IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

B.P.J. by her next friend and mother, HEATHER JACKSON, *Plaintiff*, v. WEST VIRGINIA STATE BOARD OF EDUCATION, HARRISON COUNTY BOARD OF EDUCATION, WEST VIRGINIA SECONDARY SCHOOL ACTIVITIES COMMISSION, W. CLAYTON BURCH in his official capacity as State Superintendent, DORA STUTLER in her official capacity as Harrison County Superintendent, and THE STATE OF WEST VIRGINIA, *Defendants*, and LAINEY ARMISTEAD, *Defendant-Intervenor*.	Civil Action No. 2:21-cv-00316 Hon. Joseph R. Goodwin

DECLARATION OF SRUTI SWAMINATHAN

I, Sruti Swaminathan, pursuant to 28 U.S.C. § 1746, declare as follows:

1. I am an attorney at Lambda Legal and counsel of record for Plaintiff B.P.J., with her next friend and mother, Heather Jackson. The following is true of my own personal knowledge, and, if called as a witness, I would and could testify competently thereto.

2. I submit this declaration in support of Plaintiff B.P.J.'s memorandum of law in support of the motion to exclude the expert testimony of James M. Cantor.

3. Attached to this declaration are true and correct copies of the documents listed in the table below.

Exhibit	Description
A	Decl. and Expert Report of James M. Cantor, Ph.D.
B	Dep. Tr. of James M. Cantor, Ph.D., March 21, 2022
C	Justin Lehmiller, *The Kinsey Institute Interview Series: A Conversation with Dr. James Cantor,* Kinsey Institute, https://kinseyinstitute.org/news-events/news/2017-09-28-james-cantor.php
D	Dep. Tr. of Aron Janssen, M.D., April 4, 2022
E	National Academies of Sciences, Engineering, and Medicine, *Understanding the Well-Being of LGBTQI+ Populations* (2020), http://nap.edu/25877
F	Wylie C. Hembree et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, 102(11) The Journal of Clinical Endocrinology & Metabolism 3869–3903 (Nov. 2017), https://doi.org/10.1210/jc.2017-01658
G	James Cantor, *Do trans- kids stay trans- when they grow up?* Sexology Today (Jan. 11, 2016), http://www.sexologytoday.org/2016/01/do-trans-kids-stay-trans-when-they-grow_99.html
H	Dep. Tr. of Stephen Levine, M.D., March 30, 2022

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on: May 12, 2022

/s/ Sruti Swaminathan
Sruti Swaminathan

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
CHARLESTON DIVISION

B.P.J. by her next friend and mother, HEATHER JACKSON,

Plaintiff,

v.

WEST VIRGINIA STATE BOARD OF EDUCATION, HARRISON COUNTY BOARD OF EDUCATION, WEST VIRGINIA SECONDARY SCHOOL ACTIVITIES COMMISSION, W. CLAYTON BURCH in his official capacity as State Superintendent, DORA STUTLER in her official capacity as Harrison County Superintendent, and THE STATE OF WEST VIRGINIA,

Defendants,

and

LAINEY ARMISTEAD,

Defendant-Intervenor.

Civil Action No. 2:21-cv-00316

Hon. Joseph R. Goodwin

CERTIFICATE OF SERVICE

I, Loree Stark, do hereby certify that on this 12th day of May, 2022, I electronically filed a true and exact copy of the foregoing document with the Clerk of Court and all parties using the CM/ECF System.

/s/ Loree Stark
Loree Stark
West Virginia Bar No. 12936

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
CHARLESTON DIVISION

B.P.J., by her next friend and mother, HEATHER JACKSON, *Plaintiff*, *v.* **WEST VIRGINIA STATE BOARD OF EDUCATION, HARRISON COUNTY BOARD OF EDUCATION**, *et al.*, *Defendants*, *and* **LAINEY ARMISTEAD**, *Defendant-Intervenor*.	Civil Action No: 2:21-cv-00316 **THE HONORABLE JOSEPH R. GOODWIN**

DECLARATION OF JAMES M. CANTOR, PHD.

I, Dr. James Cantor, pursuant to 28 U.S. Code § 1746, declare under penalty of perjury under the laws of the United States of America that the facts contained in my Expert Report of James M. Cantor, Ph.D., in the Case of *B.P.J. v. West Virginia State Board of Education*, dated February 23, 2022, attached hereto, are true and correct to the best of my knowledge and belief, and that the opinions expressed therein represent my own expert opinions.

Dr. James M. Cantor, PhD.

Executed February 23, 2022

Expert Report of

James M. Cantor, PhD.

In the case of *B.P.J. vs. West Virginia State Board of Education*.

February 23, 2022

Table of Contents

I. Background & Credentials 1

II. Introduction 3

III. Clarifying Terms 4

IV. Evidence Cited by Plaintiffs' Expert Reports 5

V. Evidence Missing from Plaintiffs' Expert Reports 11

A. Adult-Onset Gender Dysphoria 12

1. Outcome Studies of Transition in Adult-Onset Gender Dysphoria 13

2. Mental Health Issues in Adult-Onset Gender Dysphoria 13

B. Childhood Onset (Pre-Puberty) Gender Dysphoria 15

1. Prospective Studies of Childhood-Onset Gender Dysphoria Show that Most Children Desist in the "Natural Course" by Puberty 15

2. "Watchful Waiting" and "The Dutch Approach" 18

3. Studies of Transition Outcomes: Overview 20

a. Outcomes of The Dutch Approach (studies from before 2017): Mix of positive, negative, and neutral outcomes 21

b. Clinicians and advocates have invoked the Dutch Approach while departing from its protocols in important ways. 23

c. Studies by other clinicians in other countries have failed to reliably replicate the positive components of the results reported by the Dutch clinicians in de Vries et al. 2011. 24

4. Mental Health Issues in Childhood-Onset Gender Dysphoria 26

C. Adolescent-Onset Gender Dysphoria 28

1. Features of Adolescent-Onset Gender Dysphoria 28

2. Prospective Studies of Social Transition and Puberty Blockers in Adolescence 29

3. Mental Illness in Adolescent-Onset Gender Dysphoria 30

VI. Alleged Scientific Claims Assessed 32

A. Conversion Therapy 32

B. Claims that All Childhood Outcome Studies Are Wrong 33

C. Assessing Claims of Suicidality 34

D. Assessing Demands for Social Transition and Affirmation-Only or Affirmation-on-Demand Treatment in Pre-Pubertal Children. 37

E. Assessing the "Minority Stress Hypothesis" 41

VII. Assessing Statements from Professional Associations 42

A. Understanding the Value of Statements from Professional Associations 42

B. Misrepresentations of statements of professional associations. 43

1. World Professional Association for Transgender Health (WPATH) 44

2. Endocrine Society (ES) 45

3. Pediatric Endocrine Society and Endocrine Society (ES/PES) 46

4. American Academy of Child & Adolescent Psychiatry (AACAP) 47

5. American College of Obstetricians & Gynecologists (ACOG) 48

6. American College of Physicians (ACP) 49

7. American Academy of Pediatrics (AAP) 51

8. The ESPE-LWPES GnRH Analogs Consensus Conference Group 51

References 53

I. Background & Credentials

1. I am a clinical psychologist and Director of the Toronto Sexuality Centre in Canada. For my education and training, I received my Bachelor of Science degree from Rensselaer Polytechnic Institute, where I studied mathematics, physics, and computer science. I received my Master of Arts degree in psychology from Boston University, where I studied neuropsychology. I earned my Doctoral degree in psychology from McGill University, which included successfully defending my doctoral dissertation studying the effects of psychiatric medication and neurochemical changes on sexual behavior, and included a clinical internship assessing and treating people with a wide range of sexual and gender identity issues.

2. Over my academic career, my posts have included Psychologist and Senior Scientist at the Centre for Addiction and Mental Health (CAMH) and Head of Research for CAMH's Sexual Behaviour Clinic, Associate Professor of Psychiatry on the University of Toronto Faculty of Medicine, and Editor-in-Chief of the peer reviewed journal, *Sexual Abuse*. That journal is one of the top-impact, peer-reviewed journals in sexual behavior science and is the official journal of the Association for the Treatment of Sexual Abusers. In that appointment, I was charged to be the final arbiter for impartially deciding which contributions from other scientists in my field merited publication. I believe that appointment indicates not only my extensive experience evaluating scientific claims and methods, but also the faith put in me by the other scientists in my field. I have also served on the Editorial Boards of the *Journal of Sex Research*, the *Archives of Sexual Behavior*, and *Journal of Sexual Aggression*. Thus, although I cannot speak for other scientists, I regularly interact with and am routinely exposed to the views and opinions of most of the scientists active in our field today, within the United States and throughout the world.

3. My scientific expertise spans the biological and non-biological development of human sexuality, the classification of sexual interest patterns, the assessment and

treatment of atypical sexualities, and the application of statistics and research methodology in sex research. I am the author of over 50 peer-reviewed articles in my field, spanning the development of sexual orientation, gender identity, hypersexuality, and atypical sexualities collectively referred to as *paraphilias*. I am the author of the past three editions of the gender identity and atypical sexualities chapter of the *Oxford Textbook of Psychopathology*. These works are now routinely cited in the field and are included in numerous other textbooks of sex research.

4. I began providing clinical services to people with gender dysphoria in 1998. I trained under Dr. Ray Blanchard of CAMH and have participated in the assessment of treatment of over one hundred individuals at various stages of considering and enacting both transition and detransition, including its legal, social, and medical (both cross-hormonal and surgical) aspects. My clinical experience includes the assessment and treatment of several thousand individuals experiencing other atypical sexuality issues. I am regularly called upon to provide objective assessment of the science of human sexuality by the courts (prosecution and defense), professional media, and mental health care providers.

5. I have served as an expert witness in a total of 14 cases, which are listed in my *curriculum vitae*, attached here as Appendix 1, which includes a list of cases in which I have recently testified.

6. A substantial proportion of the existing research on gender dysphoria comes from two clinics, one in Canada and one in the Netherlands. The CAMH gender clinic (previously, Clarke Institute of Psychiatry) was in operation for several decades, and its research was directed by Dr. Kenneth Zucker. I was employed by CAMH between 1998 and 2018. I was a member of the hospital's adult forensic program. However, I was in regular contact with members of the CAMH child psychiatry program (of which Dr. Zucker was a member), and we collaborated on multiple projects.

7. For my work in this case, I am being compensated at the hourly rate of $400 per hour. My compensation does not change based on the conclusions and opinions that I provide here or later in this case or on the outcome of this lawsuit.

II. Introduction

8. The principal opinions that I offer and explain in detail in this report are:

a. Biological sex is a clear, scientifically valid, and well-defined category. The existence of disorders of sexual development in an extremely small proportion of individuals does not change this.

b. Neither early-onset (childhood) gender dysphoria nor adolescent-onset gender dysphoria can be assumed to reflect a fixed aspect of a person's psychological make-up or self-perception.

c. No study has demonstrated that "affirming" the transgender identity of a child or adolescent produces better mental health outcomes or reduced suicidality relative to psychotherapy and mental health support.

d. On the contrary, the contemporary studies have failed to find improved mental health in teens and young adults after administration of puberty blockers and/or cross-sex hormones.

e. e) Affirmation of a transgender identity in minors who suffer from early-onset or adolescent-onset gender dysphoria is not an accepted "standard of care."

In addition, I have been asked to provide an expert opinion on how relevant professional organizations have addressed these questions and whether any of them have taken any meritorious position that would undermine West Virginia's Protect Women's Sports Act (H.B. 3292) ("Act"). As I explain in detail in this report, it is my opinion that Plaintiffs' expert reports display a wide variety of flaws that call their conclusions into question and that no professional organization has articulated a meritorious position that calls into question the basis for the Act.

9. To prepare the present report, I reviewed the following resources related to this litigation:

a. West Virginia's Protect Women's Sports Act, H.B. 3293.

b. The Amended Complaint in this litigation.

c. Ms. Armistead's Declaration, Doc. 95-1.

d. Declaration and Expert Report of Deanna Adkins, MD.

e. Expert Report and Declaration of Joshua D. Safer, MD, FACP, FACE.

III. Clarifying Terms

10. Most scientific discussions begin with the relevant vocabulary and definitions of terms. In the highly polarized and politicized debates surrounding transgender issues, that is less feasible: Different authors have used terms in differing, overlapping ways. Activists and the public (especially on social media) will use the same terms, but to mean different things, and some have actively misapplied terms so that original documents appear to assert something they do not.

11. "Gender expression" is one such term. For another example, the word "child" is used in some contexts to refer specifically to children before puberty; in some contexts, to refer to children before adolescence (thus including ages of puberty); in still other contexts, to refer to people under the legal age of consent, which is age sixteen in the Netherlands (where much of the research was conducted) or age eighteen in much of North America. Thus, care should be taken in both using and interpreting the word "child" in this field.

12. Because the present document is meant to compare the claims made by others, it is the definitions used by those specific authors in those specific contexts which are relevant. Thus, definitions to my own uses of terms are provided where appropriate, but primarily explicate how terms were defined and used in their original contexts.

IV. Evidence Cited by Plaintiffs' Expert Reports

13. Dr. Adkins claimed a person's gender identity cannot be voluntarily changed. In actual clinical practice, that is rarely the relevant issue. The far more typical situation is youth who are *mistaken* about their gender identity. These youth are misinterpreting their experiences to indicate they are transgender, or they are exaggerating their descriptions of their experiences in service of attention-seeking or other psychological needs. Dr. Adkins' claim is not merely lacking any science to support it; the claim itself defies scientific thinking. In science, it is not possible to know that gender identity cannot be changed: We can know only that we lack evidence of such a procedure. In the scientific method, it remains eternally possible for evidence of such a treatment to emerge, and unlike sexual orientation's long history with conversion therapy, there have not been systematic attempts to change gender identity.

14. Dr. Adkins claimed that untreated gender dysphoria can result in several mental health issues, including suicidality. The relevant research on suicidality is summarized in its own section to follow. Nonetheless, Dr. Adkins' claim is a misleading half-truth: Missing is that people with gender dysphoria continue to experience those mental health symptoms even after they do transition, including a 19 times greater risk of death from suicide.[1] This is why clinical guidelines repeatedly indicate that mental health issues should be resolved *before* any transition, as indicated in multiple sets of clinical guidelines, summarized in their own section to follow. As emphasized even by authorities Dr. Adkins cites herself: Transition should not be relied upon itself to improve mental health status.

15. Adkins' support for the claim that untreated gender dysphoria lessens mental health consisted of two articles: Olson, *et al.* (2016) and Spack (2012). Such is a terrible misrepresentation of the state of the scientific literature. Although Olson,

[1] Dhejne, *et al.*, 2011.

et al., did indeed report that gender dysphoric children showed no mental health differences from the non-transgender control groups, Olson's report turned out to be incorrect. The Olson data were reanalyzed, and after correcting for statistical errors in the original analysis, the data instead showed that the gender dysphoric children under Olson's care *did,* in fact, exhibit significantly lower mental health.[2]

16. I conducted an electronic search of the research literature to identify any responses from the Olson team regarding the Schumm and Crawford re-analysis of the Olson data and was not able to locate any. I contacted Professor Schumm by email on August 22, 2021 to verify that conclusion, to which he wrote there has been: "No response [from Olson]."[3]

17. Adkins also misrepresented the views of Dr. Norman Spack. The article Adkins cited—Spack, 2012—repeatedly emphasized that children with gender dysphoria exhibit very many symptoms of mental illnesses. Spack asserted unambiguously that "Gender dysphoric children who do not receive *counseling* have a high risk of behavioural and emotional problems and psychiatric diagnoses."[4] The wording of Dr. Adkins' report ("gender dysphoria . . . if left untreated") misrepresents Spack so as to suggest Spack was advocating for medical transition to treat the gender dysphoria rather than counseling to treat suicidality and any other mental health issues. Moreover still, missing from Adkins' report was Spack's conclusion that "[m]ental health intervention should persist for the long term, even after surgery, *as patients continue to be at mental health risk, including for suicide.* While the causes of suicide are multifactorial, the possibility cannot be ruled out that some patients unrealistically believe that surgery(ies) solves their psychological distress."[5] Whereas

---

2 Schumm & Crawford, 2020; Schumm, *et al*., 2019.
3 Schumm, email communication, Aug. 22, 2021 (on file with author).
4 Spack, *et al.,* 2012, at 422, italics added.
5 Spack, *et al.,* 2013, at 484, italics added

Adkins (selectively) cited Spack to support her insinuation that transition relieves distress, Spack instead explicitly warned against drawing exactly that conclusion.

18. Next, Adkins claimed to have achieved levels of success in her professional clinical practice unlike those reported by anyone anywhere else in the world: "All of my patients have suffered from persistent gender dysphoria, which has been alleviated through clinical appropriate treatment."[6] It is difficult to evaluate such a bold self-assessment of success. No clinic has published success rates even approximating this. By contrast, the peer-reviewed research literature repeatedly indicates that clients misrepresent themselves to their care-providers, engaging in "image management" so as to appear as having better mental health than they actually do.[7] In the absence of objective evidence, it is not possible to differentiate Adkins' claims of success from the simpler explanation that she and her patients are telling each other what they want and expect to hear.

19. Adkins referred to the clinical practice guidelines (CPG's) of three professional societies: the American Association of Pediatrics (AAP), the World Professional Association for Transgender Health (WPATH), and the Endocrine Society. This provides only an incomplete and inaccurate portrayal of the field. I am aware of six rather than three professional societies providing clinical guidelines for the care of gender dysphoric children. They are detailed more fully in their own section of this report. Nonetheless, with the broad exception of the AAP, their statements repeatedly noted:

- Desistance of gender dysphoria occurs in the majority of prepubescent children.
- Mental health issues need to be assessed as potentially contributing factors and need to be addressed before transition.
- Puberty-blocking medication is an experimental, not a routine, treatment.

---

6 Adkins Report at 5.
7 Anzani, *et al.*, 2020; Lehmann, *et al.*, 2021.

- Social transition is not generally recommended until after puberty.

Although some other associations have published broad statements of moral support for sexual minorities and against discrimination, they did not include any specific standards or guidelines regarding medical- or transition-related care.

20. Although Adkins referred to them as "widely accepted," the WPATH and the Endocrine Society guidelines have both been subjected to standardized evaluation, the Appraisal of Guidelines for Research and Evaluation ("AGREE II") method, as part of an appraisal of all published CPGs regarding sex and gender minority healthcare.[8] Utilizing community stakeholders to set domain priorities for the evaluation, the assessment concluded that the guidelines regarding HIV and its prevention were of high quality, but that "[t]ransition-related CPGs tended to lack methodological rigour and rely on patchier, lower-quality primary research."[9] Neither the Endocrine Society's or WPATH's guidelines were recommended for use. Indeed, the WPATH guidelines received unanimous ratings of "Do not recommend."[10]

21. Immediately following the publication of the AAP policy, I conducted a point-by-point fact-check of the claims it asserted and the references it cited in support. I submitted that to the *Journal of Sex & Marital Therapy*, a well-known research journal of my field, where it underwent blind peer review and was published. I append that article as part of this report. *See* Appendix 2. A great deal of published attention ensued; however, the AAP has yet to respond to the errors I demonstrated its policy contained. Writing for *The Economist* about the use of puberty blockers, Helen Joyce asked AAP directly, "Has the AAP responded to Dr Cantor? If not, have you any response now?" The AAP Media Relations Manager, Lisa Black, responded: "We do not have anyone available for comment."

---

[8] Dahlen, *et al.,* 2021.
[9] Dahlen, *et al.*, 2021, at 6.
[10] Dahlen, *et al.,* 2021, at 7.

22. Finally, the clinical guidelines from all these associations have become largely outdated. As detailed in the *Studies of Transition Outcomes* section of this report, there was some reason, circa 2010, to expect positive outcomes among children who transition, owing to optimistic findings reported from the Netherlands.[11] Early positive findings, however, have been retracted after statistical errors were identified,[12] or shown to be more attributable to mental health counseling rather than to medical transition.[13] The professional societies' statements were produced during that earlier phase.

23. In contrast with these U.S.-based associations, public healthcare systems throughout the world have instead been withdrawing their earlier support for childhood transition, responding to the increasingly recognized risks associated with hormonal interventions and the now clear lack of evidence that medical transition was benefitting most children, as opposed to the mental health counseling accompanying transition. These have included Sweden[14, 15], Finland[16, 17], and the United Kingdom[18], and the Royal Australian and New Zealand College of Psychiatrists.[19]

24. Adkins repeatedly claimed success on the basis of what her patients tell her. In the absence of any systematic method, however, it is not possible to evaluate to what extent such a conclusion reflects human recall bias, cases of negative outcomes dropping out of treatment thus becoming invisible to Adkins, the aforementioned impression management efforts of clients, psychotherapy that they were receiving at the same time, or simple maturation during which the patients

---

[11] de Vries, et al., 2011.
[12] Kalin, 2020.
[13] c.f., Carmichael, *et al.,* 2021; Biggs, 2019; Biggs, 2020.
[14] Swedish Agency of Health Technology Assessment and Assessment of Social Services, 2019.
[15] Nainggolan, 2021.
[16] Finland Ministry of Social Affairs and Health, Council for Choices in Health Care, 2020, June 11.
[17] Finland Ministry of Social Affairs and Health, Council for Choices in Health Care, 2020, June 16.
[18] United Kingdom National Health Service (NHS), 2021, March 11.
[19] McCall, 2021.

would have experienced improved mental health regardless of transition. Indeed, the very purpose of engaging in systematic, peer-reviewed research instead of relating anecdotal recollections is to rule out exactly these biases.

25. Adkins referred to disorders of sexual development (DSDs) and intersex variations to claim that the very notion of there being two sexes is inherently flawed (*i.e.*, challenging "singular biological sex"). Although they both potentially involve medical alteration of genitalia, these are not comparable issues. DSDs and intersex conditions develop before birth, and objective medical testing is capable of confirming diagnoses. Her claims not only misrepresent the research literature on DSDs, but also failed to engage the relevant scientific concept, "construct validity." Adkins claimed DSD prevalences of 1 in 1000 live births and 1 in 300 people in the world (Adkins Report at 11), leaving unclear how there could be a larger proportion of such people living in the world than are born in the first place. The scientific literature, however, shows that DSDs are much rarer than this[20] and that the very large majority of DSDs are the hypospadias—mislocations of the urethra on the penis.[21] Because of the biological processes involved in causing them, hypospadias are classified as disorders of sexual development. That some boys are born with mislocated urethra is falsely taken by Adkins to demonstrate that 'there are more than just boys and girls'.

26. Overall, Adkins' argument was that, because there exist exceptions among features which distinguish male from female, the distinction itself is entirely moot. Although she did not use the term, Adkins is claiming that the existence of these exceptions demonstrates that sex lacks "construct validity." Her argument does not, however, follow from how construct validity is determined in science—very many scientific classification systems include exceptions. Scientific constructs are not

[20] Sax, 2002.
[21] Bancroft, 2009.

determined by any one of the components it reflects, in this case being each of the sex chromosomes, sex hormones, sexually dimorphic genitalia, etc. Rather, such constructs are represented by the generalizable interrelationships among its multiple components. Notwithstanding exceptions in an individual component in an individual case, the interrelationships among the network of components remains intact. The existence of people born with a clubfoot or undeveloped leg does not challenge the classification of humans as a bipedal species.

27. Similarly to Dr. Adkins, Dr. Safer claimed that "gender identity is durable and cannot be changed by medical intervention," providing no evidence or reference to the research literature. It is not at all apparent upon what basis such a statement about durability can be made, however. It has been the unanimous conclusion of every follow-up study of gender dysphoric children ever conducted, not only that gender identity does change, but also that it changes in the large majority of cases, as documented below. This is, of course, very different from what is reported by transgender adults—they are the very people for whom gender dysphoria did endure. Regarding responses to clinical intervention, I am not aware of, and Safer did not cite any research reports of medical interventions attempting to change gender identity, regardless of outcome. It is not clear whether Safer intended this comment to apply also to psychological/non-medical interventions.

V. Evidence Missing from Plaintiffs' Expert Reports

28. One of the most widespread public misunderstandings about transsexualism and people with gender dysphoria is that all cases of gender dysphoria represent the same phenomenon; however, the clinical science has long and consistently demonstrated that gender dysphoric children (cases of *early-onset* gender dysphoria) do not represent the same phenomenon as adult gender dysphoria

(cases of *late-onset* gender dysphoria),[22] merely attending clinics at younger ages. That is, gender dysphoric children are not simply younger versions of gender dysphoric adults. They differ in every known regard, from sexual interest patterns, to responses to treatments. A third presentation has recently become increasingly observed among people presenting to gender clinics: These cases appear to have an onset in adolescence in the absence of any childhood history of gender dysphoria. Such cases have been called adolescent-onset or "rapid-onset" gender dysphoria (ROGD).

29. In the context of school athletics, the adult-onset phenomenon would not seem relevant; however, very many public misunderstandings and expert misstatements come from misattributing evidence or personal experience from one of these types to the other. For example, there exist only very few cases of transition regret among adult transitioners, whereas the research has unanimously shown that the majority of children with gender dysphoria desist—that is, cease to experience such dysphoria by or during puberty. A brief summary of the adult-onset phenomenon is included, to facilitate distinguishing features which are unique to childhood gender dysphoria.

A. Adult-Onset Gender Dysphoria

30. People with adult-onset gender dysphoria typically attend clinics requesting transition services in mid-adulthood, usually in their 30s or 40s. Such individuals are nearly exclusively male.[23] They typically report being sexually attracted to women and sometimes to both men and women. Some cases profess asexuality, but very few indicate any sexual interest in or behavior involving men.[24] Cases of adult-onset gender dysphoria are typically associated with a sexual interest pattern (medically, a *paraphilia*) involving themselves in female form.[25]

---

[22] Blanchard, 1985.
[23] Blanchard, 1990, 1991.
[24] Blanchard, 1988.
[25] Blanchard 1989a, 1989b, 1991.

1. Outcome Studies of Transition in Adult-Onset Gender Dysphoria

31. Clinical research facilities studying gender dysphoria have repeatedly reported low rates of regret (less than 3%) among adult-onset patients who underwent complete transition (*i.e.*, social, plus hormonal, plus surgical transition). This has been widely reported by clinics in Canada,[26] Sweden,[27] and the Netherlands.[28]

32. Importantly, each of the Canadian, Swedish, and Dutch clinics for adults with gender dysphoria all performed "gate-keeping" procedures, disqualifying from medical services people with mental health or other contraindications. One would not expect the same results to emerge in the absence of such gate-keeping or when gate-keepers apply only minimal standards or cursory assessment.

2. Mental Health Issues in Adult-Onset Gender Dysphoria

33. The research evidence on mental health issues in gender dysphoria indicates it to be different between adult-onset versus adolescent-onset versus prepubescent-onset types. The co-occurrence of mental illness with gender dysphoria in adults is widely recognized and widely documented.[29] A research team in 2016 published a comprehensive and systematic review of all studies examining rates of mental health issues in transgender adults.[30] There were 38 studies in total. The review indicated that many studies were methodologically weak, but nonetheless concluded (1) that rates of mental health issues among people are highly elevated both before and after transition, (2) but that rates were less elevated among those who completed transition. Analyses were not conducted in a way so as to compare the elevation in mental health issues observed among people newly attending clinics to improvement after transition. Also, several studies showed more than 40% of patients

---

[26] Blanchard, *et al.*, 1989.
[27] Dhejneberg, *et al.*, 2014.
[28] Wiepjes, *et al.*, 2018.
[29] *See, e.g.*, Hepp, *et al.*, 2005.
[30] Dhejne, *et al.*, 2016.

becoming "lost to follow-up." With attrition rates that high, it is unclear to what extent the information from the available participants genuinely reflects the whole sample. The very high "lost to follow-up" rate leaves open the possibility of considerably more negative results overall.

34. An important caution applies to interpreting these results: These very high proportions of mental health issues come from people who are attending a clinic for the first time and are undergoing assessment. Clinics serving a "gate-keeper" role divert candidates with mental health issues away from medical intervention. The side-effect of removing these people from the samples of transitioners is that if a researcher compared the average mental health of individuals coming into the clinic with the average mental health of individuals going through medical transition, then the post-transition group would appear to show a substantial improvement, even though transition had *no effect at all*: The removal of people with poorer mental health created the statistical illusion of improvement among the remaining people.

35. The long-standing and consistent finding that gender dysphoric adults have high rates of mental health issues both before and after transition and the finding that those mental health issues cause the gender dysphoria (the epiphenomenon) rather than the other way around indicate a critical point: To the extent that gender dysphoric children resemble adults, we should not expect mental health to improve as a result of transition. Mental health issues should be resolved before any transition.

B. Childhood Onset (Pre-Puberty) Gender Dysphoria

1. Prospective Studies of Childhood-Onset Gender Dysphoria Show that Most Children Desist in the "Natural Course" by Puberty

36. The large majority of childhood onset cases of gender dysphoria occur in biological males, with clinics reporting 2–6 biological male children to each female.[31]

37. Prepubescent children (and their parents) have been approaching mental health professionals for help with their unhappiness with their sex and belief they would be happier living as the other for many decades. Projects following-up and reporting on such cases began being published in the 1970s, with subsequent generations of research employing increasingly sophisticated methods studying the outcomes of increasingly large samples. In total, there have now been a total of 11 such outcomes studies. *See* the appendix to Appendix 2 (listing these studies).

38. In sum, despite coming from a variety of countries, conducted by a variety of labs, using a variety of methods, all spanning four decades, every study without exception has come to the identical conclusion: Among prepubescent children who feel gender dysphoric, the majority cease to want to be the other gender over the course of puberty—ranging from 61–88% desistance across the large, prospective studies. Such cases are often referred to as "desisters," whereas children who continue to feel gender dysphoria are often called "persisters."

39. Notably, in most cases, these children were receiving professional psychosocial support across the study period aimed not at affirming cross-gender identification, but at resolving stressors and issues potentially interfering with desistance. While beneficial to these children and their families, the inclusion of therapy in the study protocol represents a complication for the interpretation of the results: That is, it is not possible to know to what extent the observed outcomes (predominant desistance, with a small but consistent occurrence of persistence) were

[31] Cohen-Kettenis, *et al.*, 2003; Steensma, *et al.,* 2018; Wood, *et al.*, 2013.

influenced by the psychosocial support, or would have emerged regardless. It can be concluded only that prepubescent children who suffer gender dysphoria and receive psychosocial support focused on issues other than "affirmation" of cross-gender identification do in fact desist in suffering from gender dysphoria, at high rates, over the course of puberty.

40. While the absolute number of those who present as prepubescent children with gender dysphoria and "persist" through adolescence is very small in relation to the total population, persistence in some subjects was observed in each of these studies. Thus, the clinician cannot take either outcome for granted.

41. It is because of this long-established and invariably consistent research finding that desistance is probable, but not inevitable, that the "watchful waiting" method became the standard approach for assisting gender dysphoric children. The balance of potential risks to potential benefits is very different for groups likely to desist versus groups unlikely to desist: If a child is very likely to persist, then taking on the risks of medical transition might be more worthwhile than if that child is very likely to desist in transgender feelings.

42. The consistent observation of high rates of desistance among pre-pubertal children who present with gender dysphoria demonstrates a pivotally important—yet often overlooked—feature: because gender dysphoria so often desists on its own, clinical researchers cannot assume that therapeutic intervention cannot facilitate or speed desistance for at least some patients. Such is an empirical question, and there has not yet been any such study.

43. It is also important to note that research has not yet identified any reliable procedure for discerning which children who present with gender dysphoria will persist, as against the majority who will desist, absent transition and "affirmation." Such a method would be valuable, as the more accurately that potential persisters can be distinguished from desisters, the better the risks and benefits of options can

be weighted. Such "risk prediction" and behavioral "test construction" are standard components of applied statistics in the behavioral sciences. Multiple research teams have reported that, on average, groups of persisters are somewhat more gender non-conforming than desisters, but not so different as to usefully predict the course of a particular child.[32]

44. In contrast, a single research team, led by Dr. Kristina Olson, claimed the opposite, asserting to have developed a method of distinguishing persisters from desisters, using a single composite score representing a combination of children's "peer preference, toy preference, clothing preference, gender similarity, and gender identity."[33] That team reported a statistical association (mathematically equivalent to a correlation) between that composite score and the probability of persistence. As they described their result, "Our model predicted that a child with a gender-nonconformity score of .50 would have roughly a .30 probability . . . of socially transitioning. By contrast, a child with gender-nonconformity score of .75 would have roughly a .48 probability."[34] Although the authors declared that "social transitions may be predictable from gender identification and preferences,"[35] their actual results suggest the opposite: The gender-nonconforming group who went on to transition (socially) had a mean composite score of .73 (which is less than .75), and the gender-nonconforming group who did not transition had a mean composite score of .61, also less than .75.[36] Both of those are lower than the value of .75, so both of those would be more likely than not to desist, rather than to proceed to transition. Thus, Olson's model does not distinguish likely from unlikely to transition; rather, it distinguishes unlikely from even less likely to transition.

32 Singh, *et al.* (2021); Steensma *et al.*, 2013.
33 Rae, *et al.*, 2019, at 671.
34 Rae, *et al.*, 2019, at 673.
35 Rae, *et al.*, 2019, at 669.
36 Rae, *et al.*, 2019, Supplemental Material at 6, Table S1, bottom line.

45. Although it remains possible for some future finding to yield a method to identify with sufficient accuracy which gender dysphoric children will persist, there does not exist such a method at the present time. Moreover, in the absence of long-term follow-up, it cannot be known what proportions come to regret having transitioned and then *de*transition. Because only a minority of gender dysphoric children persist in feeling gender dysphoric in the first place, "transition-on-demand" increases the probably of unnecessary transition and unnecessary medical risks.

2. "Watchful Waiting" and "The Dutch Approach"

46. It was this state of the science—that the majority of prepubescent children will desist in their feelings of gender dysphoria and that we lack an accurate method of identifying which children will persist—that led to the development of a clinical approach, often called "The Dutch Approach" (referring to The Netherlands clinic where it was developed) including "Watchful Waiting" periods. Internationally, the Dutch Approach is currently the most widely respected and utilized method for treatment of children who present with gender dysphoria.

47. The purpose of these methods was to compromise the conflicting needs among: clients' desires upon assessment, the long-established and repeated observation that those preferences will change in the majority of (but not all) childhood cases, and that cosmetic aspects of medical transition are perceived to be better when they occur earlier rather than later.

48. The Dutch Approach (also called the "Dutch Protocol") was developed over many years by the Netherlands' child gender identity clinic, incorporating the accumulating findings from their own research as well as those reported by other clinics working with gender dysphoric children. They summarized and explicated the approach in their peer-reviewed report, *Clinical management of gender dysphoria in children and adolescents: The Dutch Approach* (de Vries & Cohen-Kettenis, 2012).

The components of the Dutch Approach are:

- no social transition at all considered before age 12 (watchful waiting period),
- no puberty blockers considered before age 12,
- cross-sex hormones considered only after age 16, and
- resolution of mental health issues before any transition.

49. For youth under age 12, "the general recommendation is watchful waiting and carefully observing how gender dysphoria develops in the first stages of puberty."[37]

50. The age cut-offs of the Dutch Approach authors were not based on any research demonstrating their superiority over other potential age cut-off's. Rather, they were chosen to correspond to ages of consent to medical procedures under Dutch law. But whatever their original rationale, the data from this clinic simply contains no information about safety or efficacy of these measures at younger ages.

51. The authors of the Dutch Approach repeatedly and consistently emphasize the need for extensive mental health assessment, including clinical interviews, formal psychological testing with validated psychometric instruments, and multiple sessions with the child and the child's parents.

52. Within the Dutch approach, there is no social transition before age twelve. That is, social affirmation of the new gender may not begin until age 12—as desistance is less likely to occur past that age. "Watchful Waiting" refers to a child's developmental period up to that age. Watchful waiting does not mean do nothing but passively observe the child. Such children and families typically present with substantial distress involving both gender and non-gender issues. It is during the watchful waiting period that a child (and other family members as appropriate) would undergo therapy, resolving other issues which may be exacerbating psychological stress or dysphoria. As noted by the Dutch clinic, "[T]he adolescents in this study received extensive family or other social support . . . [and they] were all regularly

[37] de Vries & Cohen-Kettenis, 2012, at 301.

seen by one of the clinic's psychologists or psychiatrists."[38] One is actively treating the person, while carefully "watching" the dysphoria.

53. The inclusion of psychotherapy and support during the watchful waiting period is, clinically, a great benefit to the gender dysphoric children and their parents. The inclusion of psychotherapy and support poses a scientific complication, however: It becomes difficult to know to what extent the outcomes of these cases might be related to receiving psychotherapy received versus being "spontaneous" desistance, which would have occurred on its own anyway. This situation is referred to in science as a "confound."

3. Studies of Transition Outcomes: Overview

54. Very many strong claims have appeared in the media and on social media asserting that transition results in improved mental health or, contradictorily, in decreased mental health. In the highly politicized context of gender and transgender research, many authors have cited only the findings which appear to support one side, cherry-picking from the complete set of research reports. Seemingly contradictory findings are common in science with on-going research projects. When considered together, however, the full set of relevant reports show that a coherent pattern and conclusion has emerged over time, as detailed in the following sections. Initial optimism was suggested by reports of improvements in mental health.[39] Upon continued analysis, these seeming successes turned out to be illusory, however: The Bränström and Pachankis (2019) finding has been retracted.[40] The greater mental health among transitioners reported by Costa, *et al.* (2015) was noted to be because the control group consisted of cases excluded from hormone eligibility exactly because they showed poor mental health to begin with.[41] The improvements reported by the

[38] de Vries, *et al.*, 2011, at 2280-81.
[39] Bränström & Pachankis 2019; Costa, *et al.*, 2015; de Vries, *et al.*, 2011; de Vries, *et al.*, 2014.
[40] Kalin, 2020.
[41] Biggs, 2019.

de Vries studies from the Dutch Clinic themselves appear genuine; however, because that clinic also provides psychotherapy to all cases receiving puberty-blockers, it remains entirely plausible that the psychotherapy and not the puberty blockers caused the improvements.[42] New studies continued to appear an accelerating rate, repeatedly reporting deteriorations or lacks of improvement in mental health[43] or lack of improvement beyond psychotherapy alone,[44] and other studies continue to report on only the combined effect of both psychotherapy and hormone treatment together.[45]

a. Outcomes of The Dutch Approach (studies from before 2017): Mix of positive, negative, and neutral outcomes

55. The research confirms that some, but not all, adolescents improve on some, but not all, indicators of mental health and that those indicators are inconsistent across studies. Thus, the balance of potential benefits to potential risks differs across cases, and thus suggests different courses of treatment across cases.

56. The Dutch clinical research team followed up 70 youth undergoing puberty suppression at their clinic.[46] The youth improved on several variables upon follow-up as compared to pre-suppression measurement, including depressive symptoms and general functioning. No changes were detected in feelings of anxiety or anger or in gender dysphoria as a result of puberty suppression; however, natal females using puberty suppression suffered *increased* body dissatisfaction both with their secondary sex characteristics and with nonsexual characteristics.[47]

57. As the report authors noted, while it is possible that the improvement on some variables was due to the puberty-blockers, it is also possible that the improvement was due to the mental health support, and it is possible that the

---

[42] Biggs, 2020.
[43] Carmichael, *et al.*, 2021; Hisle-Gorman, *et al.*, 2021; Kaltiala, *et al.*, 2020.
[44] Achille, *et al.*, 2020.
[45] Kuper, *et al.*, 2020; van der Miesen, *et al.*, 2020, at 703.
[46] de Vries, *et al.* 2011.
[47] Biggs, 2020.

improvement occurred only on its own with natural maturation. So any conclusion that puberty blockers improved the mental health of the treated children is not justified by the data. Because this study did not include a control group (another group of adolescents matching the first group, but *not* receiving medical or social support), these possibilities cannot be distinguished from each other, representing a confound. The authors of the study were explicit in noting this themselves: "All these factors may have contributed to the psychological well-being of these gender dysphoric adolescents."[48]

58. The authors were careful not to overstate the implications of their results, "We *cautiously* conclude that puberty suppression *may be* a valuable *element* in clinical management of adolescent gender dysphoria."[49]

59. Costa, *et al.* (2015) reported on preliminary outcomes from the Tavistock and Portman NHS Foundation Trust clinic in the UK. They compared the psychological functioning of one group of youth receiving psychological support with a second group receiving both psychological support as well as puberty blocking medication. Both groups improved in psychological functioning over the course of the study, but no statistically significant differences between the groups was detected at any point.[50] As those authors concluded, "Psychological support and puberty suppression were both associated with an improved global psychosocial functioning in GD adolescence. Both these interventions may be considered effective in the clinical management of psychosocial functioning difficulties in GD adolescence."[51] Because psychological support does not pose the physical health risks that hormonal interventions or surgery does (such as loss of reproductive function), one cannot justify taking on the greater risks of social transition, puberty blockers or surgery

48 de Vries, *et al*. 2011, at 2281.
49 de Vries, *et al*. 2011, at 2282, italics added.
50 Costa, *et al*., at 2212 Table 2.
51 Costa, *et al*., at 2206.

without evidence of such treatment producing superior results. Such evidence does not exist.

b. Clinicians and advocates have invoked the Dutch Approach while departing from its protocols in important ways.

60. The reports of partial success contained in de Vries, *et al.* 2011 called for additional research, both to confirm those results and to search for ways to maximize beneficial results and minimize negative outcomes. Instead, many other clinics and clinicians proceeded on the basis of the positives only, broadened the range of people beyond those represented in the research findings, and removed the protections applied in the procedures that led to those outcomes. Many clinics and individual clinicians have reduced the minimum age for transition to 10 instead of 12. While the Dutch Protocol involves interdisciplinary teams of clinicians, many clinics now rely on a single assessor, in some cases one without adequate professional training in childhood and adolescent mental health. Comprehensive, longitudinal assessments (*e.g.*, one and a half *years*[52]) became approvals after one or two assessment sessions. Validated, objective measures of youths' psychological functioning were replaced with clinicians' subjective (and first) opinions, often reflecting only the clients' own self-report. Systematic recordings of outcomes, so as to allow for detection and correction of clinical deficiencies, were eliminated.

61. Notably, Dr. Thomas Steensma, central researcher of the Dutch clinic, has decried other clinics for "blindly adopting our research" despite the indications that those results may not actually apply: "We don't know whether studies we have done in the past are still applicable to today. Many more children are registering, and also a different type."[53] Steensma opined that "every doctor or psychologist who is involved in transgender care should feel the obligation to do a good pre- and post-test." But few if any are doing so.

[52] de Vries, *et al.*, 2011.
[53] Tetelepta, 2021.

c. Studies by other clinicians in other countries have failed to reliably replicate the positive components of the results reported by the Dutch clinicians in de Vries et al. 2011.

62. The indications of potential benefit from puberty suppression in at least some cases has led some clinicians to attempt to replicate the positive aspects of those findings. These efforts have not succeeded.

63. The Tavistock and Portman clinic in the U.K. recently released its findings, attempting to replicate the outcomes reported by the Dutch clinic.[54] Study participants were ages 12–15 (Tanner stages 3 for natal males, Tanner 2 for natal females) and were repeatedly tested before beginning puberty-blocking medications and then every six months thereafter. Cases exhibiting serious mental illnesses (*e.g.*, psychosis, bipolar disorder, anorexia nervosa, severe body-dysmorphic disorder unrelated to gender dysphoria) were excluded. Relative to the time point before beginning puberty suppression, there were *no* significant changes in any psychological measure, from either the patients' or their parents' perspective.

64. A multidisciplinary team from Dallas published a prospective follow-up study which included 25 youths as they began puberty suppression.[55] (The other 123 study participants were undergoing cross-sex hormone treatment.) Interventions were administered according to "Endocrine Society Clinical Practice Guidelines."[56] Their analyses found *no statistically significant changes* in the group undergoing puberty suppression on any of the nine measures of wellbeing measured, spanning tests of body satisfaction, depressive symptoms, or anxiety symptoms.[57] (Although the authors reported detecting some improvements, these were only found when the large group undergoing cross-sex hormone treatment were added in.) Although the Dutch

[54] Carmichael, *et al*., 2021.
[55] Kuper, *et al*., 2020, at 5.
[56] Kuper, *et al*., 2020, at 3, referring to Hembree, *et al*., 2017.
[57] Kuper, *et al*., 2020, at Table 2.

Approach includes age 12 as a minimum for puberty suppression treatment, this team provided such treatment beginning at age 9.8 years (full range: 9.8–14.9 years).[58]

65. Achille, *et al.* (2020) at Stony Brook Children's Hospital in New York treated a sample of 95 youth with gender dysphoria, providing follow-up data on 50 of them. (The report did not indicate how these 50 were selected from the 95.) As well as receiving puberty blocking medications, "Most subjects were followed by mental health professionals. Those that were not were encouraged to see a mental health professional."[59] The puberty blockers themselves "were introduced in accordance with the Endocrine Society and the WPATH guidelines."[60] Upon follow-up, some incremental improvements were noted; however, after statistically adjusting for psychiatric medication and engagement in counselling, "*most predictors did not reach statistical significance*."[61] That is, puberty blockers did not improve mental health any more than did mental health care on its own.

66. In a recent update, the Dutch clinic reported continuing to find improvement in transgender adolescents' psychological functioning, reaching age-typical levels, "after the start of specialized transgender care involving puberty suppression."[62] Unfortunately, because the transgender care method of that clinic involves both psychosocial support and puberty suppression, it cannot be known which of those (or their combination) is driving the improvement. Also, the authors indicate that the changing demographic and other features among gender dysphoric youth might have caused the treated group to differ from the control group in unknown ways. As the study authors themselves noted, "The present study can, therefore, not provide

---

[58] Kuper, *et al.*, 2020, at 4.
[59] Achille, *et al.*, 2020, at 2.
[60] Achille, *et al.*, 2020, at 2.
[61] Achille, *et al.*, 2020, at 3 (italics added).
[62] van der Miesen, *et al.*, 2020, at 699.

evidence about the direct benefits of puberty suppression over time and long-term mental health outcomes."[63]

67. It has not yet been determined why the successful outcomes reported by the Dutch child gender clinic a decade ago failed to emerge when applied by others more recently. It is possible that:

(1) The Dutch Approach itself does *not* work and that their originally successful results were a fluke;

(2) The Dutch Approach *does* work, but only in the Netherlands, with local cultural, genetic, or other unrecognized factors that do not generalize to other countries;

(3) The Dutch Approach itself *does* work, but other clinics and individual clinicians are removing safeguards and adding short-cuts to the approach, and those changes are hampering success.

(4) The Dutch Approach *does* work, but the cause of the improvement is the psychosocial support, rather than any medical intervention, which other clinics are *not* providing.

68. The failure of other clinics to repeat the already very qualified success of the Dutch clinic demonstrates the need for still greater caution before endorsing transition and the greater need to resolve potential mental health obstacles before doing so.

4. Mental Health Issues in Childhood-Onset Gender Dysphoria

69. As shown by the outcomes studies, there is no statistically significant evidence that transition reduces the presence of mental illness among transitioners. As shown repeatedly by clinical guidelines from multiple professional associations, mental health issues are expected or required to be resolved *before* undergoing transition. The reasoning behind these conclusions is that children may be expressing gender dysphoria, not because they are experiencing what gender dysphoric adults report, but because they mistake what their experiences indicate or to what they might lead. For example, a child experiencing depression from social

[63] van der Miesen, *et al.*, 2020, at 703.

isolation might develop hope—and the unrealistic expectation—that transition will help them fit in, this time as and with the other sex.

70. If a child undergoes transition, discovering only then that their mental health or social situations will not in fact change, the medical risks and side-effects (such as sterilization) will have been borne for no reason. If, however, a child resolves the mental health issues first with the gender dysphoria resolving with it (which the research literature shows to be the case in the large majority), then the child need not undergo transition at all, but yet still retains the opportunity to do so later.

71. Elevated rates of multiple mental health issues among gender dysphoric children are reported throughout the research literature. A formal analysis of children (ages 4–11) undergoing assessment at the Dutch child gender clinic showed 52% fulfilled criteria for a DSM axis-I disorder.[64] A comparison of the children attending the Canadian versus Dutch child gender dysphoria clinic showed only few differences between them, but a large proportion in both groups were diagnosable with clinically significant mental health issues. Results of standard assessment instruments (Child Behavior Check List, or CBCL) demonstrated that the average score was in the clinical rather than healthy range, among children in both clinics.[65] When expressed as percentages, among 6–11-year-olds, 61.7% of the Canadian and 62.1% of the Dutch sample were in the clinical range.

72. A systematic, comprehensive review of all studies of Autism Spectrum Disorders (ASDs) and Attention-Deficit Hyperactivity Disorder (ADHD) among children diagnosed with gender dysphoria was recently conducted. It was able to identify a total of 22 studies examining the prevalence of ASD or ADHD I youth with gender dysphoria. Studies reviewing medical records of children and adolescents referred to gender clinics showed 5–26% to have been diagnosed with ASD.[66]

[64] Wallien, *et al*., 2007.
[65] Cohen-Kettenis, *et al*., 2003, at 46.
[66] Thrower, *et al*., 2020.

Moreover, those authors gave specific caution on the "considerable overlap between symptoms of ASD and symptoms of gender variance, exemplified by the subthreshold group which may display symptoms which could be interpreted as either ASD or gender variance. Overlap between symptoms of ASD and symptoms of GD may well confound results."[67] When two or more issues are present at the same time (in this case, gender dysphoria present at the same time as ADHD or ASD), researchers cannot distinguish when a result is associated with or caused by the issue of interest (gender dysphoria itself) or one of the side issues, called *confounds* (ADHD or ASD, in the present case).[68] The rate of ADHD among children with GD was 8.3–11%. Conversely, in data from children (ages 6–18) with Autism Spectrum Disorders (ASDs) show they are more than seven times more likely to have parent-reported "gender variance."[69]

C. Adolescent-Onset Gender Dysphoria

1. Features of Adolescent-Onset Gender Dysphoria

73. A third profile has begun to present to clinicians or socially, characteristically distinct from the previously identified ones.[70] Unlike adult-onset gender dysphoria (and also unlike childhood-onset, *see supra* Part IV.B.2), this group is predominately biologically female. This group first presents in adolescence, but lacks the history of cross-gender behavior in childhood like the childhood-onset cases have. It is this feature which led to the term Rapid Onset Gender Dysphoria (ROGD).[71] The majority of cases appear to occur within clusters of peers and in association with increased social media use[72] and especially among people with autism or other neurodevelopmental or mental health issues.[73]

---

[67] Thrower, *et al.*, 2020, at 703.
[68] Cohen-Kettenis *et al.,* 2003, at 51; Skelly *et al.,* 2012.
[69] Janssen, *et al.*, 2016.
[70] Kaltiala-Heino, *et al.*, 2015; Littman, 2018.
[71] Littman, 2018.
[72] Littman, 2018.
[73] Kaltiala-Heino, *et al.*, 2015; Littman, 2018; Warrier, *et al.*, 2020.

74. It cannot be easily determined whether the self-reported gender dysphoria is a result of other underlying issues or if those mental health issues are the result of the stresses of being a stigmatized minority, as some writers are quick to assume.[74] *See infra* Part VI.E (discussing the minority stress hypothesis). Importantly, and unlike other presentations of gender dysphoria, people with rapid-onset gender dysphoria often (47.2%) experienced *declines* rather than improvements in mental health when they publicly acknowledged their gender status.[75] Although long-term outcomes have not yet been reported, these distinctions argue against generalizing findings from the other types of gender dysphoria to this one. That is, in the absence of evidence, researchers cannot assume that the pattern found in childhood-onset or adult-onset gender dysphoria also applies to rapid-onset (aka adolescent-onset) gender dysphoria. That is, the group differences already observed argue against the conclusion that any given feature would be present, in general, throughout all types of gender dysphoria.

2. Prospective Studies of Social Transition and Puberty Blockers in Adolescence

75. There do not yet exist prospective outcomes studies either for social transition or for medical interventions for people whose gender dysphoria began in adolescence. That is, instead of taking a sample of individuals and following them forward over time (thus permitting researchers to account for people dropping out of the study, people misremembering the order of events, etc.), all studies have thus far been *retrospective*. It is not possible for such studies to identify what factors caused what outcomes. No study has yet been organized in such a way as to allow for an analysis of the adolescent-onset group, as distinct from childhood-onset or adult-onset cases. Many of the newer clinics (not the original clinics systematically tracking and reporting on their case results) fail to distinguish between people who had childhood-

---

[74] Boivin, *et al.*, 2020.

[75] Biggs, 2020; Littman, 2018.

onset gender dysphoria and have aged into adolescence and people whose onset was not until adolescence. Similarly, there are clinics failing to distinguish people who had adolescent-onset gender dysphoria and aged into adulthood from adult-onset gender dysphoria. Studies selecting groups according to their current age instead of their ages of onset can produce only confounded results, representing unclear mixes according to how many of each type of case wound up in the final sample.

3. Mental Illness in Adolescent-Onset Gender Dysphoria

76. In 2019, a Special Section of the *Archives of Sexual Behavior* was published: "Clinical Approaches to Adolescents with Gender Dysphoria." It included this brief yet thorough summary of rates of mental health issues among adolescents expressing gender dysphoria by Dr. Aron Janssen of the Department of Child and Adolescent Psychiatry of New York University:[76] The literature varies in the range of percentages of adolescents with co-occurring disorders. The range for depressive symptoms ranges was 6–42%,[77] with suicide attempts ranging 10 to 45%.[78] Self-injurious thoughts and behaviors range 14–39%.[79] Anxiety disorders and disruptive behavior difficulties including Attention Deficit/Hyperactivity Disorder are also prevalent.[80] Gender dysphoria also overlaps with Autism Spectrum Disorder.[81]

77. Of particular concern in the context of adolescent onset gender dysphoria is *Borderline Personality Disorder* (BPD). The DSM criteria for BPD are:

> A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:
>
> 1. Frantic efforts to avoid real or imagined abandonment. (Note: Do not include suicidal or self-mutilating behaviour covered in Criterion 5.)

---

76 Janssen, *et al.*, 2019.
77 Holt, *et al.*, 2016; Skagerberg, *et al.*, 2013; Wallien, *et al.*, 2007.
78 Reisner, *et al.,* 2015.
79 Holt, *et al.*, 2016; Skagerberg, *et al.*, 2013.
80 de Vries, *et al.*, 2011; Mustanski, *et al.*, 2010; Wallien, *et al.*, 2007.
81 de Vries, *et al.*, 2010; Jacobs, *et al.*, 2014; Janssen, *et al.*, 2016; May, *et al.*, 2016; Strang, *et al.*, 2014, 2016.

2. A pattern of unstable and intense interpersonal relationship characterized by alternating between extremes of idealization and devaluation.
3. *Identity disturbance: markedly and persistently unstable self-image or sense of self.*
4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (Note: Do not include suicidal or self-mutilating behavior covered in Criterion 5.)
5. *Recurrent suicidal behaviour, gestures, or threats, or self-mutilating behavior.*
6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
7. Chronic feelings of emptiness.
8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

(Italics added.)

78. It is increasingly hypothesized that very many cases appearing to be adolescent-onset gender dysphoria are actually cases of BPD.[82] That is, some people may be misinterpreting their experiences to represent a gender identity issue, when it instead represents the "identity disturbance" noted in symptom Criterion 3. Like adolescent-onset gender dysphoria, BPD begins to manifest in adolescence, is substantially more common among biological females than males, and occurs in 2–3% of the population, rather than 1-in-5,000 people (*i.e.*, 0.02%). Thus, if even only a portion of people with BPD had an 'identity disturbance' that focused on gender identity and were mistaken for transgender, they could easily overwhelm the number of genuine cases of gender dysphoria.

79. A primary cause for concern is symptom Criterion 5: recurrent suicidality. Regarding the provision of mental health care, this is a crucial distinction: A person with BPD going undiagnosed will not receive the appropriate treatments (the

[82] *E.g.*, Zucker, 2019.

currently most effective of which is Dialectical Behavior Therapy). A person with a cross-gender identity would be expected to feel relief from medical transition, but someone with BPD would not: The problem was not about *gender* identity, but about having an *unstable* identity. Moreover, after a failure of medical transition to provide relief, one would predict for these people increased levels of hopelessness and increased risk of suicidality. One would predict also that misdiagnoses would occur more often if one reflexively dismissed or discounted symptoms of BPD as responses to "minority stress." *See infra* Part VI.D (discussing minority stress).

80. Regarding research, there have now been several attempts to document rates of suicidality among gender dysphoric adolescents. *See infra* Part VI.C. The scientific concern presented by BPD is that it poses a potential confound: samples of gender dysphoric adolescents could appear to have elevated rates of suicidality, not because of the gender dysphoria (or transphobia in society), but because of the number of people with BPD in the sample.

VI. Alleged Scientific Claims Assessed

A. Conversion Therapy

81. Activists and social media increasingly, but erroneously, apply the term "conversion therapy" moving farther and farther from what the research has reported. "Conversion therapy" (or "reparative therapy" and other names) was the attempt to change a person's sexual orientation; however, with the public more frequently accustomed to "LGB" being expanded to "LGBTQ+", the claims relevant only to sexual orientation are being misapplied to gender identity. The research has repeatedly demonstrated that once one explicitly acknowledges being gay or lesbian, this is only rarely mistaken. That is entirely unlike gender identity, wherein the great majority of children who declare cross-gender identity cease to do so by puberty, as shown unanimously by every follow-up study ever published. As the field grows increasingly polarized, any therapy failing to provide affirmation-on-demand is

mislabeled "conversion therapy."[83] Indeed, even actions of non-therapists, unrelated to any therapy have been labelled conversion therapy, including the very prohibition of biological males competing on female teams.[84]

B. Claims that All Childhood Outcome Studies Are Wrong

82. As already indicated, the follow-up studies of gender dysphoric children are unanimous in their conclusion that gender dysphoria desists in the large majority of cases. Nonetheless, some authors assert that the entire set of prospective outcomes studies on prepubescent children is wrong; that desistance is not, in fact, the usual outcome for gender dysphoric children; and that results from various retrospective studies are the more accurate picture.[85] As indicated in the responses published from authors of several prospective outcomes studies (and as summarized below), the detractors' arguments are invalid.[86]

83. There have been accusations that some of the prospective outcome studies are old. This criticism would be valid only if newer studies showed different results from the older studies; however, the findings of desistance are the same, indicating that age of the studies is not, in fact, a factor.

84. There have been accusations that some studies failed to use a DSM diagnosis, and should therefore be rejected. That would be a valid criticism only if studies using the DSM showed different results from studies not using the DSM. Because both kinds of studies showed the same results, one may conclude that DSM status was not a factor, even if using a DSM diagnosis would have been a preferred method.

---

[83] D'Angelo, R., Syrulnik, E., Ayad, S., Marchiano, L., Kenny, D. T., & Clarke, P. (2021). One size does not fit all: In support of psychotherapy for gender dysphoria. *Archives of Sexual Behavior, 50,* 7–16.

[84] Turban, J. (2021, March 16). Trans girls belong on girls' sports teams. *Scientific American.* www.scientificamerican.com/article/trans-girls-belong-on-girls-sports-teams/

[85] Temple Newhook, *et al*., 2018; Winters, *et al*., 2018.

[86] Steensma, *et al*., 2018a; Zucker, *et al*. 2018.

85. There have been criticisms that some studies are too small to provide a reliable result. It is indeed true that if larger studies showed different results from the smaller studies, we would tend to favor the results of the larger studies. Because the smaller studies came to the same conclusion as the larger studies, however, the criticism is, once again, entirely moot.

86. There have been accusations that studies did not use the current DSM-5 as their method of diagnosing gender dysphoric children. This criticism would be valid only if there existed any studies using the DSM-5 against which to compare the existing studies. The DSM-5 is still too recent for there yet to have been long-term follow-up studies. It can be seen, however, that the outcome studies are the same across the DSM-III, DSM-III-R, DSM-IV, and DSM-IV-TR.

87. In science, there cannot be any such thing as a perfect study. Especially in medical research, where we cannot manipulate people in ways that would clear up difficult questions, all studies will have a fault. In science, we do not, however, reject every study with any identifiable short-coming—rather, we gather a diversity of observations, made with their diversity of compromises to safety and ethics (and time and cost, etc.), and tentatively accept the most parsimonious (simplest) explanation of the full set, weighting each study according to their individual strengths and weaknesses.

C. Assessing Claims of Suicidality

88. In the absence of scientific evidence associating improvement with transition among youth, demands for transition are increasingly accompanied by hyperbolic warnings of suicide should there be delay or obstacle to affirmation-on-demand. Social media circulate claims of extreme suicidality accompanied by declarations that "I'd rather have a trans daughter than a dead son." Such claims convey only grossly misleading misrepresentations of the research literature, however.

89. Despite that the media treat them as near synonyms, suicide and suicidality are distinct phenomena. They represent different behaviors with different motivations, with different mental health issues, and with differing clinical needs. *Suicide* refers to completed suicides and the sincere intent to die. It is substantially associated with impulsivity, using more lethal means, and being a biological male.[87] *Suicidality* refers to parasuicidal behaviors, including suicidal ideation, threats, and gestures. These typically represent cries for help rather than an intent to die and are more common among biological females. Suicidal threats can indicate any of many problems or represent emotional blackmail, as typified in "If you leave me, I will kill myself." Professing suicidality is also used for attention- seeking or for the support or sympathy it evokes from others, indicating distress much more frequently than an intent to die.

90. The scientific study of suicide is inextricably linked to that of mental illness. For example, as noted in the preceding, suicidality is a well-documented symptom of Borderline Personality Disorder (as are chronic identity issues), and personality disorders are highly elevated among transgender populations, especially adolescent-onset. Thus, the elevations of suicidality among gender dysphoric adolescents may not be a result of anything related to transition (or lack of transition), but to the overlap with mental illness of which suicidality is a substantial part. Conversely, improvements in suicidality reported in some studies may not be the result of anything related to transition, but rather to the concurrent general mental health support which is reported by the clinical reported prospective outcomes. Studies that include more than one factor at the same time without accounting for each other represent a "confound," and it cannot be known which factor (or both) is the one causing the effects observed. That is, when a study provides both mental health

[87] Freeman, *et al.,* 2017.

services and medical transition services at the same time, it cannot be known which (or both) is what caused any changes.

91. A primary criterion for readiness for transition used by the clinics demonstrating successful transition is the absence or resolution of other mental health concerns, such as suicidality. In the popular media, however, indications of mental health concerns are instead often dismissed as an expectable result caused by Sexual Minority Stress (SMS). It is generally implied that such symptoms will resolve upon transition and integration into an affirming environment. Dr. Adkins makes it explicit in her report that the purpose of "the medical treatment for gender dysphoria is to eliminate the clinically significant distress." (Adkins, p. 5.)

92. Despite that relevant professional association statements repeatedly call for mental health issues, including suicidality, to be resolved before transition (see *infra* Section VI), threats of suicide are instead oftentimes used as the very justification for labelling transition a 'medical necessity'. However plausible it might seem that failing to affirm transition causes suicidality, the epidemiological evidence indicates that hypothesis to be incorrect: Suicide rates remains elevated even after complete transition, as shown by a comprehensive review of 19 studies of suicidality in gender dysphoria.[88]

93. Of particular relevance in the present context is suicidality as a well-documented symptom of Borderline Personality Disorder (BPD) and that very many cases appearing to be adolescent-onset gender dysphoria actually represent cases of BPD. [See full DSM-5 criteria already listed herein.] That is, some people may be misinterpreting their experiencing of the broader "identity disturbance" of symptom Criterion 3 to represent a gender identity issue specifically. Like adolescent-onset gender dysphoria, BPD begins to manifest in adolescence and occurs in 2–3% of the

[88] McNeil, et al., 2017.

population, rather than 1-in-5,000 people. (Thus, if even only a portion of people with BPD experienced an identity disturbance that focused on gender identity and were mistaken for transgender, they could easily overwhelm the number of genuine cases of gender dysphoria.)

94. Rates of completed suicide are elevated among post-transition transsexuals, but are nonetheless rare,[89] and BPD is repeatedly documented to be greatly elevated among sexual minorities[90]. Overall, rates of suicidal ideation and suicidal attempts appear to be related—not to transition status—but to the social support received: The research evidence shows that support decreases suicidality, but that transition itself does not. Indeed, in some situations, social support was associated with increased suicide attempts, suggesting the reported suicidality may represent attempts to evoke more support.[91]

D. Assessing Demands for Social Transition and Affirmation-Only or Affirmation-on-Demand Treatment in Pre-Pubertal Children.

95. Colloquially, affirmation refers broadly to any actions that treat the person as belonging to a new gender. In different contexts, that could apply to social actions (use of a new name and pronouns), legal actions (changes to birth certificates), or medical actions (hormonal and surgical interventions). That is, social transition, legal transition, and medical transition (and subparts thereof) need not, and rarely do, occur at the same time. In practice, there are cases in which a child has socially only partially transitioned, such as presenting as one gender at home and another at school or presenting as one gender with one custodial parent and another gender with the other parent.

96. Referring to "affirmation" as a treatment approach is ambiguous: Although often used in public discourse to take advantage of the positive connotations of the

---

89 Wiepjes, *et al.,* 2020.
90 Reuter, *et al.,* 2016; Rodriguez-Seiljas, *et al.,* 2021; Zanarni, *et al.,* 2021.
91 Bauer, *et al*., 2015; Canetto, et al., 2021.

term, it obfuscates what exactly is being affirmed. This often leads to confusion, such as quoting a study of the benefits and risks of social affirmation in a discussion of medical affirmation, where the appearance of the isolated word "affirmation" refers to entirely different actions.

97. It is also an error to divide treatment approaches into affirmative versus non-affirmative. As noted already, the widely adopted Dutch Approach (and the guidelines of the multiple professional associations based on it) cannot be said to be either: It is a staged set of interventions, wherein social transition (and puberty blocking) may not begin until age 12 and cross-sex hormonal and other medical interventions, later.

98. Formal clinical approaches to helping children expressing gender dysphoria employ a gate-keeper model, with decision trees to help clinicians decide when and if the potential benefits of affirmation of the new gender would outweigh the potential risks of doing so. Because the gate-keepers and decision-trees generally include the possibility of affirmation in at least some cases, it is misleading to refer to any one approach as "the affirmation approach." The most extreme decision-tree would be accurately called affirmation-*on-demand,* involving little or no opportunity for children to explore at all whether the distress they feel is due to some other, less obvious, factor, whereas more moderate gate-keeping would endorse transition only in select situations, when the likelihood of regretting transition is minimized.

99. Many outcomes studies have been published examining the results of gate-keeper models, but no such studies have been published regarding affirmation-on-demand with children. Although there have been claims that affirmation-on-demand causes mental health or other improvement, these have been the result only of "retrospective" rather than "prospective" studies. That is, such studies did not take a sample of children and follow them up over time, to see how many dropped out altogether, how many transitioned successfully, and how many transitioned and

regretted it or detransitioned. Rather, such studies took a sample of successfully transitioned adults and asked them retrospective questions about their past. In such studies, it is not possible to know how many other people dropped out or regretted transition, and it is not possible to infer causality from any of the correlations detected, despite authors implying and inferring causality.

100. Olson and colleagues employed exactly such a retrospective study. They offered their survey to children in the TransYouth Project—people who have socially transitioned, their families, and any contacts they had, by word of mouth. This method is referred to as "convenience sampling," and differs from genuinely representative samples in applying to means of ensuring study participants accurately represent the population being studied. There were three groups of children for comparison: (i) children who had already socially transitioned, (ii) their siblings, and (iii) children in a university database of families interested in participating in child development research. As noted by the study authors, "For the first time, this article reports on socially transitioned gender children's mental health as reported by the children."[92] Reports from parents were also recorded.[93] In contrast, no reports or ratings were provided by any mental health care professional or researcher at all. That is, although adding self-assessments to the professional assessments might indeed provide novel insights, this project did not add self-assessment to professional assessment. Rather, it replaced professional assessment with self-assessment. Moreover, as already noted, Olson's data did not show what the Olson team claimed.[94] The dataset was subsequently re-analyzed, and "[T]o the contrary, the transgender children, even when supported by their parents, had significantly lower average scores on anxiety and self-worth. "[95]

92 Durwood, *et al.*, 2017, at 121 (italics added).
93 *See* Olson, *et al.*, 2016.
94 Schumm, *et al.,* 2019.
95 Schumm & Crawford, 2020, p. 9

101. It is well established in the field of psychology that participant self-assessment can be severely unreliable for multiple reasons. For example, one well-known phenomenon in psychological research is known as "socially desirable responding"—the tendency of subjects to give answers that they believe will make themselves look good, rather than accurate answers. Specifically, subjects' reports that they are enjoying good mental health and functioning well could reflect the subjects' desire to be *perceived* as healthy and as having made good choices, rather than reflecting their actual mental health.

102. In their analyses, the study reported finding no significant differences between the transgender children, their non-transgender siblings, or the community controls. As the authors noted, "[t]hese findings are in striking contrast to previous work with gender-nonconforming children who had not socially transitioned, which found very high rates of depression and anxiety."[96] The authors are correct to note that their result contrasts with the previous research, but they do not discuss that this could reflect a problem with the novel research design they used: The subjective self-reports of the children and their parents' reports may not be reflecting reality objectively, as careful professional researchers would. Because the study did not employ any method to detect and control for participants indulging in "socially desirable responding" or acting under other biasing motivations, this possibility cannot be assessed or ruled out.

103. Because this was a single-time study relying on self-reporting, rather than a before-and-after transition study relying on professional evaluation, it is not possible to know if the children reported as well-functioning are in fact well-functioning, nor if so whether they are well-functioning because they were permitted to transition, or whether instead the fact is that they were already well-functioning

[96] Durwood, *et al.*, 2017, at 116.

and therefore permitted to transition. Finally, because the TransYouth project lacks a prospective design, it cannot be known how many cases attempted transition, reacted poorly, and then detransitioned, thus never having entered into the study in the first place.

E. Assessing the "Minority Stress Hypothesis"

104. The elevated levels of mental health problems among lesbian, gay, and bisexual populations is a well-documented phenomenon, and the idea that it is caused by living within a socially hostile environment is called the *Minority Stress Hypothesis*.[97] The association is not entirely straight-forward, however. For example, although lesbian, gay, and bisexual populations are more vulnerable to suicide ideation overall, the evidence specifically on adult lesbian and bisexual women is unclear. Meyer did not include transgender populations in originating the hypothesis, and it remains a legitimate question to what extent and in what ways it might apply to gender identity.

105. Minority stress is associated, in large part, with being a visible minority. There is little evidence that transgender populations show the patterns suggested by the hypothesis. For example, the minority stress hypothesis would predict differences according to how visibly a person is discernable as a member of the minority, which often changes greatly upon transition. Biological males who are very effeminate stand out throughout childhood, but in some cases can successfully blend in as adult females; whereas the adult-onset transitioners blend in very much as heterosexual cis-gendered males during their youth and begin visibly to stand out in adulthood, only for the first time.

106. Also suggesting minority stress cannot be the full story is that the mental health symptoms associated with minority stress do not entirely correspond with

[97] Meyer, 2003.

those associated with gender dysphoria. The primary symptoms associated with minority stress are depressive symptoms, substance use, and suicidal ideation.[98] The symptoms associated with gender dysphoria indeed include depressive symptoms and suicidal ideation, but also include anxiety symptoms, Autism Spectrum Disorders, and personality disorders.

VII. Assessing Statements from Professional Associations

A. Understanding the Value of Statements from Professional Associations

107. The value of position statements from professional associations should be neither over- nor under-estimated. In the ideal, an organization of licensed health care professionals would convene a panel of experts who would systematically collect all the available evidence about an issue, synthesizing it into recommendations or enforceable standards for clinical care, according to the quality of the evidence for each alternative. For politically neutral issues, with relevant expertise contained among association members, this ideal can be readily achievable. For controversial issues with no clear consensus, the optimal statement would summarize each perspective and explicate the strengths and weaknesses of each, providing relatively reserved recommendations and suggestions for future research that might resolve the continuing questions. Several obstacles can hinder that goal, however. Committees within professional organizations are typically volunteer activities, subject to the same internal politics of all human social structures. That is, committee members are not necessarily committees of experts on a topic—they are often committees of generalists handling a wide variety of issues or members of an interest group who feel strongly about political implications of an issue, instead of scientists engaged in the objective study of the topic.

[98] Meyer, 2003.

108. Thus, documents from professional associations may represent required standards, the violation of which may merit sanctions, or may represent only recommendations or guidelines. A document may represent the views of an association's full membership or only of the committee's members (or majorities thereof). Documents may be based on systematic, comprehensive reviews of the available research or selected portions of the research. In sum, the weight best placed on any association's statement is the amount by which that association employed evidence versus other considerations in its process.

B. Misrepresentations of statements of professional associations.

109. In the presently highly politicized context, official statements of professional associations have been widely misrepresented. In preparing the present report, I searched the professional research literature for documentation of statements from these bodies and from my own files, for which I have been collecting such information for many years. I was able to identify statements from six such organizations. Although not strictly a medical association, the World Professional Association for Transgender Health (WPATH) also distributed a set of guidelines in wide use and on which other organizations' guidelines are based.

110. Notably, despite that all these medical associations reiterate the need for mental health issues to be resolved before engaging in medical transition, only the AACAP members have medical training in mental health. The other medical specialties include clinical participation with this population, but their assistance in transition generally assumes the mental health aspects have already been assessed and treated beforehand.

1. World Professional Association for Transgender Health (WPATH)

111. The WPATH standards as they relate to prepubescent children begin with the acknowledgement of the known rates of desistance among gender dysphoric children:

> [I]n follow-up studies of prepubertal children (mainly boys) who were referred to clinics for assessment of gender dysphoria, the dysphoria persisted into adulthood for only 6–23% of children (Cohen-Kettenis, 2001; Zucker & Bradley, 1995). Boys in these studies were more likely to identify as gay in adulthood than as transgender (Green, 1987; Money & Russo, 1979; Zucker & Bradley, 1995; Zuger, 1984). Newer studies, also including girls, showed a 12–27% persistence rate of gender dysphoria into adulthood (Drummond, Bradley, Peterson-Badali, & Zucker, 2008; Wallien & Cohen-Kettenis, 2008).[99]

112. That is, "In most children, gender dysphoria will disappear before, or early in, puberty."[100]

113. Although WPATH does not refer to puberty blocking medications as "experimental," the document indicates the non-routine, or at least inconsistent availability of the treatment:

> Among adolescents who are referred to gender identity clinics, the number considered eligible for early medical treatment—starting with GnRH analogues to suppress puberty in the first Tanner stages—differs among countries and centers. Not all clinics offer puberty suppression. If such treatment is offered, the pubertal stage at which adolescents are allowed to start varies from Tanner stage 2 to stage 4 (Delemarre, van de Waal & Cohen-Kettenis, 2006; Zucker et al., [2012]).[101]

114. WPATH neither endorses nor proscribes social transitions before puberty, instead recognizing the diversity among families' decisions:

> Social transitions in early childhood do occur within some families with early success. This is a controversial issue, and divergent views are held by health professionals. The current evidence base is insufficient to predict the long-term outcomes of completing a gender role transition during early childhood.[102]

115. It does caution, however, "Relevant in this respect are the previously described relatively low persistence rates of childhood gender dysphoria."[103]

---

99 Coleman, *et al*., 2012, at 172.
100 Coleman, *et al*., 2012, at 173.
101 Coleman, *et al*., 2012, at 173.
102 Coleman, *et al*., 2012, at 176.
103 Coleman, *et al*., 2012, at 176 (quoting Drummond, *et al*., 2008; Wallien & Cohen-Kettenis, 2008).

2. Endocrine Society (ES)

116. The 150,000-member Endocrine Society appointed a nine-member task force, plus a methodologist and a medical writer, who commissioned two systematic reviews of the research literature and, in 2017, published an update of their 2009 recommendations, based on the best available evidence identified. The guideline was co-sponsored by the American Association of Clinical Endocrinologists, American Society of Andrology, European Society for Paediatric Endocrinology, European Society of Endocrinology, Pediatric Endocrine Society (PES), and the World Professional Association for Transgender Health (WPATH).

117. The document acknowledged the frequency of desistance among gender dysphoric children:

> Prospective follow-up studies show that childhood GD/gender incongruence does not invariably persist into adolescence and adulthood (so-called "desisters"). Combining all outcome studies to date, the GD/gender incongruence of a minority of prepubertal children appears to persist in adolescence. . . . In adolescence, a significant number of these desisters identify as homosexual or bisexual.[104]

118. The statement similarly acknowledges inability to predict desistance or persistence, "With current knowledge, we cannot predict the psychosexual outcome for any specific child."[105]

119. Although outside their area of professional expertise, mental health issues were also addressed by the Endocrine Society, repeating the need to handle such issues before engaging in transition, "In cases in which severe psychopathology, circumstances, or both seriously interfere with the diagnostic work or make satisfactory treatment unlikely, clinicians should assist the adolescent in managing these other issues."[106] This ordering—to address mental health issues before embarking on transition—avoids relying on the unproven belief that transition will solve such issues.

---

[104] Hembree, *et al.*, 2017, at 3876.
[105] Hembree, *et al.*, 2017, at 3876.
[106] Hembree, *et al.*, 2017, at 3877.

120. The Endocrine Society did not endorse any affirmation-only approach. The guidelines were neutral with regard to social transitions before puberty, instead advising that such decisions be made only under clinical supervision: "We advise that decisions regarding the social transition of prepubertal youth are made with the assistance of a mental health professional or similarly experienced professional."[107]

121. The Endocrine Society guidelines make explicit that, after gathering information from adolescent clients seeking medical interventions and their parents, the clinician "provides correct information to prevent unrealistically high expectations [and] assesses whether medical interventions may result in unfavorable psychological and social outcomes."[108]

3. Pediatric Endocrine Society and Endocrine Society (ES/PES)

122. In 2020, the 1500-member Pediatric Endocrine Society partnered with the Endocrine Society to create and endorse a brief, two-page position statement.[109] Although strongly worded, the document provided no specific guidelines, instead deferring to the Endocrine Society guidelines.[110]

123. It is not clear to what extent this endorsement is meaningful, however. According to the PES, the Endocrine Society "recommendations include evidence that treatment of gender dysphoria/gender incongruence is medically necessary and should be covered by insurance."[111] However, the Endocrine Society makes neither statement. Although the two-page PES document mentioned insurance coverage four times, the only mention of health insurance by the Endocrine Society was: "If GnRH analog treatment is not available (insurance denial, prohibitive cost, or other reasons), postpubertal, transgender female adolescents may be treated with an

[107] Hembree, *et al.*, 2017, at 3872.
[108] Hembree, *et al.*, 2017, at 3877.
[109] PES, online; Pediatric Endocrine Society & Endocrine Society, Dec. 2020.
[110] Pediatric Endocrine Society & Endocrine Society, Dec. 2020, at 1; Hembree, *et al.*, 2017.
[111] Pediatric Endocrine Society & Endocrine Society, Dec. 2020, at 1.

antiandrogen that directly suppresses androgen synthesis or action."[112] Despite the PES asserting it as "medically necessary," the Endocrine Society stopped short of that. Its only use of that phrase was instead limiting: "We recommend that a patient pursue genital gender-affirming surgery only after the MHP and the clinician responsible for endocrine transition therapy both agree that surgery is medically necessary and would benefit the patient's overall health and/or well-being."[113]

4. American Academy of Child & Adolescent Psychiatry (AACAP)

124. The 2012 statement of the American Academy of Child & Adolescent Psychiatry (AACAP) is not an affirmation-only policy. It notes:

> Just as family rejection is associated with problems such as depression, suicidality, and substance abuse in gay youth, the proposed benefits of treatment to eliminate gender discordance in youth must be carefully weighed against such possible deleterious effects. . . . In general, it is desirable to help adolescents who may be experiencing gender distress and dysphoria to defer sex reassignment until adulthood, or at least until the wish to change sex is unequivocal, consistent, and made with appropriate consent.[114]

125. The AACAP's language repeats the description of the use of puberty blockers only as an exception: "For situations in which deferral of sex reassignment decisions until adulthood is *not clinically feasible*, one approach that has been described in case series is sex hormone suppression under endocrinological management with psychiatric consultation using gonadotropin-releasing hormone analogues."[115]

126. The AACAP statement acknowledges the long-term outcomes literature for gender dysphoric children: "In follow-up studies of prepubertal boys with gender discordance—including many without any mental health treatment—the cross gender wishes usually fade over time and do not persist into adulthood,"[116] adding that "[c]linicians should be aware of current evidence on the natural course of gender

[112] Hembree, *et al*. 2017, at 3883.
[113] Hembree, *et al*., 2017 at 3872, 3894.
[114] Adelson & AACAP, 2012, at 969.
[115] Adelson & AACAP, 2012, at 969 (italics added).
[116] Adelson & AACAP, 2012, at 963.

discordance and associated psychopathology in children and adolescents in choosing the treatment goals and modality."[117]

127. The policy similarly includes a provision for resolving mental health issues: "Gender reassignment services are available in conjunction with mental health services focusing on exploration of gender identity, cross-sex treatment wishes, counseling during such treatment if any, and *treatment of associated mental health problems*."[118] The document also includes minority stress issues and the need to deal with mental health aspects of minority status (*e.g.*, bullying).[119]

128. Rather than endorse social transition for prepubertal children, the AACAP indicates: "There is similarly no data at present from controlled studies to guide clinical decisions regarding the risks and benefits of sending gender discordant children to school in their desired gender. Such decisions must be made based on clinical judgment, bearing in mind the potential risks and benefits of doing so."[120]

5. American College of Obstetricians & Gynecologists (ACOG)

129. The American College of Obstetricians & Gynecologists (ACOG) published a "Committee Opinion" expressing recommendations in 2017. The statement indicates it was developed by the ACOG's Committee on Adolescent Health Care, but does not indicate participation based on professional expertise or a systematic method of objectively assessing the existing research. It includes the disclaimer: "This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed."[121]

---

[117] Adelson & AACAP, 2012, at 968.
[118] Adelson & AACAP, 2012, at 970 (italics added).
[119] Adelson & AACAP, 2012, at 969.
[120] Adelson & AACAP, 2012, at 969.
[121] ACOG, 2017, at 1.

130. Prepubertal children do not typically have clinical contact with gynecologists, and the ACOG recommendations include that the client additionally have a primary health care provider.[122]

131. The ACOG statement cites the statements made by other medical associations—European Society for Pediatric Endocrinology (ESPE),, PES, and the Endocrine Society—and by WPATH.[123] It does not cite any professional association of *mental* health care providers, however. The ACOG recommendations repeat the previously mentioned eligibility/readiness criteria of having no mental illness that would hamper diagnosis and no medical contraindications to treatment. It notes: "*Before* any treatment is undertaken, the patient must display eligibility and readiness (Table 1), meaning that the adolescent has been evaluated by a mental health professional, has no contraindications to therapy, and displays an understanding of the risks involved."[124]

132. The "Eligibility and Readiness Criteria" also include, "Diagnosis established for gender dysphoria, transgender, transsexualism."[125] This standard, requiring a formal diagnosis, forestalls affirmation-on-demand because self-declared self-identification is not sufficient for DSM diagnosis.

133. ACOG's remaining recommendations pertain only to post-transition, medically oriented concerns. Pre-pubertal social transition is not mentioned in the document, and the outcomes studies of gender dysphoric (prepubescent) children are not cited.

6. American College of Physicians (ACP)

134. The American College of Physicians published a position paper broadly expressing support for the treatment of LGBT patients and their families, including

[122] ACOG, 2017, at 1.
[123] ACOG, 2017, at 1, 3.
[124] ACOG, 2017, at 1, 3 (citing the Endocrine Society guidelines) (italics added).
[125] ACOG, 2017, at 3 Table 1.

nondiscrimination, antiharassment, and defining "family" by emotional rather than biological or legal relationships in visitation policies, and the inclusion of transgender health care services in public and private health benefit plans.[126]

135. ACP did not provide guidelines or standards for child or adult gender transitions. The policy paper opposed attempting "reparative therapy;" however, the paper confabulated sexual orientation with gender identity in doing so. That is, on the one hand, ACP explicitly recognized that "[s]exual orientation and gender identity are inherently different."[127] It based this statement on the fact that "the American Psychological Association conducted a literature review of 83 studies on the efficacy of efforts to change *sexual orientation*."[128] The APA's document, entitled "Report of the American Psychological Task Force on appropriate therapeutic responses to *sexual orientation*" does not include or reference research on gender identity.[129] Despite citing no research about transgenderism, the ACP nonetheless included in its statement: "Available research does not support the use of reparative therapy as an effective method in the treatment of LGB*T* persons."[130] That is, the inclusion of "T" with "LGB" is based on something other than the existing evidence.

136. There is another statement,[131] which was funded by ACP and published in the Annals of Internal Medicine under its "*In the Clinic*" feature, noting that "'In the Clinic' does not necessarily represent official ACP clinical policy."[132] The document discusses medical transition procedures for adults rather than for children, except to note that "[n]o medical intervention is indicated for prepubescent youth,"[133] that a "mental health provider can assist the child and family with identifying an

[126] Daniel & Butkus, 2015a, 2015b.
[127] Daniel & Butkus, 2015b, at 2.
[128] Daniel & Butkus, 2015b, at 8 (italics added).
[129] APA, 2009 (italics added).
[130] Daniel & Butkus, 2015b, at 8 (italics added).
[131] Safer & Tangpricha, 2019.
[132] Safer & Tangpricha, 2019, at ITC1.
[133] Safer & Tangpricha, 2019, at ITC9.

appropriate time for a social transition,"[134] and that the "child should be assessed and managed for coexisting mood disorders during this period because risk for suicide is higher than in their cisgender peers."[135]

7. American Academy of Pediatrics (AAP)

137. The policy of the American Academy of Pediatrics (AAP) is unique among the major medical associations in being the only one to endorse an affirmation-on-demand policy, including social transition before puberty without any watchful waiting period. Although changes in recommendations can obviously be appropriate in response to new research evidence, the AAP provided none. Rather, the research studies AAP cited in support of its policy simply did not say what AAP claimed they did. In fact, the references that AAP cited as the basis of their policy instead outright contradicted that policy, repeatedly endorsing watchful waiting.[136] Moreover, of all the outcomes research published, the AAP policy cited *one*, and that without mentioning the outcome data it contained.[137].

8. The ESPE-LWPES GnRH Analogs Consensus Conference Group

138. Included in the interest of completeness, there was also a collaborative report in 2009, between the European Society for Pediatric Endocrinology (ESPE) and the Lawson Wilkins Pediatric Endocrine Society (LWPES).[138] Thirty experts were convened, evenly divided between North American and European labs and evenly divided male/female, who comprehensively rated the research literature on gonadotropin-release hormone analogs in children.

139. The effort concluded that "[u]se of gonadotropin-releasing hormone analogs for conditions other than central precocious puberty requires additional investigation

---

[134] Safer & Tangpricha, 2019, at ITC9.
[135] Safer & Tangpricha, 2019, at ITC9.
[136] Cantor, 2020.
[137] Cantor, 2020, at 1.
[138] Carel et al., 2009.

and cannot be suggested routinely."[139] However, gender dysphoria was not explicitly mentioned as one of those other conditions.

[139] Carel et al. 2009, at 752.

References

Achille, C., Taggart, T., Eaton, N. R., Osipoff, J., Tafuri, K., Lane, A., & Wilson, T. A. (2020). Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: Preliminary results. *International Journal of Pediatric Endocrinology*. doi: 10.1186/s13633-020-00078-2

Adelson, S. L., & American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues. (2012). Practice parameter on gay, lesbian, or bisexual sexual orientation, gender nonconformity, and gender discordance in children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 51*, 957–974.

American College of Obstetricians and Gynecologists. (2017). Care for transgender Adolescents. Committee Opinion No. 685. Retrieved from www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2017/01/care-for-transgender-adolescents

American Psychological Association, Task Force on Appropriate Therapeutic Responses to Sexual Orientation. (2009). Report of the American Psychological Association Task Force on Appropriate Therapeutic Responses to Sexual Orientation. Retrieved from http://www. apa.org/pi/lgbc/publications/therapeutic-resp.html

Anzani, A., De Panfilis, C., Scandurra, C., & Prunas, A. (2020). Personality Disorders and Personality Profiles in a Sample of Transgender Individuals Requesting Gender-Affirming Treatments. *International Journal of Environmental Research and Public Health, 27, 17,* 1521. www.ncbi.nlm.nih.gov/pmc/articles/PMC7084367/

Bancroft, J. (2009). *Human sexuality and its problems (3rd ed.).* New York: Elsevier.

Bauer, G. R., Scheim, A. I., Pyne, J., Travers, R., & Hammond, R. (2015). Intervenable factors associated with suicide risk in transgender persons: A respondent driven sampling study in Ontario, Canada. *BMC Public Health*, 15, 525.

Biggs, M. (2019). A letter to the editor regarding the original article by Costa et al: Psychological support, puberty suppression, and psychosocial functioning in adolescents with gender dysphoria. *Journal of Sexual Medicine, 16,* 2043.

Biggs, M. (2020). Gender dysphoria and psychological functioning in adolescents treated with GnRHa: Comparing Dutch and English prospective studies. *Archives of Sexual Behavior*, 49, 2231–2236.

Blanchard, R. (1985). Typology of male-to-female transsexualism. *Archives of Sexual Behavior*, 14, 247–261.

Blanchard, R. (1988). Nonhomosexual gender dysphoria. *The Journal of Sex Research*, 24, 188–193.

Blanchard, R. (1989a). The classification and labeling of nonhomosexual gender dysphorias. *Archives of Sexual Behavior*, 18, 315–334.

Blanchard, R. (1989b). The concept of autogynephilia and the typology of male gender dysphoria. *Journal of Nervous and Mental Disease*, 177, 616–623.

Blanchard, R. (1990). Gender identity disorders in adult women. In R. Blanchard & B. W. Steiner (Eds.), *Clinical management of gender identity disorders in children and adults* (pp. 77–91). Washington, DC: American Psychiatric Press.

Blanchard, R. (1991). Clinical observations and systematic studies of autogynephilia. *Journal of Sex and Marital Therapy*, 17, 235–251.

Blanchard, R., Steiner, B. W., Clemmensen, L. H., & Dickey, R. (1989). Prediction of regrets in postoperative transsexuals. *Canadian Journal of Psychiatry*, 34, 43–45.

Bränström, R., & Pachankis, J. E. (2019). Reduction in mental health treatment utilization among transgender individuals after gender-affirming surgeries: A total population study. *American Journal of Psychiatry, 177,* 727–734.

Boivin, L., Notredame, C.-E., Jardri, R., & Medjkane, F. (2020). Supporting parents of transgender adolescents: Yes, but how? *Archives of Sexual Behavior*, 49, 81–83.

Cantor, J. M. (2020). Transgender and gender diverse children and adolescents: Fact-checking of AAP policy. *Journal of Sex & Marital Therapy*, 46, 307–313.

Canetto, S. S., Antonelli, P., Ciccotti, A., Dettore, D., & Lamis, D. A. (2021). Suicidal as normal: A lesbian, gay, and bisexual youth script? *Crisis, 42,* 292–300.

Carel, J. C., Eugster, E. A., Rogol, A., Ghizzoni, L., Palmert, M. R.; ESPE-LWPES GnRH Analogs Consensus Conference Group, Antoniazzi, F., Berenbaum, S., Bourguignon, J. P., Chrousos, G. P., Coste, J., Deal, S., de Vries, L., Foster, C., Heger, S., Holland, J., Jahnukainen, K., Juul, A., Kaplowitz, P., Lahlou, N., Lee, M. M., Lee, P., Merke, D. P., Neely, E. K., Oostdijk, W., Phillip, M., Rosenfield, R. L., Shulman, D., Styne, D., Tauber, M., Wit, J. M. (2009). Consensus statement on the use of gonadotropin-releasing hormone analogs in children. *Pediatrics*, 123(4), e752–e762.

Cohen, J., Cohen, P., West, S. G. Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.).* Mahwah, NJ: Lawrence Erlbaum Associates.

Carmichael, P., Butler, G., Masic, U., Cole, T. J., De Stavola, B. L., Davidson, S., Skageberg, E. M., Khadr, S., Viner, R. M. (2021). Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. *PLosONE*, 16(2): e0243894.

Cohen-Kettenis, P. T. (2001). Gender identity disorder in DSM? *Journal of the American Academy of Child & Adolescent Psychiatry*, 40, 391–391.

Cohen-Kettenis, P. T., Owen, A., Kaijser, V. G., Bradley, S. J., & Zucker, K. J. (2003). Demographic characteristics, social competence, and behavior problems in children with gender identity disorder: A cross-national, cross-clinic comparative analysis. *Journal of Abnormal Child Psychology*, 31, 41–53.

Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J., Fraser, L., Green, J., Knudson, G., Meyer, W. J., Monstrey, S., Adler, R. K.,

Brown, G. R., Devor, A. H., Ehrbar, R., Ettner, R., Eyler, E., Garofalo, R., Karasic, D. H., Lev, A. I., Mayer, G., Meyer-Bahlburg, H., Hall, B. P., Pfaefflin, F., Rachlin, K., Robinson, B., Schechter, L. S., Tangpricha, V., van Trotsenburg, M., Vitale, A., Winter, S., Whittle, S., Wylie, K. R., & Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *International Journal of Transgenderism*, 13, 165–232.

Costa, R., Dunsford, M., Skagerberg, E., Holt V., Carmichael, P., & Colizzi, M. (2015). Psychological support, puberty suppression, and psychosocial functioning in adolescents with gender dysphoria. *Journal of Sexual Medicine*, 12, 2206–2214.

Dahlen, S., Connolly, D., Arif, I., Hyder Junejo, M., Bewley, S., & Meads, C. (2021). *International clinical practice guidelines for gender minority/trans people: Systematic review and quality assessment. BMJ Open, 11,* e048943.

Daniel, H., & Butkus, R. (2015a). Lesbian, gay, bisexual, and transgender health disparities: Executive summary of a policy position paper from the American College of Physicians. *Annals of Internal Medicine*, 163, 135–137.

Daniel, H., & Butkus, R. (2015b). Appendix: Lesbian, gay, bisexual, and transgender health disparities: A policy position paper from the American College of Physicians. *Annals of Internal Medicine*, 163(2), [unpaginated].

de Vries, A. L. C. & Cohen-Kettenis, P. T. (2012). Clinical management of gender dysphoria in children and adolescents: The Dutch Approach. *Journal of Homosexuality*, 59, 301–320.

de Vries, A. L. C., McGuire, J. K., Steensma, T. D., Wagenaar, E. C. F., Doreleijers, T. A. H., & Cohen-Kettenis, P. T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, 134, 1–9.

de Vries, A. L. C., Steensma, T. D., Doreleijers, T. A. H., & Cohen-Kettenis, P. T. (2011). Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study. *Journal of Sexual Medicine*, 8, 2276–2283.

de Vries, A. L., Doreleijers, T. A., Steensma, T. D., & Cohen-Kettenis, P. T. (2011). Psychiatric comorbidity in gender dysphoric adolescents. *Journal of Child Psychology and Psychiatry*, 52, 1195–1202.

de Vries, A. L., Noens, I. L., Cohen-Kettenis, P. T., van Berckelaer- Onnes, I. A., & Doreleijers, T. A. (2010). Autism spectrum disorders in gender dysphoric children and adolescents. *Journal of Autism and Developmental Disorders*, 40, 930–936.

Delemarre-van de Waal, H. A., & Cohen- Kettenis, P. T. (2006). Clinical management of gender identity disorder in adolescents: A protocol on psychological and paediatric endocrinology aspects. *European Journal of Endocrinology*, 155 (suppl 1), S131–S137.

Dhejne, C., Van Vlerken, R., Geylens, G., & Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry*, 28, 44–57.

Dhejne, C., Lichtenstein, P., Boman, M., Johansson, A. L. V., Langström, N., & Landén, M. (2011). Long-term follow-up of transsexual persons undergoing sex

reassignment surgery: Cohort study in Sweden. *PLoS ONE 6*(2), e16885.

Dhejneberg, C., Öberg, K., Arver, S., & Landén, M. (2014). An analysis of all applications for sex reassignment surgery in Sweden, 1960–2010: Prevalence, incidence, and regrets. *Archives of Sexual Behavior*, 43, 1535–1545.

Drummond, K. D., Bradley, S. J., Peterson-Badali, M., & Zucker, K. J. (2008). A follow up study of girls with gender identity disorder. *Developmental Psychology*, 44, 34–45.

Durwood, L., McLaughlin, K. A., & Olson, K. R. (2017). Mental health and self-worth in socially transitioned transgender youth. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56, 116–123.

Finland Ministry of Social Affairs and Health, Council for Choices in Health Care. (2020, June 11). *Medical treatment methods for dysphoria associated with variations in gender identity in minors—Recommendation.* Retrieved from https://palveluvalikoima.fi/documents/1237350/22895008/Summary_minors_en+(1).pdf/fa2054c5-8c35-8492-59d6-b3de1c00de49/Summary_minors_en+(1).pdf?t=1631773838474

Finland Ministry of Social Affairs and Health, Council for Choices in Health Care. (2020, June 16). *Medical treatments for gender dysphoria that reduces functional capacity in transgender people—Recommendation.* Retrieved from https://palveluvalikoima.fi/documents/1237350/22895838/Summary+transgender.pdf/2cc3f053-2e34-39ce-4e21-becd685b3044/Summary+transgender.pdf?t=1592318543000

Freeman, A., Mergl, R., Kohls, E., Székely, A., Gusmao, R., Arensman, E., Koburger, N., Hegerl, U., & Rummel-Kluge, C. (2017). A cross-national study on gender differences in suicide intent. *BMC Psychiatry, 17,* 234.

Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality*. New Haven, CT: Yale University Press.

Hembree, W. C., Cohen-Kettenis, P. T., Gooren, L., Hannema, S. E., Meyer, W. J., Murad, M. H., Rosenthal, S. M., Safer, T. D., Tangpricha, V., & T'Sjoen, G. G. (2017). Endocrine treatment of gender-dysphoric/ gender-incongruent persons: An Endocrine Society clinical practice guideline. *Journal of Clinical Endocrinology & Metabolism*, 102, 3869–3903.

Hepp, U., Kraemer, B., Schnyder, U., Miller, N., & Delsignore, A. (2005). Psychiatric comorbidity in gender identity disorder. *Journal of Psychosomatic Research, 58,* 259–261.

Hisle-Gorman, E., Schvey, N. A., Adirim, T. A., Rayne, A. K., Susi, A., Roberts, T. A., & Klein, D. A. (2021). Mental healthcare utilization of transgender youth before and after affirming treatment. *The Journal of Sexual Medicine, 18,* 1444–1454.

Holt, V., Skagerberg, E., & Dunsford, M. (2016). Young people with features of gender dysphoria: Demographics and associated difficulties. *Clinical Child Psychology and Psychiatry, 21*, 108–118.

Jacobs, L. A., Rachlin, K., Erickson-Schroth, L., & Janssen, A. (2014). Gender dysphoria and co-occurring autism spectrum disorders: Review, case examples,

and treatment considerations. *LGBT Health, 1*, 277–282.

Janssen, A., Busa, S., Wernick, J. (2019). The complexities of treatment planning for transgender youth with co-occurring severe mental illness: A literature review and case study. *Archives of Sexual Behavior, 48*, 2003–2009.

Janssen, A., Huang, H., & Duncan, C. (2016). Gender variance among youth with autism spectrum disorders: A retrospective chart review. *Transgender Health, 1*, 63–68.

Kalin, N. H. (2020). Reassessing mental health treatment utilization reduction in transgender individuals after gender-affirming surgeries: A comment by the Editor on the process. *American Journal of Psychiatry, 177,* 765.

Kaltiala, R, Heino, E., Työläjärvi, & Suomalainen, L. (2020). Adolescent development and psychosocial functioning after starting cross-sex hormones for gender dysphoria. *Nordic Journal of Psychiatry, 74,* 213–219.

Kaltiala-Heino, R., Sumia, M., Työläjärvi, M., & Lindberg, N. (2015). Two years of gender identity service for minors: Overrepresentation of natal girls with severe problems in adolescent development. *Child and Adolescent Psychiatry and Mental Health, 9*, 9.

Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body dissatisfaction and mental health outcomes of youth on gender- affirming hormone therapy. *Pediatrics, 145*, e20193006.

Lehmann, K., Rosato, M., McKenna, H., & Leavey, G. (2021). Dramaturgical accounts of transgender individuals: Impression management in the presentation of self to specialist gender services. *Archives of Sexual Behavior, 50,* 3539–3549.

Littman, L. (2018). Parent reports of adolescents and young adults perceived to show signs of a raid onset of gender dysphoria. *PLoS ONE, 13*(8), e0202330.

May, T., Pang, K., & Williams, K. J. (2016). Gender variance in children and adolescents with autism spectrum disorder from the National Database for Autism Research. *International Journal of Transgenderism, 18*, 7–15.

McCall, B. (2021, October 7). Psychiatrists shift stance on gender dysphoria, recommend therapy. *Medscape Psychiatry*. Retrieved from www.medscape.com/viewarticle/960390?src=soc_tw_share

McNeil, J., Ellis, S. J., & Eccles, F. J. R. (2017). Suicide in trans populations: A systematic review of prevalence and correlates. Psychology of Sexual Orientation and Gender Diversity, 4, 341–353.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*, 674–697.

Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/ role in childhood: Longitudinal follow-up. *Journal of Pediatric Psychology, 4*, 29–41.

Mustanski, B. S., Garofalo, R., & Emerson, E. M. (2010). Mental health disorders,

psychological distress, and suicidality in a diverse sample of lesbian, gay, bisexual, and transgender youths. *American Journal of Public Health, 100*, 2426–2432.

Nainggolan, L. (2021, May 12). Hormonal Tx of youth with gender dysphoria stops in Sweden. Medscape Psychiatry. Retrieved from www.medscape.com/viewarticle/950964?src=soc_tw_share

Olson, K. R., Durwood, L., DeMeules, M., & McLaughlin, K. A. (2016). Mental health of transgender children who are supported in their identities. *Pediatrics, 137*, e20153223.

Pediatric Endocrine Society & Endocrine Society. (2020, December 15). *Transgender health*. Retrieved from www.endocrine.org/advocacy/position-statements/transgender-health.

Pediatric Endocrine Society. (Online). About PES. Retrieved from https://pedsendo.org/about-pes/

Rae, J. R., Gülgoz, S., Durwood, L., DeMeules, M., Lowe, R., Lindquist, G., & Olson, K. R. (2019). Predicting early-childhood gender transitions. *Psychological Science, 30*, 669–681.

Rafferty, J., AAP Committee on psychosocial aspects of child and family health, AAP Committee on adolescence, AAP Section on lesbian, gay, bisexual, and transgender health and wellness. (2018). Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics, 142*(4), e20182162

Reisner, S. L., Vetters, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., & Mimiaga, M. J. (2015). Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. *Journal of Adolescent Health, 56(3)*, 274–279.

Reuter, T. R., Sharp, C., Kalpakci, A. H., Choi, H. J., & Temple, J. R. (2016). Sexual orientation and Borderline Personality Disorder features in a community sample of adolescents. *Journal of Personality Disorders, 30,* 694–707.

Rodriguez-Seiljas, C., Morgan, T. A., & Zimmerman, M. (2021). A population-based examination of criterion-level disparities in the diagnosis of Borderline Personality Disorder among sexual minority adults. *Assessment, 28,* 1097–1109.

Safer, J. D., Tangpricha, V. (2019). In the clinic: Care of the transgender patient. *Annals of Internal Medicine, 171*(1), ITC1–ITC6.

Sax, L. (2002). How common is Intersex? A response to Ann Fausto-Sterling. *The Journal of Sex Research, 39,* 174–178.

Schumm, W. R., Crawford, D. W., Fawver, M. M., Gray, N. K., Niess, Z. M., & Wagner, A. D. (2019). Statistical errors in major journals: Two case studies used in a basic statistics class to assess understanding of applied statistics. *Psychology and Education—An Interdisciplinary Journal, 56,* 35–42.

Schumm, W. R., & Crawford, D. W. (2020). Is research on transgender children what it seems? Comments on recent research on transgender children with high levels

of parental support. *The Linacre Quarterly, 87,* 9–24.

Singh, D., Bradley, S. J., & Zucker, K. J. (2021). A follow-up study of boys with gender identity disorder. *Frontiers in Psychiatry*, 12, 632784.

Skagerberg, E., Parkinson, R., & Carmichael, P. (2013). Self-harming thoughts and behaviors in a group of children and adolescents with gender dysphoria. *International Journal of Transgenderism, 14*, 86–92.

Skelly, A. C., Dettori, J. R., & Brodt, E. D. (2012). Assessing bias: The importance of considering confounding. *Evidence-based Spine-Care Journal, 3,* 9–12.

Spack, N. P., Edwards-Leeper, L., Feldman, H. A., Leibowitz, S., Mandel, F., Diamond, D. A., & Vance, S. R. (2012). Children and adolescents with gender identity disorder referred to a pediatric medical center. *Pediatrics, 129,* 418–425.

Spack, N. P. (2013). Management of transgenderism. *Journal of the American Medical Association, 309,* 478–484.

Steensma, T. D., & Cohen-Kettenis, P. T. (2018a). A critical commentary on "A critical commentary on follow-up studies and 'desistance' theories about transgender and gender-nonconforming children". *International Journal of Transgenderism, 19*, 225–230.

Steensma, T. D., Cohen-Kettenis, P. T., & Zucker, K. J. (2018b). Evidence for a change in the sex ratio of children referred for gender dysphoria: Data from the Center of Expertise on Gender Dysphoria in Amsterdam (1988–2016). *Journal of Sex & Marital Therapy, 44,* 713–715.

Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52*, 582–590.

Strang, J. F., Kenworthy, L., Dominska, A., Sokoloff, J., Kenealy, L. E., Berl, M., … Wallace, G. L. (2014). Increased gender variance in autism spectrum disorders and attention deficit hyperactivity disorder. *Archives of Sexual Behavior, 43*, 1525–1533.

Strang, J. F., Meagher, H., Kenworthy, L., de Vries, A. L., Menvielle, E., Leibowitz, S., … Anthony, L. G. (2016). Initial clinical guidelines for co-occurring autism spectrum disorder and gender dysphoria or incongruence in adolescents. *Journal of Clinical Child and Adolescent Psychology, 47*, 105–115.

Swedish Agency of Health Technology Assessment and Assessment of Social Services. (2019). *Gender dysphoria in children and adolescents: An inventory of the literature.* Retrieved from: www.sbu.se/en/publications/sbu-bereder/gender-dysphoria-in-children-and-adolescents-an-inventory-of-the-literature/

Temple Newhook, J., Pyne, J., Winters, K., Feder, S., Holmes, C., Tosh, J. Sinnott, M.-L., Jamieson, A., & Pickett, S. (2018). A critical commentary on follow-up studies and "desistance" theories about transgender and gender-nonconforming children. *International Journal of Transgenderism, 19*, 212–224.

Tetelepta, B. (2021, Feb 27). More research is urgently needed into transgender care for young people: 'Where does the large flow of children come from?' [translated]. Algemeen Dagblad. Retrieved from www.ad.nl/nijmegen/dringend-meer-onderzoek-nodig-naar-transgenderzorg-aan-jongeren-waar-komt-de-grote-stroom-kinderen-vandaan~aec79d00/?referrer=https%3A%2F%2Ft.co%2F.

Thrower, E., Bretherton, I., Pang, K. C., Zajac, J. D., & Cheung, A. S. (2020). Prevalence of Autism Spectrum Disorder and Attention-Deficit Hyperactivity Disorder amongst individuals with Gender Dysphoria: A systematic review. *Journal of Autism and Developmental Disorders*, 50, 695–706.

United Kingdom National Health Service (NHS), National Institute for Health and Care Excellence, (2021, March 11). *Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria.* Retrieved from www.evidence.nhs.uk/document?id=2334888&returnUrl=search%3ffrom%3d2020-01-01%26q%3dgender%2bdysphoria%26sp%3don%26to%3d2021-03-31

van der Miesen, A. I. R., Steensma, T. D., de Vries, A. L. C., Bos, H., Popma, A. (2020). Psychological functioning in transgender adolescence before and after gender-affirmative care compared with cisgender general population peers. *Journal of Adolescent Health, 66*, 699–704.

Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*, 1413–1423.

Wallien, M. S., Swaab, H., & Cohen-Kettenis, P. T. (2007). Psychiatric comorbidity among children with gender identity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*, 1307–1314.

Warrier, V., Greenberg, D. M., Weir, E., Buckingham, C., Smith, P., Lai, M.-C., Allison, C., & Baron-Cohen, S. (2020). Elevated rates of autism, other neurodevelopmental and psychiatric diagnoses, and autistic traits in transgender and gender-diverse individuals. *Nature Communications, 11,* 3959.

Wiepjes, C. M., den Heijer, M., Bremmer, M. A., Nota, N. M., de Block, C. J. M., Coumou, B. J. G., & Steensma, T. D. (2020). Trends in suicide death risk in transgender people: Results from the Amsterdam Cohort of Gender Dysphoria study (1972–2017). *Acta Psychiatrica Scandinavica, 141,* 486–491.

Wiepjes, C. M., Nota, N. M., de Bok, C. J. M., Klaver, M., de Vries, A. L. C., Wensing-Kruger, S. A., de Jongh, R. T., Bouman, M-B., Steensma, T. D., Cohen-Kettenis, P., Gooren, L. J. G., Kreukels B. P. C., & den Heijer, M. (2018). The Amsterdam Cohort of Gender Dysphoria Study (1972–2015): Trends in prevalence, treatment, and regrets. *Journal of Sexual Medicine, 15*, 582–590.

Winters, K., Temple Newhook, J., Pyne, J., Feder, S., Jamieson, A., Holmes, C., Sinnott, M.-L., Pickett, S., & Tosh J. (2018). Learning to listen to trans and gender diverse children: A Response to Zucker (2018) and Steensma and Cohen-Kettenis (2018). *International Journal of Transgenderism, 19*, 246–250.

Wood, H., Sasaki, S., Bradley, S. J., Singh, D., Fantus, S., Own-Anderson, A., Di Giacomo, A., Bain, J., & Zucker, K. J. (2013). Patterns of referral to a gender

identity service for children and adolescents (1976–2011): Age, sex ratio, and sexual orientation. *Journal of Sex & Marital Therapy, 39,* 1–6.

Zanarini, M. C., Magni, L. R., Temes, C. M., Hein, K. E., Aguirre, B. A., & Goodman, M. (2021). Sexual orientation and gender of intimate relationship partners among adolescents with BPD and psychiatrically healthy adolescents. *Journal of Personality Disorders, 35 (Suppl. B),* 1–7.

Zucker, K. J. (2018). The myth of persistence: Response to "A critical commentary on follow-up studies and 'desistance' theories about transgender and gender-nonconforming children" by Temple Newhook et al. (2018). *International Journal of Transgenderism, 19*, 231–245.

Zucker, K. J. (2019). Adolescents with gender dysphoria: Reflections on some contemporary clinical and research issues. *Archives of Sexual Behavior, 48,* 1983–1992.

Zucker, K. J., & Bradley, S. J. (1995). *Gender identity disorder and psychosexual problems in children and adolescents*. New York: Guilford Press.

Zucker, K. J., Bradley, S. J., Owen-Anderson, A., Kibblewhite, S. J., Wood, H., Singh, D., & Choi, K. (2012). Demographics, behavior problems, and psychosexual characteristics of adolescents with gender identity disorder or transvestic fetishism. *Journal of Sex & Marital Therapy, 38,* 151–189.

Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172*, 90–97.

EXPERT REPORT OF JAMES M. CANTOR, PHD

APPENDIX 1

James M. Cantor, PhD

Toronto Sexuality Centre
2 Carlton Ave., suite 1820
Toronto, Ontario, Canada M5B 1J3

416-766-8733 (o)
416-352-6003 (f)
jamescantorphd@gmail.com

EDUCATION

Postdoctoral Fellowship Jan., 2000–May, 2004
Centre for Addiction and Mental Health • Toronto, Canada

Doctor of Philosophy Sep., 1993–Jun., 2000
Psychology • McGill University • Montréal, Canada

Master of Arts Sep., 1990–Jan., 1992
Psychology • Boston University • Boston, MA

Bachelor of Science Sep. 1984–Aug., 1988
Interdisciplinary Science • Rensselaer Polytechnic Institute • Troy, NY
Concentrations: Computer science, mathematics, physics

EMPLOYMENT HISTORY

Director Feb., 2017–Present
Toronto Sexuality Centre • Toronto, Canada

Senior Scientist (Inaugural Member) Aug., 2012–May, 2018
Campbell Family Mental Health Research Institute
Centre for Addiction and Mental Health • Toronto, Canada

Senior Scientist Jan., 2012–May, 2018
Complex Mental Illness Program
Centre for Addiction and Mental Health • Toronto, Canada

Head of Research Nov., 2010–Apr. 2014
Sexual Behaviours Clinic
Centre for Addiction and Mental Health • Toronto, Canada

Research Section Head Dec., 2009–Sep. 2012
Law & Mental Health Program
Centre for Addiction and Mental Health • Toronto, Canada

Psychologist May, 2004–Dec., 2011
Law & Mental Health Program
Centre for Addiction and Mental Health • Toronto, Canada

Clinical Psychology Intern Sep., 1998–Aug., 1999
Centre for Addiction and Mental Health • Toronto, Canada

Teaching Assistant Sep., 1993–May, 1998
Department of Psychology
McGill University • Montréal, Canada

Pre-Doctoral Practicum Sep., 1993–Jun., 1997
Sex and Couples Therapy Unit
Royal Victoria Hospital • Montréal, Canada

Pre-Doctoral Practicum May, 1994–Dec., 1994
Department of Psychiatry
Queen Elizabeth Hospital • Montréal, Canada

ACADEMIC APPOINTMENTS

Associate Professor Jul., 2010–May, 2019
Department of Psychiatry
University of Toronto Faculty of Medicine • Toronto, Canada

Adjunct Faculty Aug. 2013–Jun., 2018
Graduate Program in Psychology
York University • Toronto, Canada

Associate Faculty (Hon) Oct., 2017–Dec., 2017
School of Behavioural, Cognitive & Social Science
University of New England • Armidale, Australia

Assistant Professor Jun., 2005–Jun., 2010
Department of Psychiatry
University of Toronto Faculty of Medicine • Toronto, Canada

Adjunct Faculty Sep., 2004–Jun., 2010
Clinical Psychology Residency Program
St. Joseph's Healthcare • Hamilton, Canada

PUBLICATIONS

1. Cantor, J. M. (2020). Transgender and gender diverse children and adolescents: Fact-checking of AAP policy. *Journal of Sex & Marital Therapy, 46,* 307–313. doi: 10.1080/0092623X.2019.1698481
2. Shirazi, T., Self, H., Cantor, J., Dawood, K., Cardenas, R.,Rosenfield, K., Ortiz, T., Carré, J., McDaniel, M., Blanchard, R., Balasubramanian, R., Delaney, A., Crowley, W., S Marc Breedlove, S. M., & Puts, D. (2020). Timing of peripubertal steroid exposure predicts visuospatial cognition in men: Evidence from three samples. *Hormones and Behavior, 121, 104712*.
3. Stephens, S., Seto, M. C., Cantor, J. M., & Lalumière, M. L. (2019). The Screening Scale for Pedophilic Interest-Revised (SSPI-2) may be a measure of pedohebephilia. *Journal of Sexual Medicine, 16,* 1655−1663. doi: 10.1016/j.jsxm.2019.07.015
4. McPhail, I. V., Hermann, C. A., Fernane, S., Fernandez, Y. M., Nunes, K. L., & Cantor, J. M. (2019). Validity in phallometric testing for sexual interests in children: A meta-analytic review. *Assessment, 26,* 535–551. doi: 10.1177/1073191117706139
5. Cantor, J. M. (2018). Can pedophiles change? *Current Sexual Health Reports, 10,* 203–206. doi: 10.1007/s11930-018-0165-2
6. Cantor, J. M., & Fedoroff, J. P. (2018). Can pedophiles change? Response to opening arguments and conclusions. *Current Sexual Health Reports, 10,* 213–220. doi: 10.1007/s11930-018-0167-0z
7. Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2018). Age diversity among victims of hebephilic sexual offenders. *Sexual Abuse, 30,* 332–339. doi: 10.1177/1079063216665837
8. Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2018). The relationships between victim age, gender, and relationship polymorphism and sexual recidivism. *Sexual Abuse, 30,* 132−146. doi: 10.1177/1079063216630983
9. Stephens, S., Newman, J. E., Cantor, J. M., & Seto, M. C. (2018). The Static-99R predicts sexual and violent recidivism for individuals with low intellectual functioning. *Journal of Sexual Aggression, 24,* 1–11. doi: 10.1080/13552600.2017.1372936
10. Cantor, J. M. (2017). Sexual deviance or social deviance: What MRI research reveals about pedophilia. *ATSA Forum, 29*(2). Association for the Treatment of Sexual Abusers. Beaverton, OR. http://newsmanager.commpartners.com/atsa/issues/2017-03-15/2.html
11. Walton, M. T., Cantor, J. M., Bhullar, N., & Lykins, A. D. (2017). Hypersexuality: A critical review and introduction to the "Sexhavior Cycle." *Archives of Sexual Behavior, 46,* 2231–2251. doi: 10.1007/s10508-017-0991-8
12. Stephens, S., Leroux, E., Skilling, T., Cantor, J. M., & Seto, M. C. (2017). A taxometric analysis of pedophilia utilizing self-report, behavioral, and sexual arousal indicators. *Journal of Abnormal Psychology, 126,* 1114–1119. doi: 10.1037/abn0000291
13. Fazio, R. L., Dyshniku, F., Lykins, A. D., & Cantor, J. M. (2017). Leg length versus torso length in pedophilia: Further evidence of atypical physical development early in life. *Sexual Abuse: A Journal of Research and Treatment, 29,* 500–514. doi: 10.1177/1079063215609936
14. Seto, M. C., Stephens, S., Lalumière, M. L., & Cantor, J. M. (2017). The Revised Screening Scale for Pedophilic Interests (SSPI-2): Development and criterion-related validation. *Sexual Abuse: A Journal of Research and Treatment, 29,* 619–635. doi:

10.1177/1079063215612444

15. Stephens, S., Cantor, J. M., Goodwill, A. M., & Seto, M. C. (2017). Multiple indicators of sexual interest in prepubescent or pubescent children as predictors of sexual recidivism. *Journal of Consulting and Clinical Psychology, 85,* 585–595. doi: 10.1037/ccp0000194
16. Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2017). Evidence of construct validity in the assessment of hebephilia. *Archives of Sexual Behavior, 46,* 301–309. doi: 10.1007/s10508-016-0907-z
17. Walton, M. T., Cantor, J. M., & Lykins, A. D. (2017). An online assessment of personality, psychological, and sexuality trait variables associated with self-reported hypersexual behavior. *Archives of Sexual Behavior, 46,* 721–733. doi: 10.1007/s10508-015-0606-1
18. Cantor, J. M., Lafaille, S. J., Hannah, J., Kucyi, A., Soh, D. W., Girard, T. A., & Mikulis, D. J. (2016). Independent component analysis of resting-state functional magnetic resonance imaging in pedophiles. *Journal of Sexual Medicine, 13,* 1546–1554. doi: 10.1016/j.jsxm.2016.08.004
19. Cantor, J. M., & McPhail, I. V. (2016). Non-offending pedophiles. *Current Sexual Health Reports, 8,* 121–128. doi: 10.1007/s11930-016-0076-z
20. Cantor, J. M. (2015). Milestones in sex research: What causes pedophilia? In J. S. Hyde, J. D. DeLamater, & E. S. Byers (Eds.), *Understanding human sexuality* (6th Canadian ed.) (pp. 452–453). Toronto: McGraw-Hill Ryerson.
21. Cantor, J. M. (2015). Pedophilia. In R. Cautin & S. Lilienfeld (Eds.), *Encyclopedia of clinical psychology.* Malden, MA: Wiley-Blackwell. doi: 10.1002/9781118625392.wbecp184
22. Nunes, K. L., & Cantor, J. M. (2015). Sex offenders. In P. Whelehan & A. Bolin (Eds.), *International encyclopedia of human sexuality.* Malden, MA: Wiley-Blackwell.
23. Cantor, J. M., Lafaille, S., Soh, D. W., Moayedi, M., Mikulis, D. J., & Girard, T. A. (2015). Diffusion Tensor Imaging of pedophilia. *Archives of Sexual Behavior, 44,* 2161–2172. doi: 10.1007/s10508-015-0599-9
24. Cantor, J. M., & McPhail, I. V. (2015). Sensitivity and specificity for the phallometric test of hebephilia. *Journal of Sexual Medicine, 12,* 1940–1950. doi: 10.1111/jsm12970
25. Dyshniku, F., Murray, M. E., Fazio, R. L., Lykins, A. D., & Cantor, J. M. (2015). Minor physical anomalies as a window into the prenatal origins of pedophilia. *Archives of Sexual Behavior, 44,* 2151–2159. doi: 10.1007/s10508-015-0564-7
26. Fazio, R. L., & Cantor, J. M. (2015). Factor structure of the Edinburgh Handedness Inventory versus the Fazio Laterality Inventory in a population with established atypical handedness. *Applied Neuropsychology, 22,* 156–160. doi: 10.1080/23279095.2014.940043
27. Lykins, A. D., Robinson, J. J., LeBlanc, S., & Cantor, J. M. (2015). The effects of common medications on volumetric phallometry. *Journal of Sexual Aggression, 21,* 385–393. doi: 10.1080/13552600.2014.900121
28. Sutton, K. S., Stratton, N., Pytyck, J., Kolla, N. J., & Cantor, J. M. (2015). Patient characteristics by type of hypersexuality referral: A quantitative chart review of 115 consecutive male cases. *Journal of Sex and Marital Therapy, 41,* 563−580. doi: 10.1080/0092623X.2014.935539
29. Cantor, J. M. (2014). Gold star pedophiles in general sex therapy practice. In Y. M. Binik and K. Hall (Eds.), *Principles and practice of sex therapy* (5th ed.) (pp. 219–234). New York: Guilford.

30. Cantor, J. M., & Sutton, K. S. (2014). Paraphilia, gender dysphoria, and hypersexuality. In P. H. Blaney & T. Millon (Eds.), *Oxford textbook of psychopathology* (3rd ed.) (pp. 589–614). New York: Oxford University Press.
31. Chivers, M. L., Roy, C., Grimbos, T., Cantor, J. M., & Seto, M. C. (2014). Specificity of sexual arousal for sexual activities in men and women with conventional and masochistic sexual interests. *Archives of Sexual Behavior, 43,* 931−940. doi: 10.1007/s10508-013-0174-1
32. Fazio, R. L., Lykins, A. D., & Cantor, J. M. (2014). Elevated rates of atypical-handedness in paedophilia: Theory and implications. *Laterality, 19,* 690−704. doi: 10.1080/1357650X.2014.898648
33. Lykins, A. D., & Cantor, J. M. (2014). Vorarephilia: A case study in masochism and erotic consumption. *Archives of Sexual Behavior, 43,* 181–186. doi: 10.1007/s10508-013-0185-y
34. Cantor, J. M., Klein, C., Lykins, A., Rullo, J. E., Thaler, L., & Walling, B. R. (2013). A treatment-oriented typology of self-identified hypersexuality referrals. *Archives of Sexual Behavior, 42,* 883–893. doi: 10.1007/s10508-013-0085-1
35. Blanchard, R., Kuban, M. E., Blak, T., Klassen, P. E., Dickey, R., & Cantor, J. M. (2012). Sexual attraction to others: A comparison of two models of alloerotic responding in men. *Archives of Sexual Behavior, 41,* 13–29. doi: 10.1007/s10508-010-9675-3
36. Cantor, J. M. (2012). Brain research and pedophilia: What it says and what it means [Invited article]. *Sex Offender Law Report, 13,* 81–85.
37. Cantor, J. M. (2012). Is homosexuality a paraphilia? The evidence for and against. *Archives of Sexual Behavior, 41,* 237–247. doi: 10.1007/s10508-012-9900-3
38. Lykins, A. D., Cantor, J. M., Kuban, M. E., Blak, T., Dickey, R., Klassen, P. E., & Blanchard, R. (2010). Sexual arousal to female children in gynephilic men. *Sexual Abuse: A Journal of Research and Treatment, 22,* 279–289. doi: 10.1177/1079063210372141
39. Lykins, A. D., Cantor, J. M., Kuban, M. E., Blak, T., Dickey, R., Klassen, P. E., & Blanchard, R. (2010). The relation between peak response magnitudes and agreement in diagnoses obtained from two different phallometric tests for pedophilia. *Sexual Abuse: A Journal of Research and Treatment, 22,* 42–57. doi: 10.1177/1079063209352094
40. Cantor, J. M., Blanchard, R., & Barbaree, H. E. (2009). Sexual disorders. In P. H. Blaney & T. Millon (Eds.), *Oxford textbook of psychopathology* (2nd ed.) (pp. 527–548). New York: Oxford University Press.
41. Barbaree, H. E., Langton, C. M., Blanchard, R., & Cantor, J. M. (2009). Aging versus stable enduring traits as explanatory constructs in sex offender recidivism: Partitioning actuarial prediction into conceptually meaningful components. *Criminal Justice and Behavior: An International Journal, 36,* 443–465. doi: 10.1177/0093854809332283
42. Blanchard, R., Kuban, M. E., Blak, T., Cantor, J. M., Klassen, P. E., & Dickey, R. (2009). Absolute versus relative ascertainment of pedophilia in men. *Sexual Abuse: A Journal of Research and Treatment, 21,* 431–441. doi: 10.1177/1079063209347906
43. Blanchard, R., Lykins, A. D., Wherrett, D., Kuban, M. E., Cantor, J. M., Blak, T., Dickey, R., & Klassen, P. E. (2009). Pedophilia, hebephilia, and the DSM–V. *Archives of Sexual Behavior, 38,* 335–350. doi: 10.1007/s10508-008-9399-9.
44. Cantor, J. M. (2008). MRI research on pedophilia: What ATSA members should know

[Invited article]. *ATSA Forum, 20*(4), 6–10.

45. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2008). Cerebral white matter deficiencies in pedophilic men. *Journal of Psychiatric Research, 42,* 167–183. doi: 10.1016/j.jpsychires.2007.10.013
46. Blanchard, R., Kolla, N. J., Cantor, J. M., Klassen, P. E., Dickey, R., Kuban, M. E., & Blak, T. (2007). IQ, handedness, and pedophilia in adult male patients stratified by referral source. *Sexual Abuse: A Journal of Research and Treatment, 19,* 285–309. doi: 10.1007/s11194-007-9049-0
47. Cantor, J. M., Kuban, M. E., Blak, T., Klassen, P. E., Dickey, R., & Blanchard, R. (2007). Physical height in pedophilia and hebephilia. *Sexual Abuse: A Journal of Research and Treatment, 19,* 395–407. doi: 10.1007/s11194-007-9060-5
48. Blanchard, R., Cantor, J. M., Bogaert, A. F., Breedlove, S. M., & Ellis, L. (2006). Interaction of fraternal birth order and handedness in the development of male homosexuality. *Hormones and Behavior, 49,* 405–414. doi: 10.1016/j.yhbeh.2005.09.002
49. Blanchard, R., Kuban, M. E., Blak, T., Cantor, J. M., Klassen, P., & Dickey, R. (2006). Phallometric comparison of pedophilic interest in nonadmitting sexual offenders against stepdaughters, biological daughters, other biologically related girls, and unrelated girls. *Sexual Abuse: A Journal of Research and Treatment, 18,* 1–14. doi: 10.1007/s11194-006-9000-9
50. Blanchard, R., Cantor, J. M., & Robichaud, L. K. (2006). Biological factors in the development of sexual deviance and aggression in males. In H. E. Barbaree & W. L. Marshall (Eds.), *The juvenile sex offender* (2nd ed., pp. 77–104). New York: Guilford.
51. Cantor, J. M., Kuban, M. E., Blak, T., Klassen, P. E., Dickey, R., & Blanchard, R. (2006). Grade failure and special education placement in sexual offenders' educational histories. *Archives of Sexual Behavior, 35,* 743–751. doi: 10.1007/s10508-006-9018-6
52. Seto, M. C., Cantor, J. M., & Blanchard, R. (2006). Child pornography offenses are a valid diagnostic indicator of pedophilia. *Journal of Abnormal Psychology, 115,* 610–615. doi: 10.1037/0021-843X.115.3.610
53. Zucker, K. J., Mitchell, J. N., Bradley, S. J., Tkachuk, J., Cantor, J. M., & Allin, S. M. (2006). The Recalled Childhood Gender Identity/Gender Role Questionnaire: Psychometric properties. *Sex Roles, 54,* 469–483. doi 10.1007/s11199-006-9019-x
54. Cantor, J. M., Blanchard, R., Robichaud, L. K., & Christensen, B. K. (2005). Quantitative reanalysis of aggregate data on IQ in sexual offenders. *Psychological Bulletin, 131,* 555–568. doi: 10.1037/0033-2909.131.4.555
55. Cantor, J. M., Klassen, P. E., Dickey, R., Christensen, B. K., Kuban, M. E., Blak, T., Williams, N. S., & Blanchard, R. (2005). Handedness in pedophilia and hebephilia. *Archives of Sexual Behavior, 34,* 447–459. doi: 10.1007/s10508-005-4344-7
56. Cantor, J. M., Blanchard, R., Christensen, B. K., Dickey, R., Klassen, P. E., Beckstead, A. L., Blak, T., & Kuban, M. E. (2004). Intelligence, memory, and handedness in pedophilia. *Neuropsychology, 18,* 3–14. doi: 10.1037/0894-4105.18.1.3
57. Blanchard, R., Kuban, M. E., Klassen, P., Dickey, R., Christensen, B. K., Cantor, J. M., & Blak, T. (2003). Self-reported injuries before and after age 13 in pedophilic and non-pedophilic men referred for clinical assessment. *Archives of Sexual Behavior, 32,* 573–581.

58. Blanchard, R., Christensen, B. K., Strong, S. M., Cantor, J. M., Kuban, M. E., Klassen, P., Dickey, R., & Blak, T. (2002). Retrospective self-reports of childhood accidents causing unconsciousness in phallometrically diagnosed pedophiles. *Archives of Sexual Behavior, 31,* 511–526.
59. Cantor, J. M., Blanchard, R., Paterson, A. D., Bogaert, A. F. (2002). How many gay men owe their sexual orientation to fraternal birth order? *Archives of Sexual Behavior, 31,* 63–71.
60. Cantor, J. M., Binik, Y. M., & Pfaus, J. G. (1999). Chronic fluoxetine inhibits sexual behavior in the male rat: Reversal with oxytocin. *Psychopharmacology*, *144*, 355–362.
61. Binik, Y. M., Cantor, J., Ochs, E., & Meana, M. (1997). From the couch to the keyboard: Psychotherapy in cyberspace. In S. Kiesler (Ed.), *Culture of the internet* (pp. 71–100). Mahwah, NJ: Lawrence Erlbaum.
62. Johnson, M. K., O’Connor, M., & Cantor, J. (1997). Confabulation, memory deficits, and frontal dysfunction. *Brain and Cognition*, *34*, 189–206.
63. Keane, M. M., Gabrieli, J. D. E., Monti, L. A., Fleischman, D. A., Cantor, J. M., & Nolan, J. S. (1997). Intact and impaired conceptual memory processes in amnesia. *Neuropsychology*, *11*, 59–69.
64. Pilkington, N. W., & Cantor, J. M. (1996). Perceptions of heterosexual bias in professional psychology programs: A survey of graduate students. *Professional Psychology: Research and Practice*, *27*, 604–612.

PUBLICATIONS

LETTERS AND COMMENTARIES

1. Cantor, J. M. (2015). Research methods, statistical analysis, and the phallometric test for hebephilia: Response to Fedoroff [Editorial Commentary]. *Journal of Sexual Medicine, 12,* 2499–2500. doi: 10.1111/jsm.13040
2. Cantor, J. M. (2015). In his own words: Response to Moser [Editorial Commentary]. *Journal of Sexual Medicine, 12,* 2502–2503. doi: 10.1111/jsm.13075
3. Cantor, J. M. (2015). Purported changes in pedophilia as statistical artefacts: Comment on Müller et al. (2014). *Archives of Sexual Behavior, 44,* 253–254. doi: 10.1007/s10508-014-0343-x
4. McPhail, I. V., & Cantor, J. M. (2015). Pedophilia, height, and the magnitude of the association: A research note. *Deviant Behavior, 36,* 288–292. doi: 10.1080/01639625.2014.935644
5. Soh, D. W., & Cantor, J. M. (2015). A peek inside a furry convention [Letter to the Editor]. *Archives of Sexual Behavior, 44,* 1–2. doi: 10.1007/s10508-014-0423-y
6. Cantor, J. M. (2012). Reply to Italiano's (2012) comment on Cantor (2011) [Letter to the Editor]. *Archives of Sexual Behavior, 41,* 1081–1082. doi: 10.1007/s10508-012-0011-y
7. Cantor, J. M. (2012). The errors of Karen Franklin's *Pretextuality* [Commentary]. *International Journal of Forensic Mental Health, 11,* 59–62. doi: 10.1080/14999013.2012.672945
8. Cantor, J. M., & Blanchard, R. (2012). White matter volumes in pedophiles, hebephiles, and teleiophiles [Letter to the Editor]. *Archives of Sexual Behavior, 41, 749–752.* doi: 10.1007/s10508-012-9954-2
9. Cantor, J. M. (2011). New MRI studies support the Blanchard typology of male-to-female transsexualism [Letter to the Editor]. *Archives of Sexual Behavior, 40*, 863–864. doi: 10.1007/s10508-011-9805-6
10. Zucker, K. J., Bradley, S. J., Own-Anderson, A., Kibblewhite, S. J., & Cantor, J. M. (2008). Is gender identity disorder in adolescents coming out of the closet? *Journal of Sex and Marital Therapy, 34,* 287–290.
11. Cantor, J. M. (2003, Summer). Review of the book *The Man Who Would Be Queen* by J. Michael Bailey. *Newsletter of Division 44 of the American Psychological Association, 19*(2), 6.
12. Cantor, J. M. (2003, Spring). What are the hot topics in LGBT research in psychology? *Newsletter of Division 44 of the American Psychological Association, 19*(1), 21–24.
13. Cantor, J. M. (2002, Fall). Male homosexuality, science, and pedophilia. *Newsletter of Division 44 of the American Psychological Association, 18*(3), 5–8.
14. Cantor, J. M. (2000). Review of the book *Sexual Addiction: An Integrated Approach. Journal of Sex and Marital Therapy, 26*, 107–109.

EDITORIALS

1. Cantor, J. M. (2012). Editorial. *Sexual Abuse: A Journal of Research and Treatment, 24.*

2. Cantor, J. M. (2011). Editorial note. *Sexual Abuse: A Journal of Research and Treatment, 23,* 414.
3. Barbaree, H. E., & Cantor, J. M. (2010). Performance indicates for *Sexual Abuse: A Journal of Research and Treatment* (SAJRT) [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 22,* 371–373.
4. Barbaree, H. E., & Cantor, J. M. (2009). *Sexual Abuse: A Journal of Research and Treatment* performance indicators for 2007 [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 21,* 3–5.
5. Zucker, K. J., & Cantor, J. M. (2009). Cruising: Impact factor data [Editorial]. *Archives of Sexual Research, 38,* 878–882.
6. Barbaree, H. E., & Cantor, J. M. (2008). Performance indicators for *Sexual Abuse: A Journal of Research and Treatment* [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 20,* 3–4.
7. Zucker, K. J., & Cantor, J. M. (2008). The *Archives* in the era of online first ahead of print[Editorial]. *Archives of Sexual Behavior, 37,* 512–516.
8. Zucker, K. J., & Cantor, J. M. (2006). The impact factor: The *Archives* breaks from the pack [Editorial]. *Archives of Sexual Behavior, 35,* 7–9.
9. Zucker, K. J., & Cantor, J. M. (2005). The impact factor: “Goin’ up” [Editorial]. *Archives of Sexual Behavior, 34,* 7–9.
10. Zucker, K., & Cantor, J. M. (2003). The numbers game: The impact factor and all that jazz [Editorial]. *Archives of Sexual Behavior, 32,* 3–5.

FUNDING HISTORY

Principal Investigators:	Doug VanderLaan, Meng-Chuan Lai
Co-Investigators:	James M. Cantor, Megha Mallar Chakravarty, Nancy Lobaugh, M. Palmert, M. Skorska
Title:	*Brain function and connectomics following sex hormone treatment in adolescents experience gender dysphoria*
Agency:	Canadian Institutes of Health Research (CIHR), Behavioural Sciences-B-2
Funds:	$650,250 / 5 years (July, 2018)

Principal Investigator:	Michael C. Seto
Co-Investigators:	Martin Lalumière , James M. Cantor
Title:	*Are connectivity differences unique to pedophilia?*
Agency:	University Medical Research Fund, Royal Ottawa Hospital
Funds:	$50,000 / 1 year (January, 2018)

Principal Investigator:	Lori Brotto
Co-Investigators:	Anthony Bogaert, James M. Cantor, Gerulf Rieger
Title:	*Investigations into the neural underpinnings and biological correlates of asexuality*
Agency:	Natural Sciences and Engineering Research Council (NSERC), Discovery Grants Program
Funds:	$195,000 / 5 years (April, 2017)

Principal Investigator:	Doug VanderLaan
Co-Investigators:	Jerald Bain, James M. Cantor, Megha Mallar Chakravarty, Sofia Chavez, Nancy Lobaugh, and Kenneth J. Zucker
Title:	*Effects of sex hormone treatment on brain development: A magnetic resonance imaging study of adolescents with gender dysphoria*
Agency:	Canadian Institutes of Health Research (CIHR), Transitional Open Grant Program
Funds:	$952,955 / 5 years (September, 2015)

Principal Investigator:	James M. Cantor
Co-Investigators:	Howard E. Barbaree, Ray Blanchard, Robert Dickey, Todd A. Girard, Phillip E. Klassen, and David J. Mikulis
Title:	*Neuroanatomic features specific to pedophilia*
Agency:	Canadian Institutes of Health Research (CIHR)
Funds:	$1,071,920 / 5 years (October, 2008)

Principal Investigator:	James M. Cantor
Title:	*A preliminary study of fMRI as a diagnostic test of pedophilia*
Agency:	Dean of Medicine New Faculty Grant Competition, Univ. of Toronto
Funds:	$10,000 (July, 2008)

Principal Investigator:	James M. Cantor
Co-Investigator:	Ray Blanchard
Title:	*Morphological and neuropsychological correlates of pedophilia*
Agency:	Canadian Institutes of Health Research (CIHR)
Funds:	$196,902 / 3 years (April, 2006)

KEYNOTE AND INVITED ADDRESSES

1. Cantor, J. M. (2021, September 28). *No topic too tough for this expert panel: A year in review.* Plenary Session for the 40th Annual Research and Treatment Conference, Association for the Treatment of Sexual Abusers.
2. Cantor, J. M. (2019, May 1). *Introduction and Q&A for 'I, Pedophile.'* StopSO 2nd Annual Conference, London, UK.
3. Cantor, J. M. (2018, August 29). *Neurobiology of pedophilia or paraphilia? Towards a 'Grand Unified Theory' of sexual interests.* Keynote address to the International Association for the Treatment of Sexual Offenders, Vilnius, Lithuania.
4. Cantor, J. M. (2018, August 29). *Pedophilia and the brain: Three questions asked and answered.* Preconference training presented to the International Association for the Treatment of Sexual Offenders, Vilnius, Lithuania.
5. Cantor, J. M. (2018, April 13). *The responses to* I, Pedophile *from We, the people.* Keynote address to the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, Minnesota.
6. Cantor, J. M. (2018, April 11). *Studying atypical sexualities: From vanilla to* I, Pedophile. Full day workshop at the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, Minnesota.
7. Cantor, J. M. (2018, January 20). *How much sex is enough for a happy life?* Invited lecture to the University of Toronto Division of Urology Men's Health Summit, Toronto, Canada.
8. Cantor, J. M. (2017, November 2). Pedophilia as a phenomenon of the brain: Update of evidence and the public response. Invited presentation to the 7th annual SBC education event, Centre for Addiction and Mental Health, Toronto, Canada.
9. Cantor, J. M. (2017, June 9). Pedophilia being in the brain: The evidence and the public's reaction. Invited presentation to *SEXposium at the ROM: The science of love and sex,* Toronto, Canada.
10. Cantor, J. M., & Campea, M. (2017, April 20). *"I, Pedophile" showing and discussion.* Invited presentation to the 42nd annual meeting of the Society for Sex Therapy and Research, Montréal, Canada.
11. Cantor, J. M. (2017, March 1). *Functional and structural neuroimaging of pedophilia: Consistencies across methods and modalities.* Invited lecture to the Brain Imaging Centre, Royal Ottawa Hospital, Ottawa, Canada.
12. Cantor, J. M. (2017, January 26). *Pedophilia being in the brain: The evidence and the public reaction.* Inaugural keynote address to the University of Toronto Sexuality Interest Network, Toronto, Ontario, Canada.
13. Cantor, J. M. (2016, October 14). *Discussion of CBC's "I, Pedophile."* Office of the Children's Lawyer Educational Session, Toronto, Ontario, Canada.
14. Cantor, J. M. (2016, September 15). *Evaluating the risk to reoffend: What we know and what we don't.* Invited lecture to the Association of Ontario Judges, Ontario Court of Justice Annual Family Law Program, Blue Mountains, Ontario, Canada. [Private link only: https://vimeo.com/239131108/3387c80652]
15. Cantor, J. M. (2016, April 8). *Pedophilia and the brain: Conclusions from the second generation of research.* Invited lecture at the 10th annual Risk and Recovery Forensic Conference, Hamilton, Ontario.

16. Cantor, J. M. (2016, April 7). *Hypersexuality without the hyperbole.* Keynote address to the 10th annual Risk and Recovery Forensic Conference, Hamilton, Ontario.
17. Cantor, J. M. (2015, November). *No one asks to be sexually attracted to children: Living in Daniel's World.* Grand Rounds, Centre for Addiction and Mental Health. Toronto, Canada.
18. Cantor, J. M. (2015, August). *Hypersexuality: Getting past whether "it" is or "it" isn't.* Invited address at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.
19. Cantor, J. M. (2015, July). *A unified theory of typical and atypical sexual interest in men: Paraphilia, hypersexuality, asexuality, and vanilla as outcomes of a single, dual opponent process.* Invited presentation to the 2015 Puzzles of Sexual Orientation conference, Lethbridge, AL, Canada.
20. Cantor, J. M. (2015, June). *Hypersexuality.* Keynote Address to the Ontario Problem Gambling Provincial Forum. Toronto, Canada.
21. Cantor, J. M. (2015, May). *Assessment of pedophilia: Past, present, future.* Keynote Address to the International Symposium on Neural Mechanisms Underlying Pedophilia and Child Sexual Abuse (NeMUP). Berlin, Germany.
22. Cantor, J. M. (2015, March). *Prevention of sexual abuse by tackling the biggest stigma of them all: Making sex therapy available to pedophiles.* Keynote address to the 40th annual meeting of the Society for Sex Therapy and Research, Boston, MA.
23. Cantor, J. M. (2015, March. *Pedophilia: Predisposition or perversion?* Panel discussion at Columbia University School of Journalism. New York, NY.
24. Cantor, J. M. (2015, February). *Hypersexuality.* Research Day Grand Rounds presentation to Ontario Shores Centre for Mental Health Sciences, Whitby, Ontario, Canada.
25. Cantor, J. M. (2015, January). *Brain research and pedophilia: What it means for assessment, research, and policy.* Keynote address to the inaugural meeting of the Netherlands Association for the Treatment of Sexual Abusers, Utrecht, Netherlands.
26. Cantor, J. M. (2014, December). *Understanding pedophilia and the brain: Implications for safety and society.* Keynote address for The Jewish Community Confronts Violence and Abuse: Crisis Centre for Religious Women, Jerusalem, Israel.
27. Cantor, J. M. (2014, October). *Understanding pedophilia & the brain.* Invited full-day workshop for the Sex Offender Assessment Board of Pennsylvania, Harrisburg, PA.
28. Cantor, J. M. (2014, September). *Understanding neuroimaging of pedophilia: Current status and implications.* Invited lecture presented to the Mental Health and Addition Rounds, St. Joseph's Healthcare, Hamilton, Ontario, Canada.
29. Cantor, J. M. (2014, June). *An evening with Dr. James Cantor.* Invited lecture presented to the Ontario Medical Association, District 11 Doctors' Lounge Program, Toronto, Ontario, Canada.
30. Cantor, J. M. (2014, April). *Pedophilia and the brain.* Invited lecture presented to the University of Toronto Medical Students lunchtime lecture. Toronto, Ontario, Canada.
31. Cantor, J. M. (2014, February). *Pedophilia and the brain: Recap and update.* Workshop presented at the 2014 annual meeting of the Washington State Association for the Treatment of Sexual Abusers, Cle Elum, WA.
32. Cantor, J. M., Lafaille, S., Hannah, J., Kucyi, A., Soh, D., Girard, T. A., & Mikulis, D. M. (2014, February). *Functional connectivity in pedophilia.* Neuropsychiatry Rounds, Toronto Western Hospital, Toronto, Ontario, Canada.

33. Cantor, J. M. (2013, November). *Understanding pedophilia and the brain: The basics, the current status, and their implications.* Invited lecture to the Forensic Psychology Research Centre, Carleton University, Ottawa, Canada.
34. Cantor, J. M. (2013, November). *Mistaking puberty, mistaking hebephilia.* Keynote address presented to the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.
35. Cantor, J. M. (2013, October). *Understanding pedophilia and the brain: A recap and update.* Invited workshop presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.
36. Cantor, J. M. (2013, October). *Compulsive-hyper-sex-addiction: I don't care what we all it, what can we* do*?* Invited address presented to the Board of Examiners of Sex Therapists and Counselors of Ontario, Toronto, Ontario, Canada.
37. Cantor, J. M. (2013, September). *Neuroimaging of pedophilia: Current status and implications.* McGill University Health Centre, Department of Psychiatry Grand Rounds presentation, Montréal, Québec, Canada.
38. Cantor, J. M. (2013, April). *Understanding pedophilia and the brain.* Invited workshop presented at the 2013 meeting of the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, MN.
39. Cantor, J. M. (2013, April). *The neurobiology of pedophilia and its implications for assessment, treatment, and public policy.* Invited lecture at the 38th annual meeting of the Society for Sex Therapy and Research, Baltimore, MD.
40. Cantor, J. M. (2013, April). *Sex offenders: Relating research to policy.* Invited roundtable presentation at the annual meeting of the Academy of Criminal Justice Sciences, Dallas, TX.
41. Cantor, J. M. (2013, March). *Pedophilia and brain research: From the basics to the state-of-the-art.* Invited workshop presented to the annual meeting of the Forensic Mental Health Association of California, Monterey, CA.
42. Cantor, J. M. (2013, January). *Pedophilia and child molestation.* Invited lecture presented to the Canadian Border Services Agency, Toronto, Ontario, Canada.
43. Cantor, J. M. (2012, November). *Understanding pedophilia and sexual offenders against children: Neuroimaging and its implications for public safety.* Invited guest lecture to University of New Mexico School of Medicine Health Sciences Center, Albuquerque, NM.
44. Cantor, J. M. (2012, November). *Pedophilia and brain research.* Invited guest lecture to the annual meeting of the Circles of Support and Accountability, Toronto, Ontario, Canada.
45. Cantor, J. M. (2012, January). *Current findings on pedophilia brain research.* Invited workshop at the San Diego International Conference on Child and Family Maltreatment, San Diego, CA.
46. Cantor, J. M. (2012, January). *Pedophilia and the risk to re-offend.* Invited lecture to the Ontario Court of Justice Judicial Development Institute, Toronto, Ontario, Canada.
47. Cantor, J. M. (2011, November). *Pedophilia and the brain: What it means for assessment, treatment, and policy.* Plenary Lecture presented at the Association for the Treatment of Sexual Abusers, Toronto, Ontario, Canada.
48. Cantor, J. M. (2011, July). *Towards understanding contradictory findings in the neuroimaging of pedophilic men.* Keynote address to 7th annual conference on Research in Forensic Psychiatry, Regensberg, Germany.

49. Cantor, J. M. (2011, March). *Understanding sexual offending and the brain: Brain basics to the state of the art.* Workshop presented at the winter conference of the Oregon Association for the Treatment of Sexual Abusers, Oregon City, OR.
50. Cantor, J. M. (2010, October). *Manuscript publishing for students.* Workshop presented at the 29th annual meeting of the Association for the Treatment of Sexual Abusers, Phoenix, AZ.
51. Cantor, J. M. (2010, August). *Is sexual orientation a paraphilia?* Invited lecture at the International Behavioral Development Symposium, Lethbridge, Alberta, Canada.
52. Cantor, J. M. (2010, March). *Understanding sexual offending and the brain: From the basics to the state of the art.* Workshop presented at the annual meeting of the Washington State Association for the Treatment of Sexual Abusers, Blaine, WA.
53. Cantor, J. M. (2009, January). *Brain structure and function of pedophilia men.* Neuropsychiatry Rounds, Toronto Western Hospital, Toronto, Ontario.
54. Cantor, J. M. (2008, April). *Is pedophilia caused by brain dysfunction?* Invited address to the University-wide Science Day Lecture Series, SUNY Oswego, Oswego, NY.
55. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2006, September). *MRIs of pedophilic men.* Invited presentation at the 25th annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.
56. Cantor, J. M., Blanchard, R., & Christensen, B. K. (2003, March). *Findings in and implications of neuropsychology and epidemiology of pedophilia.* Invited lecture at the 28th annual meeting of the Society for Sex Therapy and Research, Miami.
57. Cantor, J. M., Christensen, B. K., Klassen, P. E., Dickey, R., & Blanchard, R. (2001, July). *Neuropsychological functioning in pedophiles.* Invited lecture presented at the 27th annual meeting of the International Academy of Sex Research, Bromont, Canada.
58. Cantor, J. M., Blanchard, R., Christensen, B., Klassen, P., & Dickey, R. (2001, February). *First glance at IQ, memory functioning and handedness in sex offenders.* Lecture presented at the Forensic Lecture Series, Centre for Addiction and Mental Health, Toronto, Ontario, Canada.
59. Cantor, J. M. (1999, November). *Reversal of SSRI-induced male sexual dysfunction: Suggestions from an animal model.* Grand Rounds presentation at the Allan Memorial Institute, Royal Victoria Hospital, Montréal, Canada.

PAPER PRESENTATIONS AND SYMPOSIA

1. Cantor, J. M. (2020, April). "I'd rather have a trans kid than a dead kid": Critical assessment of reported rates of suicidality in trans kids. *Paper presented at the annual meeting of the Society for the Sex Therapy and Research.* Online in lieu of in person meeting.
2. Stephens, S., Lalumière, M., Seto, M. C., & Cantor, J. M. (2017, October). *The relationship between sexual responsiveness and sexual exclusivity in phallometric profiles.* Paper presented at the annual meeting of the Canadian Sex Research Forum, Fredericton, New Brunswick, Canada.
3. Stephens, S., Cantor, J. M., & Seto, M. C. (2017, March). *Can the SSPI-2 detect hebephilic sexual interest?* Paper presented at the annual meeting of the American-Psychology Law Society Annual Meeting, Seattle, WA.
4. Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2015, October). *Victim choice polymorphism and recidivism.* Symposium Presentation. Paper presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montréal, Canada.
5. McPhail, I. V., Hermann, C. A., Fernane, S. Fernandez, Y., Cantor, J. M., & Nunes, K. L. (2014, October). *Sexual deviance in sexual offenders against children: A meta-analytic review of phallometric research.* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
6. Stephens, S., Seto, M. C., Cantor, J. M., & Goodwill, A. M. (2014, October). *Is hebephilic sexual interest a criminogenic need?: A large scale recidivism study.* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
7. Stephens, S., Seto, M. C., Cantor, J. M., & Lalumière, M. (2014, October). *Development and validation of the Revised Screening Scale for Pedophilic Interests (SSPI–2).* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
8. Cantor, J. M., Lafaille, S., Hannah, J., Kucyi, A., Soh, D., Girard, T. A., & Mikulis, D. M. (2014, September). *Pedophilia and the brain: White matter differences detected with DTI.* Paper presented at the 13th annual meeting of the International Association for the Treatment of Sexual Abusers, Porto, Portugal.
9. Stephens, S., Seto, M., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2014, March). *The role of hebephilic sexual interests in sexual victim choice.* Paper presented at the annual meeting of the American Psychology and Law Society, New Orleans, LA.
10. McPhail, I. V., Fernane, S. A., Hermann, C. A., Fernandez, Y. M., Nunes, K. L., & Cantor, J. M. (2013, November). *Sexual deviance and sexual recidivism in sexual offenders against children: A meta-analysis.* Paper presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.
11. Cantor, J. M. (2013, September). *Pedophilia and the brain: Current MRI research and its implications.* Paper presented at the 21st annual World Congress for Sexual Health, Porto Alegre, Brazil. [Featured among Best Abstracts, top 10 of 500.]
12. Cantor, J. M. (Chair). (2012, March). *Innovations in sex research.* Symposium conducted at the 37th annual meeting of the Society for Sex Therapy and Research, Chicago.
13. Cantor, J. M., & Blanchard, R. (2011, August). fMRI versus phallometry in the diagnosis of pedophilia and hebephilia. In J. M. Cantor (Chair), *Neuroimaging of men's object*

preferences. Symposium presented at the 37th annual meeting of the International Academy of Sex Research, Los Angeles, USA.

14. Cantor, J. M. (Chair). (2011, August). *Neuroimaging of men's object preferences.* Symposium conducted at the 37th annual meeting of the International Academy of Sex Research, Los Angeles.
15. Cantor, J. M. (2010, October). A meta-analysis of neuroimaging studies of male sexual arousal. In S. Stolerú (Chair), *Brain processing of sexual stimuli in pedophilia: An application of functional neuroimaging.* Symposium presented at the 29th annual meeting of the Association for the Treatment of Sexual Abusers, Phoenix, AZ.
16. Chivers, M. L., Seto, M. C., Cantor, J. C., Grimbos, T., & Roy, C. (April, 2010). *Psychophysiological assessment of sexual activity preferences in women.* Paper presented at the 35th annual meeting of the Society for Sex Therapy and Research, Boston, USA.
17. Cantor, J. M., Girard, T. A., & Lovett-Barron, M. (2008, November). *The brain regions that respond to erotica: Sexual neuroscience for dummies.* Paper presented at the 51st annual meeting of the Society for the Scientific Study of Sexuality, San Juan, Puerto Rico.
18. Barbaree, H., Langton, C., Blanchard, R., & Cantor, J. M. (2007, October). *The role of age-at-release in the evaluation of recidivism risk of sexual offenders.* Paper presented at the 26th annual meetingof the Association for the Treatment of Sexual Abusers, San Diego.
19. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2006, July). *Pedophilia and brain morphology.* Abstract and paper presented at the 32nd annual meeting of the International Academy of Sex Research, Amsterdam, Netherlands.
20. Seto, M. C., Cantor, J. M., & Blanchard, R. (2006, March). *Child pornography offending is a diagnostic indicator of pedophilia*. Paper presented at the 2006 annual meeting of the American Psychology-Law Society Conference, St. Petersburg, Florida.
21. Blanchard, R., Cantor, J. M., Bogaert, A. F., Breedlove, S. M., & Ellis, L. (2005, August). *Interaction of fraternal birth order and handedness in the development of male homosexuality.* Abstract and paper presented at the International Behavioral Development Symposium, Minot, North Dakota.
22. Cantor, J. M., & Blanchard, R. (2005, July). *Quantitative reanalysis of aggregate data on IQ in sexual offenders.* Abstract and poster presented at the 31st annual meeting of the International Academy of Sex Research, Ottawa, Canada.
23. Cantor, J. M. (2003, August). *Sex reassignment on demand: The clinician's dilemma.* Paper presented at the 111th annual meeting of the American Psychological Association, Toronto, Canada.
24. Cantor, J. M. (2003, June). *Meta-analysis of VIQ–PIQ differences in male sex offenders.* Paper presented at the Harvey Stancer Research Day, Toronto, Ontario, Canada.
25. Cantor, J. M. (2002, August). *Gender role in autogynephilic transsexuals: The more things change…* Paper presented at the 110th annual meeting of the American Psychological Association, Chicago.

26. Cantor, J. M., Christensen, B. K., Klassen, P. E., Dickey, R., & Blanchard, R. (2001, June). *IQ, memory functioning, and handedness in male sex offenders.* Paper presented at the Harvey Stancer Research Day, Toronto, Ontario, Canada.
27. Cantor, J. M. (1998, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 106th annual meeting of the American Psychological Association.
28. Cantor, J. M. (1997, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 105th annual meeting of the American Psychological Association.
29. Cantor, J. M. (1997, August). *Convention orientation for lesbian, gay, and bisexual students*. Paper presented at the 105th annual meeting of the American Psychological Association.
30. Cantor, J. M. (1996, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 104th annual meeting of the American Psychological Association.
31. Cantor, J. M. (1996, August). *Symposium: Question of inclusion: Lesbian and gay psychologists and accreditation*. Paper presented at the 104th annual meeting of the American Psychological Association, Toronto.
32. Cantor, J. M. (1996, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 104th annual meeting of the American Psychological Association.
33. Cantor, J. M. (1995, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 103rd annual meeting of the American Psychological Association.
34. Cantor, J. M. (1995, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 103rd annual meeting of the American Psychological Association.
35. Cantor, J. M. (1994, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 102nd annual meeting of the American Psychological Association.
36. Cantor, J. M. (1994, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 102nd annual meeting of the American Psychological Association.
37. Cantor, J. M., & Pilkington, N. W. (1992, August). *Homophobia in psychology programs: A survey of graduate students.* Paper presented at the Centennial Convention of the American Psychological Association, Washington, DC. (ERIC Document Reproduction Service No. ED 351 618)
38. Cantor, J. M. (1991, August). *Being gay and being a graduate student: Double the memberships, four times the problems*. Paper presented at the 99th annual meeting of the American Psychological Association, San Francisco.

POSTER PRESENTATIONS

1. Klein, L., Stephens, S., Goodwill, A. M., Cantor, J. M., & Seto, M. C. (2015, October). *The psychological propensities of risk in undetected sexual offenders.* Poster presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montréal, Canada.
2. Pullman, L. E., Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2015, October). *Why are incest offenders less likely to recidivate?* Poster presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montréal, Canada.
3. Seto, M. C., Stephens, S. M., Cantor, J. M., Lalumiere, M. L., Sandler, J. C., & Freeman, N. A. (2015, August). *The development and validation of the Revised Screening Scale for Pedophilic Interests (SSPI-2).* Poster presentation at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.
4. Soh, D. W., & Cantor, J. M. (2015, August). *A peek inside a furry convention.* Poster presentation at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.
5. VanderLaan, D. P., Lobaugh, N. J., Chakravarty, M. M., Patel, R., Chavez, S. Stojanovski, S. O., Takagi, A., Hughes, S. K., Wasserman, L., Bain, J., Cantor, J. M., & Zucker, K. J. (2015, August). *The neurohormonal hypothesis of gender dysphoria: Preliminary evidence of cortical surface area differences in adolescent natal females.* Poster presentation at the 31st annual meeting of the International Academy of Sex Research. Toronto, Canada.
6. Cantor, J. M., Lafaille, S. J., Moayedi, M., Mikulis, D. M., & Girard, T. A. (2015, June). *Diffusion tensor imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses.* Harvey Stancer Research Day, Toronto, Ontario Canada.
7. Newman, J. E., Stephens, S., Seto, M. C., & Cantor, J. M. (2014, October). *The validity of the Static-99 in sexual offenders with low intellectual abilities.* Poster presentation at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
8. Lykins, A. D., Walton, M. T., & Cantor, J. M. (2014, June). *An online assessment of personality, psychological, and sexuality trait variables associated with self-reported hypersexual behavior.* Poster presentation at the 30th annual meeting of the International Academy of Sex Research, Dubrovnik, Croatia.
9. Stephens, S., Seto, M. C., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2013, November). *The utility of phallometry in the assessment of hebephilia.* Poster presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.
10. Stephens, S., Seto, M. C., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2013, October). *The role of hebephilic sexual interests in sexual victim choice.* Poster presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.
11. Fazio, R. L., & Cantor, J. M. (2013, October). *Analysis of the Fazio Laterality Inventory (FLI) in a population with established atypical handedness.* Poster presented at the 33rd annual meeting of the National Academy of Neuropsychology, San Diego.
12. Lafaille, S., Hannah, J., Soh, D., Kucyi, A., Girard, T. A., Mikulis, D. M., & Cantor, J. M. (2013, August). *Investigating resting state networks in pedohebephiles.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.

13. McPhail, I. V., Lykins, A. D., Robinson, J. J., LeBlanc, S., & Cantor, J. M. (2013, August). *Effects of prescription medication on volumetric phallometry output.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.
14. Murray, M. E., Dyshniku, F., Fazio, R. L., & Cantor, J. M. (2013, August). *Minor physical anomalies as a window into the prenatal origins of pedophilia.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.
15. Sutton, K. S., Stephens, S., Dyshniku, F., Tulloch, T., & Cantor, J. M. (2013, August). *Pilot group treatment for "procrasturbation."* Poster presented at 39th annual meeting of the International Academy of Sex Research, Chicago.
16. Sutton, K. S., Pytyck, J., Stratton, N., Sylva, D., Kolla, N., & Cantor, J. M. (2013, August). *Client characteristics by type of hypersexuality referral: A quantitative chart review.* Poster presented at the 39th annual meeting of the International Academy of Sex Research, Chicago.
17. Fazio, R. L., & Cantor, J. M. (2013, June). *A replication and extension of the psychometric properties of the Digit Vigilance Test.* Poster presented at the 11th annual meeting of the American Academy of Clinical Neuropsychology, Chicago.
18. Lafaille, S., Moayedi, M., Mikulis, D. M., Girard, T. A., Kuban, M., Blak, T., & Cantor, J. M. (2012, July). *Diffusion Tensor Imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses.* Poster presented at the 38th annual meeting of the International Academy of Sex Research, Lisbon, Portugal.
19. Lykins, A. D., Cantor, J. M., Kuban, M. E., Blak, T., Dickey, R., Klassen, P. E., & Blanchard, R. (2010, July). *Sexual arousal to female children in gynephilic men.* Poster presented at the 38th annual meeting of the International Academy of Sex Research, Prague, Czech Republic.
20. Cantor, J. M., Girard, T. A., Lovett-Barron, M., & Blak, T. (2008, July). *Brain regions responding to visual sexual stimuli: Meta-analysis of PET and fMRI studies.* Abstract and poster presented at the 34th annual meeting of the International Academy of Sex Research, Leuven, Belgium.
21. Lykins, A. D., Blanchard, R., Cantor, J. M., Blak, T., & Kuban, M. E. (2008, July). *Diagnosing sexual attraction to children: Considerations for DSM-V.* Poster presented at the 34th annual meeting of the International Academy of Sex Research, Leuven, Belgium.
22. Cantor, J. M., Blak, T., Kuban, M. E., Klassen, P. E., Dickey, R. and Blanchard, R. (2007, October). *Physical height in pedophilia and hebephilia.* Poster presented at the 26th annual meeting of the Association for the Treatment of Sexual Abusers, San Diego.
23. Cantor, J. M., Blak, T., Kuban, M. E., Klassen, P. E., Dickey, R. and Blanchard, R. (2007, August). *Physical height in pedophilia and hebephilia.* Abstract and poster presented at the 33rd annual meeting of the International Academy of Sex Research, Vancouver, Canada.
24. Puts, D. A., Blanchard, R., Cardenas, R., Cantor, J., Jordan, C. L., & Breedlove, S. M. (2007, August). *Earlier puberty predicts superior performance on male-biased visuospatial tasks in men but not women.* Abstract and poster presented at the 33rd annual meeting of the International Academy of Sex Research, Vancouver, Canada.
25. Seto, M. C., Cantor, J. M., & Blanchard, R. (2005, November). *Possession of child pornography is a diagnostic indicator of pedophilia.* Poster presented at the 24th annual meeting of the Association for the Treatment of Sexual Abusers, New Orleans.

26. Blanchard, R., Cantor, J. M., Bogaert, A. F., Breedlove. S. M., & Ellis, L. (2005, July). *Interaction of fraternal birth order and handedness in the development of male homosexuality.* Abstract and poster presented at the 31st annual meeting of the International Academy of Sex Research, Ottawa, Canada.
27. Cantor, J. M., & Blanchard, R. (2003, July). *The reported VIQ–PIQ differences in male sex offenders are artifactual?* Abstract and poster presented at the 29th annual meeting of the International Academy of Sex Research, Bloomington, Indiana.
28. Christensen, B. K., Cantor, J. M., Millikin, C., & Blanchard, R. (2002, February). *Factor analysis of two brief memory tests: Preliminary evidence for modality-specific measurement.* Poster presented at the 30th annual meeting of the International Neuropsychological Society, Toronto, Ontario, Canada.
29. Cantor, J. M., Blanchard, R., Paterson, A., Bogaert, A. (2000, June). *How many gay men owe their sexual orientation to fraternal birth order?* Abstract and poster presented at the International Behavioral Development Symposium, Minot, North Dakota.
30. Cantor, J. M., Binik, Y., & Pfaus, J. G. (1996, November). *Fluoxetine inhibition of male rat sexual behavior: Reversal by oxytocin*. Poster presented at the 26th annual meeting of the Society for Neurosciences, Washington, DC.
31. Cantor, J. M., Binik, Y., & Pfaus, J. G. (1996, June). *An animal model of fluoxetine-induced sexual dysfunction: Dose dependence and time course*. Poster presented at the 28th annual Conference on Reproductive Behavior, Montréal, Canada.
32. Cantor, J. M., O'Connor, M. G., Kaplan, B., & Cermak, L. S. (1993, June). *Transient events test of retrograde memory: Performance of amnestic and unimpaired populations*. Poster presented at the 2nd annual science symposium of the Massachusetts Neuropsychological Society, Cambridge, MA.

EDITORIAL AND PEER-REVIEWING ACTIVITIES

Editor-in-Chief

Sexual Abuse: A Journal of Research and Treatment	Jan., 2010–Dec., 2014

Editorial Board Memberships

Journal of Sexual Aggression	Jan., 2010–Dec., 2021
Journal of Sex Research, The	Jan., 2008–Aug., 2020
Sexual Abuse: A Journal of Research and Treatment	Jan., 2006–Dec., 2019
Archives of Sexual Behavior	Jan., 2004–Present
The Clinical Psychologist	Jan., 2004–Dec., 2005

Ad hoc Journal Reviewer Activity

American Journal of Psychiatry
Annual Review of Sex Research
Archives of General Psychiatry
Assessment
Biological Psychiatry
BMC Psychiatry
Brain Structure and Function
British Journal of Psychiatry
British Medical Journal
Canadian Journal of Behavioural Science
Canadian Journal of Psychiatry
Cerebral Cortex
Clinical Case Studies
Comprehensive Psychiatry
Developmental Psychology
European Psychologist
Frontiers in Human Neuroscience
Human Brain Mapping
International Journal of Epidemiology
International Journal of Impotence Research
International Journal of Sexual Health
International Journal of Transgenderism
Journal of Abnormal Psychology
Journal of Clinical Psychology
Journal of Consulting and Clinical Psychology
Journal of Forensic Psychology Practice
Journal for the Scientific Study of Religion
Journal of Sexual Aggression
Journal of Sexual Medicine
Journal of Psychiatric Research
Nature Neuroscience
Neurobiology Reviews
Neuroscience & Biobehavioral Reviews
Neuroscience Letters
Proceedings of the Royal Society B (Biological Sciences)
Psychological Assessment
Psychological Medicine
Psychological Science
Psychology of Men & Masculinity
Sex Roles
Sexual and Marital Therapy
Sexual and Relationship Therapy
Sexuality & Culture
Sexuality Research and Social Policy
The Clinical Psychologist
Traumatology
World Journal of Biological Psychiatry

GRANT REVIEW PANELS

2017–2021 Member, College of Reviewers, *Canadian Institutes of Health Research,* Canada.

2017 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2017 Member, International Review Board, Research collaborations on behavioural disorders related to violence, neglect, maltreatment and abuse in childhood and adolescence. *Bundesministerium für Bildung und Forschung [Ministry of Education and Research],* Germany.

2016 Reviewer. National Science Center [*Narodowe Centrum Nauki*], Poland.

2016 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2015 Assessor (Peer Reviewer). Discovery Grants Program. *Australian Research Council,* Australia.

2015 Reviewer. *Czech Science Foundation,* Czech Republic.

2015 Reviewer, "Off the beaten track" grant scheme. *Volkswagen Foundation,* Germany.

2015 External Reviewer, Discovery Grants program—Biological Systems and Functions. *National Sciences and Engineering Research Council of Canada*, Canada

2015 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2014 Assessor (Peer Reviewer). Discovery Grants Program. *Australian Research Council,* Australia.

2014 External Reviewer, Discovery Grants program—Biological Systems and Functions. *National Sciences and Engineering Research Council of Canada*, Canada.

2014 Panel Member, Dean's Fund—Clinical Science Panel. *University of Toronto Faculty of Medicine*, Canada.

2014 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2013 Panel Member, Grant Miller Cancer Research Grant Panel. *University of Toronto Faculty of Medicine*, Canada.

2013 Panel Member, Dean of Medicine Fund New Faculty Grant Clinical Science Panel. *University of Toronto Faculty of Medicine,* Canada.

2012 Board Member, International Review Board, Research collaborations on behavioural disorders related to violence, neglect, maltreatment and abuse in childhood and adolescence (2nd round). *Bundesministerium für Bildung und Forschung [Ministry of Education and Research],* Germany.

2012 External Reviewer, University of Ottawa Medical Research Fund. *University of Ottawa Department of Psychiatry*, Canada.

2012 External Reviewer, Behavioural Sciences—B. *Canadian Institutes of Health Research*, Canada.

2011 Board Member, International Review Board, Research collaborations on behavioural disorders related to violence, neglect, maltreatment and abuse in childhood and adolescence. *Bundesministerium für Bildung und Forschung [Ministry of Education and Research],* Germany.

TEACHING AND TRAINING

PostDoctoral Research Supervision
Law & Mental Health Program, Centre for Addiction and Mental Health, Toronto, Canada

Dr. Katherine S. Sutton	Sept., 2012–Dec., 2013
Dr. Rachel Fazio	Sept., 2012–Aug., 2013
Dr. Amy Lykins	Sept., 2008–Nov., 2009

Doctoral Research Supervision
Centre for Addiction and Mental Health, Toronto, Canada

Michael Walton • University of New England, Australia	Sept., 2017–Aug., 2018
Debra Soh • York University	May, 2013–Aug, 2017
Skye Stephens • Ryerson University	April, 2012–June, 2016

Masters Research Supervision
Centre for Addiction and Mental Health, Toronto, Canada

Nicole Cormier • Ryerson University	June, 2012–present
Debra Soh • Ryerson University	May, 2009–April, 2010

Undergraduate Research Supervision
Centre for Addiction and Mental Health, Toronto, Canada

Kylie Reale • Ryerson University	Spring, 2014
Jarrett Hannah • University of Rochester	Summer, 2013
Michael Humeniuk • University of Toronto	Summer, 2012

Clinical Supervision (Doctoral Internship)
Clinical Internship Program, Centre for Addiction and Mental Health, Toronto, Canada

Katherine S. Sutton • Queen's University	2011–2012
David Sylva • Northwestern University	2011–2012
Jordan Rullo • University of Utah	2010–2011
Lea Thaler • University of Nevada, Las Vegas	2010–2011
Carolin Klein • University of British Columbia	2009–2010
Bobby R. Walling • University of Manitoba	2009–2010

TEACHING AND TRAINING

Clinical Supervision (Doctoral- and Masters- level practica)
Centre for Addiction and Mental Health, Toronto, Canada

Tyler Tulloch • Ryerson University	2013–2014
Natalie Stratton • Ryerson University	Summer, 2013
Fiona Dyshniku • University of Windsor	Summer, 2013
Mackenzie Becker • McMaster University	Summer, 2013
Skye Stephens • Ryerson University	2012–2013
Vivian Nyantakyi • Capella University	2010–2011
Cailey Hartwick • University of Guelph	Fall, 2010
Tricia Teeft • Humber College	Summer, 2010
Allison Reeves • Ontario Institute for Studies in Education/Univ. of Toronto	2009–2010
Helen Bailey • Ryerson University	Summer, 2009
Edna Aryee • Ontario Institute for Studies in Education/Univ. of Toronto	2008–2009
Iryna Ivanova • Ontario Institute for Studies in Education/Univ. of Toronto	2008–2009
Jennifer Robinson • Ontario Institute for Studies in Education/Univ. of Toronto	2008–2009
Zoë Laksman • Adler School of Professional Psychology	2005–2006
Diana Mandelew • Adler School of Professional Psychology	2005–2006
Susan Wnuk • York University	2004–2005
Hiten Lad • Adler School of Professional Psychology	2004–2005
Natasha Williams • Adler School of Professional Psychology	2003–2004
Lisa Couperthwaite • Ontario Institute for Studies in Education/Univ. of Toronto	2003–2004
Lori Gray, née Robichaud • University of Windsor	Summer, 2003
Sandra Belfry • Ontario Institute for Studies in Education/Univ. of Toronto	2002–2003
Althea Monteiro • York University	Summer, 2002
Samantha Dworsky • York University	2001–2002
Kerry Collins • University of Windsor	Summer, 2001
Jennifer Fogarty • Waterloo University	2000–2001
Emily Cripps • Waterloo University	Summer, 2000
Lee Beckstead • University of Utah	2000

PROFESSIONAL SOCIETY ACTIVITIES

OFFICES HELD

2018–2019 Local Host. Society for Sex Therapy and Research.

2015 Member, International Scientific Committee, World Association for Sexual Health.

2015 Member, Program Planning and Conference Committee, Association for the Treatment of Sexual Abusers

2012–2013 Chair, Student Research Awards Committee, Society for Sex Therapy & Research

2012–2013 Member, Program Planning and Conference Committee, Association for the Treatment of Sexual Abusers

2011–2012 Chair, Student Research Awards Committee, Society for Sex Therapy & Research

2010–2011 Scientific Program Committee, International Academy of Sex Research

2002–2004 Membership Committee • APA Division 12 (Clinical Psychology)

2002–2003 Chair, Committee on Science Issues, APA Division 44

2002 Observer, Grant Review Committee • Canadian Institutes of Health Research Behavioural Sciences (B)

2001–2009 Reviewer • APA Division 44 Convention Program Committee

2001, 2002 Reviewer • APA Malyon-Smith Scholarship Committee

2000–2005 Task Force on Transgender Issues, APA Division 44

1998–1999 Consultant, APA Board of Directors Working Group on Psychology Marketplace

1997 Student Representative • APA Board of Professional Affairs' Institute on TeleHealth

1997–1998 Founder and Chair • APA/APAGS Task Force on New Psychologists' Concerns

1997–1999 Student Representative • APA/CAPP Sub-Committee for a National Strategy for Prescription Privileges

1997–1999 Liaison • APA Committee for the Advancement of Professional Practice

1997–1998 Liaison • APA Board of Professional Affairs

1993–1997 Founder and Chair • APA/APAGS Committee on LGB Concerns

PROFESSIONAL SOCIETY ACTIVITIES

MEMBERSHIPS

2017–2021 Member • *Canadian Sex Research Forum*

2009–Present Member • *Society for Sex Therapy and Research*

2006–Present Member (elected) • *International Academy of Sex Research*

2006–Present Research and Clinical Member • *Association for the Treatment of Sex Abusers*

2003–2006 Associate Member (elected) • *International Academy of Sex Research*

2002 Founding Member • CPA Section on Sexual Orientation and Gender Identity

2001–2013 Member • *Canadian Psychological Association* (CPA)

2000–2015 Member • *American Association for the Advancement of Science*

2000–2015 Member • *American Psychological Association* (APA)

APA Division 12 (Clinical Psychology)

APA Division 44 (Society for the Psychological Study of LGB Issues)

2000–2020 Member • *Society for the Scientific Study of Sexuality*

1995–2000 Student Member • *Society for the Scientific Study of Sexuality*

1993–2000 Student Affiliate • *American Psychological Association*

1990–1999 Member, American Psychological Association of Graduate Students (APAGS)

CLINICAL LICENSURE/REGISTRATION

Certificate of Registration, Number 3793
College of Psychologists of Ontario, Ontario, Canada

AWARDS AND HONORS

2017 Elected Fellow, Association for the Treatment of Sexual Abusers

2011 Howard E. Barbaree Award for Excellence in Research
Centre for Addiction and Mental Health, Law and Mental Health Program

2004 fMRI Visiting Fellowship Program at Massachusetts General Hospital
American Psychological Association Advanced Training Institute and NIH

1999–2001 CAMH Post-Doctoral Research Fellowship
Centre for Addiction and Mental Health Foundation and Ontario Ministry of Health

1998 Award for Distinguished Contribution by a Student
American Psychological Association, Division 44

1995 Dissertation Research Grant
Society for the Scientific Study of Sexuality

1994–1996 McGill University Doctoral Scholarship

1994 Award for Outstanding Contribution to Undergraduate Teaching
"TA of the Year Award," from the McGill Psychology Undergraduate Student Association

MAJOR MEDIA

(Complete list available upon request.)

Feature-length Documentaries

Vice Canada Reports. *Age of Consent.* 14 Jan 2017.
Canadian Broadcasting Company. *I, Pedophile.* Firsthand documentaries. 10 Mar 2016.

Appearances and Interviews

11 Mar 2020. Ibbitson, John. It is crucial that Parliament gets the conversion-therapy ban right. *The Globe & Mail.*
25 Jan 2020. Ook de hulpvaardige buurman kan verzamelaar van kinderporno zin. *De Morgen.*
3 Nov 2019. Village of the damned. *60 Minutes Australia.*
1 Nov 2019. HÅKON F. HØYDAL. Norsk nettovergriper: – Jeg hater meg selv: Nordmannen laster ned overgrepsmateriale fra nettet – og oppfordrer politiet til å gi amnesti for slike som ham.
10 Oct 2019. Smith, T. Growing efforts are looking at how—or if—#MeToo offenders can be reformed. *National Public Radio.*
29 Sep 2019. Carey, B. Preying on Children: The Emerging Psychology of Pedophiles. *New York Times.*
29 Apr 2019. Mathieu, Isabelle. La poupée qui a troublé les Terre-Neuviens. *La Tribune.*
21 Mar 2019. Pope Francis wants psychological testing to prevent problem priests. But can it really do that? *The Washington Post.*
12 Dec 2018. Child sex dolls: Illegal in Canada, and dozens seized at the border. Ontario Today with Rita Celli. *CBC.*
12 Dec 2018. Celli, R. & Harris, K. Dozens of child sex dolls seized by Canadian border agents. *CBC News.*
27 Apr 2018. Rogers, Brook A. The online 'incel' culture is real–and dangerous. *New York Post.*
25 Apr 2018. Yang, J. Number cited in cryptic Facebook post matches Alek Minassian's military ID: Source. *Toronto Star.*
24 Ap 2018 Understanding 'incel'. *CTV News.*
27 Nov 2017. Carey, B. Therapy for Sexual Misconduct? It's Mostly Unproven. *New York Times.*
14 Nov 2017. Tremonti, A. M. The Current. *CBC.*
9 Nov2017. Christensen, J. Why men use masturbation to harass women. *CNN.* http://www.cnn.com/2017/11/09/health/masturbation-sexual-harassment/index.html
7 Nov 2017. Nazaryan, A. Why is the alt-right obsessed with pedophilia? *Newsweek.*
15 Oct 2017. Ouatik, B. Déscouvre. Pédophilie et science. *CBC Radio Canada.*
12 Oct 2017. Ouatik, B. Peut-on guérir la pédophilie? *CBC Radio Canada.*
11 Sep 2017. Burns, C. The young paedophiles who say they don't abuse children. *BBC News.*
18 Aug 2017. Interview. *National Post Radio.* Sirius XM Canada.
16 Aug 2017. Blackwell, Tom. Man says he was cured of pedophilia at Ottawa clinic: 'It's like a weight that's been lifted': But skeptics worry about the impact of sending pedophiles into the world convinced their curse has been vanquished. *National Post.*
26 Apr 2017. Zalkind, S. Prep schools hid sex abuse just like the catholic church. *VICE.*
24 Apr 2017. Sastre, P. Pédophilie: une panique morale jamais n'abolira un crime. *Slate France.*
12 Feb 2017. Payette, G. Child sex doll trial opens Pandora's box of questions. *CBC News.*
26 Nov 2016. Det morke uvettet ["The unknown darkness]". *Fedrelandsvennen.*
13 July 2016. Paedophilia: Shedding light on the dark field. *The Economist.*

1 Jul 2016. Debusschere, B. Niet iedereen die kinderporno kijkt, is een pedofiel: De mythes rond pedofilie ontkracht. *De Morgen.*
12 Apr 2016. O'Connor, R. Terence Martin: The Tasmanian MP whose medication 'turned him into a paedophile'. *The Independent.*
8 Mar 2016. Bielski, Z. 'The most viscerally hated group on earth': Documentary explores how intervention can stop pedophiles. *The Globe and Mail.*
1 Mar 2016. Elmhirst, S. What should we do about paedophiles? *The Guardian.*
24 Feb 2016. The man whose brain tumour 'turned him into a paedophile'. *The Independent.*
24 Nov 2015. Byron, T. The truth about child sex abuse. *BBC Two.*
20 Aug 2015. The Jared Fogle case: Why we understand so little about abuse. *Washington Post.*
19 Aug 2015. Blackwell, T. Treat sex offenders for impotence—to keep them out of trouble, Canadian psychiatrist says. *National Post.*
2 Aug 2015. Menendez, J. BBC News Hour. *BBC World Service.*
13 Jul 2015. The nature of pedophilia. *BBC Radio 4.*
9 Jul 2015. The sex-offender test: How a computerized assessment can help determine the fate of men who've been accused of sexually abusing children. *The Atlantic.*
10 Apr 2015. NWT failed to prevent sex offender from abusing stepdaughter again. *CBC News.*
10 Feb 2015. Savage, D. "The ethical sadist." In Savage Love. *The Stranger.*
31 Jan 2015. Begrip voor/van pedofilie [Understanding pedophilia]. *de Volkskrant.*
9 Dec 2014. Carey, B. When a rapist's weapon is a pill. *New York Times*.
1 Dec 2014. Singal, J. Can virtual reality help pedophiles? *New York Magazine.*
17 Nov2014. Say pedófile, busco aydua. *El Pais.*
4 Sep 2014. Born that way? *Ideas, with Paul Kennedy.* CBC Radio One.
27 Aug 2014. Interrogating the statistics for the prevalence of paedophilia. BBC.
25 Jul 2014. Stephenson, W. The prevalence of paedophilia. *BBC World Service.*
21 Jul 2014. Hildebrandt, A. Virtuous Pedophiles group gives support therapy cannot. *CBC.*
26 Jan 2014. Paedophilia a result of faulty wiring, scientists suggest. *Daily Mail.*
22 Dec 2013. Kane, L. Is pedophilia a sexual orientation? *Toronto Star.*
21 Jul 2013. Miller, L. The turn-on switch: Fetish theory, post-Freud. *New York Magazine.*
1 Jul 2013. Morin, H. Pédophilie: la difficile quête d'une origine biologique. *Le Monde.*
2 Jun 2013. Malcolm, L. The psychology of paedophilia. *Australian National Radio.*
1 Mar 2013. Kay, J. The mobbing of Tom Flanagan is unwarranted and cruel. *National Post.*
6 Feb 2013. Boy Scouts board delays vote on lifting ban on gays. *L.A. Times.*
31 Aug 2012. CNN Newsroom interview with Ashleigh Banfield. *CNN.*
24 Jun 2012. CNN Newsroom interview with Don Lemon. *CNN.*

LEGAL TESTIMONY, PAST 5 YEARS

2021	Cross et al. v Loudoun School Board	Loudoun, VA
2021	Allan M. Josephson v Neeli Bendapudi	Western District of Kentucky
2021	Re Commitment of Michael Hughes (Frye Hearing)	Cook County, Illinois
2019	US vs Peter Bright	Southern District of New York, NY
2019	Probate and Family Court (Custody Hearing)	Boston, Massachusetts
2019	Re Commitment of Steven Casper (Frye Hearing)	Kendall County, Illinois
2019	Re Commitment of Inger (Frye Hearing)	Poughkeepsie, NY
2018	Re Commitment of Fernando Little (Frye Hearing)	Utica, NY
2018	Canada vs John Fitzpatrick (Sentencing Hearing)	Toronto, Ontario, Canada

EXPERT REPORT OF JAMES M. CANTOR, PHD

APPENDIX 2

JOURNAL OF SEX & MARITAL THERAPY
https://doi.org/10.1080/0092623X.2019.1698481

Routledge
Taylor & Francis Group

Transgender and Gender Diverse Children and Adolescents: Fact-Checking of AAP Policy

James M. Cantor

Toronto Sexuality Centre, Toronto, Canada

ABSTRACT
The American Academy of Pediatrics (AAP) recently published a policy statement: *Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents*. Although almost all clinics and professional associations in the world use what's called the *watchful waiting* approach to helping gender diverse (GD) children, the AAP statement instead rejected that consensus, endorsing *gender affirmation* as the only acceptable approach. Remarkably, not only did the AAP statement fail to include any of the actual outcomes literature on such cases, but it also misrepresented the contents of its citations, which repeatedly said the very opposite of what AAP attributed to them.

The American Academy of Pediatrics (AAP) recently published a policy statement entitled, *Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents* (Rafferty, AAP Committee on Psychosocial Aspects of Child and Family Health, AAP Committee on Adolescence, AAP Section on Lesbian, Gay, Bisexual, and Transgender Health and Wellness, 2018). These are children who manifest discontent with the sex they were born as and desire to live as the other sex (or as some alternative gender role). The policy was quite a remarkable document: Although almost all clinics and professional associations in the world use what's called the *watchful waiting* approach to helping transgender and gender diverse (GD) children, the AAP statement rejected that consensus, endorsing only *gender affirmation*. That is, where the consensus is to delay any transitions after the onset of puberty, AAP instead rejected waiting before transition. With AAP taking such a dramatic departure from other professional associations, I was immediately curious about what evidence led them to that conclusion. As I read the works on which they based their policy, however, I was pretty surprised—rather alarmed, actually: These documents simply did not say what AAP claimed they did. In fact, the references that AAP cited as the basis of their policy instead outright contradicted that policy, repeatedly endorsing *watchful waiting*.

The AAP statement was also remarkable in what it left out—namely, the actual outcomes research on GD children. In total, there have been 11 follow-up studies of GD children, of which AAP cited one (Wallien & Cohen-Kettenis, 2008), doing so without actually mentioning the outcome data it contained. The literature on outcomes was neither reviewed, summarized, nor subjected to meta-analysis to be considered in the aggregate—It was merely disappeared. (The list of all existing studies appears in the appendix.) As they make clear, *every* follow-up study of GD children, without exception, found the same thing: Over puberty, the majority of GD children cease to want to transition. AAP is, of course, free to establish whatever policy it likes on

CONTACT James Cantor jamescantorphd@gmail.com Toronto Sexuality Centre, 2 Carlton Street, suite 1820, Toronto, Ontario M5B 1J3, Canada.

© 2019 Taylor & Francis Group, LLC

whatever basis it likes. But any assertion that their policy is based on evidence is demonstrably false, as detailed below.

AAP divided clinical approaches into three types—conversion therapy, watchful waiting, and gender affirmation. It rejected the first two and endorsed *gender affirmation* as the only acceptable alternative. Most readers will likely be familiar already with attempts to use conversion therapy to change sexual orientation. With regard to gender identity, AAP wrote:

> "[C]onversion" or "reparative" treatment models are used to prevent children and adolescents from identifying as transgender or to dissuade them from exhibiting gender-diverse expressions. … Reparative approaches have been proven to be not only unsuccessful[38] but also deleterious and are considered outside the mainstream of traditional medical practice.[29,39–42]

The citations were:

38. Haldeman DC. The practice and ethics of sexual orientation conversion therapy. *J Consult Clin Psychol.* 1994;62(2):221–227.

29. Adelson SL; American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI). Practice parameter on gay, lesbian, or bisexual sexual orientation, gender nonconformity, and gender discordance in children and adolescents. *J Am Acad Child Adolesc Psychiatry.* 2012;51(9):957–974.

39. Byne W. Regulations restrict practice of conversion therapy. *LGBT Health.* 2016;3(2):97–99.

40. Cohen-Kettenis PT, Delemarrevan de Waal HA, Gooren LJ. The treatment of adolescent transsexuals: changing insights. *J Sex Med.* 2008;5(8):1892–1897.

41. Bryant K. Making gender identity disorder of childhood: historical lessons for contemporary debates. *Sex Res Soc Policy.* 2006;3(3):23–39.

42. World Professional Association for Transgender Health. *WPATH De-Psychopathologisation Statement.* Minneapolis, MN: World Professional Association for Transgender Health; 2010.

AAP's claims struck me as odd because *there are no studies of conversion therapy for gender identity.* Studies of conversion therapy have been limited to *sexual orientation,* and, moreover, to the sexual orientation *of adults,* not to gender identity and not of children in any case. The article AAP cited to support their claim (reference number 38) is indeed a classic and well-known review, but it is a review of sexual orientation research *only.* Neither gender identity, nor even children, received a single mention in it. Indeed, the narrower scope of that article should be clear to anyone reading even just its title: "The practice and ethics of *sexual orientation* conversion therapy" [italics added].

AAP continued, saying that conversion approaches for GD children have already been rejected by medical consensus, citing five sources. This claim struck me as just as odd, however—I recalled associations banning conversion therapy for sexual orientation, but not for gender identity, exactly because there is no evidence for generalizing from adult sexual orientation to childhood gender identity. So, I started checking AAP's citations for that, and these sources too pertained only to sexual orientation, not gender identity (specifics below). What AAP's sources *did* repeatedly emphasize was that:

A. Sexual orientation of adults is unaffected by conversion therapy and any other [known] intervention;
B. Gender dysphoria in childhood before puberty desists in the majority of cases, becoming (cis-gendered) homosexuality in adulthood, again regardless of any [known] intervention; and
C. Gender dysphoria in childhood persisting after puberty tends to persist entirely.

That is, in the context of GD children, it simply makes no sense to refer to externally induced "conversion": The majority of children "convert" to cisgender or "desist" from transgender

regardless of any attempt to change them. "Conversion" only makes sense with regard to adult sexual orientation because (unlike childhood gender identity), adult homosexuality never or nearly never spontaneously changes to heterosexuality. Although gender identity and sexual orientation may often be analogous and discussed together with regard to social or political values and to civil rights, they are nonetheless distinct—with distinct origins, needs, and responses to medical and mental health care choices. Although AAP emphasized to the reader that "gender identity is not synonymous with 'sexual orientation'" (Rafferty et al., 2018, p. 3), they went ahead to treat them as such nonetheless.

To return to checking AAP's fidelity to its sources: Reference 29 was a practice guideline from the Committee on Quality Issues of the American Academy of Child and Adolescent Psychiatry (AACAP). Despite AAP applying this source to *gender identity,* AACAP was quite unambiguous regarding their intent to speak to sexual orientation and *only* to sexual orientation: "Principle 6. Clinicians should be aware that there is no evidence that *sexual orientation* can be altered through therapy, and that attempts to do so may be harmful. There is no established evidence that change in a predominant, enduring *homosexual* pattern of development is possible. Although sexual fantasies can, to some degree, be suppressed or repressed by those who are ashamed of or in conflict about them, sexual desire is not a choice. However, behavior, social role, and—to a degree—identity and self-acceptance are. Although operant conditioning modifies sexual fetishes, it does not alter *homosexuality*. Psychiatric efforts to alter *sexual orientation* through 'reparative therapy' *in adults* have found little or no change in *sexual orientation,* while causing significant risk of harm to self-esteem" (AACAP, 2012, p. 967, italics added).

Whereas AAP cites AACAP to support gender affirmation as the only alternative for treating GD children, AACAP's actual view was decidedly neutral, noting the lack of evidence: "Given the lack of empirical evidence from randomized, controlled trials of the efficacy of treatment aimed at eliminating gender discordance, the potential risks of treatment, and longitudinal evidence that gender discordance persists in only a small minority of untreated cases arising in childhood, further research is needed on predictors of persistence and desistence of childhood gender discordance as well as the long-term risks and benefits of intervention before any treatment to eliminate gender discordance can be endorsed" (AACAP, 2012, p. 969). Moreover, whereas AAP rejected watchful waiting, what AACAP recommended was: "In general, it is desirable to help adolescents who may be experiencing gender distress and dysphoria to defer sex reassignment until adulthood" (AACAP, 2012, p. 969). So, not only did AAP attribute to AACAP something AACAP never said, but also AAP withheld from readers AACAP's actual view.

Next, in reference 39, Byne (2016) also addressed only sexual orientation, doing so very clearly: "Reparative therapy is a subset of conversion therapies based on the premise that *same-sex attraction* are reparations for childhood trauma. Thus, practitioners of reparative therapy believe that exploring, isolating, and repairing these childhood emotional wounds will often result in reducing *same-sex attractions*" (Byne, 2016, p. 97). Byne does not say this of gender identity, as the AAP statement misrepresents.

In AAP reference 40, Cohen-Kettenis et al. (2008) did finally pertain to gender identity; however, this article never mentions conversion therapy. (!) Rather, in this study, the authors presented that clinic's lowering of their minimum age for cross-sex hormone treatment from age 18 to 16, which they did on the basis of a series of studies showing the high rates of success with this age group. Although it did strike me as odd that AAP picked as support against conversion therapy an article that did not mention conversion therapy, I could imagine AAP cited the article as an example of what the "mainstream of traditional medical practice" consists of (the logic being that conversion therapy falls outside what an 'ideal' clinic like this one provides). However, what this clinic provides is the very *watchful waiting* approach that AAP rejected. The approach

espoused by Cohen-Kettenis (and the other clinics mentioned in the source—Gent, Boston, Oslo, and now formerly, Toronto) is to make puberty-halting interventions available at age 12 because: "[P]ubertal suppression may give adolescents, together with the attending health professional, more time to explore their gender identity, without the distress of the developing secondary sex characteristics. The precision of the diagnosis may thus be improved" (Cohen-Kettenis et al., 2008, p. 1894).

Reference 41 presented a very interesting history spanning the 1960s–1990s about how feminine boys and tomboyish girls came to be recognized as mostly pre-homosexual, and how that status came to be entered into the DSM at the same time as homosexuality was being *removed* from the DSM. Conversion therapy is never mentioned. Indeed, to the extent that Bryant mentions treatment at all, it is to say that treatment is entirely irrelevant to his analysis: "An important omission from the *DSM* is a discussion of the kinds of treatment that GIDC children should receive. (This omission is a general orientation of the DSM and not unique to GIDC)" (Bryant, 2006, p. 35). How this article supports AAP's claim is a mystery. Moreover, how AAP could cite a 2006 history discussing events of the 1990s and earlier to support a claim about the *current* consensus in this quickly evolving discussion remains all the more unfathomable.

Cited last in this section was a one-paragraph press release from the World Professional Association for Transgender Health. Written during the early stages of the American Psychiatric Association's (APA's) update of the DSM, the statement asserted simply that "The WPATH Board of Directors strongly urges the de-psychopathologisation of gender variance worldwide." Very reasonable debate can (and should) be had regarding whether gender dysphoria should be removed from the DSM as homosexuality was, and WPATH was well within its purview to assert that it should. Now that the DSM revision process is years completed however, history has seen that APA ultimately retained the diagnostic categories, rejecting WPATH's urging. This makes AAP's logic entirely backwards: That WPATH's request to depathologize gender dysphoria was *rejected* suggests that it is *WPATH's* view—and therefore the AAP policy—which fall "outside the mainstream of traditional medical practice." (!)

AAP based this entire line of reasoning on their belief that conversion therapy is being used "to prevent children and adolescents from identifying as transgender" (Rafferty et al., 2018, p. 4). That claim is left without citation or support. In contrast, what is said by AAP's sources is "delaying affirmation should *not* be construed as conversion therapy or an attempt to change gender identity" in the first place (Byne, 2016, p. 2). Nonetheless, AAP seems to be doing exactly that: simply relabeling any alternative approach as equivalent to conversion therapy.

Although AAP (and anyone else) may reject (what they label to be) conversion therapy purely on the basis of political or personal values, there is no evidence to back the AAP's stated claim about the existing science on gender identity at all, never mind gender identity of children.

AAP also dismissed the watchful waiting approach out of hand, not citing any evidence, but repeatedly calling it "outdated." The criticisms AAP provided, however, again defied the existing evidence, with even its own sources repeatedly calling watchful waiting the current standard. According to AAP:

> [G]ender affirmation is in contrast to the outdated approach in which a child's gender-diverse assertions are held as "possibly true" until an arbitrary age (often after pubertal onset) when they can be considered valid, an approach that authors of the literature have termed "watchful waiting." This outdated approach does not serve the child because critical support is withheld. Watchful waiting is based on binary notions of gender in which gender diversity and fluidity is pathologized; in watchful waiting, it is also assumed that notions of gender identity become fixed at a certain age. The approach is also influenced by a group of early studies with validity concerns, methodologic flaws, and limited follow-up on children who identified as TGD and, by adolescence, did not seek further treatment ("desisters").[45,47]

The citations from AAP's reference list are:

45. Ehrensaft D, Giammattei SV, Storck K, Tishelman AC, Keo-Meier C. Prepubertal social gender transitions: what we know; what we can learn—a view from a gender affirmative lens. *Int J Transgend.* 2018;19(2):251–268

47. Olson KR. Prepubescent transgender children: what we do and do not know. *J Am Acad Child Adolesc Psychiatry.* 2016;55(3):155–156.e3

I was surprised first by the AAP's claim that watchful waiting's delay to puberty was somehow "arbitrary." The literature, including AAP's sources, repeatedly indicated the pivotal importance of puberty, noting that outcomes strongly diverge at that point. According to AAP reference 29, in "*prepubertal* boys with gender discordance—including many without any mental health treatment—the cross gender wishes usually fade over time and do not persist into adulthood, with only 2.2% to 11.9% continuing to experience gender discordance" (Adelson & AACAP, 2012, p. 963, italics added), whereas "when gender variance with the desire to be the other sex is present *in adolescence,* this desire usually does persist through adulthood" (Adelson & AACAP, 2012, p. 964, italics added). Similarly, according to AAP reference 40, "Symptoms of GID *at prepubertal ages* decrease or even disappear in a considerable percentage of children (estimates range from 80–95%). Therefore, any intervention in childhood would seem premature and inappropriate. However, GID persisting *into early puberty* appears to be highly persistent" (Cohen-Kettenis et al., 2008, p. 1895, italics added). That follow-up studies of prepubertal transition differ from postpubertal transition is the very meaning of non-arbitrary. AAP gave readers exactly the reverse of what was contained in its own sources. If AAP were correct in saying that puberty is an arbitrarily selected age, then AAP will be able to offer another point to wait for with as much empirical backing as puberty has.

Next, it was not clear on what basis AAP could say that watchful waiting withholds support—AAP cited no support for its claim. The people in such programs often receive substantial support during this period. Also unclear is on what basis AAP could already know exactly which treatments are "critical" and which are not—Answering that question is the very purpose of this entire endeavor. Indeed, the logic of AAP's claim appears entirely circular: It is only if one were already pre-convinced that gender affirmation is the only acceptable alternative that would make watchful waiting seem to withhold critical support—What it delays is gender affirmation, the method one has already decided to be critical.

Although AAP's next claim did not have a citation appearing at the end of its sentence, binary notions of gender were mentioned both in references 45 and 47. Specifically, both pointed out that existing outcome studies have been about people transitioning from one sex to the other, rather than from one sex to an in-between status or a combination of masculine/feminine features. Neither reference presented this as a reason to reject the results from the existing studies of complete transition however (which is how AAP cast it). Although it is indeed true that the outcome data have been about complete transition, some future study showing that partial transition shows a different outcome would not invalidate what is known about complete transition. Indeed, data showing that partial transition gives better outcomes than complete transition would, once again, support the watchful waiting approach which AAP rejected.

Next was a vague reference alleging concerns and criticisms about early studies. Had AAP indicated what those alleged concerns and flaws were (or which studies they were), then it would be possible to evaluate or address them. Nonetheless, the argument is a red herring: Because all of the later studies showed the same result as did the early studies, any such allegation is necessarily moot.

Reference 47 was a one-and-a-half page commentary in which the author off-handedly mentions criticisms previously made of three of the eleven outcome studies of GD children, but does not provide any analysis or discussion. The only specific claim was that studies (whether early or late) had limited follow-up periods—the logic being that had outcome researchers lengthened the follow-up period, then people who seemed to have desisted might have returned to the clinic as

cases of "persistence-after-interruption." Although one could debate the merits of that prediction, AAP instead simply withheld from the reader the result from the original researchers having tested that very prediction directly: Steensma and Cohen-Kettenis (2015) conducted another analysis of their cohort, by then ages 19–28 (mean age 25.9 years), and found that 3.3% (5 people of the sample of 150) later returned. That is, in long-term follow-up, the childhood sample showed 66.7% desistence instead of 70.0% desistance.

Reference 45 did not support the claim that watchful-waiting is "outdated" either. Indeed, that source said the very opposite, explicitly referring to watchful waiting as the *current* approach: "Put another way, if clinicians are straying from SOC 7 guidelines for social transitions, not abiding by the watchful waiting model *favored by the standards,* we will have adolescents who have been consistently living in their affirmed gender since age 3, 4, or 5" (Ehrensaft et al., 2018, p. 255). Moreover, Ehrensaft et al. said there are cases in which they too would still use watchful waiting: "When a child's gender identity is unclear, the watchful waiting approach can give the child and their family time to develop a clearer understanding and is not necessarily in contrast to the needs of the child" (p. 259). Ehrensaft et al. are indeed critical of the watchful waiting model (which they feel is applied too conservatively), but they do not come close to the position the AAP policy espouses. Where Ehrensaft summaries the potential benefits and potential risks both to transitioning and not transitioning, the AAP presents an ironically binary narrative.

In its policy statement, AAP told neither the truth nor the whole truth, committing sins both of commission and of omission, asserting claims easily falsified by anyone caring to do any fact-checking at all. AAP claimed, "This policy statement is focused specifically on children and youth that identify as TGD rather than the larger LGBTQ population"; however, much of that evidence was about sexual orientation, not gender identity. AAP claimed, "Current available research and expert opinion from clinical and research leaders ... will serve as the basis for recommendations" (pp. 1–2); however, they provided recommendations entirely unsupported and even in direct opposition to that research and opinion.

AAP is advocating for something far in excess of mainstream practice and medical consensus. In the presence of compelling evidence, that is just what is called for. The problems with Rafferty, however, do not constitute merely a misquote, a misinterpretation of an ambiguous statement, or a missing reference or two. Rather, AAP's statement is a systematic exclusion and misrepresentation of entire literatures. Not only did AAP fail to provide compelling evidence, it failed to provide the evidence at all. Indeed, AAP's recommendations are *despite* the existing evidence.

Disclosure statement

No potential conflict of interest was reported by the author.

References

Rafferty, J., AAP Committee on Psychosocial Aspects of Child and Family Health, AAP Committee on Adolescence, AAP Section on Lesbian, Gay, Bisexual, and Transgender Health and Wellness. (2018). Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics*, *142*(4), e20182162 doi:10.1542/peds.2018-2162

Steensma, T. D., & Cohen-Kettenis, P. T. (2015). More than two developmental pathways in children with gender dysphoria? *Journal of the American Academy of Child and Adolescent Psychiatry*, *52*, 147–148. doi:10.1016/j.jaac.2014.10.016

Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry*, *47*, 1413–1423. doi:10.1097/CHI.0b013e31818956b9

Appendix

Count	Group	Study
2/16 4/16 10/16	gay* trans-/crossdress straight*/uncertain	Lebovitz, P. S. (1972). Feminine behavior in boys: Aspects of its outcome. *American Journal of Psychiatry, 128,* 1283–1289.
2/16 2/16 12/16	trans- uncertain gay	Zuger, B. (1978). Effeminate behavior present in boys from childhood: Ten additional years of follow-up. *Comprehensive Psychiatry, 19,* 363–369.
0/9 9/9	trans- gay	Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow-up. *Journal of Pediatric Psychology, 4,* 29–41.
2/45 10/45 33/45	trans-/crossdress uncertain gay	Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172,* 90–97.
1/10 2/10 3/10 4/10	trans- gay uncertain straight	Davenport, C. W. (1986). A follow-up study of 10 feminine boys. *Archives of Sexual Behavior, 15,* 511–517.
1/44 43/44	trans- cis-	Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality*. New Haven, CT: Yale University Press.
0/8 8/8	trans- cis-	Kosky, R. J. (1987). Gender-disordered children: Does inpatient treatment help? *Medical Journal of Australia, 146,* 565–569.
21/54 33/54	trans- cis-	Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 1413–1423.
3/25 6/25 16/25	trans- lesbian/bi- straight	Drummond, K. D., Bradley, S. J., Badali-Peterson, M., & Zucker, K. J. (2008). A follow-up study of girls with gender identity disorder. *Developmental Psychology, 44*, 34–45.
17/139 122/139	trans- cis-	Singh, D. (2012). *A follow-up study of boys with gender identity disorder*. Unpublished doctoral dissertation, University of Toronto.
47/127 80/127	trans- cis-	Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52,* 582–590.

*For brevity, the list uses “gay” for “gay and cis-”, “straight” for “straight and cis-”, etc.

Exhibit B

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE WESTERN DISTRICT OF WEST VIRGINIA
3 CHARLESTON DIVISION
4
5 _____________________________
)
6 B.P.J. by her next friend and)
mother, HEATHER JACKSON,)
7)
Plaintiff,)
8) No. 2:21-cv-00316
vs.)
9)
WEST VIRGINIA STATE BOARD OF)
10 EDUCATION, HARRISON COUNTY)
BOARD OF EDUCATION, WEST)
11 VIRGINIA SECONDARY SCHOOL)
ACTIVITIES COMMISSION, W.)
12 CLAYTON BURCH in his official)
capacity as State)
13 Superintendent, DORA STUTLER,)
in her official capacity as)
14 Harrison County)
Superintendent, and THE STATE)
15 OF WEST VIRGINIA,)
)
16 Defendants,)
)
17 LAINEY ARMISTEAD,)
)
18 Defendant-Intervenor.)
_____________________________)
19
VIDEOTAPED DEPOSITION OF
20 JAMES M. CANTOR, PhD
Monday, March 21, 2022
21 Volume I
22
Reported by:
23 ALEXIS KAGAY
CSR No. 13795
24 Job No. 5122845
25 PAGES 1 - 316

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE WESTERN DISTRICT OF WEST VIRGINIA
3 CHARLESTON DIVISION
4
5 ______________________________
)
6 B.P.J. by her next friend and)
mother, HEATHER JACKSON,)
7)
Plaintiff,)
8) No. 2:21-cv-00316
vs.)
9)
WEST VIRGINIA STATE BOARD OF)
10 EDUCATION, HARRISON COUNTY)
BOARD OF EDUCATION, WEST)
11 VIRGINIA SECONDARY SCHOOL)
ACTIVITIES COMMISSION, W.)
12 CLAYTON BURCH in his official)
capacity as State)
13 Superintendent, DORA STUTLER,)
in her official capacity as)
14 Harrison County)
Superintendent, and THE STATE)
15 OF WEST VIRGINIA,)
)
16 Defendants,)
)
17 LAINEY ARMISTEAD,)
)
18 Defendant-Intervenor.)
______________________________)
19
20 Videotaped deposition of JAMES M. CANTOR,
21 Volume I, taken on behalf of Plaintiff, with all
22 participants appearing remotely, beginning at 9:03 a.m.
23 and ending at 5:33 p.m. on Monday, March 21, 2022,
24 before ALEXIS KAGAY, Certified Shorthand Reporter
25 No. 13795.

1 APPEARANCES (Via Zoom Videoconference):
2
3 For West Virginia Secondary School Activities
4 Commission:
5 SHUMAN MCCUSKEY & SLICER
6 BY: ROBERTA GREEN
7 Attorney at Law
8 1411 Virginia Street E
9 Suite 200
10 Charleston, West Virginia 25301-3088
11 RGreen@Shumanlaw.com
12
13 For the State of West Virginia:
14 WEST VIRGINIA ATTORNEY GENERAL
15 BY: DAVID TRYON
16 Attorney at Law
17 112 California Avenue
18 Charleston West Virginia 25305-0220
19 681.313.4570
20 David.C.Tryon@wvago.gov
21
22
23
24
25

1 APPEARANCES (Continued):

2

3 For West Virginia Board of Education and Superintendent

4 Burch, Heather Hutchens as general counsel for the

5 State Department of Education:

6 BAILEY & WYANT, PLLC

7 BY: KELLY MORGAN

8 Attorney at Law

9 500 Virginia Street

10 Suite 600

11 Charleston, West Virginia 25301

12 KMorgan@Baileywyant.com

13

14 For Plaintiff:

15 LAMBDA LEGAL

16 BY: SRUTI SWAMINATHAN

17 BY: TARA BORELLI

18 BY: MAIA ZELKIND

19 Attorneys at Law

20 120 Wall Street

21 Floor 19

22 New York, New York 10005-3919

23 SSwaminathan@lambdalegal.org

24 TBorelli@lambdalegal.org

25 MZelkind@lambdalegal.org

1 APPEARANCES (Continued):

2

3 For The Plaintiff, B.P.J.:

4 COOLEY

5 BY: KATHLEEN HARTNETT

6 BY: VALERIA M. PELET DEL TORO

7 BY: KATELYN KANG

8 BY: ANDREW BARR

9 BY: ELIZABETH REINHARDT

10 BY: JULIE VEROFF

11 BY: ZOE HOLSTEROM

12 Attorneys at Law

13 500 Boylston Street

14 14th Floor

15 Boston, Massachusetts 02116-3740

16 617.937.2305

17 Khartnett@cooley.com

18 KKang@Cooley.com

19 VPeletdeltoro@cooley.com

20 ABarr@cooley.com

21 EReinhardt@cooley.com

22 JVeroff@cooley.com

23 ZHolstrom@cooley.com

24

25

1 APPEARANCES (Continued):
2
3 For the Intervenor:
4 ALLIANCE DEFENDING FREEDOM
5 BY: TRAVIS C. BARHAM
6 BY: CATIE KELLEY
7 BY: HAL FRAMPTON
8 BY: TYSON LANGHOFER
9 Attorneys at Law
10 1000 Hurricane Shoals Road, NE 30043
11 Tbarham@adflegal.org
12 CKelley@adflegal.org
13 HFrampton@adflegal.org
14 TLanghofer@adflegal.org
15
16 For defendants Harrison County Board of Education and
17 Superintendent Dora Stutler:
18 STEPTOE & JOHNSON PLLC
19 BY: JEFFREY M. CROPP
20 Attorney at Law
21 400 White Oaks Boulevard
22 Bridgeport, West Virginia 26330
23 304.933.8154
24 Jeffrey.cropp@steptoe-Johnson.com
25

1 APPEARANCES (Continued):
2
3 For West Virginia Board of Education and Superintendent
4 Burch, Heather Hutchens as general counsel for the
5 State Department of Education:
6 BAILEY & WYANT, PLLC
7 BY: KELLY MORGAN
8 Attorney at Law
9 500 Virginia Street
10 Suite 600
11 Charleston, West Virginia 25301
12 KMorgan@Baileywyant.com
13
14
15 For the Plaintiff:
16 AMERICAN CIVIL LIBERTIES UNION
17 BY: JOSHUA A. BLOCK
18 125 Broad Street
19 18th Floor
20 New York, New York 10004
21 JBlock@aclu.org
22 212.549.2500
23
24
25

1 APPEARANCES (Continued):
2
3 Also Present:
4 LINDSAY DUPHILY - VERITEXT CONCIERGE
5
6 Videographer:
7 DAVE HALVORSON
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 INDEX

2 WITNESS EXAMINATION
3 JAMES M. CANTOR, PhD
4 Volume I
5
6 BY COUNSEL SWAMINATHAN 15
7 BY MR. BARHAM 306
8
9

10 EXHIBITS

NUMBER	DESCRIPTION	PAGE
Exhibit 44	Declaration of James M. Cantor, PhD	32
Exhibit 45	Declaration of James M. Cantor, PhD	34
Exhibit 46	"The Kinsey Institute Interview Series: A Conversation with doctor James Cantor"	145
Exhibit 47	Responses to Plaintiff's First et of Interrogatories to Defendant State of West Virginia	176

1 Exhibit 48 Sexology Today! Article 186
2
3 Exhibit 49 Sexology Today! Article 190
4
5 Exhibit 50 "Mental Health Outcomes in 227
6 Transgender and Nonbinary Youths
7 Receiving Gender-Affirming Care"
8
9 Exhibit 51 "Association of Gender-Affirming 230
10 Hormone Therapy with Depression,
11 Thoughts of Suicide and Attempted
12 Suicide among Transgender and
13 Nonbinary Youth"
14
15 Exhibit 52 "Longitudinal impact of 235
16 gender-affirming endocrine
17 intervention on the mental health
18 and well-being of transgender
19 youths: Preliminary results"
20
21 Exhibit 53 "Body Dissatisfaction and mental 239
22 health outcomes of youth on
23 gender-affirming hormone therapy"
24
25 Exhibit 54 "Psychological Functioning in 243

1 transgender adolescents before
2 and after gender-affirmative care
3 compared with cisgender general
4 population peers"
5
6 Exhibit 55 "Psychological support, puberty 247
7 suppression and psychosocial
8 functioning in adolescents with
9 gender dysphoria"
10
11 Exhibit 56 "Young Adult Psychological 250
12 Outcome After Puberty Suppression
13 and Gender Reassignment"
14
15 Exhibit 57 "Long-term Follow-up of 254
16 Transsexual persons undergoing
17 sex reassignment surgery: Cohort
18 study in Sweden"
19
20 Exhibit 58 "Mental health of transgender 259
21 children who are supported in
22 their identities"
23
24 Exhibit 59 Florida Department of Children 261
25 and Families v Adoption of XXG

1	Exhibit 60	Olson 2016, Errata Issued	265
2			
3	Exhibit 61	"Evaluation of anxiety and	268
4		depression in a community sample	
5		of transgender youth"	
6			
7	Exhibit 62	"A Bill of Transsexual Rights" -	274
8		JamesCantor.org	
9			
10	Exhibit 63	Sexology Today! Article	286
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

1 Monday, March 21, 2022
2 9:03 a.m.
3
4 THE VIDEOGRAPHER: Okay. Good morning. We
5 are on the record at 9:03 a.m. on March 21st, 2022. 06:03:33
6 This is media unit 1 in the video-recorded
7 deposition of Dr. James Cantor, in the matter of
8 B.P.J. by Heather Jackson versus West Virginia State
9 Board of Education, et al., filed in the U.S.
10 District Court for the Southern District of West 06:03:55
11 Virginia, in the Charleston Division. The case
12 number is 2:21-cv-00316.
13 This deposition is being held virtually.
14 My name is Dave Halvorson. I'm the
15 videographer here from Veritext. And I'm here with 09:03:59
16 the court reporter, Alexis Kagay, also from
17 Veritext.
18 Counsel, can you please all identify
19 yourselves so the witness can be sworn in.
20 COUNSEL SWAMINATHAN: Sure thing. 09:04:11
21 So this is Sruti Swaminathan with
22 Lambda Legal, and I am counsel for Plaintiff. And
23 I'll allow my co-counsel from Lambda Legal to start
24 the introductions.
25 MS. BORELLI: This is Tara Borelli from 09:04:24

1 Lambda Legal, for Plaintiff.
2 MS. HARTNETT: Hi. This is Kathleen Hartnett
3 from Cooley, LLP, for Plaintiff.
4 MR. BARR: Good morning. This is Andrew Barr
5 from Cooley, for Plaintiff. 09:04:41
6 MS. REINHARDT: This is Elizabeth Reinhardt
7 with Cooley, LLP, for Plaintiff.
8 MS. KANG: This is Katelyn Kang from Cooley,
9 LLP, for Plaintiff.
10 MS. PELET DEL TORO: This is Valeria Pelet 09:04:50
11 del Toro from Cooley, for Plaintiff.
12 MR. BLOCK: This is Josh Block from the ACLU,
13 for Plaintiff.
14 THE VIDEOGRAPHER: Is that --
15 COUNSEL SWAMINATHAN: I believe that's 09:05:15
16 everyone on our end.
17 THE VIDEOGRAPHER: Okay.
18 MR. TRYON: This is David Tryon. I'm with
19 the West Virginia Attorney General's Office,
20 representing the State of West Virginia. 09:05:24
21 MR. BARHAM: This is Travis Barham with
22 Alliance Defending Freedom, Counsel for Intervenors,
23 defending the deposition.
24 MR. CROPP: This is Jeffrey Cropp on behalf
25 of defendants Harrison County Board of Education and 09:05:37

1 Superintendent Dora Stutler.
2 MS. MORGAN: This is Kelly Morgan on behalf
3 of the West Virginia Board of Education and
4 Superintendent Burch.
5 MS. GREEN: This is Roberta Green on behalf 09:05:52
6 of West Virginia Secondary School Activity (sic)
7 Commission.
8 THE VIDEOGRAPHER: Okay. If that's every- --
9 maybe Mr. Frampton? Is that --
10 MR. FRAMPTON: Sure, I'll identify myself, 09:06:10
11 although I'm not really participating.
12 Hal Frampton from Alliance Defending Freedom,
13 for the Intervenor.
14 THE VIDEOGRAPHER: Okay.
15 Okay. Can we please swear in the witness. 09:06:31
16 (Witness sworn.)
17 THE VIDEOGRAPHER: Okay. Please proceed.
18
19 JAMES M. CANTOR, PhD,
20 having been administered an oath, was examined and
21 testified as follows:
22
23 EXAMINATION
24 BY COUNSEL SWAMINATHAN:
25 Q Good morning, Dr. Cantor. Thank you again 09:06:33

1 for your time today. As I said, my name is
2 Sruti Swaminathan, and I'm an attorney with
3 Lambda Legal.
4 I use they/them pronouns, so if you have any
5 need to refer to me specifically, feel free to call 09:06:43
6 me Counsel Swaminathan or Attorney Swaminathan.
7 I represent B.P.J., the plaintiff in this
8 matter. And, yeah, again, thank you for -- for
9 bearing with me today.
10 So how are you? 09:06:59
11 A I'm fine. Thank you.
12 Q And would you please state and spell your
13 name for the record.
14 A Dr. James Michael Cantor, J-a-m-e-s
15 M-i-c-h-a-e-l C-a-n-t-o-r. 09:07:12
16 Q Thank you.
17 And, Dr. Cantor, what pronouns do you use?
18 A He/him.
19 Q Great. So let me explain some ground rules
20 so that the court reporter can establish a clean 09:07:23
21 transcript today.
22 I'll ask you questions, and you must answer
23 unless your counsel instructs you otherwise.
24 Do you understand?
25 A Yes, I do. 09:07:33

1 Q And I will note, I might be looking above
2 you, as you can see me, the camera is just a little
3 bit below me, so apologies for that.
4 Okay. And so, again, if your counsel objects
5 to my questions, you still need to answer my 09:07:47
6 questions unless they specifically instruct you not
7 to answer.
8 Do you understand that?
9 A I do.
10 Q Great. If you don't understand my question, 09:07:53
11 please let me know. I'm happy to try to rephrase it
12 or make it clear for you.
13 If you do answer my question, I will assume
14 that you understood. Is that fair?
15 A Yes. 09:08:06
16 Q We can take a break whenever you need. I
17 will try to naturally break every hour or so.
18 However, if I've asked a question or if I'm in the
19 middle of a line of questions, I'd appreciate if you
20 can provide me with an answer before we take a 09:08:17
21 break.
22 Do you understand that?
23 A Yes.
24 Q Great. Let's do our best not to speak over
25 each other today. And as you are doing right now, 09:08:26

1 please use verbal answers so that the court reporter
2 can transcribe your answers accurately.
3 Unfortunately, nodding your head or shaking your
4 head cannot be captured by the court reporter.
5 Do you understand that? 09:08:42
6 A Yes, I do.
7 Q Great. And so before we too -- get too far
8 along today in the -- the substantive portion, I
9 want to note for you that we're going to be talking
10 quite a bit about healthcare that's commonly used to 09:08:52
11 treat gender dysphoria for transgender people.
12 For the purposes of this deposition, when I
13 say "cisgender," I mean someone whose gender
14 identity matches the sex they were assigned at
15 birth. 09:09:07
16 Do you understand?
17 A Yes, I do.
18 Q For the purposes of this deposition, when I
19 say "transgender," I mean someone whose gender
20 identity does not match the sex they were assigned 09:09:14
21 at birth.
22 Do you understand?
23 MR. TRYON: Objection; terminology.
24 BY COUNSEL SWAMINATHAN:
25 Q You can answer. 09:09:23

1 A I understand what you mean, yes.
2 Q Great. So if I refer to "care" as
3 gender-affirming care or gender-confirming care, I
4 am referring to medical care provided to transgender
5 people to treat gender dysphoria. 09:09:34
6 Do you understand?
7 MR. TRYON: Objection; terminology.
8 THE WITNESS: To clarify, so when you say
9 "care," you mean specifically medical care?
10 BY COUNSEL SWAMINATHAN: 09:09:46
11 Q I mean medical care.
12 A I understand.
13 Q Great. And, again, when I say "B.P.J.," I am
14 referring to the plaintiff in the case.
15 Do you understand? 09:09:56
16 A Yes, I do.
17 Q Great. So you understand that you are
18 testifying under oath today, just as if you were
19 testifying in court; correct?
20 A Yes, I do. 09:10:07
21 Q Is there anything that would prevent you from
22 testifying truthfully today?
23 A No.
24 Q Is there any reason you're aware of that
25 would prevent you from completely and accurately 09:10:17

1 answering my questions?
2 A No.
3 Q Are you taking notes during this deposition?
4 A I wrote down one note to remind myself that
5 when you use the word "care," you're referring 09:10:30
6 specifically to medical care.
7 Q Okay. Have you been deposed before,
8 Dr. Cantor?
9 A Yes.
10 Q How many times? 09:10:42
11 A About a dozen.
12 Q About a dozen.
13 Let's go each -- through each occurrence
14 individually, starting with the first time you were
15 deposed. 09:10:49
16 When was that, to your recollection?
17 A It would have been about eight to ten years
18 ago.
19 Q And what was the nature of the case?
20 A What the diagnostic cutoffs are for -- for a 09:11:01
21 formal diagnosis of pedophilia or related
22 conditions.
23 Q And what was your role in the case?
24 A I was summarizing the science indicating that
25 sexual interest in a particular age range, 11 to 09:11:16

1 14 years old, is diagnosable as a mental illness.
2 Q And what course -- court was this in?
3 A Oh, I don't remember the city. It was in the
4 state of Illinois.
5 Q Do you, by chance, happen to remember the 09:11:36
6 name of the case, either the plaintiff or the
7 defendant?
8 A No, not offhand.
9 Q Okay. How about the second time you were
10 deposed? 09:11:45
11 A The same situation. There were about six
12 such cases in Illinois.
13 Q And so six out of the 12 or a dozen or so
14 cases that you mentioned deal with the same subject?
15 A Roughly, yes. 09:12:02
16 Q What about the other six?
17 A Of those, roughly three more were a similar
18 kind of question, but in New York State. Another
19 one, also in New York, was pertaining to whether
20 BDSM would count as a mental illness, but that case 09:12:23
21 did not go through to completion. And then the
22 remaining cases were about trans issues.
23 Q So about how many cases were about
24 transgender issues?
25 A I think it's two others. 09:12:42

1 Q Could you tell me more about those two
2 specific instances of your testimony?
3 A One was a -- the Josephson case, and one is
4 the Cross case.
5 Q And tell me about the Josephson case. 09:13:06
6 When -- when did you provide -- or when were you
7 deposed in that case?
8 A Roughly a year ago.
9 Q Roughly a year ago.
10 And what was your role in connection with 09:13:14
11 that deposition?
12 A To summarize the science on gender identity
13 issues.
14 Q Okay. And what court was that case in?
15 A It was in -- I -- I believe that one was 09:13:29
16 Loudoun County.
17 Q And then the second case you mentioned was
18 the Cross case.
19 A Correct.
20 Q And what was the nature of that case? 09:13:39
21 A Similar, to summarize the science on gender
22 identity issues.
23 Q Was that also within the past year that you
24 provided --
25 A Yes. 09:13:49

1 Q -- that testimony?
2 A Yes.
3 Q And was that in the same court as the
4 Josephson case or a different court?
5 A A different court. 09:13:56
6 Q Do you remember which court that was?
7 A No, I don't.
8 Q And so we just spoke about times that you've
9 been deposed. In any of these cases, did it require
10 you to testify in court as well? 09:14:07
11 A Yes.
12 Q In which cases were you required to testify
13 in court?
14 A Hold on. I take that back. It was one of
15 the two New York cases that required me to testify 09:14:26
16 in court.
17 Q So not either of the cases related to
18 transgender individuals?
19 A Correct.
20 Q Okay. And so we just spoke about testimony 09:14:40
21 that you've given. Have you provided expert
22 testimony in any other litigation?
23 A No.
24 Q This is the first case in which you've
25 provided expert testimony? 09:14:55

1 A I think I might have misunderstood your
2 question. In each of these cases, I was serving as
3 an expert witness.
4 Q Oh, in each of these cases, you were an
5 expert witness, not a fact witness -- 09:15:07
6 A Correct.
7 Q -- correct? Okay.
8 But other than these cases, there are no
9 other cases in which you've provided expert
10 testimony; right? 09:15:14
11 A Correct.
12 Q Okay. Has anyone ever tried to exclude the
13 testimony that you've provided in a case?
14 A The opposing counsel, but that's -- only the
15 opposing counsel. 09:15:33
16 Q In how many of the 12 cases that you just
17 mentioned to me has opposing counsel tried to
18 exclude your testimony?
19 A All of them.
20 Q All of them? So let's go through them. 09:15:42
21 Sorry, apologies. I think I cut you off
22 there.
23 A I guess I'm wondering about how you're using
24 the word "tried" to exclude. When you say that, I
25 mean, you know, try to verify my credentials and 09:15:59

1 determine whether I'm qualified to comment at all,
2 but not any extraordinary, in other words, outside
3 of routine, ensuring that I qualify as an expert.
4 Q So in your mind, what -- what would you
5 categorize as extraordinary in your verse? 09:16:22
6 A Anything other than the questioning that
7 we're going through right now.
8 Q Okay. And, to your knowledge, on what
9 grounds did opposing counsel in these cases try to
10 exclude your testimony? 09:16:31
11 A I don't --
12 MR. BARHAM: Objection as to form.
13 THE WITNESS: I don't recall the details.
14 BY COUNSEL SWAMINATHAN:
15 Q Okay. But it is your understanding that some 09:16:41
16 form of this effort has happened in all 12 of the
17 cases that you've provided expert testimony?
18 A Some form, yes.
19 Q Has any testimony you provided been
20 successfully excluded in any of these 12 cases? 09:16:54
21 A No.
22 Q Okay. Did any of these cases involve
23 prepubertal or adolescent transgender children?
24 A Not specific -- children, no.
25 Q Who did they involve in terms of transgender 09:17:13

1 individuals?
2 You spoke of two cases, correct, that focused
3 on transgender people?
4 A Correct. My role was to summarize the
5 science of those issues, not anything about a 09:17:27
6 specific person.
7 Q Okay. In terms of summarizing the science,
8 did the science that you provided testimony on focus
9 on prepubertal or adolescent transgender children?
10 A It included that, but wasn't limited to 09:17:41
11 prepubertal children.
12 Q Would you say that it was the focus of your
13 testimony?
14 MR. BARHAM: Objection; form.
15 THE WITNESS: I wouldn't say focus, no. 09:17:51
16 BY COUNSEL SWAMINATHAN:
17 Q Have you ever testified regarding athletics?
18 A No.
19 Q Have you ever testified regarding transgender
20 or gender-dysphoric athletes? 09:18:04
21 A No.
22 Q Have you ever testified regarding transgender
23 adolescents who are participating in athletics?
24 MR. BARHAM: Objection; terminology.
25 THE WITNESS: Not as -- not specifically, but 09:18:20

1 they would be included as part of my summarizing the
2 science overall.
3 BY COUNSEL SWAMINATHAN:
4 Q And how would -- or how has your summary of
5 the science focused on transgender -- transgender 09:18:29
6 adolescents in athletics?
7 A I don't think I understand the question.
8 Q You said that your testimony or, you know,
9 the -- the research that you have produced in
10 connection with your testimony on the science may 09:18:45
11 encompass transgender adolescents participating in
12 athletics; is that correct?
13 A I --
14 MR. BARHAM: Objection; terminology.
15 THE WITNESS: I don't recall the subject of 09:18:58
16 athletics being relevant to any of the prior cases,
17 no.
18 BY COUNSEL SWAMINATHAN:
19 Q Okay. So my apologies, I must have
20 misunderstood. 09:19:07
21 So you're saying that the science that you've
22 provided testimony on may encompass matters related
23 to transgender adolescents; is that right?
24 A The topic was broadly the science of
25 transsexuality and everything within it. So it 09:19:18

1 could include that, but it wasn't the topic relevant
2 to any of those cases.
3 Q To your understanding, did it include that?
4 Did your testimony focus on anything specific to
5 transgender adolescents? 09:19:33
6 A No, it didn't.
7 Q Okay. And just to be sure --
8 MR. BARHAM: I'm sorry, I -- I think there
9 may have been -- I -- I didn't catch the last word
10 of your question, so could you kingly repeat that. 09:19:45
11 COUNSEL SWAMINATHAN: I apologize.
12 Court reporter, can you please repeat the
13 question that I just posed to Dr. Cantor?
14 (Record read.)
15 COUNSEL SWAMINATHAN: Are you okay with that, 09:20:09
16 Counsel?
17 THE WITNESS: It -- it included transgender
18 adolescents, but not specifically athletes.
19 BY COUNSEL SWAMINATHAN:
20 Q Right. I understand. I -- I just want to 09:20:17
21 make sure your counsel is okay, has understood the
22 question.
23 MR. BARHAM: Thank you.
24 COUNSEL SWAMINATHAN: Great.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q And, again, Dr. Cantor, you've not been
3 retained as an expert witness in any other case that
4 we haven't already talked about; right?
5 A Correct. 09:20:35
6 Q Great. Did you prepare for this deposition
7 today?
8 A Yes, I did.
9 Q Without disclosing any communications you may
10 have had with counsel, what did you do to prepare 09:20:47
11 for today's deposition?
12 A Reread my notes, which I've been accumulating
13 for many years, reread individual papers that were
14 relevant and ensured that I was including anything
15 new that came out since the last time I went through 09:21:05
16 the literature.
17 Q So who provided you with the documents that
18 you just mentioned?
19 I heard your own notes and then new articles
20 that may have come out in the -- in the past few 09:21:18
21 years on this literature.
22 And apologies, could you remind me what else
23 you said you reviewed?
24 A It was my -- oh, and a scan of the literature
25 to see if there was anything new. 09:21:31

1 Q And so was this all research that you
2 independently conducted, or did anyone provide you
3 with any of the materials that you reviewed?
4 A All me.
5 Q Did you meet with your defense counsel? 09:21:43
6 A We met in rehearsal for today, but not over
7 the material -- of my research of the material.
8 Q Who are your attorneys, by the way?
9 A Who are my attorneys?
10 Q Who is your attorney today? Who is 09:22:07
11 representing you in connection with this deposition?
12 A Just Travis.
13 Q Just Travis.
14 And so you said you've met with Travis once
15 in preparation for this deposition; right? 09:22:18
16 A We met briefly yesterday, and then there was
17 a meeting on Friday to rehearse today.
18 MR. TRYON: Counsel, I would also -- this is
19 David Tryon. I will also note that I also represent
20 Dr. Cantor in this deposition. 09:22:34
21 COUNSEL SWAMINATHAN: Great. Thank you,
22 Mr. Tryon.
23 And did you meet with Dr. Cantor at all in
24 preparation for this deposition?
25 MR. TRYON: I'm sorry, are you asking me that 09:22:48

1 question?
2 COUNSEL SWAMINATHAN: Yes.
3 MR. TRYON: I think you should direct your
4 questions to Dr. Cantor.
5 BY COUNSEL SWAMINATHAN: 09:22:55
6 Q Dr. Cantor, did you meet with Mr. Tryon in
7 preparation for this deposition?
8 A Yes. He was present, virtually, on Friday.
9 Q On Friday, but not yesterday?
10 A Correct. 09:23:02
11 Q So beyond the scan of research that you've
12 done in preparation for this deposition, did you
13 review any specific documents?
14 A Yes. The documents are noted in my report.
15 Q What were those documents? 09:23:17
16 A As best as I can recall, they were the
17 declarations of Dr. Adkins, Jensen, Safer and the
18 related rebuttals.
19 Q Did you review any documents beyond those
20 that you just listed that are not cited in your 09:23:38
21 expert report?
22 A No.
23 Q Did you conduct any additional research to
24 prepare for this deposition beyond what you did for
25 your expert report? 09:23:52

1 A No.
2 Q Did you discuss this case with anyone other
3 than your attorneys?
4 A No.
5 Q Did you bring anything with you today? 09:24:05
6 A A blank notepad, the aforementioned documents
7 so I could refer to them on the way, and the details
8 of the address to how to get here.
9 Q Did anyone get you a water bottle?
10 A And a water bottle. 09:24:23
11 Q Great. I'm glad you have that.
12 Okay. So if you could please go into the
13 "Marked Exhibits" folder, I'm going to introduce
14 tab 2, which is a document that has been marked as
15 Exhibit 45 -- 44, apologies. 09:24:37
16 (Exhibit 44 was marked for identification
17 by the court reporter and is attached hereto.)
18 MR. BARHAM: Counsel, I'm in the "Marked
19 Exhibits" folder, and I'm not seeing this document.
20 COUNSEL SWAMINATHAN: Apologies, my -- 09:24:52
21 I'll -- I'll let you know when -- when it's in
22 there, and then you might need to give the -- the
23 page a little bit of a refresh. It's -- it takes a
24 moment to load.
25 Counsel, are you able to see the document and 09:25:35

1 is the witness able to see the document now?
2 MR. BARHAM: Yes.
3 COUNSEL SWAMINATHAN: Great.
4 BY COUNSEL SWAMINATHAN:
5 Q Dr. Cantor, why don't you take a moment to 09:25:46
6 review what the document is.
7 A I'm sorry, this is a 100-page document?
8 Q Take a look at the first few pages to get
9 your understanding of what it is.
10 So have you seen this document before? 09:26:15
11 A Yes. This is my -- the report I prepared for
12 today.
13 Q Did you author this document?
14 A Yes, I did.
15 Q Did anyone else help you draft this document? 09:26:27
16 A No.
17 Q When was this document created?
18 A Both -- primarily, over the course of the
19 last two years or so.
20 Q Is there an execution date on the document? 09:26:48
21 I believe it might be on page 2.
22 A I see a date on page 46, 31 March 2021.
23 Q On page 6, you said?
24 A 36 (sic), I think that was.
25 And the date of execution is 22 June 2021. 09:27:14

1 Q Great. Thank you so much.
2 And, Dr. Cantor, why was this document
3 created?
4 A In preparation for today, that was the
5 request put to me from the attorneys of West 09:27:26
6 Virginia.
7 Q Thank you.
8 And if you could please go into the "Marked
9 Exhibits" folder, I'd like you -- I'd like to
10 introduce tab 1, which has been marked as 09:27:38
11 Exhibit 45.
12 (Exhibit 45 was marked for identification
13 by the court reporter and is attached hereto.)
14 COUNSEL SWAMINATHAN: Counsel and Dr. Cantor,
15 let me know when you're able to -- to see that 09:28:06
16 document.
17 BY COUNSEL SWAMINATHAN:
18 Q Do you have it up in front of you?
19 A Yes, I do.
20 Q Great. Have you seen this document before? 09:28:31
21 A Yes, I have.
22 Q What is it?
23 A This is the report I prepared for today.
24 Q Did you author this document?
25 A Yes, I did. 09:28:44

1 Q Did anyone else help you draft this document?
2 MR. BARHAM: Counsel, I'm going to
3 interrupt -- interrupt you because I'm confused
4 why -- how this document differs from the prior one
5 that we just reviewed. 09:29:01
6 COUNSEL SWAMINATHAN: So my understanding is
7 that this is Dr. Cantor's report executed on
8 February 23rd, 2022, and the prior document was
9 Dr. Cantor's expert report submitted in
10 conjunction -- in connection with the preliminary 09:29:20
11 injunction motion, dated June 22nd, 2021.
12 MR. BARHAM: Thank you.
13 BY COUNSEL SWAMINATHAN:
14 Q So, Dr. Cantor, when was this document
15 created? 09:29:34
16 A This was executed on February 23, 2022.
17 Q And why was this document created?
18 A In preparation for today, at the request of
19 the attorneys.
20 Q Great. And if you can, can you please turn 09:29:51
21 to page 69 of this PDF. Apologies for the long
22 scroll.
23 So what you should see on page 69 is the
24 start of Appendix 1 to your expert report.
25 A Yes. 09:30:46

1 Q Are you there?
2 Have you seen --
3 A Yes.
4 Q -- this document before?
5 A Yes, I have. 09:30:50
6 Q What is it?
7 A That's my CV.
8 Q And did you author this document?
9 A Yes, I did.
10 Q Did anyone assist you in authoring this 09:30:56
11 document?
12 A No.
13 Q When was it created?
14 A It's been accumulating over the course of my
15 career. 09:31:07
16 Q And is there anything in this copy of your CV
17 that needs to be updated or corrected?
18 A One second.
19 Q Yeah, please take a moment to review. I
20 believe there are 32 pages. You've done a lot over 09:31:21
21 the course of your career.
22 A Nothing to add. It's current.
23 Q Great. So I want to talk to you a bit about
24 your education history.
25 So, Dr. Cantor, where did you complete your 09:31:52

1 undergraduate education?
2 A Rensselaer Polytechnic Institute.
3 Q It's commonly known as RPI; right?
4 A Yes, it is.
5 Q Did you enjoy your time at RPI? 09:32:07
6 A Yes.
7 Q What did you study?
8 A Interdisciplinary science, with
9 concentrations in computer science, mathematics and
10 physics. 09:32:18
11 Q And so my next set of questions pertain just
12 to your undergraduate education at RPI.
13 As a part of your formal education for your
14 undergraduate degree, did you ever take any courses
15 focused on child psychology? 09:32:33
16 A As an undergraduate, no.
17 Q As an undergraduate.
18 A No.
19 Q How about adolescent psychology?
20 A No. 09:32:42
21 Q Did you conduct any research on those
22 subjects?
23 A No.
24 Q As a part of your formal education for your
25 undergraduate degree, did you ever take any courses 09:32:56

1 regarding transgender or gender-dysphoric people?
2 A No.
3 Q Did you ever conduct any research concerning
4 transgender or gender-dysphoric people?
5 A No. 09:33:09
6 Q Did you have any other educational training
7 related to transgender or gender-dysphoric people at
8 RPI?
9 A No.
10 Q Okay. What did you study next? 09:33:18
11 A After that, I did start studying psychology
12 at the graduate level.
13 Q And where did you complete -- I see here a
14 Master's of Arts; correct?
15 A Correct. 09:33:33
16 Q Where did you complete your Master's of Arts?
17 A Boston University.
18 Q And so I believe you said you studied
19 psychology; is that correct?
20 A Correct. 09:33:47
21 Q So apologies for my naivety here, but as you
22 were getting your Master's of Arts, would that be a
23 major in psychology or a psychology focus?
24 A At the graduate level, there are no majors.
25 The degree is in that subject matter specifically. 09:33:59

1 So it would be a Master of Arts in psychology.
2 Q I appreciate that clarification. Thank you.
3 When did you graduate?
4 A 1992.
5 Q And so my next set of questions are going to 09:34:18
6 pertain solely to your Master's education.
7 So as part of your formal education for your
8 Master's of Arts, did you ever take any courses
9 focused on child psychology?
10 A Yes. 09:34:31
11 Q Can you describe those courses to me?
12 A The course specifically was in cognitive
13 development and testing.
14 Q And how about adolescent psychology?
15 A It was blended in. 09:34:45
16 Q Okay. And so beyond this one course in
17 cognitive development, were there any other courses
18 focused on child or adolescent psychology?
19 A Not focused on them, no.
20 Q Okay. Did you conduct any research on those 09:34:58
21 subjects, specifically speaking about child and
22 adolescent psychology?
23 A No.
24 Q As a part of your formal education for your
25 Master's of Arts, did you ever take any courses 09:35:15

1 regarding transgender or gender-dysphoric people?
2 A No.
3 Q Did you ever conduct any research concerning
4 transgender or gender-dysphoric people?
5 A No. 09:35:30
6 Q And so what did you study next after your
7 time at Boston University?
8 A I worked for several years as a research
9 assistant in neuropsychology and then began my
10 doctoral studies in psychology. 09:35:50
11 Q So how long were you a research assistant in
12 neuropsychology?
13 A About three years.
14 Q So you took a three-year gap between pursuing
15 your doctorate degree, after completing your 09:36:02
16 Master's of Arts?
17 A Roughly, yes.
18 Q And where did you spend those three years as
19 a research assistant?
20 A I remained in Boston -- remained in Boston -- 09:36:12
21 remained in Boston.
22 COUNSEL SWAMINATHAN: I apologize. Did
23 anyone else hear that a few times or --
24 BY COUNSEL SWAMINATHAN:
25 Q Are you able to hear me clearly, Dr. Cantor? 09:36:25

1 A I think so.
2 Q Okay. Cool. Great. Thank you.
3 And so where -- where in Boston did you
4 complete that research assistant three-year
5 position? 09:36:36
6 A It was the -- it's listed on my CV. I don't
7 immediately recall the formal name of the hospital.
8 Q Okay. Would it be the Queen Elizabeth
9 Hospital?
10 A No. 09:36:52
11 Q No?
12 A It was the Boston VA, part of their
13 Memory Disorders Research Center, which predates
14 when I began recording my jobs on my CV.
15 Q Okay. So that -- that job is -- 09:37:19
16 (Simultaneous speaking.)
17 A Correct. It was -- it was at the Boston VA,
18 which has a formal name that I don't recall, and I
19 was in the Memory Disorders Research Center.
20 Q Great. And just for -- for my clarity, it is 09:37:32
21 not listed on your CV; correct?
22 A Correct.
23 Q Okay. And so you said you -- after you
24 finished your research assistant in neuropsychology,
25 three-year experience, you went on to get your 09:37:47

1 doctorate degree; is that right?
2 A Yes.
3 Q Again, apologies if I botch the -- the
4 language here, but what did you focus on as a part
5 of your doctorate degree? 09:38:03
6 A Clinical psychology.
7 Q Clinical psychology.
8 And where did you complete your doctorate
9 degree?
10 A McGill University. 09:38:12
11 Q So, again, my next set of questions pertain
12 solely to your time at McGill.
13 So as part of your formal education for your
14 doctorate degree in clinical psychology, did you
15 ever take any courses focused on child psychology? 09:38:28
16 A Not courses focused on it, no. The design of
17 the program at McGill often blended child,
18 adolescent and adult psychology together.
19 Q I see. Can you describe that a bit more?
20 A For example, in learning to do testing, one 09:38:50
21 would be trained both in the standard intelligence
22 test for adults as well as the standard intelligence
23 test for children.
24 Q Thank you. I appreciate that.
25 And so, you know, my question pertaining to 09:39:06

1 adolescent psychology, it's your understanding that
2 the courses were a blend of child, adolescent and
3 adult psychology; correct?
4 A Many of them, yes.
5 Q Many of them. 09:39:17
6 And you have never specifically taken a
7 course that focused solely on adolescent psychology
8 at McGill; right?
9 A Correct.
10 Q Okay. Did you, as a part of your normal 09:39:28
11 education, ever take any courses regarding
12 transgender or gender-dysphoric people at McGill?
13 A Not any courses focused on it, but there were
14 courses focused on human sexuality, which, of
15 course, included transsexuality. 09:39:50
16 Q Can you describe that a bit more? Why would
17 your course on human sexuality include
18 transsexuality?
19 A Why would it include?
20 Q Let me rephrase it. How did it include? 09:40:00
21 A By summarizing the existing research at the
22 time and what was thought in the field at the time.
23 Q And how many courses would you say you took
24 that focused on human sexuality?
25 MR. BARHAM: Objection; terminology. 09:40:18

1 MR. TRYON: Objection. Dave Tryon speaking.
2 THE WITNESS: The organization -- the
3 organization of a doctoral program wasn't around
4 courses at all. The primary focus of -- at the
5 doctoral level is on performing research, learning 09:40:38
6 how to perform research and proper research
7 methodology in whatever field the student is
8 pursuing.
9 In my case, that was sexuality. So
10 everything I did at the doctoral level was one way 09:40:49
11 or another targeted towards sexuality, even though
12 there were -- even if not as part of the formal
13 course.
14 BY COUNSEL SWAMINATHAN:
15 Q That is very helpful. I obviously do not 09:41:01
16 have a doctorate degree, so that's a helpful
17 explanation for me to understand how the program is
18 structured.
19 So let me ask another question.
20 How much of your research, in your study of 09:41:13
21 sexuality, concerned transgender and
22 gender-dysphoric people in particular?
23 MR. BARHAM: Objection; terminology.
24 You can answer, if you can.
25 THE WITNESS: It's a little hard to estimate. 09:41:34

1 Roughly 10 to 20 percent was specifically on
2 trans-related issues, and in others, because trans
3 populations were -- were included one way or
4 another, there was a little bit of all of them.
5 BY COUNSEL SWAMINATHAN: 09:41:52
6 Q And what was the nature of that research,
7 typically, in the 10 to 20 percent that you had just
8 mentioned?
9 A Primarily brain development, cognitive
10 development, and I'm also called upon, very 09:42:04
11 frequently, to consult in the statistics and how to
12 analyze existing data.
13 Q Okay. Did you have any other educational
14 training at the doctorate level related to
15 transgender people? 09:42:21
16 A What do you mean, educational training?
17 Q Beyond the independent research that you
18 conducted or the research that you conducted with
19 supervision at McGill, did you have any other
20 educational training, such as a practicum, related 09:42:34
21 to transgender people?
22 MR. TRYON: Objection; form of the -- form of
23 the question.
24 THE WITNESS: Not practicum related
25 specifically to transgender people, but I did 09:42:50

1 practicum related to human sexuality, which
2 necessarily included transgender people.
3 BY COUNSEL SWAMINATHAN:
4 Q Can you describe that practicum?
5 A I was seeing patients for -- mostly for 09:43:05
6 one-on-one therapy, regardless of the issue that
7 they came in with. That can be anything from sexual
8 dysfunctions, curiosities about their own sexual
9 interests, and dysphoric transgender issues.
10 Q Got it. And you said you were seeing 09:43:20
11 patients. How old were these patients, typically?
12 A Young adults and up.
13 Q And what do you understand "young adults" to
14 mean, in terms of an age?
15 A Late teens. 09:43:34
16 Q So late teens and onward you would --
17 A Yes.
18 Q Okay. About how many patients do you think
19 you've seen during your time at McGill in -- in
20 these practica that you just spoke about? 09:43:52
21 A Roughly 30.
22 Q Okay. Thank you.
23 And so what did you do after obtaining your
24 doctorate degree?
25 A I continued as a postdoctoral researcher at 09:44:07

1 the University of Toronto and at the Centre for
2 Addiction and Mental Health.
3 Q Is it okay with you if I refer to the
4 Centre for Addiction and Mental Health, as CAMH?
5 A Yes. 09:44:26
6 Q Is it commonly known as CAMH, or am I --
7 A Usually they pronounce it CAMH.
8 Q CAMH. I will do the same.
9 COUNSEL SWAMINATHAN: And, Court Reporter,
10 that is C-A-M-H when I refer to "CAMH." 09:44:38
11 BY COUNSEL SWAMINATHAN:
12 Q Okay. Can you describe your fellowship
13 experience at CAMH?
14 A I started at -- there was an overlap year
15 between the doctoral studies and my postdoctoral 09:44:50
16 studies. The final year of a Ph.D. is an internship
17 program, which is very much like an advanced
18 practicum program.
19 Within the internship, I was half-time of the
20 entire year in their Gender Identity Clinic and 09:45:05
21 half-time for a full year in their Sexual Behaviours
22 Clinic, which worked primarily with sexual
23 offenders. I continued that work and continued the
24 related research then for the seven years after
25 receiving my doctorate, staying at the same 09:45:24

1 institution.
2 The -- the projects themselves were primarily
3 focussed on brain function and development of each
4 of the sexual issues.
5 Q Got it. And so you said during your 09:45:34
6 internship period you had a position with the
7 Gender Identity Clinic and then separately the
8 Sexual Behaviours Clinic; is that correct?
9 A Yes.
10 Q What responsibilities did you have during 09:45:46
11 your time in those clinics?
12 A I was conducting one-on-one therapy with
13 individual people, pursuing or wondering if they
14 should pursue medical transition, group therapy of
15 people just living their lives as trans people and 09:46:06
16 requiring support, and among the sexual -- in the
17 SBC, in the Sexual Behaviours Clinic, with the sex
18 offenders, it was rehabilitation.
19 Q And what qualified you to provide the
20 one-on-one therapy that you just spoke about for 09:46:25
21 individuals pursuing medical transition and group
22 therapy? Was there any additional certificate or
23 training that you needed in order to provide this
24 therapy?
25 A The training of those issues was -- for those 09:46:39

1 issues is -- it's a lot of reading and then
2 one-on-one study with other experts who are
3 extremely experienced with -- with trans issues. I
4 studied under Ray Blanchard at CAMH.
5 Q Did you study under anyone else besides 09:47:03
6 Ray Blanchard?
7 A There were other instructors. He ran the
8 lab. The other primary input to my education was a
9 trans clin- -- she herself was a trans clinician,
10 Maxine Petersen. 09:47:24
11 Q And so did either Ray Blanchard or
12 Maxine Petersen serve as a supervisor to you in each
13 of those positions?
14 A Yes. Both of them.
15 Q Okay. Did you have anyone to supervise under 09:47:35
16 you in those positions at the Gender Identity Clinic
17 and the Sexual Behaviours Clinic?
18 A Not while I was an intern or -- not while I
19 was an intern and not while I was a postdoc.
20 Q What did you do next, after interning at 09:47:58
21 those clinics?
22 A After the internship and I received my
23 doctorate, then I was appointed as a postdoctoral
24 fellow at CAMH.
25 Q So my next set of questions pertain to your 09:48:08

1 fellowship.
2 So as a part of your fellowship, did your
3 work focus on child psychology?
4 A Did my focus -- it didn't focus on child
5 psychology, no. 09:48:25
6 Q And apologies, can we go back one minute
7 to -- you -- you had stated that you provided
8 one-on-one therapy to individuals pursuing medical
9 transition/group therapy.
10 What was the average age of those patients 09:48:37
11 that you provided the one-on-one therapy to?
12 A Average age?
13 Q Yeah.
14 A Early 40s.
15 Q What do you think was the youngest age of the 09:48:51
16 patient, to your recollection? I understand it was
17 a bit of time ago.
18 A Youngest would have been late teens, early
19 20s.
20 Q Okay. Great. And, sorry, back to your 09:49:03
21 fellowship. We just spoke about child psychology,
22 and you mentioned that it did not focus on child
23 psychology; correct?
24 A Correct.
25 Q How about adolescent psychology? 09:49:15

1 A Again, it didn't focus on adolescent
2 psychology, but most of the assessments that we were
3 doing and the research we were doing was entire
4 lifespan. So, of course, childhood and adolescence
5 is a predominant part of that, but not the focus of 09:49:34
6 it.
7 Q I see. And so, again, you'll have to educate
8 me a bit, but as a part of your postdoctoral
9 fellowship, do you take any courses?
10 A No. 09:49:48
11 Q No? It's --
12 A Oh, I should take that back. There are no
13 courses built into the program itself, but I often
14 opted to take extra courses just to fill in extra
15 material that I needed, such as in neuroscience or 09:49:59
16 similar advanced statistics.
17 Q So beyond neuroscience, what other courses
18 did you elect to take during your postdoctoral
19 fellowship?
20 A Just those two deals, neuroscience and 09:50:12
21 statistics.
22 Q And statistics. Okay.
23 And were those, like, online courses, or were
24 they courses offered through CAMH?
25 A They were courses through the Univer- -- 09:50:22

1 through the University of Toronto. CAMH is a
2 teaching hospital of the University of Toronto.
3 Q Great. And so, as part of your fellowship,
4 did any of your work focus on transgender or
5 gender-dysphoric adults? 09:50:38
6 A Not at that time, no.
7 Q What about transgender or gender-dysphoric
8 adolescents?
9 A Not at that time, no.
10 Q Okay. Have you completed any other studies? 09:50:57
11 A Altogether, I -- oh, when you say "studies,"
12 you don't mean published studies; you mean --
13 Q Right. Educational pursuits of degrees and
14 things like that.
15 A No. That's my full formal education. 09:51:14
16 Q And I don't mean to say that you haven't done
17 so much already. I just wanted to make sure that
18 we've covered all of the bases.
19 And what is your current occupation right
20 now? 09:51:26
21 A I'm in private practice as a clinical
22 psychologist.
23 Q And where do you conduct your private
24 practice?
25 A In Toronto. 09:51:35

1 Q In Toronto. Okay.
2 So I see on page 1 and 2 of your CV, which
3 hopefully you still have in front of you, you list
4 your employment history. I would love to walk
5 through your employment history, but if it's okay 09:51:54
6 with you, in chronological order. So if we can turn
7 to page 2.
8 A Yes.
9 Q I see that you completed predoctoral
10 practicum at the Queen Elizabeth Hospital in 09:52:07
11 Montreal, Canada; is that correct?
12 A Yes.
13 Q And that was in the department of psychiatry?
14 A Yes.
15 Q And you were there from May 1994 to 09:52:16
16 December 1994; is that correct?
17 A Yes.
18 Q What was your title in this position?
19 A They used a French word that I don't
20 remember. A "stagiaire." A -- a local Montreal, 09:52:37
21 Quebec, term. The best English translation would be
22 trainee in psychology.
23 Q Do you speak French?
24 A No, I don't.
25 Q Trainee. Okay. Great. 09:52:51

1 Can you tell me a bit about your work in this
2 position?
3 A My focus then was general psychotherapy with
4 outpatients who would typically come in to that
5 clinic with a series of disorders, mainly 09:53:08
6 depressions and anxieties.
7 Q And did you work in this position focus on
8 children?
9 A No.
10 Q What about adolescents? 09:53:17
11 A Didn't focus on them, no.
12 Q No. So you predominantly worked with adults
13 who came in with depression and anxiety disorders?
14 A Correct.
15 Q Okay. And then I see that you completed a 09:53:31
16 predoctoral practicum at the Royal Victoria Hospital
17 in Montreal; is that right?
18 A Yes.
19 Q And this was in the sex and couples therapy
20 unit? 09:53:45
21 A That's correct.
22 Q And you were there for a little under four
23 years. It says September 1993 to June 1997; is that
24 right?
25 A Correct. I continued seeing clients there 09:53:55

1 over the course of my doctoral studies.
2 Q Got it. Okay.
3 So can you tell me about your work in this
4 position and whether you had a similar French title
5 there? 09:54:07
6 What -- what was your title?
7 A My -- I don't remember -- I don't remember my
8 title.
9 Q Okay. No problem.
10 A It was in English. It's an English-speaking 09:54:19
11 hospital. My functions there were sex therapy and
12 couples therapy, the full range of sexual disorders
13 and the range of issues that -- that interfere with
14 romantic relationships.
15 Q Got it. So did the majority of your work in 09:54:34
16 this position focus on adults?
17 A Yes.
18 Q Okay. And in this position, did you conduct
19 any research or, you know, have any, like, work
20 experience in the field of transgender or 09:54:49
21 gender-dysphoric people?
22 A Not specific to them, no.
23 Q Okay. And then I see that you were a
24 teaching assistant at McGill in the Department of
25 Psychology; is that right? 09:55:05

1 A Yes.
2 Q And was this during your doctorate degree as
3 well?
4 A Yes.
5 Q Okay. And so that was from September 1993 to 09:55:13
6 May 1998 --
7 A Yes.
8 Q -- is that right?
9 Okay. Who were you a teaching assistant for?
10 Was it for a professor, or were you a general 09:55:25
11 teaching assistant for the program?
12 A Two different professors. One was
13 Rhonda Amsel for statistics courses, and the other
14 was Irv Binik for sexuality courses.
15 Q Can you repeat the name of the professor who 09:55:41
16 focused on sexuality courses?
17 A Irv, I-r-v, Binik, B-i-n-i-k.
18 Q And so what courses within sexuality did
19 Irv Binik teach?
20 A The name of the course itself was 09:55:58
21 Human Sexuality.
22 Q It was called Human Sexuality. Okay.
23 And has he taught any other courses at
24 McGill, to your knowledge, or during the time that
25 you were there? 09:56:07

1 A I think that's the only course he taught
2 while I was there, yes.
3 Q So in your role as a teaching assistant, were
4 you required to conduct any research on transgender
5 or gender-dysphoric people? 09:56:28
6 A As a part of that course, no.
7 Q As a part of that course. No?
8 A Correct. Not as part of that course.
9 Q Okay. And then you went on to work as a
10 clinical psychology intern, as we spoke about, at 09:56:45
11 CAMH; right?
12 A Correct.
13 MR. BARHAM: Counsel, we've been going about
14 an hour. Would this be a natural time for a
15 five-minute break? 09:56:55
16 COUNSEL SWAMINATHAN: Absolutely. Let's take
17 a break, and we can come back at 10:05, if that
18 works.
19 Do you want to take a seven-minute break?
20 MR. BARHAM: Sure. That sounds good. 09:57:05
21 COUNSEL SWAMINATHAN: Okay. We can go off
22 the record.
23 THE VIDEOGRAPHER: Yes, we are going off the
24 record at 9:57 a.m., and this is the end of Media
25 Unit No. 1. 09:57:12

1 (Recess.)
2 THE VIDEOGRAPHER: All right. We are back on
3 the record at 10:08 a.m., and this is the beginning
4 of Media Unit No. 2.
5 Go ahead, please. 10:08:34
6 BY COUNSEL SWAMINATHAN:
7 Q Okay. Dr. Cantor, before the break, you
8 testified that you had studied under two
9 individuals, Blanchard and Petersen; is that
10 correct? 10:08:46
11 A Yes.
12 Q And that's Ray Blanchard and Maxine Petersen;
13 right?
14 A Yes.
15 Q And you mentioned that they are extremely 10:08:56
16 knowledgeable on issues of transgender identities
17 and gender-dysphoric people; right?
18 A Yes.
19 Q And their focus is -- they -- they focus on
20 adults who identify as transgender or who suffer 10:09:14
21 from gender dysphoria; right?
22 A Their writings and their careers have spanned
23 the entire lifespan, but most of their work was with
24 adults.
25 Q Adults. Okay. 10:09:31

1 And so we spoke about your time at the -- at
2 CAMH as a clinical psychology intern, but then you
3 moved to the law and mental health program, is that
4 correct, at CAMH?
5 A The Sexual Behaviours Clinic is part of the 10:09:49
6 law and mental health program.
7 Q Oh, okay. So let me ask it a different way.
8 What did you do after you were a clinical
9 psychology intern at CAMH?
10 A After I was an intern was when I started my 10:10:02
11 postdoctoral -- postdoctoral studies.
12 Q And so this is when you were a psychologist
13 within the law and mental health program?
14 A Yes.
15 Q Okay. Can you tell me about your work in 10:10:16
16 that position?
17 A That's when I began my brain-based research
18 on the development of atypical human sexualities.
19 Q And did your work in this position focus on
20 child psychology? 10:10:37
21 A It's a little hard to say. What I was
22 researching on was brain development, which begins
23 at conception, continues, of course, quite
24 dramatically over the course of gestation, continues
25 to develop over the course of childhood and 10:10:56

1 adolescence and ends in adulthood.
2 Q Got it. So this brain development research
3 that you did, did you focus only on brain
4 development as it relates to atypical sexualities?
5 A Although the questions I was asking were 10:11:12
6 about human sexuality, I simultaneously needed to
7 account for all of the other possible things that
8 were going on in the brain; and so, therefore, they
9 became related, even though those weren't the topics
10 of my specific efforts. 10:11:35
11 Q Your work in this position didn't focus on
12 children and adolescents with gender dysphoria;
13 right?
14 A It's a little tough to say. It's tough to
15 say. Everything I look at in a brain scan is an 10:11:54
16 accumulation of everything that happens over life,
17 very much of which happens in childhood and before
18 childhood. So I was looking at the effects in the
19 brain of everything that happened over childhood
20 accumulated -- accumulating, but I wasn't looking 10:12:10
21 during childhood.
22 Q It's fair to say that it didn't focus on
23 child (sic) and adolescents with gender dysphoria;
24 right?
25 MR. BARHAM: Objection; terminology. 10:12:25

1 THE WITNESS: It depends on what one means by
2 "focus."
3 BY COUNSEL SWAMINATHAN:
4 Q You didn't work with children and adolescents
5 with gender dysphoria in this position directly, did 10:12:33
6 you?
7 A Not while they were children and adolescents,
8 no.
9 Q Okay. Did you conduct research specifically
10 related to children and adolescents with gender 10:12:46
11 dysphoria, or did you focus more holistically on
12 brain development from birth to adulthood?
13 MR. TRYON: Objection; form.
14 THE WITNESS: I didn't -- my research
15 subjects, while they were research subjects, were no 10:13:06
16 longer children, but we would often focus on events
17 that happened during childhood and adolescence.
18 BY COUNSEL SWAMINATHAN
19 Q I see. So what approximate -- or age -- or
20 what was the average age of the research subjects 10:13:19
21 that you worked with?
22 A The research subjects then ran the -- the
23 gamut from 18 to simulating.
24 Q Okay. And, again, this research was related
25 to brain development as connected to atypical 10:13:40

1 sexualities, right, the research you --
2 A Yes.
3 Q -- you just mentioned?
4 Okay. Thank you.
5 And then you went on to be the research 10:13:49
6 section head at CAMH; right?
7 A Correct.
8 Q And you were the section head from
9 December 2009 to September 2012; right?
10 A Correct. 10:14:03
11 Q Great. What was your title beyond research
12 section head in this position? Did you hold any
13 other titles?
14 A Psychologist.
15 Q Psychologist. Okay. 10:14:15
16 Can you tell me about your work in this
17 position?
18 Mainly what I'm trying to understand is how
19 much of your practice was research versus clinical
20 psychology. 10:14:30
21 A It's -- it's tough to pull them apart at that
22 level. I was simultaneously doing frontline
23 clinical work but also systematically recording the
24 results of that work, those of my colleagues, those
25 of my then-students in order to analyze patterns in 10:14:47

1 the data of what everybody was seeing.
2 So what was done for research purposes was
3 also done for clinical purposes and vice versa.
4 Q I see. And so during your time as research
5 section head, did any of your research involve, 10:15:04
6 specifically, gender dysphoria or transgender
7 medicine?
8 MR. BARHAM: Objection; form.
9 THE WITNESS: I would hesitate -- it didn't
10 focus, but was repeatedly included. In order to do 10:15:25
11 any of the -- or in order to do research on any of
12 these topics, because they interrelate, we also --
13 at least indirectly, also include the other atypical
14 sexualities.
15 BY COUNSEL SWAMINATHAN: 10:15:39
16 Q I see. So what was your work primarily
17 focused on, though, during your time as research
18 section head?
19 A My work, as I said, was primarily focused on
20 how atypical sexualities develop. 10:15:52
21 Q And in your understanding, how do they
22 develop?
23 A Well, that could be any atypical sexuality.
24 Some -- those include pedophilia, other paraphilias,
25 transsexuality, people who call themselves 10:16:08

1 hypersexual.
2 I also participated in research and the
3 development of what I'll call ordinary -- the
4 development of sexual orientation.
5 Q So would you say that your work was primarily 10:16:19
6 focused on pedophilia and hypersexuality?
7 MR. TRYON: Objection; form.
8 THE WITNESS: Primarily, sure.
9 BY COUNSEL SWAMINATHAN:
10 Q And then you went on to become the head of 10:16:35
11 research at the Sexual Behaviours Clinic; right?
12 A Yes.
13 Q And that was from November 2010 to
14 April 2014; correct?
15 A Yes. 10:16:49
16 Q And you were still at CAMH?
17 A Yes.
18 Q Great. So can you tell me about your work in
19 this position?
20 A Only my position title changed. 10:17:03
21 Q So your work remained the same, but you were
22 promoted to head of research?
23 A Correct.
24 Q What is the difference between research
25 section head and head of research? 10:17:16

1 A There isn't one. There was a reorganization
2 of the departments. The titles in the department
3 were realigned to match those in other departments.
4 Q I see. Thank you.
5 And so in this position, as you continued on, 10:17:33
6 am I correct to say that your work still focused
7 primarily on pedophilia, hypersexuality and your
8 work with sex offenders? Is that correct?
9 A Yes.
10 Q Okay. And did your work, in terms of the 10:17:49
11 patients you saw, at all focus on children and
12 adolescents?
13 MR. BARHAM: Objection; form.
14 THE WITNESS: Not --
15 MR. TRYON: Objection. 10:18:06
16 THE WITNESS: Not while they were children
17 and adolescents, but very many of the issues that we
18 were dealing with were issues that occurred during
19 childhood and adolescence.
20 BY COUNSEL SWAMINATHAN: 10:18:11
21 Q I see. But the patients themselves, at the
22 time you saw them, were not children or adolescents;
23 right?
24 A Correct.
25 Q Got it. And then you were a senior scientist 10:18:20

1 as a part of the complex mental illness program;
2 right?
3 A Correct.
4 Q And that was from January 2012 to May 2018?
5 A Correct. 10:18:42
6 Q What was your responsibility or, you know,
7 what were you duties under the title of senior
8 scientist?
9 A The duties were the same as before, but,
10 again, in the administrative structure of the 10:18:53
11 hospital, one often had dual titles.
12 Q I see. So when you adopted the title of
13 senior scientist, you were still the head of
14 research; is that correct?
15 A Yes. 10:19:09
16 Q So why did they give you this additional
17 title?
18 A That was a higher rank than psychologist.
19 Q I see. And did your roles change at all from
20 head of research to then adopting this dual role as 10:19:23
21 senior scientist and head of research?
22 A No. My functions were the same.
23 Q Did you have a change in supervision at all?
24 A I'm not sure what you mean.
25 Whom I was supervising or whom I was 10:19:41

1 supervised by?
2 Q Apologies. Was who you reported to in your
3 prior role as head of research still the same person
4 or group of people you reported to as senior
5 scientist? 10:19:54
6 A Yes.
7 Q Who were those individuals?
8 A Oh, I don't recall his name. He was the head
9 of the law and mental health program.
10 Q So the head of the law and mental health 10:20:12
11 program in the 2012 to 2018 timeframe. Is that fair
12 to say?
13 A Yes.
14 Q And I take it from your slight
15 misunderstanding of my prior question that you have 10:20:29
16 supervised people in those positions as well; right?
17 A Yes.
18 Q And so when you were a senior scientist, who
19 did you supervise in that position?
20 A Students whom I was training at the time. 10:20:41
21 Q And so these are students of the University
22 of Toronto?
23 A No. They were usually students really coming
24 to CAMH from all over the world for their
25 internships and their training. 10:21:02

1 Q I see. Okay.
2 And so at any given time, how many students
3 would you say, on average, you supervise?
4 A Three to five.
5 Q Okay. And what kind of work were those 10:21:13
6 students typically engaging in when they were under
7 your supervision?
8 A A lot of the cognitive testing and treatment
9 with people with atypical sexualities.
10 Q And what did -- what did their assignments 10:21:27
11 look like? What -- what did they work on, when you
12 say that they focused on cognitive treatment and
13 atypical sexualities?
14 A There was a great deal of -- of testing. Our
15 object was to try to record, objectively, what other 10:21:45
16 clinicians were perceiving subjectively.
17 Q And how did you do that? How did you -- how
18 did your clinic test objectively?
19 A Sometimes through document checks. Sometimes
20 through formal testing, using standardized 10:22:03
21 instruments.
22 Q Okay. And so in your position as senior
23 scientist and, you know, under -- while you were
24 supervising these CAMH interns, did you ever work
25 directly with children or adolescents with gender 10:22:21

1 dysphoria?
2 A Directly, no.
3 Q Did your testing ever involve issues
4 pertaining to child or adolescent psychology?
5 A Issues pertaining to, yes. 10:22:39
6 Q What would you describe those issues as?
7 A Events occurring during those periods of
8 life.
9 Q And how would you obtain data on those
10 events? 10:22:52
11 A Sometimes through interview with the patient.
12 Sometimes through review of documents.
13 Q Got it. And so when you say you've
14 interviewed the patients, you're interviewing them
15 as adults, and they're recounting their childhood 10:23:05
16 experiences; correct?
17 A Yes.
18 Q And when you say "records," who provides you
19 with the medical records of these patients?
20 A Typically, they were provided by a court, 10:23:18
21 parole or probation officers or the patients'
22 lawyers.
23 Q I see. Okay. So how -- how do these
24 patients come to you? How do you -- or a better
25 question is, how do you find these patients that you 10:23:34

1 work with?
2 A Well, I didn't really find them at all.
3 Typically, these would be assigned to the hospital,
4 and then the hospital would get them to the
5 appropriate clinic, and then I saw everybody who 10:23:48
6 came to that clinic, or I was ultimately responsible
7 for the research going on with everybody in that
8 clinic.
9 Q I see. So how -- or why would these patients
10 be referred to your hospital? 10:24:00
11 MR. TRYON: Objection.
12 THE WITNESS: Either through --
13 MR. BARHAM: Objection as to form.
14 THE WITNESS: Typically, they were -- they
15 had committed a sexual offense and served their 10:24:11
16 sentence and were being released to parole and
17 probation, and so the parole and probation system
18 wanted as much information as possible in order to
19 put the person -- to help maximize the person's
20 benefit from their -- from their rehabilitation time 10:24:27
21 and from their parole and probation time.
22 Other people self-referred because they had a
23 question or concern with some issue and there was
24 nobody else with the expertise to be able to answer
25 it -- to be able to address it. 10:24:42

1 BY COUNSEL SWAMINATHAN:
2 Q Two quick follow-up questions.
3 So what was most typically the offense that
4 these patients had committed when they came to your
5 hospital? 10:24:51
6 MR. TRYON: Objection.
7 THE WITNESS: I would hesitate to say to the
8 hospital. But the ones who ended up in my clinic
9 were there specifically for a sex-related --
10 sex-related reason. Roughly two-thirds of those 10:25:03
11 would be related to or potentially related to a
12 sexual offense.
13 BY COUNSEL SWAMINATHAN:
14 Q Can you describe for me what you mean by
15 "sexual offense"? What does sexual offense 10:25:18
16 encompass?
17 MR. TRYON: Objection.
18 And before you answer, I just -- I don't know
19 what HIPAA laws are in Canada, but I just want to
20 caution the witness to make sure that you're not 10:25:28
21 violating any confidentiality requirements of -- of
22 Canadian law.
23 COUNSEL SWAMINATHAN: Thank you, Counsel.
24 Your objection is noted.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q You can answer, Dr. Cantor.
3 A I understand.
4 Typically, these were touching of a child or
5 child pornog- -- or child pornography possession. 10:25:42
6 Q Thank you. I appreciate that.
7 So you also said that some of these patients
8 were self-referred; right?
9 A Yes.
10 Q Approximately what percentage of your 10:25:55
11 patients were self-referred as opposed to coming to
12 you from a different -- coming to the hospital from
13 a different method?
14 A Roughly a quarter to a third.
15 Q I appreciate it. 10:26:13
16 And then your position has changed again, but
17 maybe you can let me know if -- was there any
18 difference between your role as a senior scientist
19 and a senior scientist, inaugural member, as noted
20 on your resumé? 10:26:29
21 A No, there was no difference.
22 Q What -- what does it mean to be an inaugural
23 member?
24 A It was -- it was an inaugural -- an inaugural
25 member of that now newly formed institution. It was 10:26:45

1 a large donation to the hospital, which, again,
2 triggered a another reorganization.
3 Q Oh, okay. So what was the Campbell Family
4 Mental Health Research Institute previously known an
5 as? 10:27:01
6 A It wasn't previously known. The Campbell
7 family was the source of the large donation which
8 triggered the renaming and the reorganization.
9 Q I see. So it was -- it's completely separate
10 from the complex mental illness program or the 10:27:10
11 Sexual Behaviours Clinic?
12 A I don't recall the administrative details,
13 but as I say, it was a shuffling rather than a -- it
14 was more a shuffling than anything else.
15 Q So were the people that you worked with in 10:27:24
16 that position largely the same as previous
17 positions, in terms of your coworkers?
18 A Yes. Nothing from my day-to-day work
19 changed.
20 Q Got it. And the -- the work that you had 10:27:36
21 just described to me, that you had done in your role
22 as senior scientist, that work was the same as
23 senior scientist, inaugural member?
24 A Correct.
25 Q Okay. And you were there until May 2018; 10:27:48

1 right?
2 A Yes.
3 Q And then finally, I think we're getting to
4 where you are presently, which is the director of
5 the Toronto Sexuality Centre; correct? 10:28:01
6 A Yes.
7 Q And so you are currently the director of the
8 Toronto Sexuality Centre, but you're also conducting
9 your own private practice; is that right?
10 A That is my private practice. 10:28:14
11 Q Oh, that is your private practice. Okay.
12 And so can you tell me about your private
13 practice? Approximately how many patients do you
14 have as a part of your private practice?
15 A Roughly 50, currently. 10:28:28
16 Q So you have about 50 patients. Does this
17 fluctuate a lot, or is it typically around 50?
18 A I do my best to keep the number pretty
19 constant.
20 Q Okay. And why is that? 10:28:47
21 A Oh, for the -- for the workload.
22 Q Got it. And so you've been in your private
23 practice for about five years now; is that right?
24 A Yes.
25 Q When you first started your private practice, 10:29:01

1 approximately how many patients did you have?
2 A I want to say zero, and then I worked it up
3 from there.
4 Q And how are patients typically finding you or
5 coming to you for -- for your treatment? 10:29:20
6 A Generally from routine advertising. Perhaps
7 a quarter of them are referred specifically from
8 other clinicians who feel that they're not qualified
9 to deal with, whatever sexual issues, will send
10 their client to me. 10:29:38
11 Q You said "routine advertising." What does
12 routine advertising for your practice look like?
13 A An ad in Psychology Today and websites.
14 Q Any social media?
15 A No. 10:29:53
16 Q And you said sometimes other clinicians refer
17 patients to you because they are unable to meet the
18 needs of what the patient is looking for; right?
19 A Correct.
20 Q And so what would you describe your specialty 10:30:05
21 to be that these other clinicians don't possess?
22 A Human sexuality, which is left out of most
23 mental health training programs altogether.
24 Q And I know we've spoken about this briefly
25 before, but what all do you understand to fall under 10:30:24

1 human sexuality again?
2 A Sexual functioning, sexual attraction --
3 sexual functioning and sexual attraction patterns.
4 Q And so of your 50 patients, approximately --
5 you know, what's the average age of your 50 10:30:40
6 patients?
7 A Average? 30 to 35.
8 Q How old is your youngest patient, without
9 disclosing any HIPAA violative information?
10 A Youngest would be, I think, early 20s. 10:30:57
11 Q Early 20s. And how about the oldest?
12 A Oldest would be late 60s.
13 Q So as your role as director, is it -- am I
14 correct that it's solely just your private practice,
15 not your research? There's no -- no more research 10:31:18
16 component of this position?
17 A Not paid.
18 Q So at the Toronto Sexuality Centre, you're
19 praid -- you're paid for the work that you do in
20 conjunction with your private practice; right? 10:31:36
21 A Correct.
22 Q And any other research you do, there's no
23 payment from this entity for that research; right?
24 A Correct.
25 Q Okay. So in any of these positions that 10:31:47

1 we've spoken about, have you provided care directly
2 to transgender people?
3 A I'm sorry, would you ask that again?
4 Q Sure. So in any of these positions, have you
5 provided care to transgender people? 10:32:03
6 MR. BARHAM: Objection; form.
7 THE WITNESS: Yes.
8 BY COUNSEL SWAMINATHAN:
9 Q Which positions have you provided care to
10 transgender people? 10:32:15
11 A Right now, asking as to the Toronto Sexuality
12 Centre?
13 Q Any others?
14 A I -- I don't have any other clinical
15 positions. I'm -- again, I'm checking your 10:32:28
16 question.
17 When you asked me about my experiences with
18 trans people, you mean the -- my clinical
19 experiences within the Toronto Sexuality Centre?
20 Q Exactly. And I'm just trying to ensure that 10:32:43
21 I haven't missed any other practices that, you know,
22 you may have had with respect to, you know,
23 providing direct care to -- to transgender people.
24 So I understand your answer to be the Toronto
25 Sexuality Centre; is that correct? 10:32:57

1 A Yes, I -- I -- that includes trans people and
2 people with transitions.
3 Q Okay. And, again, none of this care was
4 provided to transgender prepubertal kids; right?
5 A Correct. 10:33:15
6 Q And none of this care was provided to
7 transgender adolescents; right?
8 A Some would be adolescents. I -- I see
9 clients at ages 16 and up.
10 Q 16 and up. 10:33:32
11 And you said your youngest client at the
12 moment is in their early 20s, but you have seen
13 clients who have been under the age of 18; is that
14 right?
15 A Yes. 10:33:45
16 Q How many transgender people under the age of
17 18 have you provided care to?
18 A Six to eight.
19 Q Okay.
20 A While they were in that age. 10:33:58
21 Q Got it. And what about under the age 16,
22 have you ever provided care to any transgender
23 adolescent or prepubertal kid under the age of 16?
24 A No.
25 Q Okay. Did any of the care that you provided 10:34:11

1 to transgender and gender-dysphoric people involve
2 prescribing puberty-delaying treatment?
3 A No. I'm not licensed for providing medical
4 care.
5 Q And so you're not licensed to provide -- or, 10:34:31
6 sorry, prescribe hormone therapy; right?
7 A That is correct.
8 Q Okay. So your care primarily involved
9 counseling; right?
10 A Yes. 10:34:44
11 Q So with respect to any employment that you've
12 held, have you ever been subject to discipline by
13 your employer?
14 A No.
15 Q No? And you've spent a significant portion 10:34:55
16 of your career at CAMH; right?
17 A Yes.
18 Q Okay. How have you gotten along with your
19 colleagues over the span of -- it looks like over
20 20 -- 20 years? 22 years? How have you gotten 10:35:15
21 along with your colleagues there?
22 A In general, very well.
23 Q And apologies, just one -- one clarification.
24 So you said that you're not licensed to
25 prescribe puberty-delaying treatment or cross-sex 10:35:29

1 hormones; right?
2 A Correct.
3 Q Are you qualified to refer patients to
4 providers who are licensed to provide that care?
5 A I'm not -- the question doesn't quite make 10:35:49
6 sense to me.
7 Q Great. I'm -- I'm happy to rephrase.
8 Have you ever provided a referral for one of
9 your patients to obtain puberty-delaying treatment
10 or cross-sex hormones from, let's say, an 10:36:03
11 endocrinologist?
12 A It's tough to say. Again, the Canadian
13 medical system doesn't work quite the same way as
14 the American way does. A letter from me would
15 generally be sufficient for a medical provider who 10:36:27
16 is looking for a licensed mental healthcare provider
17 to say that a person is mentally healthy and ready
18 to engage in a medical treatment, but we don't send
19 the referral -- but -- but in the U.S., I understand
20 there are certain legal ramifications how that 10:36:53
21 referral happens, which isn't necessarily relevant
22 to where I am.
23 Q I see. So you would provide a letter to
24 another mental health provider who works with a
25 patient, who would then be able to provide a 10:37:05

1 referral to the medical doctor to prescribe these
2 treatments; right?
3 A No. I would be that other mental health
4 provider.
5 Q So you would receive a letter from another 10:37:18
6 practitioner and then that -- you would be the
7 decision-maker as to whether the person is ready for
8 a referral to a medical doctor to receive these
9 treatments; is that correct?
10 A No. Usually, I would be the initiator. I 10:37:35
11 mean, a -- a -- any given patient might come to me
12 through another provider, but that doesn't require
13 anything -- anything formal or anything in writing.
14 If the request or the -- if what is
15 appropriate to the case is that the person does go 10:37:52
16 on for medical treatment, then I would write a
17 letter indicating that patient's preparedness for
18 that medical treatment.
19 Q I see. And so how often have you written
20 such a letter? How -- how many times, to your 10:38:03
21 approximate recollection?
22 A Two, three dozen.
23 Q Two, three dozen.
24 And do you typically write these letters for
25 those who are above the age of 16? 10:38:17

1 A Yes.
2 Q Have you ever written a letter for a patient
3 of yours who was under the age of 16 to receive
4 puberty-delaying treatment or hormone therapy?
5 A No. 10:38:33
6 Q Has any patient under the age of 16 come to
7 you with that request?
8 A I don't see patients under 16.
9 Q How about under 18? Has any patient between
10 the ages of 16 and 18 come to you with a request 10:38:46
11 seeking puberty-delaying treatment or, sorry, at
12 that point cross-sex hormones?
13 A I haven't had such a request, no.
14 Q Okay. Sorry, we were just speaking about
15 your colleagues at CAMH, and I was asking you, you 10:39:00
16 know, how have you gotten along with your colleagues
17 there, and you said fine; is that correct?
18 A Generally, quite well, yes.
19 Q Generally, quite well.
20 Did you ever have any disagreements with 10:39:11
21 other employees of CAMH?
22 A Yes.
23 Q What kinds of disagreements have you had?
24 MR. BARHAM: I'm going to object and advise
25 not to disclose any confidential information. 10:39:31

1 THE WITNESS: Generally, these were, you
2 know, minor administrative disagreements about how
3 something should be done or -- or efficiency.
4 The largest disagreement I had was not
5 related to gender -- to gender issues at all, but it 10:39:51
6 ultimately was what motivated my leaving the
7 hospital.
8 BY COUNSEL SWAMINATHAN:
9 Q It was not related to issues of gender
10 dysphoria or related to transgender people? 10:40:04
11 A Correct.
12 Q And it caused you to leave the hospital.
13 And was that in 2018?
14 A Yes.
15 Q Okay. So you've never had any issue come up 10:40:18
16 relating to the topic of transgender people; right?
17 A When you now say "never had any issue come
18 up," we're -- we're still talking in which -- in
19 which context?
20 Q Apologies. Let me -- let me clarify. 10:40:38
21 So you said that there was a disagreement in
22 2018 that caused you to leave CAMH; right?
23 A I wouldn't say that there was a disagreement
24 in 2018. It took me several years to -- to get
25 to -- to get to that point, but that certainly -- 10:40:54

1 but that was the formal date of when -- when I left
2 CAMH.
3 Q I understand.
4 What was that disagreement?
5 A It had become very apparent to me that the 10:41:05
6 psychiatric staff was misusing hospital time for
7 their own private practices, and I was ultimately
8 unable to change that from happening in a
9 substantial way. I thought it was grossly unethical
10 and no longer wanted any part of a clinic that would 10:41:24
11 -- that would allow that.
12 Q And were these psychiatric staff individuals
13 that you supervised?
14 A No.
15 Q No? And to your knowledge, if -- if you 10:41:34
16 know, how were they misusing hospital time?
17 A They were seeing private patients and using
18 hospital resources for those private patients.
19 Q And would those patients be coming to the
20 hospital, or would these be virtual sessions? 10:41:51
21 A Coming to the hospital.
22 Q Yeah, I'm just trying to get a better
23 understanding of whether, you know, these
24 psychiatric staff were seeing these patients and the
25 patients were not registered in the hospital 10:42:06

1 records.
2 Is -- is that what happened?
3 A The --
4 MR. BARHAM: I'm going to object and caution
5 you about resealing confidential information. 10:42:16
6 COUNSEL SWAMINATHAN: Objection noted. Thank
7 you.
8 THE WITNESS: That's not how the system
9 exactly was set up. Because of the nature of the
10 laboratory, it was permitted to see nonhospital 10:42:35
11 patients, but hour by hour and patient by patient,
12 they were encroaching on hours that should have been
13 reserved for hospital patients, but hospital
14 patients were getting displaced for the private
15 patients. 10:42:49
16 Q And how, exactly, did this -- this misuse of
17 time lead you to your decision to leave the hospital
18 entirely?
19 A It became apparent -- it became apparent that
20 some money resources had been bled away from the 10:43:12
21 clinic that there were no -- at one time, the -- the
22 regular patients who were regularly getting referred
23 ceased being referred. The referral sources
24 realized that the delays got so long, they didn't
25 bother referring anybody anymore, and if there are 10:43:27

1 no people, then -- if there are no referrals,
2 there's no clinic. If there's no clinic, there's no
3 research.
4 I was able to correct it for a time, but I
5 was unable to get the hospital to change its policy 10:43:40
6 to make it permanent.
7 Q I see. And so your disagreement with how the
8 hospital handled that situation is what caused you
9 to leave; right?
10 A Yes. 10:43:53
11 Q And prior to that, I think you testified that
12 you've had no other disagreements during your time
13 at CAMH with respect to topics concerning
14 transgender people; right?
15 MR. TRYON: Objection; form. 10:44:12
16 THE WITNESS: Correct.
17 BY COUNSEL SWAMINATHAN:
18 Q You've never disagreed with any employee as
19 to what proper care for transgender individuals
20 should be? 10:44:19
21 MR. TRYON: Objection.
22 THE WITNESS: Not that I recall, no.
23 BY COUNSEL SWAMINATHAN:
24 Q Okay. So let's move to page 3 of your CV, if
25 you still have that up in front of you. 10:44:33

1 A Yes.
2 Q Great. Can you take a moment to review?
3 I -- I believe pages 3 through 7 list
4 publications that you have authored and coauthored;
5 right? 10:44:57
6 A Yes.
7 Q Okay. Approximately how long have you been
8 authoring publications?
9 A You said three pages? I'm counting five.
10 Q 3 through 7, sorry. 3, 4, 5, 6 -- 10:45:11
11 A Oh, pages 3 through 7?
12 Q Yes, yes.
13 A I understand.
14 Yes, I'm sorry, what was your question again?
15 Q Approximately how long have you been 10:45:23
16 authoring publications?
17 A Oh, almost 30 years.
18 Q Almost 30 years.
19 And what topics do you predominantly write
20 about? 10:45:33
21 A Human sexuality and atypical sexualities.
22 Q And within human sexuality and atypical
23 sexuality, what subjects do you primarily focus on?
24 A Sexual orientation, paraphilias and gender
25 identity. 10:45:51

1 Q And you have 64 articles listed here under
2 "Publications"; right?
3 A That's -- yes.
4 Q When did you start writing and researching
5 about paraphilias? 10:46:06
6 A Specifically about the paraphilias, soon
7 after I arrived at CAMH.
8 Q Okay. So that would be around 1998, '99
9 timeframe?
10 A Roughly, yes. 10:46:21
11 Q Okay. And how many of these publications
12 focus on transgender and gender-dysphoric people?
13 A I have listed them on my CV. I'd have to
14 count. It's roughly a half dozen.
15 Q Why don't we go through these pages together. 10:46:39
16 So your first publication titled "Transgender
17 and gender diverse children and adolescents:
18 Fact-checking of AAP policy," authored by J. Cantor
19 in 2020; is that correct?
20 A Yes. 10:46:58
21 Q And you would say that publication pertains
22 to issues of transgender and gender dysphoria in
23 people; right?
24 A Yes.
25 Q Great. I'm looking down the list now. 10:47:08

1 Is there anything else on page 3, any other
2 publication listed on page 3 that deals specifically
3 with transgender individuals or individuals
4 diagnosed with gender dysphoria?
5 A No. 10:47:29
6 Q Okay. Let's go to page 4. Can we go through
7 this same exercise?
8 Is this there any publication on this page
9 that relates specifically to transgender individuals
10 or individuals with gender dysphoria? 10:47:52
11 A Only indirectly, number 26, Fazio and Cantor.
12 Q What do you mean by "indirectly"?
13 A One of the ways -- left-handedness is more
14 common among people who are trans or gay, for that
15 matter, than -- than not. 10:48:18
16 Q And that's the only -- that's the only way
17 that this article is connected to issues concerning
18 people who are transgender and gender dysphoric;
19 right?
20 A Yes. 10:48:33
21 Q Okay. Great. Let's go to page 5 of your
22 list of publications.
23 A Yes.
24 Q Can we go through that same exercise?
25 I can see that number 30 concerns paraphilia, 10:48:43

1 gender dysphoria and hypersexuality, so I assume
2 that article relates to transgender or
3 gender-dysphoric people in some regard; right?
4 A Yes.
5 Q Is there any other article on that page that 10:48:57
6 relates to what we're speaking about?
7 A That particular one, that's a -- the relevant
8 chapter in the Oxford Textbook of Psychopathology.
9 I just finished writing the new version of that, but
10 it's not yet in my CV. The book hasn't come out 10:49:17
11 yet.
12 Q Okay. Great. So just number 30; right?
13 And then can we --
14 A Hang on. I'm going through the rest of the
15 list. 10:49:32
16 Q Oh, apologies.
17 A Again, indirectly, number 37, Cantor, 2012,
18 "Is homosexuality a paraphilia?" Again, gender
19 identity factors indirectly, in answering that
20 question. 10:49:48
21 Q So, again, your testimony is that 37
22 indirectly focuses on transgender people and gender
23 identity disorders as related to homosexuality as a
24 paraphilia; is that right?
25 A The evidence -- exactly as the -- the title 10:50:03

1 states, reviewing the evidence and the arguments
2 that have been posed for each side.
3 Q So how does this article specifically address
4 issues of transgender people and gender dysphoria
5 individuals? 10:50:21
6 A There is a specific paraphilia called
7 "autogynephilia" which is strongly related to the
8 motivator -- which is strongly -- which is one of
9 the strongest motivatives for adults who want to
10 transition, specifically from male to female. 10:50:36
11 Q So --
12 A Whether they --
13 Q Apologies. Continue.
14 A Whether they consider themselves heterosexual
15 or homosexual is often rooted at what their stage of 10:50:45
16 transition is. So it makes the question of
17 whether -- sexual orientations of paraphilia a
18 little more complicated.
19 Q Got it. And as you just testified,
20 autogynephilia applies to adults; right? 10:51:00
21 A That's not exactly it, no. Usually in a
22 clinic, autogynephilia is the primary motivator
23 behind most -- most people who start becoming gender
24 dysphoric in adulthood, but that doesn't mean it's
25 limited to adulthood. 10:51:21

1 Q Got it. Are there any other articles on this
2 page that relate to transgender --
3 A Yes.
4 Q -- or gender dysphoria?
5 A Yes. Number 40, which is the then prior 10:51:33
6 version of that chapter for the Oxford Textbook of
7 Psychopathology, but the chapter was retitled, so
8 the phrase "gender identity" doesn't appear in the
9 title in that -- in that title. Or it doesn't
10 appear in the title in that version. 10:51:50
11 Q So this chapter titled "Sexual disorders"
12 encompasses information about transgender identities
13 and gender dysphoria; is that right?
14 A Yes.
15 Q Okay. Anything else on this page? 10:51:59
16 A No.
17 Q Okay. We're almost done with this exercise.
18 Page 6. Are there any articles on page 6 of
19 your CV that focus --
20 A Yes. Number 53, Zucker, et al. 10:52:26
21 Q Okay. "The Recalled Childhood Gender
22 Identity/Gender Role Questionnaire: Psychometric
23 properties."
24 So this publication focuses on issues
25 pertaining to transgender and gender-dysphoric 10:52:42

1 individuals; right?
2 A Children specifically, yes.
3 Q Children specifically. Okay.
4 Anything else on this page?
5 A No. 10:52:51
6 Q And the last page, page 7, are there any
7 articles on this page that pertain to transgender
8 individuals or gender-dysphoric individuals?
9 A No.
10 Q Great. So you've identified six articles for 10:53:15
11 me, and, if you don't mind, I'd like to go through
12 those six articles in a little bit more depth. So
13 if you could turn back to page 3.
14 Would it be fair to describe your work that
15 you've done in connection with these articles as 10:53:40
16 research?
17 A Broadly speaking, in different contexts,
18 people use the word "research" different ways.
19 Q I don't want to misrepresent your work, so
20 how -- how would you describe what goes into the 10:53:52
21 publication of these articles? Would you call it
22 research or study?
23 Is "study" a more appropriate word?
24 A Again, these mean different things in
25 science, and we would use different words in 10:54:11

1 different contexts.
2 Usually when I use the word "research," we're
3 talking about actually collecting original data,
4 analyzing patterns and then reporting the results of
5 those analyses. 10:54:24
6 Q Okay.
7 A In science, of course, when there are many
8 such -- many such observations reported, we then go
9 through and read -- read those, accumulate those and
10 find patterns in those sets of observations. 10:54:34
11 So some people would call that research;
12 others, not. There also exists people who just
13 refer -- review all of the research and summarize it
14 all into one. That also would legitimately be
15 called research. 10:54:51
16 Q Okay. So why don't we go through these and
17 you can correct me if I'm mischaracterizing
18 anything.
19 But article 1, to me, seems like a review; is
20 that correct? 10:55:02
21 A That would be fair to say. In -- as I say,
22 some people would call that research.
23 Q Okay. So why did you author this article?
24 A When the AAP first published its paper, it
25 very obviously, to me, contained glaring error after 10:55:24

1 glaring error. It repeatedly said whatever original
2 studies made such a claim. I was well aware of that
3 original study and knew that it made no such claim.
4 At that time, especially, there were
5 relatively few people who knew any of the research 10:55:43
6 on gender identity, so I simply conducted a
7 fact-check of all the claims that were made by the
8 AAP.
9 Q So this article doesn't include any original
10 research of yours; right? 10:55:54
11 A I did not collect data for it.
12 Q Okay. Who requested that you write this
13 article?
14 A No one.
15 Q No one? 10:56:06
16 So it was your decision to fact-check the AAP
17 policy; right?
18 A Yes.
19 Q It wasn't at the request of any other entity?
20 A Correct. 10:56:16
21 Q Okay. And let's go on to number 26, which I
22 believe is the next publication, on page 4.
23 A Yes.
24 Q So this is an article that you authored along
25 with Fazio; is that correct? 10:56:38

1 A Yes.
2 Q Who is Fazio?
3 A She was a graduate student who was studying
4 under me for her internship and then --
5 Q Got it. 10:56:47
6 A -- and then post-doc.
7 MR. TRYON: Pardon me, Counsel, which number
8 are we on?
9 COUNSEL SWAMINATHAN: Apologies. We are on
10 page 4 of Dr. Cantor's CV and Article No. 26. 10:56:54
11 MR. TRYON: Thank you.
12 COUNSEL SWAMINATHAN: No worries.
13 BY COUNSEL SWAMINATHAN:
14 Q Okay. And so this is the article that you
15 mentioned tangentially related to transgender people 10:57:05
16 and gender identity disorders because of the
17 left-handed association; is that correct?
18 A Yes.
19 Q Okay. And did you author this article out of
20 your own volition, or were you requested by a 10:57:26
21 certain entity to -- to research this issue?
22 A Neither. It was Fazio's initially.
23 Q Okay. And so you were supervising Fazio's
24 research; is that correct?
25 A This portion of it, yes. 10:57:41

1 Q Okay. Great.
2 And can we go to number 30 now, which is at
3 the top of page 5 of your CV?
4 A Yes.
5 Q You mention that there is a new version of 10:57:58
6 this Oxford textbook that is in the works right now;
7 right?
8 A Yes.
9 Q And in this current version, you wrote this
10 chapter with Sutton, K. S.; is that right? 10:58:14
11 A Yes.
12 Q Who is Sutton?
13 A He was a postdoctoral fellow of mine at the
14 time.
15 Q I see. And you coauthored this article in 10:58:27
16 2014; is that right?
17 A That's the year it came out. I don't
18 remember the date when we submitted the manuscript.
19 Q Okay. A quick clarifying question.
20 Is there a reason that your name is first in 10:58:42
21 this article and Sutton's is second, but in the
22 prior article we were looking at, Fazio's name was
23 first and your name was second?
24 A Just reflecting proportion of -- of effort
25 into it. As I say, I -- with Fazio, I was 10:59:00

1 participating only in a particular portion. And
2 with Sutton, I was the primary author and Sutton
3 added in other details.
4 Q Got it. Okay.
5 And so, can you remind me again, how exactly 10:59:12
6 does this article relate to transgender people or
7 people with gender dysphoria?
8 A A section of that chapter is specifically
9 about transgenderism.
10 Q What is that chapter focused on? 10:59:24
11 A I'm sorry, I'm no longer sure that we're
12 talking about the same chapter. I'm talking about
13 the chapter with Sutton.
14 Q What -- what -- you mentioned that a portion
15 of the chapter focuses on transgender identities; 10:59:41
16 right?
17 A Yes.
18 Q I'm asking you to describe that portion a
19 little bit more for me.
20 A Oh. In that portion, we reviewed what, until 10:59:52
21 then, was known about gender -- gender identity,
22 gender dysphoria and transsexualism in children and
23 adults.
24 Q And this was independent research that you
25 and Sutton conducted? 11:00:04

1 A It was a review, as I said, of what was
2 already known about those topics at that time.
3 Q Got it. And were there any findings that you
4 presented that were separate from what data was
5 already existing in this review that you mentioned? 11:00:22
6 Was there any new finding that came out of this
7 article?
8 A Not an empirical finding. When we saw
9 patterns in the research or comparisons between
10 different kinds of atypical sexualities and so on, 11:00:39
11 we would -- we would add those, but the focus of the
12 chapter and the purpose of the textbook was to
13 convey to readers what was already established in
14 the science.
15 Q And -- and I assume this chapter was reviewed 11:00:51
16 by others; right?
17 A Yes. That particular book, the Oxford
18 Textbook of Psychopathology, is one of the best
19 known such texts in the world.
20 Q Assume that it's a peer-reviewed text; right? 11:01:06
21 A I would hesitate to call it peer reviewed.
22 It's not peer reviewed in the way that journal
23 articles are peer reviewed. In journal articles,
24 it's initiated by the author, sent into the journal
25 and the journal can either publish or not publish 11:01:25

1 it.
2 Q Uh-huh.
3 A Book chapters are by invitation. The book
4 editors then select topic experts and -- and invite
5 them to submit a chapter for the book. 11:01:38
6 Q Got it.
7 A That chapter gets peer reviewed in the way
8 that it's sent to other topic experts for -- for
9 feedback, but it's not reviewed in the same should
10 we consider this at all, I don't know anything about 11:01:49
11 this topic and then need an expert to tell me, which
12 would happen in the journal peer review system.
13 Q Understood. So you were invited to author
14 this chapter by Blaney and Millon; is that correct?
15 A Correct. 11:02:02
16 Q Okay. And when did they extend this
17 invitation to you? Because previously when I said
18 that, you know, it was published in 2014, you
19 mentioned that the work that has been put into it
20 was ongoing prior to 2014. 11:02:17
21 So when -- when did they approach you about
22 authoring this chapter?
23 A I don't recall exactly. It would have been
24 about a year and a half to two years ahead of time.
25 Q Okay. Great. 11:02:29

1 And then you mentioned number 37, article 37,
2 is related to transgender identities and gender
3 dysphoria as related to autogynephilia; is that
4 correct?
5 A The -- yes, the nexus between the topics is 11:02:42
6 autogynephilia. In order to answer the questions
7 that I had set for myself requires that people know
8 each chunks of that literature.
9 Q Got it. Okay.
10 And article 40, you also mention that the 11:03:03
11 title is "Sexual disorders," but that's only because
12 it's a previous version of the title that did not
13 include issues of gender identity; is that correct?
14 A Yes.
15 Q And the textbook actually includes 11:03:17
16 information pertinent to transgender individuals and
17 gender identity disorders; is that right?
18 A Correct. In the years after that, it
19 became -- it became more and more uncontested
20 whether gender identity should automatically be 11:03:36
21 called a -- a disorder at all. So by parsing out
22 the title, we removed the word "disorder"
23 altogether.
24 Q I see. And this -- this came out in 2009; is
25 that right? 11:03:52

1 A Correct.
2 Q And then the last one you mentioned was on
3 page 6 of 32 of your CV, and it's Article No. 53,
4 the Zucker article. And you mentioned that this
5 article focuses on children with gender identity 11:04:05
6 disorders; is that right?
7 A Yes.
8 Q Can you tell me more about this -- and
9 however you call it, a study or research that went
10 into this article? 11:04:29
11 A I provided primarily statistical input into
12 the article. The topic on it was how to find the
13 most objective and reliable way to ask about events
14 in childhood and how cross-gender they were.
15 Q So what do you mean by "statistical input"? 11:04:49
16 A Because I have a substantial background in
17 statistics, I'm often asked to -- to add to the
18 statistical analyses that -- or to double-check the
19 statistical analyses that any researcher is doing.
20 Q So is this Zucker article a compilation of 11:05:06
21 original research?
22 A It is an original piece of research, yes.
23 Q It is an original piece of research.
24 And your contribution to the article was to
25 ensure that the statistical analysis was sound; is 11:05:19

1 that correct?
2 A I don't think it's fair to limit my
3 contribution to that, but that was my predominant
4 role.
5 Q Fair to say it was your predominant 11:05:31
6 contribution; right?
7 A Yes.
8 COUNSEL SWAMINATHAN: I just want to check in
9 because I think it's been about an hour. So I was
10 wondering if you need a break. Or, Counsel Travis, 11:05:40
11 if -- if you want to take another short five-minute
12 break.
13 THE WITNESS: I'm okay.
14 COUNSEL SWAMINATHAN: You're okay --
15 MR. BARHAM: I'm fine with continuing. 11:05:47
16 COUNSEL SWAMINATHAN: Okay. Sounds good.
17 BY COUNSEL SWAMINATHAN:
18 Q So of these six publications that we just
19 talked about, none of these publications focus on
20 transgender people in athletics; right? 11:06:02
21 A Correct.
22 Q Do any of these publications relate to the
23 issues in this case?
24 MR. TRYON: Objection.
25 THE WITNESS: Do they relate? I -- I'm 11:06:22

1 not -- I'm not sure I know how to answer that
2 question.
3 BY COUNSEL SWAMINATHAN:
4 Q Sure. Let me ask a better question.
5 What is your understanding of what this case 11:06:33
6 is about?
7 A Well, there's what the case is about and
8 there's what I've been asked to contribute --
9 Q Sure. My question is, what is your
10 understanding of what this case is about? 11:06:43
11 A Is whether it's fair and appropriate for
12 biological males to participate in -- on biological
13 female teams.
14 Q And do any of these publications inform your
15 opinion on the issues that you just identified? 11:07:03
16 A I --
17 MR. BARHAM: Objection; form.
18 THE WITNESS: I would hesitate to say
19 "inform" because several of my publications in turn
20 reflect what's in the rest of the empirical 11:07:21
21 literature, and it's the entire empirical literature
22 that informs my opinion. It can't really be
23 separated. But none -- none of my opinion about
24 this case developed from my publications. Rather,
25 my publications and my opinion both come from the 11:07:40

1 sum of the scientific literature.
2 BY COUNSEL SWAMINATHAN:
3 Q I appreciate that explanation. Thank you.
4 Let's go on to the next section of your CV.
5 So on, let's see, page 8, you have a list of 11:07:55
6 letters and commentaries that you have authored and
7 coauthored; right?
8 A Yes.
9 Q Approximately how long have you been offering
10 letters and commentaries? 11:08:18
11 A Roughly 20 years.
12 Q And what topics do you predominantly comment
13 on?
14 A Atypical sexuality in humans.
15 Q When did you start commenting on atypical 11:08:32
16 sexualities?
17 A The first publication on it was in 2000.
18 Q And is that the -- Publication No. 14 that
19 was listed -- that's listed here on page 8?
20 A Yes, it is. 11:08:56
21 Q And do any of these publications focus on
22 transgender people or people with gender dysphoria?
23 A Yes.
24 Q Which ones?
25 A Numbers 6, 9, 10, 11. And I don't recall if 11:09:11

1 number 12 did, but I think not.
2 Q Okay. So we're working with number 6, 9, 10
3 and 11, right, under "Letters and Commentaries"?
4 A Yes.
5 Q And Letter No. -- or Letter or Commentary 11:09:59
6 No. 6, this is a comment that you wrote in response
7 to Italiano's 2012 comment on an article that you
8 had written in 2011; is that right?
9 A Yes.
10 Q Does this comment have anything to do with 11:10:20
11 transgender children and adolescents playing sports?
12 A No.
13 Q Let's turn to number 9, which is -- is this a
14 letter, or is this commentary?
15 A A letter. 11:10:44
16 Q A letter.
17 A The difference -- there really -- it's a
18 general standard whether they say "commentary" or
19 "letter." There's no rigorous or systematic
20 difference between the terms. 11:10:54
21 Q Got it. Thank you.
22 And so this was in 2011, entitled "New MRI
23 studies support the Blanchard typology of
24 male-to-female transsexualism."
25 Did I read that accurately? 11:11:03

1 A I'm sorry, say that again.
2 Q The -- it's titled "New MRI studies support
3 the Blanchard typology of male-to-female
4 transsexualism."
5 Did I read that accurately? 11:11:16
6 A Yes.
7 Q Okay. And did this letter have anything to
8 do with transgender children or adolescents playing
9 sports?
10 A No. 11:11:34
11 Q No? Let's look at number 10. This is --
12 this is authored by Zucker, Bradley, Own-Anderson,
13 Kibblewhite and yourself; is that correct?
14 A Yes.
15 Q And it's titled "Is gender identity disorder 11:11:51
16 in adolescents coming out of the closet?"; correct?
17 A Yes.
18 Q Can you tell me a bit about this letter or
19 commentary? Why was it written?
20 A So we were observing, in those days -- we're 11:12:14
21 now going back almost 15 years -- seeing the
22 beginnings of the great increase in the number of
23 adolescents presenting to clinics expressing gender
24 dysphoria.
25 Q Okay. And is this a piece of original 11:12:30

1 research, or is this a review of existing research?
2 A Original research.
3 Q Who funded this research?
4 A It wasn't funded in a direct way. It
5 required no -- it required no funding. It wasn't 11:12:54
6 the kind of a study that required hiring new people
7 or equipment.
8 Q I see. So there was no grant application
9 process or something similar associated with this
10 publication; right? 11:13:07
11 A Correct.
12 Q How did the authors of this study, including
13 yourself, come together to conduct this research?
14 A They were already colleagues at CAMH.
15 Q Got it. So these are all employees of CAMH? 11:13:25
16 A At that time, yes.
17 Q Were any of these authors students or --
18 sorry, fellows?
19 A I don't recall if Kibblewhite was. They may
20 have been. 11:13:47
21 Q Okay. And you said that this study was not
22 directly funded. Was it indirectly funded in any
23 way?
24 A It would be reasonable to say that the
25 hospital's salary support of the staff was an 11:14:00

1 indirect funding, but it wasn't related to any --
2 any one particular study at all.
3 Q Got it. And just to clarify, this is a study
4 that you-all came together to carry out on -- on
5 your own, not at the request of anyone? 11:14:17
6 A Correct.
7 Q Okay. And is this study related to
8 transgender children or adolescents participating in
9 athletics specifically?
10 A No. 11:14:30
11 Q Okay. And then you said, finally, number 11
12 under "Letters and Commentaries." It's a review, in
13 2003, of the book The Man Who Would Be Queen by
14 J. Michael Bailey. Did I read that accurate?
15 A Yes. 11:14:52
16 Q What is The Man Who Would Be Queen?
17 A It was a book by J. Michael Bailey, published
18 at the time, describing for the lay public gender
19 identity and transsexualism in children -- well, in
20 children and adults. 11:15:10
21 Q Did the book focus on children or adults?
22 A I don't think it's fair to say it focused on
23 either. It spanned a lifetime.
24 Q Understood. I'm just trying to understand
25 because it says "The Man Who Would Be Queen," 11:15:26

1 instead of "The Boy." So I was just wondering how
2 old the protagonist of this book is, to your
3 recollection.
4 A There wasn't a single protagonist. There
5 were multiple protagonists. 11:15:38
6 Q What was the average age of the multiple
7 protagonists in this book?
8 A Oh, I don't recall, and I'm not sure that
9 that's meaningful. That is, in the book, Bailey was
10 describing the phenomena of transsexuality and 11:16:00
11 gender dysphoria and then used individual cases and
12 describes people in order to -- in order to help,
13 you know, color the -- the issue for -- for the
14 audience, but it wasn't -- it wasn't of a number of
15 people by which one could calculate an average. He 11:16:20
16 described a couple of children, and he described a
17 couple of adults, and he tried to -- did his best to
18 describe people who were transitioning in each
19 direction.
20 Q I understand. I'm -- sorry. I was just 11:16:30
21 trying to clarify whether this was book was similar
22 to, you know, the clinical work that you do, where
23 you speak to adults or people over the age of 16
24 and, you know, retroactively gain their childhood --
25 gain knowledge of their childhood experiences or if 11:16:47

1 this book, the individual cases that you mentioned,
2 were actually children versus adults.
3 And you say it's a mix of both; right?
4 A It includes cases of both.
5 Q Yeah. Okay. That -- that's all I was 11:17:01
6 wondering. Thank -- thank you.
7 And so why did you review this book?
8 A For the same reason I -- I -- for the same
9 reason that I wrote the AAP study. The book was
10 fascinating, well written, very informative, 11:17:19
11 useful -- and useful to society, but also very
12 controversial. So I thought it would be useful, as
13 one of the few people qualified to -- to do so, to
14 compare the book with -- with the actual research at
15 the time. 11:17:37
16 Q Did anyone request you to write this review?
17 A No.
18 Q Did you speak to Michael Bailey while writing
19 this review?
20 A I don't recall. I had already met him before 11:17:47
21 I wrote the review. I don't recall contacting him
22 at all while I was writing.
23 Q And so to your recollection and speaking
24 about it more generally, this book has to do with
25 the full age range of transgender identities, and, 11:18:20

1 in your testimony, it does not focus solely on adult
2 transitioners; right?
3 A It's not limited -- it's not at all limited
4 to adults.
5 Q It's not at all limited to adults, but more 11:18:33
6 generally, it speaks to adults as opposed to
7 children?
8 MR. TRYON: Objection; form.
9 THE WITNESS: I hesitate to say that it
10 speaks to either one any more than the other. 11:18:45
11 BY COUNSEL SWAMINATHAN:
12 Q Okay. That's fair.
13 And then at the bottom of the page and then
14 the next page, you have a list of your publications,
15 specifically your editorials, and that is your CV 11:18:59
16 page 8 and 9.
17 A Yes.
18 Q Okay. And so approximately how long have you
19 been authoring editorials?
20 A About 20 years. 11:19:18
21 Q 20 years. And what topics do you
22 predominantly write on in terms of your editorial
23 publications?
24 A Primarily on the editorial process itself.
25 I'm on the editorial board for the Archives of 11:19:32

1 Sexual Behavior, and I serve as editor in chief for
2 the journal Sexual Abuse.
3 So it's routine for editors and editorial
4 board members to comment on the structure and
5 recurrences within the journal itself. 11:19:47
6 Q When did you start sitting on the board, the
7 editor -- as -- as the editor in chief of the
8 journal Sexual Abuse?
9 A It's on my CV. I don't recall the year.
10 Q Approximately how long do you remember 11:20:03
11 sitting on the board for or sitting in that
12 position?
13 A Roughly 15 to 20 years.
14 Q Okay. And so you have ten publications
15 listed here under "Editorials"; is that right? 11:20:18
16 A Yes.
17 Q And from my view of the ten editorials, is it
18 fair to say that you predominantly comment on sexual
19 abuse?
20 A I wasn't -- no, I wasn't commenting on sexual 11:20:35
21 abuse itself. I was commenting on the journal
22 entitled Sexual Abuse.
23 Q Okay. So when you're commenting on the
24 journal entitled Sexual Abuse, what is the nature of
25 this commentary? 11:20:52

1 A Number of publications, people coming and
2 leaving the editorial board, my plans for the
3 journal for the future. We weren't talking about
4 the topic within the journal. We were talking about
5 the journal as the topic. 11:21:05
6 Q I see. Okay. So these are -- these are
7 comments on kind of the -- the structure or the
8 future of the journal itself, not specific
9 substantive reviews of the articles contained within
10 these journals; is that right? 11:21:21
11 A Yes.
12 Q Okay. And then on page 10 of your CV, you've
13 listed your funding history; is that right?
14 A Yes.
15 Q And so these two pages list the funding that 11:21:38
16 you've been the recipient of over the course of your
17 career; right?
18 A Yes.
19 Q Is this a comprehensive list of the grants
20 you've received? 11:21:54
21 A Yes.
22 Q And you were a co-investigator for four out
23 of the seven times that you received funding for a
24 study; right?
25 A Just checking. 11:22:08

1 Q No problem.
2 A Yes, that's correct.
3 Q And you were a principal investigator, then,
4 for three out of the seven times you received
5 funding for a study; correct? 11:22:26
6 A Yes.
7 Q Were any of these seven awards of funds
8 related to the study or treatment of gender
9 dysphoria for transgender people?
10 A Yes. 11:22:40
11 Q Can you point me to which ones, please?
12 A The first one, "Brain function and
13 connectomics following sex hormone treatment in
14 adolescents experience gender dysphoria."
15 Q Uh-huh. 11:22:54
16 A And Effects of hormone treatment on brain
17 development: A magnetic resonance imaging of --
18 study of adolescents with gender dysphoria.
19 Q Great. Thank you.
20 I would love to talk about those two studies 11:23:19
21 a bit further. So if we could start with the first
22 one, which I understand to believe was granted in
23 July of 2018.
24 So I see that it says $650,000 and -- sorry,
25 $650,250, and then it has a forward slash, 5 years. 11:23:36

1 So is that the amount of funds that were
2 awarded over a period of five years?
3 A Yes, that's correct.
4 Q Not each year; right? It's a totality of the
5 funds received over five years? 11:23:51
6 A Correct.
7 Q Okay. And when it says "July, 2018," does it
8 mean that you -- like, the funds started coming in
9 in July 2018 and continue on to, presumably,
10 July 2023; is that correct? 11:24:07
11 A June 2023, but yes.
12 Q Okay. June 2023.
13 And so can you describe the study to me?
14 A The study itself is to take brain scans of
15 kids throughout the process of -- throughout their 11:24:28
16 process of transitions.
17 Q Okay. And how did you discover this
18 opportunity?
19 A I had worked, at least indirectly, with some
20 of these authors before. It's -- they're -- they -- 11:24:41
21 they're running the study, but, of course, they
22 needed somebody with a background in brain imaging,
23 in statistics and in human sexuality, including
24 gender identity.
25 Q So who are Doug VanderLaan and 11:24:58

1 Meng-Chuan Lai?
2 A They now are two sex researcher
3 neuroscientists specializing in child gender
4 identity.
5 Q They specialize in child gender identity 11:25:12
6 disorders; is that right?
7 A Yes.
8 Q What about Megha Mallar Chakravarty, Nancy
9 Lobaugh, M. Palmert and Skorska?
10 Apologies if I mispronounced any of those. 11:25:25
11 A No problem.
12 They're other statisticians and
13 neuroscientists involved in the data collection for
14 MRI research.
15 Q Are those folks also focused on child gender 11:25:38
16 dysphoria identities?
17 A No.
18 Q No? Okay.
19 And who applied for the funding for this
20 study? 11:25:56
21 A Dr. VanderLaan.
22 Q VanderLaan.
23 And are you aware of what papers were
24 submitted in connection with that application?
25 A I don't understand the question. Papers 11:26:07

1 submitted for an application?
2 Q I assume that to apply for a grant, there's
3 some sort of application process; is that correct?
4 A Yes.
5 Q Were you involved in that application 11:26:19
6 process, or was that solely done by Doug VanderLaan?
7 A I was involved in relevant parts of it.
8 Q What was your involvement?
9 A To review, check and add to the sections on
10 statistics, neuro- -- and neuroimaging research 11:26:38
11 methods.
12 Q Got it. Okay.
13 And I assume the study is still ongoing;
14 right?
15 A Yes, it is. 11:26:48
16 Q It is.
17 And you don't have any findings to report
18 right now; right?
19 A No, not yet.
20 Q Okay. And just to check in -- or is this 11:26:59
21 study at all related to the participation of
22 transgender children and adolescents in athletics
23 specifically?
24 A It's not a topic of the study.
25 Q Okay. And it looks like you said there was 11:27:17

1 another study where the principal investigator,
2 Doug VanderLaan, and co-investigators, Bain, Cantor
3 Chakravarty, Chavez, Lobaugh and Zucker, bas- -- or
4 the date is September 2015. That's the other study
5 that you mentioned is relevant to transgender and 11:27:39
6 gender-dysphoric individuals; right?
7 A It's a grant, not a study.
8 Q Sorry, grant. Apologies.
9 Can you tell me about that grant?
10 A It was very similar to the first one. In 11:27:51
11 fact -- well, the one we first discussed, even
12 though it, chronologically, is first. The
13 chronologically first one bled into or ran into or
14 became the second one, which is continuing the
15 first. 11:28:08
16 Q I see. So were there independent results
17 that were obtained from -- from this research, or
18 did that research continue on into the grant that we
19 just spoke about?
20 A That research is continuing on into the 11:28:24
21 current one.
22 Q Great. And so it looks like it's the same
23 agency that awarded both grants; right?
24 A Correct.
25 Q And this time, they provided you $952,955, 11:28:37

1 again, over the course of five years, starting from
2 September 2015; is that right?
3 MR. TRYON: Objection; form of the question.
4 THE WITNESS: Yes.
5 BY COUNSEL SWAMINATHAN: 11:29:01
6 Q So am I correct that your team of
7 investigators applied for a second grant to continue
8 the research that they were doing as a part of this
9 initial awarding?
10 A Correct. 11:29:12
11 Q Is there a reason that they gave you less
12 money the second time?
13 A Less was needed.
14 Q Less was needed?
15 A Yes. 11:29:20
16 Q Why was less needed the second time around?
17 A Changes in staff and then -- and student
18 needs, just the size of the lab that needed to be --
19 needed to be supported.
20 Also, in the second stage of the study, there 11:29:35
21 are now ongoing participants who require brain
22 scanning at regular intervals, which is unlike the
23 earlier part of the study where it was a much wider
24 range of people getting scanned.
25 Q I see. And, again, did this first stage of 11:29:49

1 the study involve the participation of transgender
2 children or adolescents in athletics?
3 A The -- the way you phrased your question is a
4 little funny. The -- the topic of the study wasn't
5 focused on it, but I would not be at all surprised 11:30:08
6 if some of the participants in the study were in
7 turn involved in athletics.
8 Q Do you anticipate reporting specifically on
9 athletic performance of transgender athletes in
10 these studies? 11:30:27
11 A I don't anticipate reporting on that, no.
12 Q No? And you don't know for sure that these
13 study participants may or may not be athletes as
14 well; right?
15 A Correct. 11:30:39
16 Q Okay.
17 COUNSEL SWAMINATHAN: Okay. How about we
18 take a five-minute break.
19 MR. BARHAM: Sounds good.
20 COUNSEL SWAMINATHAN: Can we go off the 11:30:51
21 record?
22 THE VIDEOGRAPHER: Yes. We are going off the
23 record at 11:31 a.m., and this is the end of Media
24 Unit No. 2.
25 (Recess.) 11:47:06

1 THE VIDEOGRAPHER: All right. We are back on
2 the record at 11:47 a.m., and this is the beginning
3 of Media Unit No. 3.
4 Go ahead, please.
5 BY COUNSEL SWAMINATHAN: 11:47:15
6 Q Okay. So, Dr. Cantor, can you please turn to
7 page 16 of your CV.
8 A I'm there.
9 Q Awesome. So page 16 through 18, I
10 understand, lists your paper presentations and 11:47:39
11 symposia; is that correct?
12 A Yes.
13 Q What topics do you predominantly present on?
14 A The same topics that -- that I research on,
15 atypical human sexuality. 11:47:56
16 Q And when did you start presenting on atypical
17 human sexuality?
18 A In the 1990s, I believe it was. Roughly
19 30 years.
20 Q And it looks like you have 38 presentations 11:48:09
21 listed here; right?
22 A Yes.
23 Q We're going to go through a similar exercise.
24 Would you please look at page 16 and tell me
25 whether any of these paper presentations and 11:48:28

1 symposia focus on transgendered people or
2 gender-dysphoric people.
3 A Yes. Number 1. And that's the only one on
4 this page.
5 Q Great. And then can we do that same exercise 11:48:59
6 for page 17 of 32, please, which are 14 through 25.
7 A Number 23 and number 25.
8 Q Great. And then the last page, on page 18,
9 please.
10 A None on that page. 11:50:33
11 Q Great. So if we can turn back to page 16 and
12 look at the first presentation that you have listed.
13 So I understand it's a presentation given by
14 yourself in April 2020, and it's titled "I'd rather
15 have a trans kid than a dead kid: Critical 11:50:51
16 assessment of reported rates of suicidality in trans
17 kids."
18 Did I read that correctly?
19 A Yes.
20 Q And this was presented at the annual meeting 11:51:01
21 of the Society for the Sex Therapy and Research;
22 right?
23 A Yes.
24 Q And I assume it was online due to COVID?
25 A That's correct. 11:51:12

1 Q Okay. Who were you asked to present at this
2 annual meeting by?
3 MR. BARHAM: Objection; form.
4 MR. TRYON: Objection; vague.
5 THE WITNESS: I wasn't -- I wasn't asked. 11:51:28
6 BY COUNSEL SWAMINATHAN:
7 Q You weren't asked?
8 A Correct. I submitted a proposal to -- to
9 present, and it was accepted.
10 Q When was it accepted? 11:51:33
11 A Oh, I don't remember the date. In general,
12 they were four to six months ahead of the date of
13 the conference itself.
14 Q Got it. And what did you have to submit in
15 order to vie for a spot to present at this annual 11:51:47
16 meeting?
17 A A form and a, roughly, one-paragraph summary.
18 Q And to the best of your recollection, what
19 did you say in that one-paragraph summary?
20 A Roughly the same material that's contained in 11:52:03
21 my report.
22 Q Can you give me a brief summary of what you
23 mean by that?
24 A That very many people exaggerate the amount
25 of suicide and suicidality that occur- -- that's 11:52:14

1 reported amongst trans populations.
2 Q Got it. And were you paid to give that
3 presentation?
4 A No.
5 Q No? And you said this presentation focuses 11:52:30
6 on transgender children and adolescents or some
7 other population?
8 A Transgender children and adolescents.
9 Q Does this -- did the presentation you give at
10 all focus on transgender children and adolescents 11:52:45
11 participating in athletics?
12 A No.
13 Q No? Okay.
14 Then you told me that number 23 also focuses
15 on transgender people and gender-dysphoric people; 11:52:58
16 right?
17 It's a presentation from August 2003. And I
18 take it where you're the only person listed in the
19 front, you are the only presenter; is that right?
20 A Yes. 11:53:16
21 Q Okay. And so this presentation was titled
22 "Sex reassignment on demand: The clinician's
23 dilemma." And this paper was presented at the 111th
24 annual meeting of the American Psychological
25 Association in Toronto, Canada; is that correct? 11:53:34

1 A Yes.
2 Q So was this an American Psychological
3 Association annual meeting in Canada?
4 A Yes.
5 Q Do they typically have their annual meetings 11:53:49
6 in Canada?
7 A Oddly, more -- more frequently than you would
8 think. A -- Toronto is a very popular city for --
9 for the APA.
10 Q Interesting. Okay. 11:54:00
11 And so you testified that in the previous
12 presentation that we spoke about, you submitted a
13 form requesting to present at that meeting.
14 Did you do the same for this annual meeting?
15 A I don't remember the exact process anymore, 11:54:15
16 but it was roughly the same.
17 Q So you requested your -- your participation
18 in this meeting as opposed to someone reaching out
19 to you, asking you to present at this meeting;
20 right? 11:54:29
21 A Correct.
22 Q Okay. And what were you presenting on?
23 A I was presenting on my experiences, now
24 having had the first several years of my experience
25 working with people, in turn working with their 11:54:45

1 gender identities.
2 Q So you were presenting on your own
3 experience; right?
4 A I was couching everything in my experience,
5 but it was meant to be a tutorial to help other 11:55:03
6 clinicians who were preparing to do the same thing.
7 Q Did you present any data at this annual
8 meeting?
9 A No, I did not.
10 Q No? Did you present any original research of 11:55:15
11 yours at this annual meeting?
12 A No, I did not.
13 Q Okay. And at this meeting, did any portion
14 of your presentation focus on transgender children
15 or adolescents? 11:55:32
16 A No.
17 Q Okay. 25, I believe you said, was the -- the
18 last one that focuses on transgender identities and
19 people with gender dysphoria; right?
20 A That sounds right, yes. 11:55:55
21 Q Okay. And so this was a presentation given
22 in 2002, August 2002. And, again, you were a sole
23 presenter here. And your presentation -- or your --
24 title of your paper that was presented at the 110th
25 annual meeting of the American Psychological 11:56:18

1 Association, this time in Chicago, was titled
2 "Gender role in autogynephilic transsexuals: The
3 more things change..."; is that correct? Did I read
4 that correctly?
5 A Yes. 11:56:38
6 Q Is there anything after that ellipses that
7 was just left out because of lack of space, or is
8 that --
9 A No. The ellipses were part of the title.
10 Q Part of the tile. Okay. 11:56:46
11 And did you submit a similar form to present
12 at the 110th annual meeting of the -- are you okay
13 if I call it the APA? Is that an acronym you're
14 familiar with?
15 A I'm familiar with it. I'm fine in this 11:56:59
16 context. My single hesitation is that it's easy to
17 confuse the American Psychological Association with
18 the American Psychiatric Association since both get
19 abbreviated APA.
20 Q I will go through the process of saying the 11:57:15
21 whole term.
22 So for the 110th annual meeting of the
23 American Psychological Association, were you asked
24 to present at this meeting, or did you submit a
25 form, similar to the 111th? 11:57:30

1 A I submitted an application to present.
2 Q Okay. And I assume that application was
3 accepted?
4 A Yes.
5 Q Were you paid to give that presentation? 11:57:43
6 A No.
7 Q No? And can you tell me a bit about the
8 substance of that presentation?
9 A Yes. I was presenting to the audience the
10 existence of autogynephilia, which most people, 11:58:04
11 especially then, were very unfamiliar with.
12 Q So you said most people were unfamiliar with
13 it then.
14 Do you know of anyone else who was as
15 familiar or similarly familiar with autogynephilia, 11:58:21
16 at the time, as you were?
17 A Yes.
18 Q Any prominent researches come to mind? Would
19 you be able to -- to name a few?
20 A Certainly. Even the names that have been 11:58:37
21 mentioned already, J. Michael Bailey, Ray Blanchard
22 and Maxine Petersen.
23 Q Any others come to mind?
24 A Again, it's a large literature. Many people
25 have published on it. The largest other name that 11:58:51

1 quickly comes to mind is Anne Lawrence. Again,
2 herself an openly trans woman.
3 Q And, again, you said that at the time,
4 though, it wasn't a very well-known subject for most
5 people at this conference? 11:59:09
6 A Correct.
7 Q And, again, this presentation did not focus
8 on transgender children and adolescents with gender
9 dysphoria; right?
10 A Correct. 11:59:26
11 Q And it didn't focus on transgender children
12 and adolescents participating in athletics, did it?
13 A Correct, it did not.
14 Q Okay. And then if you could turn to page 25
15 of your CV. I think it's PDF page 93. 11:59:48
16 A Yes.
17 Q I understand that this is a list of teaching
18 and training, and so I assume that to mean that you
19 were the supervisor of these students or fellows
20 listed on this page; right? 12:00:14
21 A Correct.
22 Q Is this a comprehensive list, in addition to
23 the back, which says -- on page 26, which continues
24 the list at CAMH clinical supervision, doctoral- and
25 masters-level practice, do these two pages cover 12:00:29

1 your teaching and training experience?
2 A Yes.
3 Q Okay. So did you ever provide educational
4 training to the individuals that you supervised
5 related to transgender people? 12:00:43
6 A One second. I'm just running through them in
7 my head.
8 Q No problem.
9 A Some of the students had some trans clients
10 or a gender dysphoria-related question over the 12:01:21
11 course of a specific case, but none -- and some of
12 my students were co-supervised by other supervisors
13 who took the lead role, specifically in their
14 gender -- in cases that they did have with gender
15 dysphoria, but I myself didn't do the primary 12:01:41
16 supervision of a case specifically about gender
17 dysphoria.
18 Q Got it. So you did not specifically take the
19 lead role in supervising them on issues of gender
20 dysphoria; right? 12:01:56
21 A Correct.
22 Q Okay. Did your supervision of these students
23 ever involve providing care to transgender adults?
24 A Yes.
25 Q Can you tell me about that? 12:02:17

1 A Again, some of the -- although some of the
2 clients weren't in to talk about trans issues
3 themselves, some of them happened to have been
4 trans. So it was related, but not a primary focus of
5 the treatment. 12:02:33
6 Q Got it. So it was not a primary focus of the
7 treatment, but their identities might have been
8 relevant to transgender issues and gender dysphoria;
9 is that correct?
10 A Yes, that's correct. 12:02:44
11 Q Okay. Did your supervision ever involve
12 research around puberty-delaying treatment
13 prescribed to transgender children?
14 A No.
15 Q What about transgender adolescents? 12:02:59
16 A No.
17 Q Did your supervision ever involve research
18 around prescribing hormones to transgender adults?
19 A No.
20 Q Did your supervision ever involve research 12:03:14
21 and -- sorry, strike that.
22 Did your supervision ever involve prescribing
23 hormones to transgender adults?
24 A No.
25 Q Okay. We're finally through your resumé, 12:03:33

1 which may provide some sense of relief, and I want
2 to talk more about your involvement in this case.
3 So how did you first learn about this case?
4 A I was contacted by the lawyers, who informed
5 me. 12:03:58
6 Q Who were those lawyers?
7 A The ADF team. I don't -- oh, no, no, no.
8 I'm sorry. No, I was contacted by the attorney
9 general's office in West Virginia, who -- who told
10 me about the case and asked if I would be willing to 12:04:19
11 participate.
12 Q And when did that contact occur?
13 A I don't recall exactly. Roughly six months
14 ago.
15 Q Okay. And had you worked with anyone from 12:04:31
16 the AG office of West Virginia before?
17 A Before this --
18 MR. BARHAM: Objection; form.
19 BY COUNSEL SWAMINATHAN:
20 Q I'm sorry, before -- 12:04:47
21 A No, I hadn't.
22 Q Had you spoken to anyone at the AG's office
23 of West Virginia before this case?
24 A No.
25 Q Okay. And why did you agree to serve as an 12:04:55

1 expert in this case?
2 MR. TRYON: Objection to the extent that it
3 calls for any attorney-client information.
4 You can answer to the extent you do not
5 reveal any communications with your attorneys. 12:05:11
6 COUNSEL SWAMINATHAN: Objection noted.
7 Thank you, Counsel.
8 THE WITNESS: I felt interested and
9 qualified.
10 BY COUNSEL SWAMINATHAN: 12:05:21
11 Q Okay. And, again, you said that you were
12 first reached out to by the AG's office of
13 West Virginia.
14 When did you hear from ADF, again?
15 MR. BARHAM: Objection. To the extent that 12:05:32
16 it calls for any communication between the witness
17 and legal staff, I'm going to instruct him not to
18 answer so as to preserve the attorney-client
19 privilege.
20 COUNSEL SWAMINATHAN: Sure. I'm -- I'm not 12:05:50
21 asking the witness to disclose any attorney-client
22 communications. I'm simply asking him when he was
23 first contacted by any member of the Alliance
24 Defending Freedom team.
25 MR. BARHAM: You can answer. 12:06:07

1 THE WITNESS: A few months after I was
2 contacted by the West Virginia AG's office.
3 BY COUNSEL SWAMINATHAN:
4 Q So that would put you at about three months
5 ago, right, since you said it was about six months 12:06:14
6 ago that you were contacted by the West Virginia
7 AG's office?
8 A That's roughly correct.
9 Q Roughly correct. Okay.
10 And who reached out to you? 12:06:31
11 A Oh, I don't remember who from the team. I
12 believe it was Roger Brooks.
13 Q Okay. And, again, I am not seeking any
14 communications you had with counsel, but I just
15 wanted to know the timing of that. 12:06:43
16 And so you said you agreed to serve as an
17 expert in the case, as you were interested and
18 qualified; correct?
19 A Yes.
20 Q What is your understanding of why you were 12:06:56
21 qualified to serve as an expert in this case?
22 A Because I have a very substantial background
23 in the relevant subject matter and science.
24 Q And can you describe your interest more, in
25 this case? 12:07:15

1 A My interest is indeed in the science and in
2 any opportunity that I have to provide that science
3 so it can be used for public policy.
4 Q Got it. Okay.
5 And so you said the AG's office reached out 12:07:31
6 to you about six months ago, but if you remember,
7 the document that we reviewed, which is marked
8 Exhibit 44, which is the declaration that you
9 submitted in conjunction with the preliminary
10 injunction motion, that motion was dated -- or 12:07:49
11 sorry, that declaration was dated June 22nd, 2021;
12 right?
13 A Yes, that's the date.
14 Q So if the AG's office of West Virginia
15 contacted you about six months ago, which is about 12:08:08
16 October, who contacted you in connection with
17 drafting this declaration in June of 2021?
18 A Again, I believe the person I was contacted
19 by was Roger Brooks.
20 Q So during the period of June 2021, you had 12:08:46
21 only spoken to Roger Brooks, not anyone at the AG's
22 office of West Virginia; right?
23 MR. TRYON: Objection.
24 THE WITNESS: I think --
25 MR. BARHAM: Object -- objection as to form. 12:09:08

1 THE WITNESS: Unless I misunderstood your
2 question, the original question was contacted for
3 this case. I had received contact from the ADF team
4 regarding prior cases. And the other exhibit is
5 from a deposition I gave in a prior case that was 12:09:25
6 then reused for this case.
7 So the date of the prior document I prepared
8 is dated for -- from the prior case rather than when
9 I was contacted for this case.
10 COUNSEL SWAMINATHAN: Court reporter, can you 12:09:46
11 please read back my original question?
12 THE REPORTER: Yes. So the last one was
13 "Q So during the period of June 2021..."
14 Is that the question you want read back?
15 COUNSEL SWAMINATHAN: Actually, I think it's 12:08:48
16 either the question before that -- it's the one
17 pertaining to when he was first contacted about this
18 case.
19 (Record read.)
20 BY COUNSEL SWAMINATHAN: 12:10:28
21 Q And, Dr. Cantor, you testified that, you
22 know, this was an expert report in connection with
23 another case, but I presume someone contacted you
24 about the declaration that you submitted on
25 June 22nd, 2021, in this case, which has your 12:10:36

1 signature on the second page of the PDF; right?
2 A It has my signature, yes.
3 The AG in West Virginia already had a copy of
4 my prior report and asked me if it would be okay for
5 them to use that, to which I agreed. 12:10:55
6 Q Yeah. So who contacted you and asked you
7 whether it was agreeable for them to use this prior
8 expert report?
9 A The AG's office.
10 Q And when did that contact happen? 12:11:09
11 A That's what was about six months ago.
12 Q How could that possibly be about six months
13 ago if it was executed with your signature on
14 June 22nd, 2021?
15 A Oh, now I'm seeing it -- okay. Now I got it. 12:11:21
16 So it would have been older than six months
17 ago. As I said, it was really only -- only rough,
18 my estimation of the time.
19 Q Got it. And so -- I appreciate that.
20 And so this report was not tailored to this 12:11:42
21 case at all?
22 A The prior case? The --
23 Q I apologize. I can be more clear.
24 So this report that was attached to the
25 declaration of the June 22nd, 2021, executed 12:11:59

1 document was not changed at all when used in this
2 case; am I right?
3 A The submission to -- to the prior case wasn't
4 changed at all when it was submitted for use in this
5 case, and then I updated it for -- to submit a 12:12:21
6 report specific to this case.
7 Q Right. I'm just trying to understand that
8 this expert report that was attached to the
9 declaration on June 22nd, 2021, was not changed at
10 all from its prior use in the Allan Josephson case; 12:12:38
11 is that right?
12 A Correct.
13 Q Okay. Thank you.
14 And so you testified earlier that your main
15 area of expertise is studying atypical sexual 12:12:53
16 patterns -- or atypical sexualities and paraphilias;
17 right?
18 A Yes.
19 Q What is your understanding of a paraphilia?
20 A Oh, goodness. The term "paraphilia" is used 12:13:10
21 different ways by different people in different
22 contexts. Most broadly it refers to the highly
23 atypical sexual interest that dominate a person's
24 life and interact with or prevent them from having
25 a -- an otherwise typical sexual life. 12:13:34

1 Q So do you view being transgender as a
2 paraphilia?
3 A No.
4 Q No. Okay.
5 And how much time do you spend researching 12:13:53
6 paraphilias?
7 A Oh, currently?
8 Q Currently, yes.
9 A About half my time.
10 Q Okay. And you said that you also focus on 12:14:15
11 atypical sexualities. And would that include
12 hypersexuality? Is that an atypical sexuality?
13 A Yes.
14 Q What is hypersexuality?
15 A Generally, these are people who are trying to 12:14:31
16 reduce their sexual behaviors in one way or another.
17 There is no formal definition.
18 Q And how much time do you spend researching
19 hypersexuality?
20 A These days, roughly 10 percent. 12:14:47
21 Q Okay. And I think you mentioned that you
22 also spend time researching sex addiction; is that
23 correct?
24 A Yes.
25 Q What is sex addiction? 12:15:03

1 A "Sex addiction" is a popular term. It's
2 essentially a synonym for hypersexuality.
3 Q Oh, okay. So would you say that you spend
4 about 10 percent of your time, in that same 10
5 percent that we spoke about for hypersexuality, 12:15:21
6 researching sex addiction?
7 A Yes.
8 Q Okay. And I understand that you also
9 research pedophilia; correct?
10 A Yes. 12:15:31
11 Q What do you understand pedophilia to be?
12 A The sexual attraction to children. The
13 formal diagnosis is more rigid.
14 Q Apologies, I -- the formal diagnosis is what?
15 A More rigid. 12:15:50
16 Q More rigid.
17 What -- what is the formal diagnosis?
18 A The formal diagnosis of pedophilic disorder
19 is somebody who's sexually attracted to prepubescent
20 children more than they are attracted to adults. 12:16:02
21 Q Thank you.
22 And so how much time do you spend researching
23 pedophilic disorders?
24 A Currently, roughly 10 to 20 percent.
25 Q Okay. And so we were speaking earlier about 12:16:21

1 autogynephilia, and I just want to get a clear
2 understanding.
3 So is autogynephilia a paraphilia?
4 A Yes, it is.
5 Q Why is it a paraphilia? 12:16:33
6 A It's a highly atypical sexual interest
7 pattern that can interfere or interact with a
8 person's usual sexual life.
9 Q Okay. But being transgender is not a
10 paraphilia; right? 12:16:51
11 MR. BARHAM: Objection.
12 THE WITNESS: Correct.
13 BY COUNSEL SWAMINATHAN:
14 Q Okay. So we've got about, I think, 80
15 percent of your time covered now with -- with what 12:17:02
16 we've spoken about, about what your research focuses
17 on.
18 What does the other 20 percent focus on?
19 A I wouldn't add the percentages quite so
20 easily because these topics overlap so much. For 12:17:18
21 example, a person with -- with autogynephilia, but
22 doesn't want to be autogynephilic, might refer to
23 themselves as a sexual addict because they feel like
24 that they're addicted to the related pornography.
25 So which way it gets classified depends on 12:17:39

1 what classification system a person -- a person is
2 using.
3 Q And so you testified earlier that
4 autogynephilia is a paraphilia, but being
5 transgender is not a paraphilia. 12:17:56
6 Why is a transgender identity not a
7 paraphilia?
8 A More than one thing can motivate a person to
9 want to live as the other sex. Autogynephilia is
10 only one of them. 12:18:14
11 Q So being transgender is not a paraphilia
12 because there are multiple -- multiple reasons for
13 why an individual can identify as transgender; is
14 that right?
15 A Yes, that's correct. 12:18:30
16 Q Okay. And what are the other reasons behind
17 autogynephilia that go into that?
18 A The other primary one that's been identified
19 is sexual orientation, homosexuality.
20 Q So homosexuality is, in your mind, a 12:18:47
21 contributing factor to someone identifying as
22 transgender?
23 A It can motivate a person to feel gender
24 dysphoric, yes.
25 Q What do you mean by "motivate"? 12:19:01

1 A Be the source of the desire to change.
2 Q Is there anything else that comes to mind
3 when you said that there are multiple contributing
4 factors that prevent -- or that in your mind do not
5 categorize transgender -- diagnoses of gender 12:19:23
6 dysphoria as paraphilias?
7 We mentioned autogynephilia, and we mentioned
8 homosexuality. Are there any others?
9 A The remaining predominant one I would
10 describe, as I described them in my report, 12:19:39
11 individuals, typically young, who mistake the
12 emotions that they're having to be gender dysphoria
13 when they're actually motivated by something else,
14 for example, a desire not to be associated with the
15 sex that they would be biologically associated with. 12:19:58
16 Q And so beyond what you just described, what
17 other emotions are these young individuals feeling
18 that would make them want to be the other sex?
19 A That's a subject of ongoing -- ongoing
20 investigation. We have some educated guesses, but I 12:20:18
21 can't say that the question has been entirely --
22 entirely answered.
23 Q And so similar to autogynephilia or
24 homosexuality, is there a term to describe these --
25 the experiences of these young individuals who 12:20:35

1 mistake emotions that they are having for gender
2 dysphoria?
3 A I can't think of a widespread term, no.
4 Q Is there any term that you use for it, to
5 describe that phenomenon? 12:20:52
6 A No, I don't think so.
7 Q Okay. So is it your testimony that anyone
8 who is transgender is transgender either due to
9 autogynephilia, homosexuality or a mistake they've
10 made as a -- as a younger individual and the 12:21:13
11 emotions that they are misconstruing as
12 gender-dysphoric feelings? Is that your
13 understanding?
14 A That's the best summary we have of the -- of
15 the existing research, yes. 12:21:27
16 Q Okay. When did you become interested in sex
17 research?
18 A Oh, I think I was probably always interested
19 in sex research, and then I just found a way to make
20 a living at it. 12:21:45
21 Q Okay. So I'm going to introduce tab 4, which
22 will be marked as Exhibit 46. And it will take one
23 minute to show up, so please give the system a
24 second.
25 (Exhibit 46 was marked for identification 12:21:59

1 by the court reporter and is attached hereto.)
2 COUNSEL SWAMINATHAN: And, Travis, we can
3 break after this -- after this exhibit.
4 BY COUNSEL SWAMINATHAN:
5 Q Can you see it there, Dr. Cantor? 12:22:16
6 A Not yet. Ooh. Oh, yeah.
7 Q Great. Okay.
8 And so this is an -- my -- my understanding
9 of this document is that the Kinsey Institute, which
10 is associated with Indiana University, has an 12:22:35
11 interview series, and they had a conversation with
12 Dr. James Cantor, which I presume is you, in this
13 context; is that true?
14 A Yes, it is.
15 Q Do you remember this interview? 12:22:49
16 A I can't say that I remember it specifically.
17 I give a lot of interviews. But I remember its
18 author, Justin Lehmiller, and I remember, roughly,
19 the -- the kind of interview. But as I say, I can't
20 take this specific interview out of the many that I 12:23:08
21 do.
22 Q That's fair.
23 I would love to give you just a -- a moment
24 to review, if you want to reflesh -- refresh your
25 recollection. 12:23:20

1 And I believe the question on the first page,
2 by Lehmiller, is (as read):
3 "As a sex researcher, one of the
4 most common questions you get asked
5 is how you got into this line of 12:23:48
6 work in the first place. So let's
7 start there—what is it that drew you
8 to this field of study? What's the
9 story behind how you became a sex
10 researcher?" 12:24:01
11 Did I read that correctly?
12 A Yes.
13 Q And when you answered, it says (as read):
14 "Cantor: I think it was mostly dumb
15 luck." 12:24:12
16 Did I read that correctly?
17 A Yes.
18 Q What do you mean when you say that it was
19 mostly dumb luck that you got into the sex
20 researcher line of work? 12:24:24
21 A I was referring, at that point, specifically
22 to the people who were my supervisors when I started
23 my clinical internship. It's because they had a --
24 it's because they were doing active sex research and
25 the atypical sexualities that I got exposed to it 12:24:43

1 with the depth that I did, with, you know -- with
2 experts as well known as -- as they were.
3 I didn't pick that internship site because of
4 the research that was going on there. I went for a
5 relatively usual clinical experience where I thought 12:25:00
6 my clinical experience with the trans patients would
7 be the most relevant to my career.
8 And it's just because the other half of my
9 exposure was with sex offenders and sex offender
10 research that I realized that there was an 12:25:17
11 opportunity there for me to think and research more
12 broadly than I was -- than I had planned.
13 Q And you said you have done a number of these
14 interviews, correct, over the course of your career?
15 A Yes. 12:25:32
16 Q And, you know, you strive to give accurate
17 information in these interviews to the questions
18 you're asked; right?
19 A Yes.
20 Q Yes. Okay. 12:25:42
21 Can you turn to the next page, please? I
22 think it's page 2 of the document.
23 And Lehmiller asks you what your primary area
24 of research and what methods do you typically use to
25 answer your research questions. 12:25:59

1 Lehmiller asks you this question right after
2 the first paragraph at the top.
3 And your response is, quote, (as read):
4 "My primary research opportunities
5 have involved studying sex 12:26:11
6 offenders, mostly pedophiles and
7 persons with other atypical
8 sexualities whose behaviours led
9 them into the legal system."
10 Did I read that correctly? 12:26:23
11 A Yes.
12 Q And would it be fair for me to say that most
13 of the patients that you work with are those who
14 have had contact with the legal system?
15 A Depending on how you count them. 12:26:32
16 Q Can you tell me a bit more about that? I
17 think I'm -- I'm trying to understand. Because you
18 mentioned you have about 50 patients in your private
19 practice at any given point in time. Of those --
20 A Right. 12:26:51
21 Q -- patients, are -- are they mostly folks who
22 have had some contact with the legal system?
23 A No, they are not. And that's why, as I say,
24 it's difficult to be able to count this way.
25 When I was doing research on sex offenders at 12:27:04

1 CAMH, my clinical contact was largely limited to
2 roughly an hour or two per person, focused very
3 specifically on history-taking and very specifically
4 on the elements that would be useful in getting that
5 person into the right kind of a treatment program. 12:27:24
6 So those people count in very many thousands
7 because it's an hour or two per person.
8 Q Got it.
9 A Actual ongoing treatment with a psychotherapy
10 patient is an hour with that person per week, going 12:27:36
11 on for many months.
12 Q So --
13 A So just counting number of people is
14 incomparable unless you're counting the number of
15 people in a comparable situation. 12:27:48
16 Q Totally understood.
17 So the distinction there is that the
18 population that you worked with at CAMH is different
19 than the population that you're currently working
20 with in your private practice; is that right? 12:27:56
21 A Correct.
22 Q Okay. And is it accurate to say that your
23 primary research opportunities have involved
24 studying sex offenders?
25 A That would be fair, yes. 12:28:06

1 Q So how many of your current patients, without
2 violating any HIPAA laws, have been adjudicated as
3 sex offenders?
4 A Current patients?
5 Q Yes. 12:28:25
6 A None.
7 Q None? And how many, approximately, if you
8 can give me a percentage, of the patients that you
9 saw at CAMH have been adjudicated as sex offenders?
10 A 80 percent -- 12:28:38
11 Q 80 --
12 A -- ish.
13 Q Okay.
14 COUNSEL SWAMINATHAN: So this might be a good
15 place for us to break, for you to get lunch. 12:28:45
16 If we can go off the record.
17 THE VIDEOGRAPHER: Yep. We are going off the
18 record at 12:28 p.m., and this is the end of Media
19 Unit No. 3.
20 (Recess.) 01:20:01
21 THE VIDEOGRAPHER: All right. We are back on
22 the record at 1:20 p.m., and this is the beginning
23 of Media Unit No. 4.
24 Go ahead, please.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q So, Dr. Cantor, I understand you just had
3 your lunch break. Did you have any conversations
4 with your counsel during the lunch break?
5 A Not about the case, no. 01:20:19
6 Q They -- to clarify, they weren't about the
7 substance of the deposition; right?
8 A Correct.
9 Q Great. So earlier this morning, you
10 testified that in preparing for this deposition, you 01:20:30
11 did a review to find updates in the literature; is
12 that correct?
13 A Yes.
14 Q When did you complete this review?
15 A Oh, I would hesitate to say that I ever 01:20:41
16 completed it or ever would complete it. I'm, you
17 know, often scouring the literature, and I'm often
18 made aware of new papers as they come out, and I
19 keep a list to go -- to go back through them.
20 Q Understood. I -- I think -- 01:20:58
21 A So --
22 Q -- a better question then is, when did you
23 conduct your review in preparation for this
24 deposition?
25 A Right up through, let's say, a few weeks 01:21:03

1 before I submitted the final version. I don't
2 remember the exact date.
3 Q Got it. And did you indeed find any updates
4 in the literature that you thought to include in
5 your updated report? 01:21:23
6 A I don't recall specifically. As I say, I
7 keep a reading pile and a reading list, and every
8 time I need to produce a document, I go through it
9 and -- and update it. I can't say that I have a
10 specific recollection of the size of that pile 01:21:38
11 before this specific report.
12 Q Got it. So would you be able to give me a
13 more general understanding of whether there was new
14 literature that you reviewed in connection with
15 drafting your second report? 01:21:50
16 A Yes, there -- there was a -- it had -- yes,
17 there's been a pretty substantial increase relative
18 to the very slow rate at which this literature
19 was -- was growing. So there was a substantial
20 amount published in 2020 and 2021 that -- that I 01:22:11
21 needed to -- to include and -- that I needed to
22 include.
23 Q And sitting here right now, you just can't
24 remember the names of the specific articles or
25 literature ; right? 01:22:25

1 A No, I can't. Generally, I do it
2 chronologically.
3 Q Okay. I'm going to ask you a bit about the
4 individual plaintiff in this case.
5 So do you know who B.P.J. is? 01:22:33
6 A Only in theory. I've never met the person.
7 I couldn't -- and, of course, I have no direct
8 contact with the -- with the client themself.
9 Q And you've never spoken to anyone in her
10 family either; right? 01:22:51
11 A Correct.
12 Q You've personally not spoken to anyone at her
13 school; right?
14 A Correct.
15 Q Have you reviewed any of B.P.J.'s medical 01:22:59
16 records?
17 A If I have, I'm not recalling. In general, I
18 go through a medical record to take note of
19 anything, you know, specific of relevance. If I did
20 in this, I would have made such a note, and I don't 01:23:19
21 recall doing so.
22 Q So it's your testimony today that you -- you
23 have not reviewed any of B.P.J.'s medical records;
24 right?
25 A Yes. 01:23:30

1 Q Okay. Did you read B.P.J.'s declaration in
2 this case?
3 A Not that I recall, no.
4 Q You read the intervenor's declaration in this
5 case; right? 01:23:46
6 A The interview?
7 Q The intervenor. My apologies.
8 A I'm sorry, who is this?
9 Q Lainey Armistead, the intervenor in this
10 case. 01:23:57
11 A I'm -- did I see a copy of that?
12 Q I'm just trying to get an understanding of
13 whether you read her declaration or not.
14 If you -- what might be helpful is if you
15 turn to Exhibit 45, which is your expert report that 01:24:10
16 you prepared in 2022, and on page 4 of that expert
17 report -- I'll -- I'll wait for you to -- to get
18 there so we can review.
19 A Oh, yes.
20 Q So fair to say number 9 on page 4 of your 01:24:40
21 expert report says (as read):
22 "To prepare the expert report, I
23 reviewed the following resources
24 related to this litigation."
25 And A is H.B. 3293. 01:24:48

1 B, the amended complaint in this litigation.
2 C, Ms. Armistead's declaration.
3 Do you see that?
4 A Yes, I do.
5 Q Why did you read the intervenor's 01:25:00
6 declaration?
7 A I was provided each of those documents in the
8 beginning. I reviewed the documents to see if
9 there's anything -- if there's anything relevant.
10 There wasn't anything relevant that I could -- that 01:25:09
11 I anticipated being in the report, so, of course, I
12 concentrated on the materials that were relevant.
13 Q Got it. And is there any reason that you
14 were not provided the plaintiff's declaration in
15 this case, to your knowledge? 01:25:24
16 A I -- I couldn't say why I -- I have no idea
17 why I wouldn't have been given something. I -- no,
18 I have no idea why I wouldn't have been supplied
19 with a -- with a copy.
20 Q That's fair. Okay. 01:25:38
21 So we're going to continue with Exhibit 45,
22 which is your report, and can you please turn to
23 page 3, which is just the page before the one you
24 were on.
25 Can you please take a moment to review this 01:25:51

1 page and let me know when you're ready.
2 A Okay.
3 Q So the last paragraph on the page reads,
4 quote, (as read):
5 "In addition, I have been asked to 01:26:28
6 provide an expert opinion on how
7 relevant professional organizations
8 have addressed these questions and
9 whether any of them have taken any
10 meritorious position that would 01:26:37
11 undermine West Virginia's Protect
12 Women's Sport Act (H.B. 3293)
13 ('Act'). As I explain in detail in
14 this report, it is my opinion that
15 Plaintiffs' expert reports display a 01:26:49
16 wide variety of flaws that call
17 their conclusions into question and
18 that no professional organization
19 has articulated a meritorious
20 position that calls into question 01:26:59
21 the basis for the Act."
22 Did I read that correctly?
23 A Yes.
24 Q So with respect to the Act, your role in this
25 case is to review the opinions of various 01:27:09

1 professional organizations and determine if they
2 have taken any meritorious positions that would
3 undermine the Act; right?
4 A That included that, yes.
5 Q Are you offering any positions in support of 01:27:21
6 the Act?
7 A I don't think I can be said to be offering
8 any opinions in support or against the Act so much
9 as providing the information that's in the science,
10 and then the political and legal process need to 01:27:43
11 integrate it into policy in the way that they do,
12 but I'm not making any specific recommendation about
13 any specific act.
14 Q So it's fair to say that you're not offering
15 any positions in support of H.B. 3293; right? 01:27:57
16 MR. TRYON: Objection to form.
17 A Not in support of it. I can only say what
18 elements of it are consistent or inconsistent with
19 the existing science.
20 BY COUNSEL SWAMINATHAN: 01:28:13
21 Q And are those opinions of whether they are
22 consistent or inconsistent included in your report?
23 A Yes.
24 Q So is your main role here today to show that
25 the organizations have not, in your view, undermined 01:28:26

1 the Act?
2 A I'm sorry, say that again.
3 Q Is your role in providing your expert
4 testimony to show that the professional
5 organizations have not, in your view, undermined the 01:28:38
6 Act?
7 MR. BARHAM: Objection to form.
8 THE WITNESS: Is my position -- I'm sorry,
9 one more time.
10 BY COUNSEL SWAMINATHAN: 01:28:52
11 Q No problem. I want to make this as clear as
12 possible for you.
13 I'm just trying to understand that your role
14 is to show that no professional organization has
15 articulated a meritorious position that calls into 01:29:02
16 question the basis for the Act; right?
17 MR. TRYON: Objection.
18 MR. BARHAM: Objection to form.
19 THE WITNESS: I -- I don't think I can say
20 that that is my purpose, although I'm aware of the 01:29:13
21 legal context in which the questions are being asked
22 of me. But I'm not -- being asked of me. But --
23 but my only opinions are -- can be about -- can only
24 be about what is or is not supported by the science.
25 Where it goes from there is up to the -- it's up to 01:29:31

1 others.
2 BY COUNSEL SWAMINATHAN:
3 Q Understood. So rather than your purpose,
4 just one, you know, objective that you achieved via
5 drafting this report is to opine on whether any 01:29:44
6 professional organization has articulated a
7 meritorious position that calls into question the
8 basis for the Act; right?
9 MR. TRYON: Objection.
10 THE WITNESS: If I'm understanding properly 01:29:57
11 the way you're asking the question, it's am I only
12 going to give opinions one side versus the other,
13 which is not correct. My role has been to assess
14 altogether the role of the science regardless of
15 which way those facts fall, not to cite the facts 01:30:16
16 merely on one side of the argument.
17 BY COUNSEL SWAMINATHAN:
18 Q Right. And so you spoke about the science.
19 So how do you believe that the Act is
20 supported by the science that you're referring to? 01:30:27
21 MR. BARHAM: Objection as to form.
22 THE WITNESS: That question -- that question
23 goes outside what I was -- what I've been asked to
24 do. I was -- I'm not and did not include in my
25 report the science specific to athletic performance. 01:30:56

1 As my report contains, it is an overview and --
2 describing the science of gender identity in
3 general, which, of course, will get adopted into the
4 question, but I am not offering an opinion on the
5 amount, for example, by which being born male might 01:31:19
6 serve as an athletic advantage relative to other
7 females. I was not asked that question, and that
8 question is not in my report, but that's the part
9 that's most pertinent to the -- to the long
10 question. 01:31:32
11 BY COUNSEL SWAMINATHAN:
12 Q So how is the science that you discuss in the
13 report relevant to the Act?
14 MR. BARHAM: Objection to the scope and form.
15 THE WITNESS: In order for any government to 01:31:54
16 institute policies that best integrate the science
17 into whatever they do, they need to know that
18 science. The same for Courts. So in order to
19 balance whatever a Court perceives as the relevant
20 issues, they need that information before them to 01:32:10
21 make the -- to make any decision.
22 BY COUNSEL SWAMINATHAN:
23 Q But you're not a lawmaker; correct?
24 A Correct.
25 Q And you're not offering an expert opinion 01:32:23

1 regarding whether science supports the Act; right?
2 A I wasn't asked to review the part of the
3 science that is most directly involved in the Act,
4 that is to say, specifically differences in athletic
5 performance between the genders -- sexes, I should 01:32:45
6 say.
7 Q But it's fire say that you're not offering an
8 expert opinion regarding whether science supports
9 the Act; right?
10 MR. TRYON: Objection. 01:32:54
11 THE WITNESS: I -- the questions, as posed to
12 me and as phrased in my report, are neither to
13 support nor to detract from the law but merely
14 summarize the science and indicate parts of overlap
15 and parts of contradiction. None of it is in -- is 01:33:21
16 in -- is a means to accomplish any specific end.
17 BY COUNSEL SWAMINATHAN:
18 Q Dr. Cantor, I think my question might be a
19 yes-or-no question. I am just asking, you know,
20 whether you believe that you're offering testimony 01:33:36
21 today and in connection with your report as to
22 whether science supports this act.
23 I understand that earlier you said you were
24 not offering an opinion on whether -- on -- on
25 either side, whether to support or not support 01:33:53

1 the Act.
2 So I think my question might be a yes-or-no
3 question.
4 A I don't think it is a yes-or-no question.
5 Science is, you know, complicated. There are -- 01:34:03
6 this issue is complicated. And it's quite feasible
7 that, you know, pieces of science will support some
8 aspects and not others.
9 Q Okay. So, again, if you can clarify, what in
10 your report is relevant to the Act? What testimony 01:34:19
11 that you've offered in your report is relevant to
12 the Act?
13 A All of it.
14 Q How is all of what you offer relevant to
15 the Act? 01:34:32
16 A In a decision made to affect trans people,
17 one needs to be, as much as possible, aware of the
18 science of trans people.
19 Q Okay. And so it's your testimony that all of
20 the opinions that you offer in your report are 01:34:54
21 opinions related to H.B. 3293; is that correct?
22 A Yes.
23 Q Okay. And you agree that the Act is a
24 decision that's made to affect trans people;
25 correct? 01:35:17

1 A I'm not a lawyer, but --
2 MR. TRYON: Objection.
3 THE WITNESS: I'm not a lawyer myself, but I
4 think that's fair for me to say, yes.
5 BY COUNSEL SWAMINATHAN: 01:35:25
6 Q Okay. And what is your understanding of
7 H.B. 3293?
8 A That it requires people who were born male to
9 play -- it forbids people who were born male from
10 playing on female teams. 01:35:36
11 Q And have you read the text of the Act?
12 A Yes, I have.
13 Q You've read it from top to bottom?
14 A From what I believe to be the top and what I
15 believe to be the bottom, yes. 01:35:49
16 Q Okay. So what is your understanding of what
17 the, quote, basis for the Act is?
18 MR. BARHAM: Objection as to form and the
19 scope.
20 THE WITNESS: To ask for the basis of the Act 01:36:14
21 I think is to ask what is on the minds of the
22 political system and the politicians who created it,
23 which, of course, I can't know.
24 BY COUNSEL SWAMINATHAN:
25 Q I'm -- I'm definitely not asking you to read 01:36:27

1 into the minds of the politicians.
2 I'm -- I'm going to read again the last
3 sentence on page 3 of your expert report that says
4 (as read):
5 "As I explain in detail in this 01:36:36
6 report, it is my opinion that
7 Plaintiffs' expert reports display a
8 wide variety of flaws that call
9 their conclusions into question and
10 that no professional organization 01:36:46
11 has articulated a meritorious
12 position that calls into question
13 the basis for the Act."
14 So I am simply asking you what your
15 understanding of the basis for the Act is. 01:37:01
16 A That the Act was necessary to improve the
17 lives of the students on these teams.
18 Q Can you be more specific about "the students
19 on these teams"? What do you mean by that?
20 A To balance the rights, needs and privileges 01:38:00
21 of each of the groups.
22 Q Who are the groups that we're speaking about?
23 A The people on the teams, the -- the
24 competitors, the trans students and then their,
25 typically, non-trans teammates. 01:38:13

1 Q And which teams are we specifically talking
2 about?
3 A I wasn't -- I wasn't talking about any
4 particular sport, but this -- this would be any
5 sex-segregated teams. 01:38:28
6 Q Okay. And how did you develop the
7 understanding that you just shared with me?
8 A I take it on general principles as the
9 purpose behind any law is to improve the situation
10 for the citizens relevant to it. 01:38:48
11 Q And how does this act impact the live --
12 lives of trans students?
13 A I have no direct knowledge of that kind of
14 impact outside of what's reported in the science,
15 and I'm not aware of there being any objective signs 01:39:05
16 measuring such an outcome.
17 COUNSEL SWAMINATHAN: Court Reporter, can you
18 please read back Dr. Cantor's answer before this
19 one?
20 (Recess.) 01:39:16
21 BY COUNSEL SWAMINATHAN:
22 Q So, Dr. Cantor, do you think that the Act
23 improves the lives of trans students?
24 A There's no way for me to know that without
25 data, and we don't have any. 01:39:43

1 Q Do you have data on how it improves the lives
2 of non-transgender students?
3 A No. The topic hasn't been studied.
4 Q So your report discusses prepubertal kids;
5 right? 01:40:05
6 A In part, yes.
7 Q A portion of your report discusses
8 prepubertal kids; right?
9 A Yes.
10 Q That discussion does not pertain to the 01:40:13
11 population affected by H.B. 3293; correct?
12 MR. BARHAM: Objection; form, scope and
13 terminology.
14 MR. TRYON: Objection.
15 THE WITNESS: No, that's not correct. 01:40:27
16 BY COUNSEL SWAMINATHAN:
17 Q How does your discussion about prepubertal
18 kids pertain to the population affected by H.B.
19 3293?
20 A The prepubertal kids become pubertal kids, 01:40:37
21 then become adolescents, even though they are
22 participating in these teams. For example, in
23 teenagehood, they still are members of -- they are
24 still a member of the demographic group where they
25 were. So they would still represent a phenomenon of 01:40:52

1 child-onset gender dysphoria even after they cease
2 to be a child.
3 Q What is your understanding of who is impacted
4 by H.B. 3293?
5 A Participant- -- everyone who participates and 01:41:11
6 follows in the -- the relevant sports.
7 Q And you said that prepubertal kids -- your --
8 your discussion on prepubertal kids pertains to the
9 population affected by H.B. 3293 because prepubertal
10 kids become pubertal kids who become adolescents; 01:41:28
11 right?
12 A Correct. The classifications are according
13 to when the -- the dysphoria starts, not where it
14 currently is.
15 Q So is it your opinion that adolescents are 01:41:40
16 still prepubertal kids?
17 A No, they are not.
18 Q Your report discusses adult-onset gender
19 dysphoria; right?
20 A Yes, it does. 01:41:58
21 Q That discussion also does not pertain to the
22 population affected by H.B. 3293; right?
23 A That is not correct.
24 Q Can you explain to me how adult-onset gender
25 dysphoria pertains to the population affected by 01:42:15

1 H.B. 3293?
2 A That's now a different question. You're now
3 asking me about adult onset rather than adult trans
4 people who may or may not have been dysphoric
5 earlier. 01:42:29
6 Q Can you explain that difference to me?
7 A The -- the science demonstrates over and over
8 again that the age -- the age of development at
9 which one starts to feel highly dysphoric allows us
10 to predict the -- predict many other phenomena and 01:42:46
11 the life trajectory that the person is on.
12 If a person is adult onset, which not always,
13 but in most of the literature is midlife, 30s and
14 40s, this would be past the student athletics age,
15 but if the person has -- but that's different from 01:43:06
16 people who had childhood-onset dysphoria, continue
17 to have that dysphoria and then eventually become
18 adults.
19 Q What studies are you talking about when you
20 just mentioned that there are studies with data that 01:43:23
21 show over and over?
22 A The -- the -- the studies that show over and
23 over -- which specific point?
24 Q Well, you just -- you tell me. You -- you
25 were just talking about studies that show that 01:43:42

1 adult-onset gender -- the differences between
2 adult-onset gender dysphoria and gender dysphoria in
3 adults; right?
4 A Right.
5 Q I'm -- I'm just trying to understand what 01:43:54
6 studies you were relying on when you just gave me
7 that explanation of the differences.
8 A Oh. There are many dozen such studies,
9 including those cited in my report. These are the
10 studies that demonstrate that it's the adult onset, 01:44:08
11 not the childhood onset which experience, for
12 example, autogynephilia.
13 Q So you say there are dozens, and I absolutely
14 do not expect you to recant every study cited in
15 your report, but can you name a few studies that 01:44:23
16 you're referring to?
17 A I can't recite their titles. The original
18 author who started most of those were Ray Blanchard,
19 and then many others have continued, such as
20 Anne Lawrence, who I mentioned earlier. 01:44:40
21 Q And you've cited -- cited these studies in
22 your report; is that correct?
23 A I don't recall exactly which of those studies
24 that I mentioned, but in the section on adult-onset
25 gender dysphoria, I provide the appropriate topic -- 01:44:54

1 provide the appropriate summary, with references.
2 Q Okay. And the discussion of adult-onset
3 gender dysphoria is not relevant to the Act;
4 correct?
5 MR. BARHAM: Objection; asked and answered. 01:45:11
6 MR. TRYON: Objection.
7 THE WITNESS: It -- no, it -- it is
8 relevant -- no, it is relevant.
9 BY COUNSEL SWAMINATHAN:
10 Q I'm sorry, I don't think I heard an answer as 01:45:25
11 to why it is relevant.
12 A Oh, I'm sorry. It's relevant in order to
13 help understand, especially with so much
14 misinformation being circulated today, which facts
15 apply to which group. 01:45:42
16 Q Which groups are you speaking about?
17 A Which onset -- which age -- which type of
18 onset of gender dysphoria we're talking about.
19 Q And --
20 A But -- 01:45:56
21 Q I'm sorry, go -- I apologize for cutting you
22 off.
23 A Adult-onset gender-dysphoric individuals who
24 come in and are otherwise mentally healthy are shown
25 to do very, very well after transition. But one 01:46:10

1 needs to know that phenomenon is limited to the
2 adult onset type so as to not misapply it to the
3 childhood onset types.
4 So even though the law would not directly
5 pertain to the behaviors of the adult onset type, 01:46:22
6 one needs to understand the functioning of the adult
7 onset type so as not to confuse the information
8 about it with information about the childhood onset
9 type.
10 Q But we agree that the Act does not apply to 01:46:35
11 the adults that we're speaking about; right?
12 MR. TRYON: Objection.
13 THE WITNESS: As I -- as I've just -- as I
14 just explained, it's not relevant in a direct way,
15 but in order to understand the information about 01:46:49
16 childhood onset, one requires information about
17 adult onset with which to contrast it.
18 BY COUNSEL SWAMINATHAN:
19 Q Okay. And your report also discusses people
20 with the female sex assigned at birth? 01:47:02
21 A Yes.
22 MR. TRYON: Objection; terminology.
23 BY COUNSEL SWAMINATHAN:
24 Q That discussion also does not pertain to the
25 population affected by H.B. 3293; right? 01:47:17

1 MR. TRYON: Objection.
2 MR. BARHAM: Objection; form, scope,
3 terminology.
4 THE WITNESS: No, that is not correct either.
5 BY COUNSEL SWAMINATHAN: 01:47:25
6 Q So how does -- how does your report's
7 discussion about people with a female sex assigned
8 at birth pertain to the population effected by H.B.
9 3293?
10 MR. BARHAM: Objection; terminology. 01:47:36
11 THE WITNESS: For the same reason. There's a
12 great deal of information being offered -- being
13 offered which pertains only to a certain subtype of
14 gender dysphoria, and in order to make sure that
15 like goes with like, one needs to understand all of 01:47:51
16 them so information about one kind of transition
17 doesn't get confused with other kinds of transition.
18 BY COUNSEL SWAMINATHAN:
19 Q Is it fair for me to say that H.B. 3293 does
20 not determine whether a person with the female sex 01:48:07
21 assigned at birth can play on any specific sports
22 team; correct?
23 MR. BARHAM: Objection --
24 MR. TRYON: Objection.
25 MR. BARHAM: -- form, scope and terminology. 01:48:20

1 THE WITNESS: As I read the law, it doesn't
2 alter directly or doesn't affect the -- the
3 behaviors available for -- it is a one-way ban,
4 not -- it bans people born as male to play on female
5 teams, but not people born female to play on male 01:48:40
6 teams, is my understanding of the law.
7 BY COUNSEL SWAMINATHAN:
8 Q Got it. And are you offering an expert
9 opinion on whether transgender girls and women
10 should be allowed to play on sports teams consistent 01:48:52
11 with their gender identity?
12 A I'm not -- not offering such an opinion of my
13 own. I'm just evaluating what's been circulating
14 relative to the existing science.
15 Q So would you agree that H.B. 3293 is a 01:49:03
16 one-way ban?
17 MR. TRYON: Objection.
18 MR. BARHAM: Objection; form and scope.
19 THE WITNESS: Again, I'm not a lawyer. I'm
20 not aware of a technical definition for one way, but 01:49:19
21 it certainly seems to fit that.
22 BY COUNSEL SWAMINATHAN:
23 Q So the population of people affected are not
24 people with adult-onset gender dysphoria; right? We
25 agree -- we discussed that; right? 01:49:33

1 MR. TRYON: Objection.
2 THE WITNESS: The law doesn't pertain to
3 their behavior specifically, correct.
4 BY COUNSEL SWAMINATHAN:
5 Q And are you offering an opinion on whether an 01:49:40
6 11-year-old transgender girl who has been on puberty
7 blockers since Tanner stage II should be allowed to
8 play on the girls' cross-country team consistent
9 with her gender identity?
10 A I'm not offering a specific opinion like 01:49:54
11 that, no.
12 Q Okay. Are you opining that H.B. 3293 is
13 justified because it discourages children and
14 adolescents from being on a pathway toward life as a
15 transgender person? 01:50:12
16 MR. TRYON: Objection.
17 THE WITNESS: No, that -- no, I'm not.
18 BY COUNSEL SWAMINATHAN:
19 Q Do you believe that H.B. 3293 discourages
20 children and adolescents from being on a pathway 01:50:22
21 toward life as a transgender person?
22 MR. BARHAM: Objection.
23 MR. TRYON: Objection.
24 THE WITNESS: There's no way for me to know
25 that. 01:50:33

1 BY COUNSEL SWAMINATHAN:
2 Q What is your understanding of the impact
3 on -- of H.B. 3293 on the decision to transition for
4 children and adolescents suffering from gender
5 dysphoria? 01:50:46
6 A I'm not aware of that ever having been
7 studied.
8 COUNSEL SWAMINATHAN: Okay. I'm going to
9 introduce tab 5, which has been marked as
10 Exhibit 47. 01:51:00
11 (Exhibit 47 was marked for identification
12 by the court reporter and is attached hereto.)
13 BY COUNSEL SWAMINATHAN:
14 Q Again, it takes a moment to refresh and load,
15 so please let me know when you have it. 01:51:32
16 A I have it.
17 Q Great. And have you seen this document
18 before, Dr. Cantor?
19 A It's not looking familiar to me, no.
20 Q It's not looking familiar to you. 01:52:03
21 You did not help author this document, then,
22 I understand; right?
23 A No.
24 Q Okay. I will represent to you that these are
25 the State of West Virginia's responses to plaintiff 01:52:19

1 B.P.J.'s first set of interrogatories, dated
2 November 23rd, 2021.
3 I'm going to be focusing on page 9 of the
4 document, if you are able to turn to page 9.
5 A One moment. 01:52:40
6 Q No problem. Take your time.
7 A Got it.
8 Q Great. And so Interrogatory No. 6, which is
9 at the top of the document, asks the State to
10 "Identify all governmental interests that YOU" -- 01:52:56
11 the State of West Virginia -- "believe are advanced
12 by H.B. 3293."
13 Do you see that?
14 A Yes, I do.
15 Q And the state, in its response, says (as 01:53:08
16 read):
17 "Without waiver of any objections,
18 the State asserts the following
19 interests, primarily and in general,
20 which are advanced by the Protection 01:53:19
21 of Women's Sports Act."
22 And there are three items listed under there.
23 The first is "To protect Women's Sports." The
24 second, "To follow Title IX." And the third, "To
25 protect women's safety in female athletic sports." 01:53:33

1 Do you see that?
2 A Yes, I do.
3 Q Okay. So are you offering an expert opinion
4 with respect to whether H.B. 3293 serves the
5 interest of protecting women's sports? 01:53:46
6 A I haven't been asked that, no.
7 Q Okay. And are you offering an opinion with
8 respect to whether H.B. 3293 serves the interest of
9 following Title IX?
10 A I haven't been asked that, no. 01:54:03
11 Q Okay. And are you offering an opinion with
12 respect to whether H.B. 3293 serves the interest of
13 protecting women's safety in female athletic sports?
14 A I have not been asked that, no.
15 Q And are you aware that H.B. 3293 applies to 01:54:20
16 college athletes as well?
17 A Yes.
18 Q Do you have any opinions on whether H.B. 3293
19 should apply to college athletes?
20 A I have no opinion in any direction. 01:54:33
21 Q Okay. So it's -- it's fair to say that you
22 don't have an opinion on -- on that issue; right?
23 A Yes.
24 Q Okay. So I want to talk a bit about your
25 experience with the treatment of gender dysphoria. 01:54:56

1 I understand earlier that you testified that
2 you're not an endocrinologist; right?
3 A Yes.
4 Q And you personally have not diagnosed any
5 child or adolescent with gender dysphoria; right? 01:55:05
6 A Correct.
7 Q And you personally have never treated any
8 child or adolescent for gender dysphoria; right?
9 A Correct.
10 Q Okay. And you don't provide psychotherapy 01:55:18
11 counseling to children or adolescents with gender
12 dysphoria; right?
13 A Age 16 or above, I do. Under age 16, I do
14 not.
15 Q And so it was your testimony earlier that you 01:55:38
16 see about six to eight patients age 16 to 18;
17 correct?
18 A Roughly, yes.
19 Q Roughly. And so roughly, of those six to
20 eight patients, how many of those patients come to 01:55:49
21 you suffering from gender dysphoria?
22 A Those -- those people come to me -- I'm
23 sorry, could you ask that again?
24 Q Sure. I -- I must have phrased it poorly.
25 So of the six to eight patients that you see, 01:56:11

1 on average, who are ages 16 to 18, how many of them
2 have a gender dysphoria diagnosis?
3 A I don't recall if they came in already with
4 such a diagnosis or at least I don't recall how many
5 would have had -- would have already been assigned 01:56:46
6 such a diagnosis by another clinician before they
7 got to me.
8 Q Would you be able to share with me roughly
9 how many of them identify as transgender or gender
10 dysphoric? 01:57:01
11 A When they come to me, they're not sure of
12 what their identity is. That's often among their
13 questions.
14 Q Okay. And what professional training or
15 expertise do you possess to provide psychotherapy 01:57:14
16 counseling to those adolescents who come to you
17 questioning whether they have gender dysphoria or
18 not?
19 A Do you mean my licensing or education?
20 Q Your licensing. 01:57:30
21 A My licensing is as a clinical psychologist,
22 registered in Ontario, specifically for adults and
23 adolescents age 16 and up.
24 Q Okay. And so that licensing does not
25 pertain -- or allow you to provide psychotherapy 01:57:41

1 counseling to anyone under the age of 16; correct?
2 A Correct.
3 Q Okay. Are you familiar with the term
4 "affirmation on demand"?
5 A Yes. 01:57:56
6 Q What does that term mean?
7 A It refers to permitting a person to engage in
8 whatever available methods to acknowledge or to
9 medically induce their transition with no other --
10 with no evaluation or supervision. 01:58:15
11 Q Has any patient ever come to you asking for
12 affirmation on demand?
13 A No.
14 Q What is your basis for saying that providers
15 are providing affirmation on demand to children and 01:58:31
16 adolescents with gender dysphoria?
17 A Through several venues. I get that
18 information from parents, from people, you know, in
19 society who e-mail me asking for help. There's a
20 large number of media reports of it happening 01:58:49
21 throughout the world, U.S., Canada and Europe. And
22 there's now been -- there are now several
23 governmental entities, mostly in Europe, are now
24 beginning more formal investiga- -- investigations
25 of it. 01:59:05

1 Q Okay. So let me see if I understand this
2 correctly.
3 You said parents, people who e-mail you, news
4 sources and information put out by government
5 entities, most commonly in Europe; is that correct? 01:59:17
6 Those are the sources from which you've heard that
7 providers are providing affirmation on demand?
8 A That question sounds slightly different to
9 me.
10 There's affirmation on demand as an idea. 01:59:36
11 Q Uh-huh.
12 A And then there are the actual processes that
13 clinics are doing in which they're providing
14 affirmation without sufficient evaluation. So it's
15 starting to approach affirmation on demand, which 01:59:51
16 would be the name for the most extreme version.
17 Q I see. And so have you spoken to providers
18 who claim to provide affirmation on demand to
19 children and adolescents with gender dysphoria?
20 A No. The people who are -- seem to be 02:00:11
21 providing it deny that that's what they're doing.
22 Q Have you -- are you personally aware of any
23 providers who fail to conduct the sufficient
24 evaluation that you just mentioned that teeters on
25 the edge of affirmation on demand? 02:00:25

1 A I'm not clear on what you mean by "personally
2 aware" beyond the way that I already described how I
3 become aware of it.
4 Q I think I'm just trying to understand more
5 how that you know for certain providers are 02:00:46
6 providing affirmation on demand.
7 A Again, that -- that seems to be the question
8 you asked before, where it's a series of different
9 kinds of sources.
10 Q But none of those sources are actual 02:01:00
11 providers who provide this care; right?
12 A Again, as I said already, most of the people
13 who seem to be providing something that would
14 reasonably be called that deny that that's what
15 they're doing. 02:01:16
16 Q Has anyone at your hospital, to your
17 knowledge, provided affirmation on demand?
18 A When you say my hospital, I assume you mean
19 my former affiliation at CAMH.
20 Q Yes. Apologies. 02:01:33
21 Has anyone, to your knowledge, at CAMH
22 provided affirmation on demand?
23 A No. The clinic there is known for being
24 cautious.
25 Q So you've not talked to any other providers 02:01:48

1 who have claimed to provide affirmation on demand;
2 right?
3 A Correct. The people who seem to be providing
4 it deny that that's what they're providing.
5 Q Okay. And your only evidence that 02:02:03
6 affirmation on demand is being provided is from
7 parents, from people and society directly e-mailing
8 you, from news sources and from the government
9 entity releases that you spoke about earlier; right?
10 A Correct. 02:02:19
11 Q Okay. Have you read any studies that show
12 that providers are providing affirmation on demand
13 to children and adolescents with gender dysphoria?
14 A No. No, I'm not. As I say, the -- the
15 providers don't acknowledge that that's what they're 02:02:38
16 doing to begin with, leaving little opportunity to
17 study it at all.
18 Q Okay. What do you understand desistance to
19 mean in the context of gender dysphoria?
20 A Different people use the words in slightly 02:02:53
21 different ways or with different cutoffs, but in
22 general, they -- they refer to a person realizing
23 that they weren't actually trans after all.
24 Q So you said different people have maybe
25 different definitions. 02:03:08

1 What is your definition of desistance?
2 A I don't think I can really say that I have a
3 definition so much as I do my best to understand
4 what the person taking to me or the document that
5 I'm reading, what they meant by it and then going 02:03:25
6 with, you know, whatever meaning it is that -- that
7 they meant.
8 Q I guess I'm trying to understand.
9 So in your professional practice, what
10 different variations of understanding of the word 02:03:43
11 "desistance" have you encountered?
12 A Generally, they would differ according to how
13 far along the transition process the person was to
14 begin with. A person suspecting that they might be
15 trans and then figuring out that they're not is very 02:03:59
16 different from a person who transitions, socially
17 changed a name and then changed it back, which is
18 still again very different from somebody who has
19 taken hormones or gone through surgery and then
20 regrets that. 02:04:14
21 Q Okay. You spoke about regret.
22 What do you understand regret to mean in the
23 context of desistance?
24 A Wishes that they had never gone through
25 transition to begin with. 02:04:24

1 Q Okay. And are you aware of any studies
2 tracking desistance in adolescents with gender
3 dysphoria?
4 A I'm aware of studies that have included it
5 inside of a larger study of the phenomenon -- of 02:04:41
6 trans adolescents in general. There have -- I've
7 seen that there exists now a small handful of
8 studies trying to survey those kids. I haven't
9 studied them yet in any depth, however.
10 Q Okay. Would you know the names of any of 02:05:06
11 these small handful of studies you just mentioned?
12 A Not offhand, no.
13 Q Would you know any of the authors of these
14 studies or the people who are in the process of
15 collecting this data? 02:05:21
16 A Not offhand, no.
17 Q Okay. And are any of these studies cited in
18 your report?
19 A No, they are not.
20 Q Okay. So I'm going to introduce tab 7, which 02:05:29
21 is going to be marked as Exhibit 48. Give me one
22 moment for it to show up on your end.
23 Are you --
24 (Exhibit 48 was marked for identification
25 by the court reporter and is attached hereto.) 02:06:07

1 THE WITNESS: Yes.
2 BY COUNSEL SWAMINATHAN
3 Q Great. Do you recognize this blog post,
4 Dr. Cantor?
5 A Yes, I do. 02:06:16
6 Q So this is a blog post entitled "Do trans
7 kids stay trans when they grow up?"
8 You authored this post in Sexology Today!;
9 correct?
10 A Correct. 02:06:29
11 Q And you wrote this in 2016. It says
12 January 11th, 2016; correct?
13 A That's right.
14 Q Okay. And so I want to turn your attention
15 to the -- the second paragraph of -- the top of the 02:06:43
16 page. You write (as read):
17 "Only very few trans- kids still
18 want to transition by the time they
19 are adults. Instead, they generally
20 turn out to be regular gay or 02:06:57
21 lesbian folks."
22 Did I read that accurately?
23 A Yes.
24 Q What does "regular gay or lesbian folks"
25 mean? 02:07:08

1 A No other sexual interest phenomena that would
2 better account or better describe what they're
3 interested -- what they're interested in.
4 Q What are non-regular gay or lesbian folks,
5 then? 02:07:24
6 A For example, somebody with a -- with a
7 paraphilia or with a fetish that makes the
8 determination of their sexual orientation a bit
9 moot.
10 Q What does that mean, to make it a bit moot? 02:07:36
11 A That their sexual interest pattern doesn't
12 follow along what most people are generally familiar
13 with in -- in discussing attraction to men or
14 attraction to women.
15 Q Okay. So if a child's gender dysphoria were 02:07:53
16 to persist and they continued to want to transition
17 by the time they are adults, what are they, in your
18 view?
19 A If -- they would most -- they would be in the
20 running to qualify -- the emotion they would be 02:08:11
21 describing would be gender dysphoria. Whether they
22 qualify for the diagnosis depends on -- would
23 require a more fulsome assessment.
24 Q Would they be irregular, in your mind?
25 A They would be atypical in that it is 02:08:25

1 statistically a rarer phenomenon than cisgender is.
2 Q I heard you say, just a few seconds ago, they
3 would be in the running for, and then you kind of
4 cut off, I thought.
5 What did you mean to say when you said they 02:08:44
6 would be in the running for? Would they be in the
7 running for being transgender?
8 A Yes, that would be possible, but I can't make
9 that kind of conclusion without the person
10 undergoing, as I say, a more fulsome assessment, 02:08:57
11 looking for other possible motivators for why they
12 might feel gender dysphoria.
13 Q So what do you -- let's see.
14 Are you aware that gender identity and sexual
15 orientation are distinct concepts? 02:09:12
16 A Yes.
17 Q Yes? Are you aware that someone can be
18 transgender and gay?
19 A Yes, although the particular phrases become a
20 little bit more complicated when a person is 02:09:24
21 changing sex and you're trying to say what they're
22 attracted to relative to the sex they are.
23 Q And is it equally as complicated for the
24 understanding that someone can be transgender and a
25 lesbian? 02:09:43

1 A Is it complicated? Yes.
2 Q Is it more complicated than someone being
3 transgender and gay?
4 A No. This is the same complication.
5 Q The same complication. Okay. 02:09:56
6 Dr. Cantor, do you believe that social
7 transition for gender-dysphoric adolescents after
8 age 12 is appropriate?
9 A That's an empirical question -- that's an
10 empirical question, and the science unde- -- is 02:10:17
11 still somewhat undecided about it.
12 Q I'm just asking for your opinion, though.
13 Do you believe that social transition for
14 gender-dysphoric adolescents after age 12 is
15 appropriate? 02:10:35
16 A It's not possible to have an opinion outside
17 of the science.
18 COUNSEL SWAMINATHAN: Okay. I'm going to
19 introduce tab 23, which is now going to be marked as
20 Exhibit 49. 02:10:49
21 (Exhibit 49 was marked for identification
22 by the court reporter and is attached hereto.)
23 THE WITNESS: I see it.
24 BY COUNSEL SWAMINATHAN:
25 Q Great. And if you can turn to the second 02:11:15

1 page of this article, which is an article titled
2 "When is a 'TERF'" --
3 COUNSEL SWAMINATHAN: For the court reporter,
4 that's T-E-R-F.
5 BY COUNSEL SWAMINATHAN: 02:11:26
6 Q -- "not a 'TERF'?" authored on July 20- --
7 July 8th, 2020.
8 And this is an article written by you, right,
9 Dr. Cantor?
10 A Yes, it is. 02:11:36
11 Q And if you turn to page 2, you'll see, around
12 the middle of the page, the -- the third paragraph
13 that begins with (as read):
14 "I support age 12, not for any
15 ideological reason, but because that 02:11:51
16 is what the (current) evidence
17 supports: The majority of
18 prepubescent kids cease to feel
19 trans during puberty, but the
20 majority of kids who continue to 02:12:04
21 feel trans after puberty rarely
22 cease."
23 Do you see that?
24 A Yes, I do.
25 Q So is it fair to say that you support social 02:12:09

1 transition for gender-dysphoric adolescents at age
2 12?
3 A No.
4 Q No? So this article is authored in July of
5 2020. 02:12:29
6 So has your opinion changed from July 2020 --
7 July 2020 to now?
8 A Science has changed, and as I say, my opinion
9 just follows the science.
10 Q How has the science changed? 02:12:42
11 A The -- several of the papers that were being
12 circulated in the late 2019s have turned out to be
13 wrong. Some were retracted. Some were reanalyzed,
14 and it was shown that their results were not correct
15 to begin with. And it was recognized that those 02:13:02
16 studies which did seem to be indicating an
17 improvement over -- over transition, such kids were
18 receiving psychotherapy in addition to receiving
19 medical transition.
20 Once that was recognized, we could no longer 02:13:15
21 conclude that it was any -- the medical
22 transition -- that it was the medical transition or
23 any other transition being the source of the benefit
24 rather than the psychotherapy itself.
25 So once the evidence supporting earlier 02:13:28

1 transition evaporated, then one's opinion of that
2 science has to change with it.
3 Q So you mentioned studies that have been
4 changed or retracted. What studies are you talking
5 about? 02:13:42
6 A It's a series of -- a series of studies, all
7 of which have been -- are cited in my report.
8 Q Can you name a few of those studies?
9 A I'm better with names if I could have my
10 report in front of me at the same time. 02:13:56
11 MR. BARHAM: The latest report is Exhibit 45;
12 is that correct?
13 COUNSEL SWAMINATHAN: That is correct.
14 THE WITNESS: Bränström and Pachankis 2019
15 became retracted. 02:14:53
16 BY COUNSEL SWAMINATHAN:
17 Q Any others?
18 A Olson, et al., was demonstrated to be
19 incorrect.
20 The Costa study, although it came out 02:15:37
21 earlier, it then became better known once the other
22 studies started -- after the other studies started
23 showing that they were in error.
24 Q And you're talking about the Costa 2015; is
25 that correct? 02:16:00

1 A Yes.
2 Q Okay.
3 A So those are the --
4 Q Okay. Thank you, Dr. --
5 A Those are the ones -- okay. 02:16:06
6 Q So, Dr. Cantor, what is the Dutch protocol?
7 A The Dutch protocol started outside of Canada.
8 The largest clinic for children's gender dysphoria
9 was in the Netherlands. They also took a
10 conservative method, like -- like the clinics in 02:16:26
11 Canada, where children who were otherwise qualified
12 would be allowed to begin taking puberty blockers at
13 age 14 and then cross-sex hormones at age 16.
14 Q And the Dutch protocol allowed for a social
15 transition after age 12; right? 02:16:46
16 A It was during adolescence. I don't recall
17 the specific age.
18 Q Let me turn your attention to a page in your
19 report that might help you reflect (sic) your
20 recollection. 02:17:02
21 So if you could turn to page 19 of your
22 report.
23 A One moment.
24 Q No problem.
25 And at the top of the page, it says that "The 02:17:23

1 components of the Dutch Approach are: no social
2 transition at all considered before age 12..." which
3 they describe as the watchful waiting period.
4 A Correct.
5 Q So is it fair to say that the Dutch protocol 02:17:36
6 allows for social transition after age 12?
7 A Allows for it? Yes.
8 Q So is it your opinion as you testify today
9 that you disagree with the Dutch protocol with
10 respect to the age at which it allows for social 02:17:53
11 transition?
12 A There were some pieces missing in that.
13 As I said, the Dutch protocol, at the time,
14 was developed on the data that was available at that
15 time. Both have changed -- well, the Dutch 02:18:15
16 protocol, as we call it, hasn't changed, but the
17 clinics themselves have -- are now becoming more
18 conservative, as the original version of the Dutch
19 protocol has not been as well replicated.
20 But instead of clinics raising their 02:18:29
21 standards, like is happening throughout Europe,
22 clinics in the U.S. who are receiving reports are
23 lowering their standards.
24 Q I see. And so if you look at page 18 of your
25 report, just the page before, and you look at 02:18:42

1 paragraph 46, in the last sentence of your
2 paragraph, you state, quote, (as read):
3 "Internationally, the Dutch Approach
4 is currently the most widely
5 accepted and utilized method for 02:18:54
6 treatment of children who present
7 with gender dysphoria."
8 End quote.
9 Do you agree with that statement?
10 A Yes, that would -- that would still be fair 02:19:02
11 to say.
12 Q Okay. Dr. Cantor, what puberty-blocking
13 drugs are you aware of?
14 A Oh, I couldn't tell them to you by name so
15 much as by function. 02:19:20
16 Q What are you aware of about the function of
17 puberty-blocking treatment?
18 A Well, there are a series of signals in the
19 brain that indicate to different parts of the brain
20 and different parts of the body when to -- that they 02:19:34
21 should be maturing. The puberty blocker stops --
22 stops that cycle.
23 Q And, again, you are not an expert in the
24 different types of prescription drugs that are used
25 as puberty-blocking agents; right? 02:19:50

1 A That is correct.
2 Q Okay. You have never obtained informed
3 consent to provide puberty blockers; right?
4 A Correct.
5 Q And you've never had a patient sign an 02:20:03
6 informed consent form relating to puberty blockers;
7 right?
8 A Correct.
9 Q You personally have no experience with
10 monitoring patients who are undergoing 02:20:15
11 puberty-blocking treatment; right?
12 A Correct.
13 Q You don't know what type of monitoring is
14 typically done or not done for those patients;
15 right? 02:20:28
16 A That's part of medical practice.
17 Q That's not your practice; right?
18 A Correct.
19 Q Okay. Dr. Cantor, you know what cross-sex
20 hormones are; correct? 02:20:46
21 A Yes.
22 Q For transgender women, estrogen is the
23 hormone that's typically prescribed; correct?
24 MR. BARHAM: Objection as to terminology.
25 THE WITNESS: Yes. 02:20:55

1 BY COUNSEL SWAMINATHAN:
2 Q And for transgender men, testosterone is the
3 hormone that's typically prescribed; correct?
4 MR. BARHAM: Objection; terminology.
5 THE WITNESS: Correct. 02:21:07
6 BY COUNSEL SWAMINATHAN:
7 Q Have you ever obtained informed consent to
8 provide cross-sex hormones to anyone?
9 A No.
10 Q You've never had a patient sign an informed 02:21:15
11 consent form relating to cross-sex hormones; right?
12 A Correct.
13 Q Okay. Have you advised patients about
14 potential risks and benefits of cross-sex hormones?
15 A No, I have not. 02:21:33
16 Q Okay. Aside from the literature you have
17 reviewed, you personally don't know what doctors
18 tell their patients about cross-sex hormones; right?
19 MR. BARHAM: Objection as to form and scope.
20 THE WITNESS: That's not entirely true. For 02:21:55
21 example, people who have detransitioned or people
22 who have transitioned, when it's relevant, you know,
23 will discuss with me conversations that they've had
24 with their physicians.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q Okay. So your knowledge of what doctors tell
3 their patients about cross-sex hormones comes from
4 what your patients who have detransitioned have told
5 you; is that fair? 02:22:17
6 A In part. The other sources are the sources
7 that I mentioned earlier, e-mails and other contacts
8 from -- from family members, requests for -- for
9 consultation, media -- and media outlets.
10 Q Got it. Thank you. Okay. 02:22:34
11 Did you review --
12 COUNSEL SWAMINATHAN: Actually, I just want
13 to check in. You're -- are you okay to keep going?
14 But it has been about an hour and ten minutes. If
15 you need a break, that's totally fine. 02:22:44
16 THE WITNESS: I'm good.
17 COUNSEL SWAMINATHAN: You're good? Okay.
18 BY COUNSEL SWAMINATHAN:
19 Q Did you review the 2017 Endocrine Society
20 guidelines in full before forming your opinions in 02:22:56
21 this case?
22 A Yes, I have.
23 Q You have? You've read them from top to
24 bottom as well?
25 A Yes, I have. 02:23:04

1 Q When's the last time you've done that?
2 A Oh. Last week.
3 Q Last week. And are you aware that the
4 Endocrine Society guidelines recommend treating
5 gender-dysphoric and gender-incongruent adolescents 02:23:18
6 who have entered puberty at Tanner stage II by
7 suppression with gonadotropin-releasing hormone
8 agonists?
9 A I'm aware that that's in that document, yes.
10 Q Okay. And if we can take a look back -- I -- 02:23:30
11 I assume you still have your report pulled up. If
12 you can take a look at page 3 of your report.
13 A I'm there.
14 Q And you look at paragraph 8, subset (e), you
15 state that (as read): 02:23:59
16 "Affirmation of a transgender
17 identity in minors who suffer from
18 early-onset or adolescent-onset
19 gender dysphoria is not an accepted
20 'standard of care.'" 02:24:10
21 Which is in quotes.
22 Is that correct?
23 A That's correct.
24 Q So this opinion conflicts with the
25 Endocrine Society recommendations; right? 02:24:20

1 A Yes, it does.
2 Q And you yourself are not a part of the
3 Endocrine Society; right?
4 A That is correct.
5 Q You've never advised the Endocrine Society in 02:24:31
6 any capacity; right?
7 A That is correct.
8 Q You personally were not involved with the
9 development of the original Endocrine Society
10 guidelines back in 2009; right? 02:24:47
11 A Correct.
12 Q You were not involved with the development of
13 the updated guidelines in 2017; right?
14 A Correct.
15 Q Do you know what kind of scientific 02:24:59
16 literature review the Endocrine Society conducted in
17 developing the 2017 updates?
18 A I'm not aware of its details, no.
19 Q Are you aware of what kind of outside experts
20 the Endocrine Society may have consulted in 02:25:16
21 developing the 2017 updates?
22 A I'm aware that they had such people whom they
23 requested, yes.
24 Q Are you aware of any of these people by name?
25 A The only one I know by name is from his 02:25:32

1 involvement in this case, Dr. Jensen.
2 Q Okay. And you don't hold yourself out as an
3 expert in how the Endocrine Society developed the
4 original 2009 guidelines for treatment of gender
5 dysphoria; right? 02:25:50
6 A It's a little hard to imagine such a question
7 being used to determine whether a person can be
8 called an expert on -- on anything. That's a very
9 narrow topic. However, there has been systematic
10 evaluation of the Endocrine Society's guidelines. 02:26:08
11 Q I guess my question is that you don't hold
12 yourself out personally as an expert in how the
13 Endocrine Society developed the original 2009
14 guidelines; right?
15 A Yes, that would be true. 02:26:23
16 Q Okay. And the same -- you don't hold
17 yourself out as an expert in how the
18 Endocrine Society developed the 2017 updates; right?
19 A That, again, would, I think, be true.
20 Q Okay. You know what the WPATH is, right, the 02:26:40
21 World Professional Association for Transgender
22 Health?
23 A Yes, I am.
24 Q Sorry, yes, you do or yes, you --
25 A Yes, I am aware. 02:26:54

1 Q Oh, okay. Do you know that WPATH
2 publishes standards of care for the health of
3 transgender people?
4 A Yes, I'm aware.
5 Q Are you aware that WPATH has been publishing 02:27:07
6 these standards since 1979?
7 A Yes, I am.
8 Q Okay. To your knowledge, what is the latest
9 standard of care available from WPATH?
10 A They're in the middle of revising them now. 02:27:21
11 I don't remember the year of the current -- current
12 version, but --
13 Q Do you know the number of the current
14 version?
15 A No. I don't recall. 02:27:33
16 Q Do you know when the most recent version was
17 published?
18 A Not without looking it up. I don't remember
19 the year, no.
20 Q So in your report, you express some opinions 02:27:47
21 about the WPATH Standards of Care; right?
22 A Correct.
23 Q Before you wrote this report, did you sit
24 down and review the WPATH Standards of Care?
25 A Yes. Yes, I did. 02:28:00

1 Q When did you review them?
2 A That was now three or four years ago.
3 Q And have you reviewed all of the articles
4 cited in the "References" section of the WPATH
5 Standards of Care? 02:28:27
6 A I haven't looked through the reference list
7 to see how many of them I would have read, no.
8 Q So you haven't reviewed the reference list;
9 right?
10 A Well, I haven't reviewed the reference list 02:28:37
11 to see how many of those references I happened to
12 know, no.
13 Q Okay. And you yourself are not a part of the
14 WPATH; right?
15 A Correct. 02:28:48
16 Q Have you ever been a member of WPATH?
17 A No.
18 Q Have you ever advised the WPATH in any
19 capacity?
20 A No. 02:29:01
21 Q Okay. You personally have not been involved
22 with the development of WPATH Standards of Care,
23 Version 7; right?
24 A Correct.
25 Q Okay. Do you know that WPATH is currently 02:29:13

1 working on Version 8 of their standards of care?
2 A Yes, I am.
3 Q You personally have not been involved in the
4 development of WPATH Standards of Care, Version 8;
5 right? 02:29:29
6 A Correct.
7 Q And you don't hold yourself out as an expert
8 in how Version 8 is currently being developed;
9 right?
10 A Again, I hesitate to say that that is a 02:29:40
11 subject in which there exists expertise. It's
12 within my topic of expertise, but I wouldn't say
13 that I am an expert in that topic specifically.
14 Q Okay. And in this particular case, you're
15 not offering any expert opinions on how Version 8 of 02:29:59
16 the WPATH Standards of Care are currently being
17 developed; right?
18 A Correct. The comments in my report included
19 evaluation of Version 7.
20 Q Okay. So, Dr. Cantor, I would love for you 02:30:16
21 to turn to page 16 of your expert report.
22 A Got it.
23 Q Great. If you could just have that open.
24 So do you agree that the number and
25 percentage of prepubertal kids with gender dysphoria 02:30:40

1 who do not go on to identify as transgender is
2 currently unknown?
3 A No, I don't think that's exactly fair to say.
4 What --
5 Q So -- what do you base your opinion -- 02:31:11
6 MR. BARHAM: I'd ask that -- I'd ask that you
7 allow him to finish his answer before answer- --
8 asking the next question.
9 COUNSEL SWAMINATHAN: Apologies, Counsel.
10 BY COUNSEL SWAMINATHAN: 02:31:20
11 Q Please finish your answer, Dr. Cantor.
12 A There have been 11 studies, and all of them
13 show that the large majority cease to want to
14 transition by puberty, but the exact number changes
15 study by study. So I can't say that the number is 02:31:31
16 known, in that we haven't found the same number
17 coming up over and over again, but it would be
18 unfair to say that, you know, the entire range of
19 possible numbers are equally possible. They're not.
20 The studies have consistently even, even 02:31:46
21 unanimously, said that it was the large majority
22 desist, but we still can't give a -- a specific
23 number better than a range.
24 Q So you agree that the number and percentage
25 of prepubertal kids with gender dysphoria who do not 02:32:03

1 go on to identify as transgender is currently
2 unknown; right?
3 MR. BARHAM: Objection; asked and answered.
4 MR. TRYON: Objection.
5 THE WITNESS: Again, I can't say that there 02:32:12
6 is a specific number, but the range is unanimously,
7 in every single study, the large majority.
8 BY COUNSEL SWAMINATHAN:
9 Q And which studies are you referring to?
10 A There were 11, and they were the -- the 11 02:32:29
11 studies listed on my blog, which you posted.
12 Q I think I have maybe shown you two blog posts
13 now. Was it tab 40 -- sorry -- Exhibit 48? Is that
14 the one you're referring to?
15 A I don't remember the tab number, but only one 02:32:45
16 of those two had a list of studies, and the other
17 was, you know, just text from me.
18 Q Okay. Do you agree that the number and
19 percentage of adolescents with gender dysphoria who
20 do not go on to identify as transgender is currently 02:33:00
21 unknown?
22 A That is much less known, correct.
23 Q Okay. And I take it you are not offering any
24 expert opinions on what number or percentage of
25 adolescents with gender dysphoria do not go on to 02:33:16

1 identify as transgender; right?
2 A I don't -- no, I'm not off- -- I'm not
3 offering such a percentage, no. We have -- we don't
4 have the kind of prospective systematic studies to
5 give us a better idea of the range. Instead, we 02:33:37
6 have studies which retrospectively try to ask
7 questions from these people, but those studies don't
8 give us an estimate of how many people have already
9 desisted and, therefore, never took the
10 questionnaire to begin with. 02:33:53
11 Q Okay. And, Dr. Cantor, you agree that no
12 study supports the withholding of gender-affirming
13 treatment after the onset of puberty; right?
14 MR. BARHAM: Objection as to terminology.
15 THE WITNESS: Could you ask that again, 02:34:11
16 please?
17 BY COUNSEL SWAMINATHAN:
18 Q Sure. You agree that no study supports the
19 withholding of gender-affirming treatment after the
20 onset of puberty; right? 02:34:19
21 A That no study supports the withholding.
22 MR. BARHAM: Objection --
23 THE WITNESS: That's --
24 MR. BARHAM: Objection as to terminology.
25 THE WITNESS: That's true in only a very 02:34:37

1 vacuous way in that that's not how science, never
2 mind medical science, is conducted. In science, we
3 begin with the null hypothesis. Everything starts
4 with a null hypothesis. The onus of proof belongs
5 to the person saying that doing something will do 02:35:12
6 something. It's not possible to prove a null
7 hypothesis. We start with it and wait for proof
8 that doing something has whatever intended effect.
9 All of that is to say it's not possible to
10 conduct a study that would prove what happens when 02:35:30
11 you do nothing. We start with that point.
12 BY COUNSEL SWAMINATHAN:
13 Q So what is the basis for your opinion that
14 it's not possible to prove what the effects of,
15 quote, doing nothing are? 02:35:46
16 A That's a fundamental tenet of science.
17 That's what I call the -- as I said, that's called
18 the null hypothesis. It's a basic functioning of
19 the scientific process.
20 Q And so there's -- I'm right, though, that 02:35:58
21 there's no study that has tracked what you call as
22 doing nothing in adolescents who are suffering from
23 gender dysphoria; right?
24 MR. TRYON: Objection.
25 THE WITNESS: Correct, there is no such 02:36:17

1 study.
2 BY COUNSEL SWAMINATHAN:
3 Q Okay. You recognize that your theory of
4 withholding social transition to see if prepubertal
5 kids with gender dysphoria desist is an outlier in 02:36:27
6 the scientific community?
7 MR. BARHAM: Objection as to form and
8 terminology.
9 THE WITNESS: No, I would not say that at
10 all. 02:36:41
11 BY COUNSEL SWAMINATHAN:
12 Q What do you base your -- that answer on?
13 A I'm in regular contact with a -- with very,
14 very many scientists in my field, and they generally
15 agree with me. It's -- and they generally agree 02:36:51
16 with -- agree with me. It's the outliers who tend
17 to speak most often, loudest and most publicly. So
18 the public mind is very, very different from the
19 collection of scientists.
20 Q So you said very, very many people agree with 02:37:08
21 you. How many people are you talking about?
22 A Oh. Several scores. I -- of the ones I
23 interact with, close to a hundred.
24 Q Can you define score for me?
25 A 20. 02:37:34

1 Q So several scores. Would you say 40 to 60 is
2 an accurate capture of how many people you spoke to?
3 A Probably closer to a hundred.
4 Q Okay. And who are these hundred people? I'm
5 not asking you to identify all 100 by name, but who, 02:37:54
6 generally, are they?
7 A Sex researchers and sex therapists.
8 Q Okay. So beyond the conversations that you
9 had with these scores of individuals, do you have
10 any other basis for believing that practitioners 02:38:15
11 support withholding social transition in prepubertal
12 patients with gender disorder?
13 MR. BARHAM: Objection as to form and
14 terminology.
15 THE WITNESS: No. That's my primary source. 02:38:33
16 BY COUNSEL SWAMINATHAN:
17 Q And do any of those hundred or so individuals
18 actually treat transgender patients?
19 A Yes. None of them does it as a specific
20 specialty, but very many of them, of the clinicians 02:38:55
21 among them, have or have had trans clients among
22 their patient base.
23 Q Okay. Can you please turn to page 18 of your
24 report --
25 COUNSEL SWAMINATHAN: And, actually, I think 02:39:26

1 this might be a good time for a five-minute break.
2 I think we've been going for about an hour and
3 20 minutes now.
4 Can we go off the record?
5 THE VIDEOGRAPHER: Yep. We are going off the 02:39:34
6 record and -- at, let's see, 2:39 p.m., and this is
7 the end of Media Unit No. 4.
8 (Recess.)
9 THE VIDEOGRAPHER: All right. We are back on
10 the record at 2:53 p.m., and this is the beginning 02:53:07
11 of Media Unit No. 5.
12 Go ahead, please.
13 BY COUNSEL SWAMINATHAN:
14 Q Dr. Cantor, can you please turn to page 12 of
15 your expert report, which is Exhibit 45. 02:53:16
16 A Got it.
17 Q Okay. So paragraph 29, on page 12, you state
18 (as read):
19 "For example, there exist only very
20 few cases of transition regret among 02:53:48
21 adult transitioners, whereas the
22 research has unanimously shown that
23 the majority of children with gender
24 dysphoria desist—that is, cease to
25 experience such dysphoria by or 02:54:01

1 during puberty."
2 Did I read that correctly?
3 A Yes.
4 Q What is your basis for this assertion?
5 A The 11 studies that were also cited in my 02:54:16
6 blog.
7 Q Is there a reason you didn't cite any of
8 those studies here, in your report?
9 A I didn't include --
10 Q I just mean in this paragraph, on this page, 02:54:35
11 is there a reason there's no footnotes --
12 A Oh, in that paragraph, on that page? No.
13 Only because there was an introductory paragraph,
14 you know, before the rest of the document.
15 Q And those 11 studies are the -- the same 02:54:52
16 studies that you mentioned before that you said were
17 on your blog?
18 A Correct.
19 Q Okay. And on page 18 of your expert report,
20 on -- in paragraph 45 of page 18, you state (as 02:55:10
21 read):
22 "Because only a minority of gender
23 dysphoric children persist in
24 feeling gender dysphoric in the
25 first place, 'transition-on-demand' 02:55:25

1 increases the proba-" --
2 I assume you mean "probability." It says
3 "probably" here.
4 A Oh, goodness. That's right.
5 Q That's right? Okay. 02:55:33
6 (As read):
7 -- "increases the probability of
8 unnecessary transition and
9 unnecessary medical risks."
10 Is that fair, as it's read? 02:55:42
11 A Yes.
12 Q Okay. What's your basis for this opinion?
13 A I want to say mathematics.
14 Q What do you mean by that?
15 A The -- if only few people regretted 02:56:01
16 transition, then transitioning everybody would be
17 the wrong decision for only few people. If most
18 people cease to want to transition eventually, then
19 transitioning all of them would be making a much
20 larger number of errors. 02:56:23
21 Q What do you mean by "transitioning all of
22 them"?
23 A If the people were given transition on
24 demand.
25 Q So what do you understand the term 02:56:33

1 "transition on demand" to mean?
2 A That we give the person -- we recognize
3 whatever element of that person as soon as they make
4 that request.
5 Q So I just want to make sure I understand. 02:56:49
6 You are saying that your opinion for -- or
7 your basis for stating that a minority of
8 gender-dysphoric children persist is based in math;
9 is that correct?
10 A No. I'm saying that the -- the conclusion 02:57:00
11 that we will have more errors and make more mistakes
12 if we don't consider that statistic. That's math.
13 Q I guess I'm understanding what -- or trying
14 to understand, what is the basis for that statistic,
15 that only a minority of gender-dysphoric children 02:57:17
16 persist?
17 A Those 11 studies, which were summarized --
18 which were summarized in my blog, together with the
19 number -- the exact numbers of people who continue
20 to want to transition after puberty and those which 02:57:33
21 ceased to.
22 These people only came into the clinics when
23 they started expressing their gender dysphoria. If
24 they were transitioned after that first appointment,
25 because we didn't yet know which ones were going to 02:57:48

1 persist and which ones were going to desist, then we
2 would only know that if we transi- -- transitioned
3 all of them that first day, most of those would end
4 up being a mistake because we know that most of
5 those will -- will have ceased to want to transition 02:58:06
6 by puberty.
7 Q And is the reason that you don't state --
8 sorry, strike that.
9 To your knowledge, are people being
10 transitioned on the first day? 02:58:20
11 A Those are the reports that we referred to
12 earlier that there are becoming more and more cases
13 getting reported to me or to the -- or via their
14 families or in the media. Or, as I say, now that
15 there are investigations going on in other 02:58:40
16 countries, that's what they're continuing to find.
17 Q Okay.
18 A Transition on demand is the most extreme
19 version of it, but -- but the difference is whether
20 -- the meaningful part is whether these people are 02:58:51
21 being transitioned before a meaningful assessment
22 and a meaningful attempt to -- to estimate who might
23 persist, who might not, or if we're even capable of
24 doing that with enough precision to be risking the
25 kind of medical risks that come into play. 02:59:09

1 Q Okay. And so, again, you have no direct
2 knowledge of this, but the reports you refer to are
3 the parental anecdotes that are communicated to you,
4 the e-mails that you receive, the government
5 entities putting out information and the news 02:59:26
6 sources that you just mentioned; right?
7 A We're saying that people are being
8 transitioned on demand, yes.
9 Q Yes.
10 A And when I say media reports, those are no 02:59:36
11 longer, necessarily, individual cases. These are
12 also administrators in schools and so on who are
13 indicating what the policies are in that school or
14 parents talking about policies in the -- in social
15 groups and so on. So these are people not going to 02:59:54
16 clinics at all; they're merely being socially
17 transitioned by -- you know, within their social
18 groups.
19 Q Can you tell me more about those media
20 reports? 03:00:04
21 You know, you -- you mentioned an example of
22 a school. Can you give me a more detail about that
23 particular report from a school?
24 A No. I haven't recorded -- I don't recall
25 particulars. 03:00:17

1 Q Of any of the media reports that you're
2 referencing, you don't recall particulars?
3 A Not -- not at this time, no. Those, I
4 haven't been accumulating.
5 Q Okay. Can you please turn to page 27 of your 03:00:27
6 report?
7 A Got it.
8 Q Great. And so if you look at paragraph 69,
9 you state the following, quote, (as read):
10 "...a child experiencing depression 03:00:48
11 from social isolation might develop
12 hope—" --
13 A I'm sorry, where did you say you were?
14 Q Oh, apologies. It's the end of page 26, top
15 of page 27. It's the sentence beginning "For 03:01:03
16 example."
17 A Got it.
18 Q Apologies. So let me read that again.
19 So you state, quote, (as read):
20 "For example, a child experiencing 03:01:13
21 depression from social isolation
22 might develop hope—and the
23 unrealistic expectation—that
24 transition will help them fit in,
25 this time as and with the other 03:01:27

1 sex."
2 Did I read that accurately?
3 A Yes.
4 Q So what is the basis of this opinion?
5 MR. TRYON: This is Dave Tryon. 03:01:37
6 I'm just going to object that this is one
7 sentence out of an entire paragraph.
8 COUNSEL SWAMINATHAN: Your objection is
9 noted, Counsel.
10 BY COUNSEL SWAMINATHAN: 03:01:50
11 Q Dr. Cantor, you can answer.
12 A It's an explanation -- I offer it as a
13 possible explanation which accounts for all of the
14 existing observations.
15 Q Are you aware of any study that shows that a 03:01:59
16 child experiencing depression from social isolation
17 might develop hope and the unrealistic expectation
18 that transition will help them fit in?
19 A No. That particular hypothesis hasn't
20 been -- hasn't been tested. 03:02:17
21 Q Have you spoken to anyone about this
22 hypothesis?
23 A Oh. Yes, relatively and commonly.
24 Q Okay. Can you please turn to page 53 of your
25 expert report? 03:02:35

1 A Yes.

2 Q Great. And so do you see that it's titled

3 "References" at the top of the page?

4 A Yes.

5 Q Great. And so pages 53 to 61 of your report 03:02:56

6 includes a list of articles that you cite to in your

7 report, and I've done my best to count them, but

8 there are 106 articles cited in your report.

9 Do you see that?

10 A I didn't count them either, but that sounds 03:03:18

11 about right.

12 Q Okay. How did you find these articles?

13 A Oh. I've been accumulating these articles

14 throughout my career, starting with my education and

15 the classic -- and the classic articles with them, 03:03:33

16 and then I read new ones as they come out and get

17 discussed within my field.

18 Q So you found every single one of these

19 articles in your references list. Is that accurate?

20 A Yes. Yes. Yes, it is. 03:03:47

21 Q None of these articles were provided to you

22 by some other source?

23 A Oh. I can't recall if there was a particular

24 e-mail from a colleague who told me, have you seen

25 this or that article. I would -- I can't remember 03:04:03

1 specifics, but I would not be at all surprised if I
2 received one of these articles as a manuscript, as a
3 peer reviewer, before even it was published.
4 Also, very commonly in science, it's a
5 scientist spending many, many years releasing study 03:04:22
6 after study, and before the study comes out, there
7 are poster conferences and conference presentations.
8 So I'm aware that they are coming even before --
9 long before they come in print.
10 So there are those indirect methods that -- 03:04:34
11 that are possible.
12 Q But no one sent you any of these articles in
13 connection with your preparation of this report;
14 right?
15 A No. Yes, that is correct, no one has. 03:04:45
16 Q Okay. So you said you accumulated this list
17 of articles over the course of your career; right?
18 A Yes.
19 Q You've known about the existence of many of
20 these articles well before agreeing to serve as an 03:05:02
21 expert in this case; right?
22 A Most of them, yes.
23 Q Most of them.
24 So when did you begin your research for
25 drafting the expert report, version 2022? 03:05:13

1 A It would have been within a few days after I
2 first received the -- the request to participate at
3 all.
4 Q Okay. And so have you read every article
5 included in this list? 03:05:36
6 A Yes, I have, with the caveat that some of
7 them are standard reference texts where only certain
8 portions of the text are relevant.
9 Q Okay. And so when you were looking for
10 articles to include in your report, had you already 03:05:53
11 formed an opinion about whether transgender women
12 and girls have an athletic advantage over cisgender
13 women?
14 MR. BARHAM: Objection as to scope and
15 terminology. 03:06:05
16 THE WITNESS: I was already very, very well
17 aware of the state of the literature before I
18 received any notice of this particular case than
19 when I -- so it was on the basis of the knowledge of
20 the literature that I already had that gave me, you 03:06:36
21 know, some idea of what the liter- -- literature had
22 and then my searching for any other articles,
23 including articles that weren't relevant or weren't
24 part of this particular question that I continued to
25 accumulate, and I found nothing that changed my mind 03:06:59

1 as I was doing research for this case.
2 BY COUNSEL SWAMINATHAN:
3 Q So prior to this case, what -- what was and,
4 I guess, in your testimony now, continues to be your
5 opinion on whether transgender women and girls have 03:07:18
6 an athletic advantage over cisgender women?
7 A I wasn't --
8 MR. BARHAM: Objection as to scope.
9 THE WITNESS: I wasn't asked that question as
10 part of this report. 03:07:28
11 BY COUNSEL SWAMINATHAN:
12 Q Do you have any opinion on that question
13 outside of, you know, your involvement in this case?
14 A Only my other knowledge -- my other knowledge
15 of the studies that had been done on male and female 03:07:46
16 child performance.
17 Q Do any of these 106 or so articles relate to
18 athletic performance?
19 A No. I wasn't asked to summarize that part of
20 the literature. 03:08:02
21 Q Okay. And just to be clear, do you think
22 this list of articles is comprehensive of the
23 existing research on transgender children and
24 adolescents?
25 A I would say comprehensive in scope and topic, 03:08:15

1 that is, the range of -- of the facts that are
2 listed -- listed in it, but, again, I wasn't asked
3 to do it specifically on athleticism.
4 Q Leaving aside athleticism, do you think this
5 list of articles accurately captures the most 03:08:35
6 reputable studies on transgender children and
7 adolescents?
8 A Yes, I think that --
9 MR. TRYON: Objection.
10 A I think that would be fair to say, yes. 03:08:47
11 BY COUNSEL SWAMINATHAN:
12 Q Okay. Do you think these are articles that
13 you have not included in this list that may present
14 data that is contrary to your report?
15 A No, there isn't. 03:08:58
16 Q Okay. Do you think there are articles that
17 you have not included in this list that may reach
18 conclusions that are contrary to your report?
19 A There exists such conclusions, and they've
20 been published. I would have to check to see to 03:09:21
21 what extent those are merely opinions in -- in
22 letters and commentaries, for example, opposed to
23 derived from -- derived as conclusions from specific
24 data.
25 Q So your testimony is that there may be some 03:09:40

1 studies that reach conclusions that are contrary to
2 your report?
3 MR. BARHAM: Objection as to form and scope.
4 THE WITNESS: No. The opposite. It's -- I'm
5 not aware of any studies that are based on data that 03:09:50
6 contradict these, although people may have expressed
7 contradictory opinions.
8 BY COUNSEL SWAMINATHAN:
9 Q Via letter and commentary; is that correct?
10 A Correct. 03:10:01
11 Q Okay. Great.
12 Can you please turn to page 24 of the same
13 exhibit, so continuing with your report.
14 A Got it.
15 Q Great. And so the heading above paragraph 62 03:10:22
16 of your report -- it starts with the letter "c" --
17 says, quote, (as read):
18 "Studies by other clinicians in
19 other countries have failed to
20 reliably replicate the positive 03:10:39
21 components of the results reported
22 by the Dutch clinicians in de Vries
23 et al. 2011."
24 COUNSEL SWAMINATHAN: And for the court
25 reporter, that's D-E, space, capital V-R-I-E-S. 03:10:49

1 BY COUNSEL SWAMINATHAN:
2 Q Do you see that?
3 A Oh, you're talking to me?
4 Yes, I do.
5 Q I'm sorry. Yes. 03:10:59
6 What did you mean by this?
7 A Exactly what it says. There was initially
8 some research demonstrating improvement among these
9 kids after transition, but when other countries and
10 other facilities tried to do it, they were unable to 03:11:17
11 replicate those results. They were not finding
12 improvement.
13 Q So what are the positive components of the
14 results reported by the Dutch clinicians in
15 de Vries, et al., 2011? 03:11:33
16 A They reported some improvements in some
17 psychological parameters and social function.
18 Q Any other positive components?
19 A I would have to reread the original to see if
20 that's an exhaustive list, but they were essentially 03:11:46
21 all of those.
22 Q Are you aware that there are additional
23 scientific peer-reviewed studies showing the
24 positive effects of gender-affirming care?
25 A Yes, there are. 03:12:00

1 Q Okay. So are you aware of the 2022 Tordoff,
2 et al., study titled "Mental Health Outcomes in
3 Transgender and Nonbinary Youths Receiving
4 Gender-Affirming Care"?
5 A Yes, I am. 03:12:17
6 COUNSEL SWAMINATHAN: Okay. I'm going to
7 introduce tab 8, which has been marked as
8 Exhibit 50.
9 (Exhibit 50 was marked for identification
10 by the court reporter and is attached hereto.) 03:12:45
11 BY COUNSEL SWAMINATHAN:
12 Q Let me know when you're able to see it,
13 Dr. Cantor.
14 A I am.
15 Q Okay. Great. 03:12:54
16 And you can see at the top that this study
17 was conducted by Diana Tordoff, Jonathon Wanta,
18 Arin Collin, Cesalie Stepney, David Inwards-Breland,
19 and Kim Ahrens; is that correct?
20 A Yes, that's what I see. 03:13:13
21 Q Are you familiar with any of these people?
22 A No, I'm not.
23 Q You don't have any personal connections to
24 any of these people; right?
25 A Correct. 03:13:26

1 Q Okay. Do you agree that the Journal of
2 American Medical Association is a highly respected
3 publication?
4 A That's not this journal.
5 Q Oh, apologies. The JAMA Network. 03:13:39
6 Do you agree that the JAMA Network is a
7 highly respected entity?
8 A No, it is not. It's relying on the fame of
9 JAMA itself.
10 Q It's relying on the fame of what? I 03:13:55
11 apologize.
12 A JAMA, the Journal of the American Medical
13 Association. This is an online offshoot of that.
14 Q Okay. And you don't know whether these
15 researchers are highly respected researchers in the 03:14:04
16 field, right, because you don't know who they are?
17 A Correct.
18 Q Okay. Do you know whether this particular
19 study is a peer-reviewed publication?
20 A To the best of my knowledge, it is. 03:14:19
21 Q Okay. Are you aware that this study found
22 that gender-affirming care was associated with
23 60 percent lower odds of moderate or severe
24 depression and 73 percent lower odds of suicidality
25 over a 12-month follow-up? 03:14:37

1 A Not in the way that you said you were going
2 to use the meaning of the word "care," no.
3 Q So what -- what did you understand this study
4 to find in the way that you would identify care?
5 A Well, these kids were -- were receiving 03:14:53
6 medical care, and 65 percent of them were also
7 receiving psychotherapy at the same time.
8 Q So for purposes of the question I'm asking
9 you, can you understand gender-affirming care to
10 include psychotherapy and medical care? Is that 03:15:09
11 fair?
12 A For the purpose of this question? Sure.
13 MR. BARHAM: Objection to terminology.
14 BY COUNSEL SWAMINATHAN:
15 Q Let me repeat my question, then. 03:15:16
16 Are you aware that this study found that
17 gender-affirming care, both psychotherapy and
18 medical care, was associated with 60 percent lower
19 odds of moderate or severe depression and 73 percent
20 lower odds of suicidality over a 12-month follow-up? 03:15:29
21 A I'm aware that that was their conclusion,
22 yes.
23 Q Okay. And at the time you authored your
24 report, were you aware of those studies?
25 A No. It had not yet come out. 03:15:43

1 Q Okay. And are you aware of the 2021 Green,
2 et al., study titled "Association of
3 Gender-Affirming Hormone Therapy With Depression,
4 Thoughts of Suicide, and Attempted Suicide Among
5 Transgender and Nonbinary Youth"? 03:16:01
6 A Yes, I am.
7 Q Great.
8 COUNSEL SWAMINATHAN: I'm going to introduce
9 tab 9, which is going to be marked as Exhibit 51.
10 It should pop up on your screen shortly. 03:16:19
11 (Exhibit 51 was marked for identification
12 by the court reporter and is attached hereto.)
13 BY COUNSEL SWAMINATHAN:
14 Q And as you pull that up, Dr. Cantor, I just
15 want to confirm, did you identify the Tordoff study 03:16:37
16 as a part of your continued update to the literature
17 that you were doing before sitting for this
18 deposition?
19 A Well, as I say, that -- that study only just
20 came out. It -- it wasn't available when I 03:16:58
21 submitted my study. And then I became notified of
22 its existence, you know, when it did -- first came
23 out, but my -- but my -- I shouldn't have said
24 "study." Report. I'm sorry. But my report was
25 already submitted when it did come out. So -- 03:17:12

1 Q I -- I --
2 A -- had my report been due in six months, it
3 would have been edited.
4 Q I understand that. I just meant in the
5 review that you said you did in preparing for this 03:17:21
6 deposition, was this one of the studies that you had
7 reviewed prior to sitting for this deposition?
8 A The Green study?
9 Q The Tordoff study.
10 A Oh, the -- the Tordoff study? 03:17:33
11 Again, didn't exist when I prepared.
12 Q Okay. So it's -- it didn't exist in the past
13 few weeks?
14 A The --
15 Q Tordoff study. 03:17:43
16 A When you said in preparation, do you mean for
17 sitting here physically today, or do you mean for my
18 submitted report?
19 Q I mean for sitting here physically today.
20 A For sitting here physically today, I did -- I 03:17:54
21 did review Tordoff, yes.
22 Q Got it. Okay. Thank you.
23 And now we can turn our attention to the 2021
24 Green study, and as you can see, the authors of this
25 study are Amy Green, Jonah DeChants, Myeshia Price 03:18:13

1 and Carrie Davis.
2 Do you see that?
3 A Yes, I do.
4 Q Are you familiar with any of these
5 individuals? 03:18:27
6 A Not meaningfully. Myeshia Price, I think I
7 had a three e-mail exchange with a few years ago.
8 Nothing substantive or relevant to today's case.
9 Q Your e-mails did not pertain to transgender
10 people or gender dysphoria at all? 03:18:47
11 A They did pertain to transgender individuals,
12 not athleticism, not today's case, but I couldn't --
13 I don't recall what aspects of gender dysphoria the
14 discussion was.
15 Q Do you remember if the discussion was focused 03:19:05
16 on adults suffering from gender dysphoria?
17 A I don't recall.
18 Q Okay. That's fair.
19 And so do you see that the study was
20 published -- or accepted on October 28, 2021? And 03:19:19
21 do you agree that the Journal of Adolescent Health
22 is a highly respected publication?
23 A Yes, to the best of my knowledge.
24 Q Is it a peer-reviewed publication?
25 A So far as I know. 03:19:36

1 Q So are you aware that this study found that
2 access to gender-affirming hormones during
3 adolescence was associated with lower odds of recent
4 depression and having attempted suicide in the past
5 year? 03:19:55
6 A In a retrospective survey, I'm aware of that,
7 yes.
8 Q Yes. At the time you authored your report,
9 were you aware of this study?
10 A Yes, I was. 03:20:02
11 Q Did you cite this study in your report?
12 A No, I did not.
13 Q Why didn't you cite this Green 2021 study in
14 your report?
15 A It's not -- it's not methodologically sound 03:20:16
16 enough. This was a retrospective instead of a
17 prospective study. Retrospective studies are not
18 able to come to the kind of conclusions that -- that
19 are not -- retrospective studies are only able to
20 produce correlations. We cannot, from a 03:20:38
21 correlation, say anything about causality.
22 Q Do you cite any retrospective studies in your
23 report?
24 A I would have to go through and check.
25 Q Off the top of your head, can you think of 03:20:59

1 any retrospective studies you may have cited in your
2 report?
3 A I can't think of one offhand, no.
4 Q Were any of the 11 studies that you mentioned
5 that support your theory of desistance retrospective 03:21:17
6 studies?
7 A No. It was -- specifically was of
8 prospective studies.
9 Q Okay. And so it's your testimony that none
10 of the studies that you've cited in your report are 03:21:31
11 retrospective; right?
12 MR. BARHAM: Objection as to form and
13 terminology.
14 THE WITNESS: No. I just can't recall
15 offhand if any were. 03:21:41
16 BY COUNSEL SWAMINATHAN:
17 Q So there may be some retrospective studies
18 that you rely on in drafting your report?
19 MR. TRYON: Objection.
20 THE WITNESS: Yes. But not from making a 03:21:51
21 causal conclusion.
22 BY COUNSEL SWAMINATHAN:
23 Q Okay. And are you aware of the 2012 Achille,
24 et al., study titled "Longitudinal impact of
25 gender-affirming endocrine intervention on the 03:22:06

1 mental health and well-being of transgender youths"?
2 A Yes, I am. It's cited in my report.
3 Q Great. Would --
4 COUNSEL SWAMINATHAN: I'm going to introduce
5 tab 10, which I believe now marks Exhibit 52. 03:22:21
6 (Exhibit 52 was marked for identification
7 by the court reporter and is attached hereto.)
8 BY COUNSEL SWAMINATHAN:
9 Q And let me know when you're able to see it,
10 Dr. Cantor. 03:22:52
11 A Yes, I can see.
12 Q Okay. Great.
13 So this study is published in the
14 International Journal of Pediatric Endocrinology;
15 correct? 03:23:14
16 A Yes, it is.
17 Q And is -- the authors are Chris- --
18 Christal Achille -- I apologize if I'm
19 mispronouncing that -- Tenille Taggart, Nicholas
20 Eaton, Jennifer Osipoff, Kimberly Tafuri, Andrew 03:23:15
21 Lane and Thomas Wilson.
22 Do you see that?
23 A Yes, I do.
24 Q Are you familiar with any of these
25 individuals? 03:23:37

1 A No, I'm not.
2 Q Okay. And it looks like this study was
3 conducted in 2020, at some point. I don't see the
4 date on it.
5 But is it fair to say that it was -- it came 03:23:54
6 out in 2020?
7 A The -- the study was conducted between 2013
8 and 2018.
9 Q But the results were published, apologies, in
10 2020? 03:24:08
11 A It came out in print in 2020.
12 Q Okay. And have you read this study before?
13 A Yes, I have.
14 Q And are you aware that is study found that
15 endocrine intervention was associated with decreased 03:24:23
16 depression and suicidal ideation and improved
17 quality of life for transgender youth?
18 A I'm aware that that's what the paper said,
19 yes.
20 Q And at the time you authored your report, 03:24:33
21 were you aware of this study?
22 A Yes, I was.
23 Q And you cite this study in your report;
24 right?
25 A Correct. 03:24:43

1 Q Why didn't you cite this particular
2 conclusion drawn from the study, that the endocrine
3 intervention was associated with decreased
4 depression and suicidal ideation and improved
5 quality of life for transgender youth? 03:25:00
6 A Because the improvements are also plausibly
7 attributed -- attributable to the psychotherapy that
8 the clients were -- that the patients were getting.
9 Q But, Dr. Cantor, isn't it true that no study,
10 including the Dutch study, had a control group of 03:25:17
11 people who received solely therapy, but no blockers
12 or hormones?
13 A That is not correct.
14 Q Which -- can you tell me what study has a
15 control group of people who received therapy, but no 03:25:29
16 blockers and hormones?
17 A Costa, et al., 2015.
18 Q Can you spell that for the court reporter?
19 A C-O-S-T-A --
20 Q Uh-huh. 03:25:37
21 A -- et al.
22 Q 2015?
23 A Yes.
24 Q Am I accurate in saying that the Dutch
25 protocol did not have a control group of people who 03:25:49

1 received therapy, but no blockers and hormones?
2 A That is correct.
3 Q And so would you agree that this Achille
4 study is similarly situated to the Dutch protocol,
5 in terms of what -- in terms of the two 03:26:07
6 interventions, both psychotherapy and hormone
7 treatment, occurring at the same time? Is that fair
8 to say?
9 A No, it's not. The research method being used
10 is not related to the clinical method being used. 03:26:23
11 The research method is how one analyzes what's been
12 doing clinically.
13 Q Okay. So you mentioned that Costa, et al.,
14 2015, does have a control group. Are there any
15 other studies that you can think of? 03:26:40
16 A No, not offhand.
17 Q Okay. And are you aware of the 2020 Kuper,
18 et al., study titled "Body Dissatisfaction and
19 Mental Health Outcomes of Youth on Gender-Affirming
20 Hormone Therapy"? 03:27:04
21 A I believe that one's in my report also.
22 Can I refer to it just a second?
23 Q Absolutely.
24 COUNSEL SWAMINATHAN: I will introduce it as
25 tab 11, which is Exhibit 53. 03:27:16

1 (Exhibit 53 was marked for identification
2 by the court reporter and is attached hereto.)
3 THE WITNESS: Oh, no, I meant my report.
4 BY COUNSEL SWAMINATHAN:
5 Q Oh, sure. Feel free to reference your 03:27:20
6 report.
7 Do you see Exhibit 53, in the share?
8 MR. BARHAM: Counsel, the witness is still
9 looking at his expert report, I see.
10 COUNSEL SWAMINATHAN: Oh, apologies. I'm 03:28:08
11 unable to see his hands by the --
12 MR. BARHAM: It's okay.
13 THE WITNESS: All right. Got it. Okay.
14 Ready. Yes, Kuper.
15 BY COUNSEL SWAMINATHAN: 03:28:19
16 Q No problem.
17 So, again -- so this study is conducted by
18 Laura Kuper, Sunita Stewart, Stephanie Preston,
19 May Lau and Ximena Lopez.
20 Do you see that? 03:28:33
21 A One second. We need to switch windows.
22 Q No problem.
23 A Yes, I have it.
24 Q Okay. Are you familiar with any of those
25 individuals? 03:29:00

1 A No, I am not.
2 Q And so this study was downloaded from the
3 American Academy of Pediatrics; is that correct?
4 You can see that --
5 A It was published in the journal Pediatrics 03:29:25
6 which is owned by the American Association of
7 Pediatrics.
8 Q Yes, apologies.
9 I was just pointing towards the bottom of the
10 page where it says this particular article was 03:29:35
11 downloaded from www.aappublications.org/news, and it
12 was accepted for publication on December 6, 2019.
13 Do you see that?
14 A Yes, I do.
15 Q Okay. Is this a peer-reviewed publication? 03:29:55
16 A Yes, it is.
17 Q Okay. And are you aware that the results of
18 this study show that hormone therapy for youth is
19 associated with reducing body dissatisfaction and
20 modest improvements in mental health? 03:30:09
21 A That's not what I would call the whole truth.
22 Q What would you call the whole truth?
23 A That this group of patients were -- were
24 given many, many different mental health factors.
25 The majority of those showed no differences, but the 03:30:30

1 report and the media reports about this are only
2 talking about the positive ones, despite that there
3 was no difference -- that there was generally no
4 difference.
5 Q You said that this study has faced media 03:30:42
6 criticisms. Is that fair?
7 A Media attention, I would say.
8 Q Media attention.
9 What outlets of media have reported that
10 there were no positive results from this study? 03:30:57
11 A I didn't say that there were media reports
12 saying no positive results. The reverse. The media
13 had been reporting only the positive results.
14 Q So there were positive results as a result of
15 this study; right? 03:31:14
16 MR. TRYON: Objection.
17 THE WITNESS: Some of the measures indicated
18 positive results, but when one -- when one runs
19 many, many, many statistical tests, some of them
20 will always look like they're positive. 03:31:26
21 BY COUNSEL SWAMINATHAN:
22 Q I see. But it's fair to say that there were
23 positive results reported from the study; right?
24 A No, I'm not sure that is fair to say. As I
25 say, it's a statistical property that if you roll 03:31:42

1 the dice enough times, you will eventually get snake
2 eyes. If you only report the snake eyes and fail to
3 report everything else, it's not fair to say that
4 you actually caused snake eyes.
5 Q Dr. Cantor, so it's your testimony today that 03:31:58
6 there are no positive results from this Kuper 2020,
7 et al., study?
8 MR. BARHAM: Objection as to form.
9 THE WITNESS: No, that's not my testimony
10 either. 03:32:10
11 BY COUNSEL SWAMINATHAN:
12 Q So your testimony is what, that there -- you
13 just --
14 A The positive results they found are easily
15 attributable to a statistical fluke or game plan 03:32:19
16 rather than an actual reflection of changes in the
17 actual age and groups.
18 Q Okay. So that method also applies to studies
19 showing negative reports; right?
20 A The principle applies to -- no, it does not. 03:32:38
21 The problem of false positives only applies to
22 positive results.
23 Q Interesting. So it then isn't true for the
24 negative results of other studies, but it only
25 applies to the false positives. Is that your 03:32:59

1 testimony?
2 A Not exactly. I think we're using the word
3 "negative" in different ways.
4 Q Okay.
5 A In statistics, the word "negative" means we 03:33:11
6 didn't find anything. Everything stays flat.
7 Everything remains exactly where it was.
8 I'm wondering if you're using the word
9 "negative" to mean unfortunate or deleterious.
10 Q No, I think -- I think I -- I understand 03:33:25
11 your -- the way you've been using "negative," so --
12 A Okay. In statistics, it is indeed true that
13 the methods used to find positive results are
14 different from the ones that we use for analyzing
15 negative results. They are not equal. 03:33:38
16 Q Okay. And are you aware of the 2020
17 van der Miesen, et al., study titled "Psychological
18 Functioning in Transgender Adolescents Before and
19 After Gender-Affirmative Care Compared With
20 Cisgender General Population Peers"? 03:33:58
21 A Yes, I am. It also is in my report.
22 COUNSEL SWAMINATHAN: I'm going to introduce
23 tab 12, which will be Exhibit 54.
24 (Exhibit 54 was marked for identification
25 by the court reporter and is attached hereto.) 03:34:06

1 THE WITNESS: Hang on. If I can just refer
2 to my report again for the van der Miesen section.
3 BY COUNSEL SWAMINATHAN:
4 Q No problem. I can speed it up for you and
5 say that you have cited this report on page 25 and 03:34:19
6 26.
7 A Perfect. Thank you.
8 Q No problem.
9 Just a -- one more question regarding the --
10 the statistics we were just talking about. So -- 03:34:37
11 A One second.
12 Okay. I'm ready.
13 Q Is your -- is it your understanding that data
14 can be skewed or explained by alternate causation in
15 all of these studies? 03:34:59
16 A I don't think you're using the word "skew"
17 the way we use it in statistics.
18 Can you phrase the question a different way?
19 Q Sure. Isn't it possible that data can be
20 represented or explained by alternative causation in 03:35:19
21 all of these studies?
22 MR. TRYON: Objection; form of the question.
23 THE WITNESS: I don't know what you mean by
24 alternative causality, was it, you said?
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q Yeah, of -- you know, you said earlier that,
3 you know, there -- there are alternate reasons for
4 why some studies -- some of the results of certain
5 studies may be misrepresented in how the results are 03:35:46
6 presented; right?
7 A Some people will cherry-pick which results
8 they report, yes.
9 Q Right. And so are you saying that, you know,
10 if you roll the dice enough times, you can get 03:36:02
11 results that you want and that's what some of these
12 researches have done?
13 A Yes, that's true.
14 Q Yeah. And isn't that true that that's a
15 possibility for all studies? 03:36:20
16 A Yes, it is.
17 MR. TRYON: Objection.
18 BY COUNSEL SWAMINATHAN:
19 Q Okay.
20 A Yes, it is. And in figuring out what the 03:36:26
21 probability of that happening is for any particular
22 study is itself an important branch of statistics.
23 Q And so I think you have Exhibit 54 up, is
24 that correct, the van der Miesen study?
25 A Yes. 03:36:49

1 Q Great. So this study was conducted -- or it
2 looks like it was a team of van der Miesen,
3 Steensma, de Vries, Bos and Popma, is that correct,
4 as the -- the authors of this study?
5 A Yes, it is. 03:37:13
6 Q Okay. And do you know any of these folks?
7 A No. I've never met anybody.
8 Q Okay. And so this study was published in
9 2020 in the Journal of Adolescent Health; is that
10 right? 03:37:27
11 A Yes, it is.
12 Q And are you aware that the results of this
13 study showed fewer emotional and behavioral problems
14 after puberty suppression and similar or fewer
15 problems compared to same-age cisgender peers? 03:37:38
16 A Yes, I am.
17 Q Okay. And at the time you authored your
18 report, were you aware of this study?
19 A Yes, I was. It's referenced in it.
20 Q Did you reference this finding in your 03:37:56
21 report?
22 A I -- I referenced the finding and also
23 then -- the people in this clinic also received
24 psychotherapy along with their medical care.
25 Q Similar to the Dutch study; right? 03:38:10

1 A This is one of the Dutch studies.
2 Q This is a later version; correct?
3 A That's right.
4 Q 2020.
5 And are you -- actually, we -- we just spoke 03:38:24
6 about the 2015 Costa, et al., article; right? So I
7 assume you are familiar with "Psychological Support,
8 Puberty Suppression and Psychosocial Functioning in
9 Adolescents with Gender Dysphoria"?
10 A That is correct. 03:38:40
11 Q Okay.
12 COUNSEL SWAMINATHAN: I'm going to introduce
13 tab 13, which will be marked as Exhibit 55.
14 (Exhibit 55 was marked for identification
15 by the court reporter and is attached hereto.) 03:38:44
16 BY COUNSEL SWAMINATHAN:
17 Q And I'll represent to you that you do cite
18 this study as well in your report, on page 22, if --
19 if you would like to reference that, but I won't be
20 referring to your report in asking my questions. 03:39:11
21 MR. BARHAM: Do you want the report?
22 THE WITNESS: No. I'm fine with this.
23 I see it.
24 BY COUNSEL SWAMINATHAN:
25 Q Great. And so let's look at the authors of 03:39:21

1 this study. It's Rosalia Costa, Michael Dunsford,
2 Elin Skagerberg, Victoria Holt, Polly Carmichael and
3 Marco Colizzi.
4 Do you see that?
5 A Yes, I do. 03:39:40
6 Q Do you know any of these folks?
7 A No, I don't.
8 Q Okay. And this study was published in the
9 Journal of Sexual Medicine; is that correct?
10 A Yes, it is. 03:39:48
11 Q Do you agree that the Journal of Sexual
12 Medicine is a highly respected publication?
13 A No, I don't.
14 Q Why do you disagree?
15 A I had interactions with not the current 03:40:08
16 editor, but the prior editor of the journal.
17 Together with reviews and instructions to peer
18 reviewers, he asked specifically that authors
19 increase the number of papers citing that particular
20 journal and manuscripts sent to that journal which 03:40:28
21 would elevate that journal's -- it's called an
22 impact factor. The number of citations to studies
23 in it is a measure of how important the journal is.
24 So the prior editor was trying to gain the
25 system. So at that point, I refused any further 03:40:45

1 contact with the -- with the journal itself or that
2 editor.
3 As I said, there's a new editor. I have had
4 some contact with -- with the new editor, who no
5 longer participates in that policy, but I remain 03:40:52
6 rather skeptical of the journal itself.
7 Q Have you ever submitted any of your studies
8 to be published in the Journal of Sexual Medicine?
9 A I don't recall. If I did, it would have been
10 one soon after the journal started. 03:41:18
11 Q Okay. And is this Journal of Sexual Medicine
12 a peer-reviewed publication?
13 A Yes, it is.
14 Q And are you aware that the results of this
15 study found increased psychological function after 03:41:36
16 six months of puberty suppression in adolescents
17 with gender dysphoria?
18 A I'm aware that that's what it reported.
19 Q Did you include that finding in your report?
20 A Yes, I did, together with the caveat that 03:41:51
21 becau- -- that they were also receiving mental
22 healthcare at the same time.
23 This -- this paper didn't have a medical
24 care -- medical care only.
25 Q Okay. And are you aware of the 2014 03:42:07

1 de Vries, et al., study titled "Young Adult
2 Psychological Outcome After Puberty Suppression and
3 Gender Reassignment"?
4 A Yes, I am.
5 COUNSEL SWAMINATHAN: I'm going to introduce 03:42:25
6 tab 14, which will be marked as Exhibit 56.
7 (Exhibit 56 was marked for identification
8 by the court reporter and is attached hereto.)
9 THE WITNESS: I have it.
10 BY COUNSEL SWAMINATHAN: 03:42:50
11 Q Great. And so let's look at the authors.
12 There's Annelou de Vries, Jenifer McGuire,
13 Thomas Steensma, Eva Wagenaar, Theo Doreleijers and
14 Peggy Cohen-Kettenis.
15 Do you see that? 03:43:11
16 A Yes, I do.
17 Q Are you familiar with any of these folks?
18 A By reputation only.
19 Q Who are you familiar with by reputation?
20 A De Vries, because of the number of studies 03:43:21
21 that -- that they've been involved with, and
22 Dr. Cohen-Kettenis with her -- through her
23 association with Dr. Zucker.
24 Q Have you met either de Vries or
25 Cohen-Kettenis before? 03:43:36

1 A No, I have not.
2 Q Have you communicated with them via e-mail?
3 A No, I have not.
4 Q Or by phone?
5 A No. 03:43:45
6 Q Okay. And so this study was accepted for
7 publication on July 7th, 2014, and it's published in
8 the Pediatrics journal that we just referred to
9 earlier.
10 Are you aware that this study followed a 03:44:02
11 cohort of transgender young people in the
12 Netherlands, from puberty suppression through
13 surgical treatment?
14 A Yes, I am.
15 Q And, in fact, these are some of the same 03:44:12
16 authors who wrote the Dutch study that you
17 described, in great length, in your report; right?
18 A This is indeed the Dutch team, and it was on
19 the basis of these results that they began forming
20 what we're now calling the Dutch model. 03:44:30
21 Q And are you aware that this study found that
22 the cohort had global functioning that was
23 equivalent to the Dutch population?
24 A Yes, I am.
25 Q And you included this study in your report; 03:44:44

1 right?
2 A Yes, I did.
3 Q And did you take similar issue with the fact
4 that this study did not have a control of folks who
5 received psychotherapy only? 03:44:57
6 A The issue wasn't that it lacked a group of
7 psychotherapy only; the problem is that the study
8 had no method of separating how much of its result
9 was due to psychotherapy versus due to medical
10 intervention. 03:45:27
11 Q And that's typically done using a control
12 group, though; right?
13 A That's one of the ways to do that, yes.
14 Q What are some of the other ways to do that?
15 A It's an advanced statistical technique called 03:45:38
16 "allocation of variance," essentially.
17 Q Okay.
18 A Or there's a better term. I'll get it.
19 "Covariance analysis."
20 Q Covariance analysis. 03:45:57
21 And so is it fair to say that the positive
22 findings of the Dutch study have indeed been
23 replicated?
24 A No, not meaningfully.
25 Q What is the difference between having been 03:46:19

1 replicated and having been replicated meaningfully?
2 A Other studies that have attempted to
3 replicate it have changed parts of the protocol in
4 one way or another or changed the ways that they
5 measure the outcomes in order to make direct 03:46:40
6 comparison difficult.
7 Q So the de -- de Vries, as you pronounced it,
8 2014 study, in your opinion, did not replicate the
9 positive findings of the Dutch study?
10 A De Vries, 2014, is the Dutch study. 03:46:57
11 Q This is -- so I believe we're talking about
12 several Dutch studies at this -- at this point.
13 So you had testified earlier that, I believe,
14 the Dutch study was replicated in 2020 as well; is
15 that correct? 03:47:21
16 A Are you referring to the van der Miesen
17 study?
18 Q I am, yes.
19 A No. The van der Miesen 2020 study, from the
20 Dutch group, would not be fairly called a 03:47:46
21 replication of their own 2011 and 2014 studies.
22 Q So why isn't it a fair replication?
23 A It's a different patient sample approaching
24 the clinics now than in the years when -- when the
25 first studies came out. 03:48:08

1 Q What would you say the primary difference in
2 the patiel -- patient sample is?
3 A The psychological profiles, their ages, their
4 sex ratios.
5 Q Any other differences? 03:48:22
6 A Those are the major ones.
7 Q Okay.
8 COUNSEL SWAMINATHAN: So I'm going to
9 introduce tab 15, which has been marked as
10 Exhibit 57. 03:48:37
11 (Exhibit 57 was marked for identification
12 by the court reporter and is attached hereto.)
13 BY COUNSEL SWAMINATHAN:
14 Q Let me know when you're able to access it,
15 please. 03:49:24
16 A Yes, I have it now.
17 Q Great. And so this is the 2011 Dhejne study;
18 correct?
19 A It's Swedish.
20 Q How would you pronounce that? 03:49:39
21 A Oh, oh, oh, you mean the -- the author's
22 name. I'm sorry. You said "Dane," and my brain
23 registered Danish.
24 Q No.
25 A Actually, I don't know how to pronounce this 03:49:49

1 author's name.
2 Q I've heard "Dhejne" for "Dhejne," so I'm
3 going to go with "Dhejne" today.
4 But do you see that this study was conducted
5 by Cecilia Dhejne, Paul Lichtenstein, Marcus Boman, 03:50:01
6 Anna Johansson, Niklas Långström and Mikael Landén?
7 Do you see that?
8 A Yes.
9 Q And it's titled "Long-Term Follow-Up of
10 Transsexual Persons Undergoing Sex Reassignment 03:50:13
11 Surgery: Cohort Study in Sweden."
12 Did I read that correctly?
13 A Yes.
14 Q You cite this study in your report; correct?
15 A Yes, I believe I do. Let me just refer to my 03:50:26
16 own report with context.
17 Do you have the page number offhand.
18 Q I do. It's page 5 of your report.
19 A Thank you.
20 Yes, ready. 03:51:10
21 Q So one of the points for which you cite this
22 study is to say that Swedish patients who underwent
23 gender-affirming firming surgery had a 19.1 times
24 greater suicide rate than the control group; right?
25 A Yes. 03:51:30

1 Q Okay. Beyond the Dhejne study, are you aware
2 of any other authority for that claim?
3 A Not offhand, no.
4 Q Okay. And who is the control group for the
5 Dhejne study? 03:51:45
6 A The Danish population, average.
7 Q And you understand that the control group
8 consisted of patients without gender dysphoria;
9 right?
10 A Yes. 03:51:58
11 Q Okay. So what this Dhejne study compared was
12 the suicide rate for patients who underwent
13 gender-affirming surgery against the general Swedish
14 population; right?
15 A Correct. 03:52:12
16 Q Okay. And the suicide rate for patients who
17 underwent gender-affirming surgery was not compared
18 against patients who were transgender, but had no
19 access to medical care; right?
20 A Correct. 03:52:27
21 Q Okay. So no one in the control group was
22 transgender; right?
23 A There's no way to say that. I would hesitate
24 to call the remain- -- the demographics of the
25 remaining population a control group. They didn't 03:52:42

1 exactly participate at all except via government
2 statistic.
3 Q And they were ten randomly selected control
4 persons who were matched by sex and birth year;
5 right? 03:52:57
6 A I would have to recheck the original study
7 for the details, but that sounds about correct.
8 Q Okay. You know that there are studies that
9 find that patients with gender dysphoria who don't
10 undergo gender-affirming surgery have a higher risk 03:53:08
11 of suicide compared to the general population. Are
12 you aware of that?
13 A Yes, I am.
14 Q Okay. If you could please turn to page 7 of
15 this study. 03:53:22
16 A Yes.
17 Q And the font size is quite small, but if you
18 look at the left side of the page and the third full
19 paragraph in that left column, it starts with "For
20 the purpose of evaluating." 03:53:45
21 Can you take a moment to read that paragraph,
22 please?
23 A Yes.
24 Q So the authors recognize that persons with
25 gender dysphoria before sex reassignment may differ 03:54:26

1 from control patients who do not have gender
2 dysphoria; right?
3 A I'm sorry, say that again.
4 Q Sure. The authors of this study recognize
5 that people with gender dysphoria before sex 03:54:39
6 reassignment may differ from control patients who do
7 not have gender dysphoria; right?
8 A That is correct.
9 Q They say "In other words" -- this is a quote
10 directly from the study (as read): 03:54:55
11 "In other words, the results should
12 not be interpreted such as sex
13 reassignment per se increases
14 morbidity and mortality."
15 Do you see that? 03:55:05
16 A Yes, I do.
17 Q You agree that this study does not support
18 the conclusion that sex reassignment by itself
19 increases the risk of suicide; right?
20 A That would be a bizarre conclusion, correct. 03:55:19
21 Q Okay. And this study does not support the
22 conclusion that sex reassignment by itself increases
23 risk of other morbidities; right?
24 A I'm sorry, ask that again.
25 Q Sure. This study does not support the 03:55:36

1 conclusion that sex reassignment by itself increases
2 risks of other morbidities; right?
3 A By itself, no.
4 Q Okay. And the authors even go on to say
5 "Things might have been even worse without sex 03:55:54
6 reassignment."
7 Do you see that?
8 A Yes, I do.
9 Q Okay.
10 COUNSEL SWAMINATHAN: And I'm going to 03:56:05
11 introduce tab 16, which has been marked as
12 Exhibit 58.
13 (Exhibit 58 was marked for identification
14 by the court reporter and is attached hereto.)
15 THE WITNESS: I have it. 03:56:40
16 BY COUNSEL SWAMINATHAN:
17 Q Great. And so I believe we referenced this
18 study earlier in our conversation. This is a study
19 titled "Mental Health of Transgender Children Who
20 Are Supported in Their Identities," and the authors 03:56:52
21 are Kristina Olson, Lily Durwood, Madeleine DeMeules
22 and Katie McLaughlin.
23 Do you see that?
24 A Yes, I do.
25 Q Are you familiar with any of these authors? 03:57:02

1 A No, I am not.
2 Q Do you recognize this study?
3 A By title, I do. For content, I need to check
4 my report again.
5 Q Okay. I'll represent to you that you do cite 03:57:18
6 this study in your report, and if helpful, I can
7 point you to the paragraph number. It's
8 paragraph --
9 A Okay.
10 Q -- paragraph 15 of your report. And I'll get 03:57:32
11 the page number for you. Pages 5 to 6 of your
12 report.
13 A Hold on.
14 Yeah, I have it.
15 Q Great. And so in paragraph 15 of your 03:57:59
16 report, you state, quote, (as read):
17 "Olson's report turned out to be
18 incorrect. The Olson data were
19 reanalyzed and after correcting for
20 statistical errors in the original 03:58:08
21 analysis, the data instead showed
22 that the gender dysphoric children
23 under Olson's care did, in fact,
24 exhibit significantly lower mental
25 health." 03:58:20

1 And the cite you have for -- for that
2 statement is "Schumm & Crawford, 2020: Schumm, et
3 al., 2019."
4 Did I read that accurately?
5 A Yes, that's correct. 03:58:34
6 Q Okay. And so is it your understanding that
7 the Olson data was reanalyzed by Schumm and
8 Crawford?
9 A Yes.
10 Q Have you independently conducted your own 03:58:47
11 statistical analysis of the Olson data?
12 A No, I have not.
13 Q Okay. Have you asked any other
14 statistician's opinion on whether Olson's
15 statistical analysis was wrong? 03:59:02
16 A No, I have not.
17 Q Okay. Do you know if Schumm's statistical
18 analysis has ever been questioned in a court of law?
19 A Not that I know of, no.
20 Q Okay. 03:59:19
21 COUNSEL SWAMINATHAN: So I'm going to
22 introduce tab 17, which will be marked as
23 Exhibit 59.
24 (Exhibit 59 was marked for identification
25 by the court reporter and is attached hereto.) 04:00:02

1 BY COUNSEL SWAMINATHAN:
2 Q Let me know when you're able to see it.
3 A I can see it.
4 Q Great. And so I'll represent to you that
5 this is a copy of an opinion from the District Court 04:00:11
6 of Appeal of Florida, Third District, and the title
7 of the case is Florida Department of Children and
8 Families, Appellant, versus Adoption of -- in re
9 Matter of Adoption of X.X.G. and N.R.G., Appellees.
10 Do you see that? 04:00:29
11 A Yes, I do.
12 Q Are you familiar with this case?
13 A No, I am not.
14 Q You don't know what it's about; right?
15 A Correct. 04:00:44
16 Q Okay. I'll represent to you that in this
17 case, Dr. Schumm conducted a methodological analysis
18 of the works of psychologists on homosexual
19 parenting. So this is a case about the adoption of
20 children by a gay parent. And I'll -- I'll make 04:00:57
21 that representation to you, but also please feel
22 free to review the document in further detail, if
23 you -- if you need to. But if not, I would like to
24 turn your attention to pages 7 and 8 of the PDF.
25 Start on page 7: 04:01:12

1 A I'm there.
2 Q Great. And so if you could read from "We
3 consider first the Department's experts." If you
4 could read that paragraph and let me know when you
5 are done. 04:01:46
6 A Just the one paragraph on that page?
7 Q Yes. Just on that page. I just want you to
8 have the understanding that Dr. Schumm was one of
9 the department's witnesses in this case.
10 And then if you turn to the next page, 04:02:06
11 page 8. If you can read the paragraph -- it's a
12 lengthy paragraph -- on the left-hand side of the
13 page, along with the final paragraph at the bottom,
14 and let me know when you're finished with that, that
15 would be great. 04:02:26
16 A Okay.
17 Q Okay. And so what you just read, it states
18 the following (as read):
19 "Dr. Schumm admitted that he applies
20 statistical standards that depart 04:03:34
21 from conventions in the field. In
22 fact, Dr. Cochran and Dr. Lamb
23 testified that Dr. Schumm's
24 statistical re-analysis contained a
25 number of fundamental errors. 04:03:43

1 Dr. Schumm ultimately concluded that
2 based on his re-analysis of the
3 data, there are statistically
4 significant differences between
5 children of gay and lesbian parents 04:03:54
6 as compared to children of
7 heterosexual parents. Dr. Schumm
8 understands that much of the
9 scientific community disagrees with
10 his conclusions and concedes to the 04:04:01
11 possibility that some gay parents
12 may be beneficial to some children."
13 Did I read this correctly?
14 A Yes, as best I can see.
15 Q Had you previously been aware that Dr. Schumm 04:04:12
16 admitted in a court of law that he applies
17 statistical standards that depart from conventions
18 in the field?
19 A I'm sorry, is that what I read?
20 Q You can see it says "Dr. Schumm admitted that 04:04:27
21 he applies statistical standards that depart from
22 conventions in the field," in the middle of page 8.
23 A Yes, I see it.
24 Q If you had known this information, would that
25 have affected your thinking about whether Schumm was 04:04:45

1 a reliable source for the reanalysis of the Olson
2 data?
3 A No, I don't think so.
4 Q Why not?
5 A Because of the lack of the response from the 04:04:59
6 original team that he commented on.
7 Q What do you mean by that?
8 A Olson never replied to Schumm's correction,
9 and Schumm's correction, in this instance, was
10 published, unlike what's being described in the case 04:05:15
11 you just put before me.
12 Q And are you aware that there was a correction
13 issued for the 2016 Olson article?
14 A Yes, I am.
15 COUNSEL SWAMINATHAN: I'm going to introduce 04:05:28
16 tab 18, which will be marked as Exhibit 60.
17 (Exhibit 60 was marked for identification
18 by the court reporter and is attached hereto.)
19 BY COUNSEL SWAMINATHAN:
20 Q Let me know when you have the document up. 04:05:58
21 A I do.
22 Q Okay. So I'm going to represent to you that
23 this is an errata of the Olson 2016 "Mental Health
24 of Transgender Children Who Are Supported in Their
25 Identities," and this errata was published in 04:06:08

1 August 2018, as you can see at the bottom of the
2 page.
3 A Yes.
4 Q So if you read the second paragraph on that
5 page, the only correcting to the article was a 04:06:26
6 missing comma, not any changes to the statistics in
7 the Olson analysis; correct?
8 A Correct.
9 Q And I'm going to ask you to look back at what
10 was previously marked as Exhibit 44 -- sorry -- 04:06:38
11 Exhibit 45, which is your report, again, and if you
12 could please turn to page 6.
13 A Yes.
14 Q In paragraph 16 of your report, on page 6,
15 you state, quote, (as read): 04:07:09
16 "I conducted an electronic search of
17 the research literature to identify
18 any responses from the Olson team
19 regarding the Schumm and Crawford
20 re-analysis of the Olson data and 04:07:20
21 was not able to locate any. I
22 contacted Professor Schumm by email
23 on August 22, 2021 to verify that
24 conclusion, to which he wrote there
25 has been: 'No response [from 04:07:34

1 Olson].'"
2 End quote.
3 Did I read that correctly?
4 A Yes.
5 Q Did you ever reach out directly to 04:07:41
6 Kristina Olson regarding the results of this study?
7 A No, I did not.
8 Q Why not?
9 A It wasn't pertinent to my analysis. Had she
10 had a response, it should have been published. 04:07:58
11 Q Did you ever reach out to anyone else on the
12 Olson team regarding the results of this study?
13 A No, I did not.
14 Q Okay. Are you aware of the 2021 Gibson,
15 et al., study titled "Evaluation of Anxiety and 04:08:12
16 Depression in a Community Sample of Transgender
17 Youth"?
18 A Not by title. Did I cite that one?
19 Q I don't believe you have included this study
20 in your report. 04:08:30
21 A Okay.
22 Q But as you said, you may have discovered it
23 in your further research, but I will show it to you
24 so that we are on the same page of what we're
25 talking about. 04:08:42

1 COUNSEL SWAMINATHAN: So I'm going to
2 introduce tab 19, which will be marked as
3 Exhibit 61.
4 (Exhibit 61 was marked for identification
5 by the court reporter and is attached hereto.) 04:08:53
6 BY COUNSEL SWAMINATHAN:
7 Q Also, while we're waiting for that exhibit to
8 load, is there any reason that you felt the need to
9 reach out to Professor Schumm, but not
10 Kristina Olson, with respect to the Olson study? 04:09:03
11 A Only that given my known reputation, given
12 that -- the great polarization in the field, I
13 didn't anticipate a cordial or appropriate response
14 from Olson. It didn't seem to be -- there didn't
15 seem to be a point to me. 04:09:30
16 Q What is your known reputation that you
17 referred to in the field?
18 A I'm known as highly critical of a lot of the
19 claims that people are making.
20 Q And is that what leads to what you refer to 04:09:41
21 as the great polarization?
22 A Leads to, no. I think it's an element of.
23 Q What are the other elements?
24 A Well, that the same thing happens to anybody
25 who says anything critical about anybody's thinking 04:09:56

1 on either side of such questions.
2 Q How do you know that?
3 A I'm frequently a target of it. I'm
4 frequently in contact with other targets of it. It
5 has become one of the most frequently discussed 04:10:19
6 issues, not -- in the media and among academics.
7 Q So what evidence do you have that you are
8 frequently a target of this -- you know, the
9 polarization that you speak of?
10 A On social media, the way that my views are 04:10:31
11 misrepresented in -- I wouldn't say mainstream
12 media, but in minority media, I'm frequently
13 misrepresented in -- in -- in similar ways.
14 Q Okay. And so please let me know if Exhibit
15 61 has entered your file share. 04:10:56
16 A Yes, I see it.
17 Q Okay. Great.
18 So this is a study conducted by Gibson --
19 Dominic Gibson, Jessica Glazier and Kristina Olson.
20 Do you see that? 04:11:17
21 A Yes, I do.
22 Q And this was a 2021 study.
23 Do you see that?
24 At the bottom of the page, you can --
25 A Yes, I do. 04:11:31

1 Q Great. And so do you see that Kristina Olson
2 is an author -- one of the authors of this study?
3 A Yes, I see.
4 Q And you told me that you had not seen this
5 study before; correct? 04:11:48
6 A Correct.
7 Q So I want to give you a second to review the
8 introduction and perhaps the -- the first page, as
9 much --
10 A Okay. Give me a moment. 04:12:10
11 Q Absolutely.
12 A Yes.
13 Q Great. So as you can see, this study has a
14 bigger sample size than the 2016 Olson study;
15 correct? 04:14:12
16 A Yes.
17 Q And you said you were not aware of this more
18 recent study at the time you authored your report;
19 right?
20 A I would hesitate to say that I was unaware 04:14:18
21 entirely, but at least when I was going through the
22 literature, it did not fit what I thought was
23 relevant, so I passed it by.
24 Q Why didn't you think this study was relevant?
25 A Oh, I thought -- as I said, I imagine in the 04:14:36

1 mindset then, I still didn't see how it was
2 relevant -- still don't see exactly how it was
3 relevant or would add anything above the studies I
4 already cited.
5 Q So it's your testimony that the study didn't 04:14:45
6 add any new findings or new opinions to the studies
7 that you had already relied on in offering your
8 report; right?
9 A I would have to read it in full in order to
10 be able to say that for sure. When you asked had I 04:14:59
11 seen it before, I can't say whether I actually said
12 (sic) it before and rejected it or if I, in fact,
13 hadn't seen it before, for whatever reason.
14 Q And, Dr. Cantor, do you agree that
15 transgender or gender-dysphoric youth experience 04:15:19
16 significantly higher levels of anxiety and
17 depression than their cisgender peers?
18 A That's what the science seems to indicate,
19 yes.
20 Q So if you look at page 3 of this study, 04:15:32
21 understanding that you have not had the time to
22 fully review it, at the top of the page, the
23 paragraph starting "Nonetheless," this study found
24 that many socially transitioned transgender or
25 gender-dysphoric youth experienced levels of anxiety 04:15:56

1 and depression in the normative range and equal to
2 or only slightly higher than their sibling --
3 siblings and cisgender peers.
4 Do you see that?
5 A Yes, I do. 04:16:09
6 Q So are you aware of any studies showing that
7 the existence of a Y chromosome provides an athletic
8 advantage if a person does not go through endogenous
9 male puberty?
10 MR. BARHAM: Objection as to form and scope. 04:16:25
11 MR. TRYON: Objection.
12 THE WITNESS: I'm sorry, could you say that
13 again?
14 BY COUNSEL SWAMINATHAN:
15 Q Sure. Are you aware of any studies showing 04:16:32
16 that the existence of a Y chromosome in an -- in an
17 individual provides an athletic advantage if a
18 person does not go through endogenous male puberty?
19 MR. TRYON: Objection.
20 THE WITNESS: I have seen such studies, but 04:16:58
21 because that question was outside of the scope of
22 what was -- of the questions posed to me, I didn't
23 study them closely.
24 BY COUNSEL SWAMINATHAN:
25 Q Can you name some of those studies that 04:17:08

1 you've seen?
2 A No, not offhand.
3 Q Okay. Are you aware of any studies showing
4 that the existence of genitalia associated with the
5 male sex assigned at birth provides an athletic 04:17:22
6 advantage?
7 MR. BARHAM: Objection as to form, scope and
8 terminology.
9 MR. TRYON: Same objection.
10 THE WITNESS: The studies that I saw didn't 04:17:33
11 break down sex into the various components or
12 evidence that indicates sex.
13 BY COUNSEL SWAMINATHAN:
14 Q So it fair to say that you haven't seen a
15 study showing that the existence of genitalia 04:17:44
16 associated with the male sex assigned at birth
17 specifically provides an athletic advantage?
18 A No --
19 MR. TRYON: Same objection.
20 THE WITNESS: No, that's not exactly the same 04:17:56
21 thing. The studies typically compare boys versus
22 girls. They didn't compare any of the components
23 that led them to know or believe that the boys were
24 boys and the girls were girls. They divided boys
25 and girls, but they didn't analyze differences 04:18:10

1 specifically according to chromosomes or genitalia.
2 BY COUNSEL SWAMINATHAN:
3 Q Can you recall the names of any of those
4 studies that you're referring to?
5 A No. I didn't study them as closely since 04:18:21
6 they weren't part of the questions posed to me.
7 Q Okay.
8 COUNSEL SWAMINATHAN: I'm going to show you
9 tab 21, which will be marked as Exhibit 62.
10 (Exhibit 62 was marked for identification 04:18:32
11 by the court reporter and is attached hereto.)
12 THE WITNESS: I hit the wrong button.
13 MR. BARHAM: Is this a good break time?
14 COUNSEL SWAMINATHAN: Sure.
15 Do you need a break, Dr. Cantor? 04:19:22
16 Can we go off the record?
17 No problem.
18 THE VIDEOGRAPHER: Yes. We are going off the
19 record at 4:19 p.m., and this is the end of Media
20 Unit No. 5. 04:19:32
21 (Recess.)
22 THE VIDEOGRAPHER: Okay. We are back on the
23 record, 4:31 p.m., and this is the beginning of
24 Media Unit No. 6.
25 Go ahead, please. 04:31:03

1 COUNSEL SWAMINATHAN: Great.
2 BY COUNSEL SWAMINATHAN:
3 Q So, Dr. Cantor, I believe just before the
4 break I was introducing tab 21, which is marked as
5 Exhibit 62, into the Exhibit Share. Please let me 04:31:10
6 know if you've been able to access it.
7 A Yes, I can see it.
8 Q Great. And have you seen this one page
9 before?
10 A Yes. I wrote it. 04:31:43
11 Q Okay. And so JamesCantor.org is your
12 website; right?
13 A Yes, it is.
14 Q Great. And why did you include this bill of
15 transsexual rights on your website? 04:31:54
16 A Typically addressing the other pole of this
17 highly polarized debate.
18 Q So the first bill of rights states that
19 "People who are transsexual have the right to
20 respect." 04:32:10
21 Do you agree with this statement?
22 A Yes, I do.
23 Q Great. And under the statement, it reads (as
24 read):
25 "As societies and institutions 04:32:22

1 become increasingly aware of their
2 transsexual members and
3 participants, they become
4 increasingly confronted by the needs
5 to assimilate and accommodate what 04:32:30
6 they used to ignore. Taking on
7 these tasks from a position of basic
8 respect will go a long way in
9 establishing inclusive policies and
10 healthy environments." 04:32:41
11 Did I read that accurately?
12 A Yes.
13 Q What inclusive policies are you referring to
14 here on your website?
15 A I wasn't referring to any particular policy. 04:32:53
16 Q So when you say "Taking on these tasks from a
17 position of basic respect will go a long way in
18 establishing inclusive policies," what did you mean
19 inclusive -- what did you mean when you wrote
20 "inclusive policies"? 04:33:11
21 A Policies that would help transsexuals feel
22 included in the rest of society.
23 Q Got it. And what did you understand -- or
24 what do you understand the phrase "healthy
25 environments" to mean? 04:33:22

1 A I wasn't trying to make a -- I wasn't trying
2 to be specific, certainly not when I wrote this,
3 which, I think, now was more than ten years ago. I
4 was referring in general to how caustic environments
5 were -- were becoming for everybody in those days. 04:33:41
6 Unfortunately, environments have become all
7 the more, as they say, polarized.
8 Q Do you still agree with this statement as it
9 reads on your website?
10 A I -- I agree with the statement, but, of 04:33:52
11 course, we're in a very different context now.
12 Society, I mean, is in a very different context now.
13 Q What's different about the context now as
14 compared to when you authored this portion of your
15 website? 04:34:14
16 A Oh, goodness. Most of the child transition
17 issues have now become mainstream issues, and people
18 are making extreme statements and cherry-picking and
19 overstating the reality on both sides.
20 Q So I pulled this document, as you can see at 04:34:34
21 the corner of the page, on March 17th, 2022, at
22 7:14 a.m. I was up early that day.
23 Is there a reason that you haven't updated
24 your website in the last ten years?
25 A Oh, I just became involved in other projects. 04:34:52

1 It also became easier to communicate with the public
2 in other venues. Again, ten years ago, we barely
3 had any -- we barely had any social media. I'm not
4 even sure we had Twitter then. So now there are
5 just other venues by which to communicate these 04:35:11
6 types of ideas.
7 Q Got it. Okay.
8 And so the second bill of rights states (as
9 read):
10 "People considering transition have 04:35:18
11 the right to be free from undue
12 pressure to transition -- to
13 de-transition, or not to transition.
14 Do you agree that people considering
15 transition have the right to be free from undue 04:35:28
16 pressure to not transition?
17 A Yes.
18 Q And under this statement, it reads (as read):
19 "Some aspects of transition, such as
20 medical interventions, affect only 04:35:44
21 the person undergoing the process,
22 and some aspects of transition
23 directly affect other people in
24 their lives. People considering and
25 undergoing transition have the right 04:35:55

1 to make their choices on the basis
2 of these only, and not for any
3 political, religious, or societal
4 statement that it might be perceived
5 to be making." 04:36:06
6 Did I read that correctly?
7 A Yes.
8 Q Do you agree that medical interventions and
9 transitioning affect only the person undergoing the
10 process? 04:36:17
11 A That would depend on the medical intervention
12 itself. That's not a -- medical interventions
13 aren't one thing.
14 Q Got it. So it's a -- as your words say,
15 "Some aspects of transition, such as medical 04:36:34
16 interventions, affect only the person undergoing the
17 process..."
18 What did you mean by that?
19 A I was allowing for the possibility, such as,
20 for example, cosmetic -- purely cosmetic changes are 04:36:46
21 for the person themselves, but someone who is going
22 to be -- replace wearing false breasts with breast
23 implants, to the outside world, it will look the
24 same, but it will feel very different to the person.
25 Q So apologies, you said that medical 04:37:03

1 intervention such as cosmetic changes? So is -- is
2 a cosmetic change like wearing a, you know, fake
3 breast-augmenting device a medical intervention?
4 A I didn't mean to and still don't mean to be
5 that precise so much as to point out to readers 04:37:21
6 that -- that there exists interventions which may
7 have absolutely nothing to do with -- with anybody
8 other than the transsexual person themselves. I
9 didn't mean to try to enumerate or express an
10 opinion about any particular one of them. 04:37:40
11 Q But you agree that those interventions can be
12 medical, correct, as --
13 A Yes.
14 Q Okay. And you then go on to state that (as
15 read): 04:37:47
16 "People considering and undergoing
17 transition have the right to make
18 their choices on the basis of these
19 only, and not for any political,
20 religious, or societal statement..." 04:38:00
21 Do you agree that it should be the
22 transgender person's choice whether to go through
23 medical treatment?
24 A Phrase that again, please.
25 Q Do you agree that it should be the 04:38:16

1 transgender or gender-dysphoric person's choice
2 whether or not to go through medical treatment?
3 A Broadly speaking, yes. There can, however,
4 and there do legitimately -- there will legitimately
5 exist exceptions to that. 04:38:39
6 Q Okay. But broadly speaking, yes?
7 A In general, it is that person to -- it's up
8 to that person to decide whether to do it. But, of
9 course, if there's a medical reason not to do it
10 that the person is ignoring, it is indeed up to the 04:38:48
11 actual medical staff to ensure that those procedures
12 are not engaged in, even if it is the wishes of the
13 patient.
14 Q Okay. And if you turn to the next page,
15 page 2 of 3 of your bill of transsexual rights, 04:39:05
16 number 5 states (as read):
17 "People in the process of transition
18 have the right to health care that
19 respects the gender in which they
20 live, including to be addressed by 04:39:14
21 pronouns and other language that
22 acknowledges that gender."
23 Did I read that correctly?
24 A I'm sorry, which number are you reading from?
25 Q Number 5. 04:39:34

1 A Ah.
2 MR. TRYON: Counsel, I'm going to object to
3 questions, continued questions, on this. It's
4 outside the scope.
5 COUNSEL SWAMINATHAN: Thank you, Counsel. 04:39:43
6 Your objection is noted.
7 THE WITNESS: I'm sorry, I just reread it.
8 And, I'm sorry, what was your question again?
9 BY COUNSEL SWAMINATHAN:
10 Q I hadn't asked one yet, but I will -- 04:39:54
11 A Oh.
12 Q -- ask it now.
13 Do you agree that people in the process of
14 transition have the right to be addressed by
15 pronouns and other language that acknowledges the 04:39:59
16 gender in which they live?
17 MR. BARHAM: Objection as to form and scope.
18 THE WITNESS: In the context in which I wrote
19 it, yes. In today's context, where -- where the
20 right is -- "exaggerated" isn't the right word, but 04:40:26
21 being abused or used for disingenuous purposes would
22 be a reasonable limit to that which really did not
23 meaningfully exist when I first -- first wrote this.
24 BY COUNSEL SWAMINATHAN:
25 Q So do you agree, generally, that people in 04:40:47

1 the process of transition have the right to be
2 addressed by pronouns and other language that
3 acknowledges the gender in which they live, aside
4 from these ulterior instances that you just
5 referenced? 04:41:03
6 MR. BARHAM: Objection as to form and scope.
7 MR. TRYON: Same objection.
8 THE WITNESS: Again, in general, yes. But
9 transition -- the word "transition" and the process
10 of transition now is used and meant very differently 04:41:17
11 from how it was a decade ago.
12 BY COUNSEL SWAMINATHAN:
13 Q How is it used differently?
14 A It's used more broadly, it's used
15 prematurely, and it's used by people who are 04:41:29
16 completely outside any healthcare context.
17 Q Is it always used more broadly and more
18 prematurely now?
19 A I don't really understand the question.
20 Q Is it always the case that the language that 04:41:51
21 you're taking issue with today is due to the fact
22 that it's being used prematurely in individuals who
23 are gender dysphoric?
24 MR. TRYON: Objection to the form.
25 THE WITNESS: I'm sorry, I'm still not quite 04:42:09

1 understanding the question.
2 COUNSEL SWAMINATHAN: Court Reporter, can you
3 please read back Dr. Cantor's answer before, where
4 he expresses the understanding issue?
5 (Record read.)
6 THE REPORTER: The one before that, do you
7 want me to --
8 COUNSEL SWAMINATHAN: That's good.
9 THE REPORTER: Okay.
10 BY COUNSEL SWAMINATHAN:
11 Q So, Dr. Cantor, I was just saying, do you
12 believe that it's always the case that the word is
13 used more broadly and more prematurely?
14 A There are people who still use it properly,
15 yes. 04:42:58
16 Q Okay. So you were a member of the Society
17 for the Scientific Study of Sexuality; correct?
18 A Yes, that's correct.
19 Q What is the purpose of the society?
20 A Their stated purpose is to forward and 04:43:15
21 promote the conduct and dissemination of sex
22 research.
23 Q How did you get involved in that society?
24 A Oh, I joined when I was a student, as, in
25 those days, it was -- it was a well-known large 04:43:36

1 organization, and it had -- it was relatively easy
2 to get into. One, essentially, could get into it
3 just by signing up.
4 Q Were there any fees associated with the
5 society? 04:43:51
6 A Yes, there were.
7 Q Were they annual membership fees?
8 A Yes, they were.
9 Q Are you able to give me an approximation of
10 what those fees were to be a member of the society? 04:44:02
11 A I don't really recall. They weren't
12 substantial. And, of course, for students, even
13 lower, when I first joined.
14 Q And how long have you been a member of this
15 society? 04:44:21
16 A I would have to look it up. It was roughly
17 15 to 20 years before I resigned.
18 Q Okay. And what did your membership involve?
19 A Oh, at that point, really just membership and
20 discussions going -- well, actually, technically, 04:44:49
21 too, I suppose. One was participation, largely in
22 their -- in their Listserv discussions with -- with
23 other sex researchers. And the other, I was on the
24 editorial board of their journal, the Journal of Sex
25 Research. 04:45:07

1 Q And so am I understanding it correctly that
2 you had to be a member in order to access the
3 Listserv for the Society for the Scientific Study of
4 Sexuality?
5 A Yes, the Listserv was meant for members. 04:45:16
6 Q Okay. And you said that you resigned from
7 the society; is that correct?
8 A That is correct.
9 Q When did you resign?
10 A I would have to look up the date. It was 04:45:29
11 roughly two or three years ago now.
12 Q Okay.
13 COUNSEL SWAMINATHAN: I'm going to introduce
14 tab 22, which has been marked as Exhibit 30 -- or
15 63. 04:45:59
16 (Exhibit 63 was marked for identification
17 by the court reporter and is attached hereto.)
18 BY COUNSEL SWAMINATHAN:
19 Q Please let me know when you're able to see
20 it. 04:46:01
21 A Got it.
22 Q Great. And so this is a blog post in
23 Sexology Today!; correct?
24 A Yes, it is.
25 Q And remind me again, what -- what is 04:46:34

1 Sexology Today!?
2 A It's my blog.
3 Q It's your blog. Okay.
4 And this blog post was published on
5 August 10th, 2020; correct? 04:46:45
6 A Yes, that's correct.
7 Q And I'm not going to assume, but since it's
8 your blog, I assume you authored this blog post;
9 right?
10 A Yes. 04:46:59
11 Q Okay. And so I see here that you had a
12 27-year association with the Society for the
13 Scientific Study of Sexuality.
14 Does that ring a bell?
15 A Yes. Longer than I remember. 04:47:09
16 Q And I see here that the society had removed
17 you from the online forum; is that right?
18 A That's right.
19 Q It says (as read):
20 "I then received an unsigned email 04:47:24
21 informing me that I had been
22 suspended from the listserv."
23 Did I read that correctly?
24 A I'm not seeing that line, but it sounds
25 familiar. 04:47:34

1 Q Apologies. It's toward the middle of the
2 page. I think the fourth paragraph down.
3 A Yes.
4 Q Okay. Why were you removed from -- or why
5 were you suspended from the Listserv? 04:47:49
6 A That's a good question. There's the reason
7 they gave me, and there's the reason that everybody
8 suspects, but nobody will say out loud.
9 Q Can you describe that a bit more?
10 A They believe -- or they told me that what I 04:48:05
11 said they deemed to be disrespect- -- disrespectful.
12 Q What did you say that they deemed to be
13 disrespectful?
14 A I sincerely don't remember.
15 Q Did -- to your recollection, did what you 04:48:30
16 said -- did what you say deal with issues relating
17 to transgender people or gender-dysphoric people?
18 A Yes. We were debating something about the
19 science or findings that were reported in the
20 science and whether it matched up with whatever it 04:48:51
21 was somebody else was saying. That led to a -- and
22 that led to a debate. I don't remember without, you
23 know, going back through my old e-mails exactly what
24 it -- what it was.
25 Q Got it. Can you turn to the next page of the 04:49:06

1 exhibit, please?
2 A Got it.
3 Q Okay. And there's a footnote 1 at the bottom
4 of the page. Can you please review that footnote?
5 A Yes. 04:49:29
6 Q So this is an e-mail that you received from
7 the board of directors?
8 A Yes, it is.
9 Q Is the paragraph under the first sentence,
10 the one beginning with "Nasty, discourteous, unkind, 04:49:43
11 uncivil, attacking, inappropriate, unprofessional,
12 harassing, threatening, hateful, racist, sexist,
13 homophobic, erotophobic, derogatory, or
14 objectionable remarks or jokes that might be
15 offensive to other people, abusive, defamatory, 04:50:01
16 libelous, pornographic, obscene, invasive of
17 another's privacy, or otherwise torturous or un- --
18 torturous or unlawful messages will NOT be deemed
19 appropriate. Courtesy is highly valued" -- is what
20 I just read one of the Listserv's guidelines? 04:50:21
21 A Yes, I believe it is.
22 Q And did the Society for the Scientific Study
23 of Sexuality believe that you violated one of these
24 guidelines?
25 A There's no way to know what the society 04:50:32

1 thought. The board of directors voted that I did,
2 but the enormous debate and the other resignations
3 from the society at the -- at the same time
4 suggested that was not the opinion of the society;
5 it was just -- whichever relevant members of the 04:50:51
6 board.
7 Q Does this e-mail reflesh -- refresh your
8 recollection of what opinion you expressed that
9 caused them to suspend your membership from the
10 Listserv? 04:51:07
11 A No, it doesn't. I didn't express -- I never
12 expressed anything on that Listserv that I hadn't
13 expressed in many other venues, including with other
14 professionals, with other sex researchers.
15 Q And so can you please look at the next page, 04:51:20
16 at footnote 3?
17 And I believe footnote 3 spans three pages,
18 from 3 of 9 to 5 of 9, of the exhibit.
19 And this looks like it's an e-mail from you
20 to the Society of Scientific Study of Sexuality 04:51:47
21 members dated July 20th, 2020, at 4:48 p.m.; is that
22 correct?
23 A That time is correct. But, no, I did not
24 write that.
25 Q This is not your e-mail? 04:52:02

1 A Footnote -- in footnote 3, no, it is not.
2 Q Whose e-mail is this?
3 A Zoe Peterson, then-president of quad S.
4 Q Okay. And --
5 A I believe she signed it at -- yes, that's her 04:52:16
6 signature at the bottom of it.
7 Q Great. And so this e-mail was written by
8 Zoe Peterson in response to your resignation from
9 the society and your suspension from the Listserv?
10 A I hesitate to say what she wrote -- I 04:52:33
11 hesitate to say that she wrote it in response to me.
12 I think she wrote it in response to the enormous
13 discussion on the list that happened, saying that
14 the society disagreed with what the board did in
15 banning me from the Listserv. 04:52:50
16 Q I see. Okay.
17 And so this e-mail did go out after you were
18 banned from the Listserv; right?
19 A Correct. Some of the other members continued
20 to forward to me relevant e-mails about the debate 04:53:00
21 that was going on which I then couldn't see.
22 Q Okay. And if you look at page 4 of the
23 exhibit, at the bottom of the page.
24 A Yes.
25 Q There's a paragraph starting with "Finally, 04:53:17

1 and most importantly, to our transgender,
2 non-binary, and gender nonconforming members who
3 raised this issue and who have expressed that they
4 have felt -- they have long felt hurt, disrespected,
5 marginalized, and unprotected on our listserv and 04:53:33
6 within our organization, I hear you and I thank you
7 for sharing your experiences and reactions with such
8 honesty and courage."
9 Do you see that?
10 A Yes, I do. 04:53:46
11 Q Do you know why Zoe Peterson included that in
12 her e-mail?
13 A I assume that she was trying to demonstrate
14 that people who were resigning should stop resigning
15 and that she was on what she considered to be the 04:54:02
16 politically correct avenue.
17 Q So when she says "Finally, and most
18 importantly, to our transgender, non-binary, and
19 gender nonconforming members who raised this issue,"
20 what issue is she talking about? 04:54:19
21 A That's a very good question.
22 Q Do you know the answer to that question?
23 A No, I don't.
24 Q Do you have any understanding that may inform
25 what the issue that she is referring to may be? 04:54:34

1 A No. My experience is that people are
2 misrepresenting issues and exaggerating them in
3 order to come out with whatever political outcome
4 they want. It is exactly because this is so vague
5 that I can't come to any other conclusion but that 04:54:51
6 this is another one of those.
7 Q So is it your testimony that this response
8 from Zoe Peterson was not in reaction to your
9 suspension from the Listserv?
10 A That's not exactly -- 04:55:11
11 MR. BARHAM: Objection as to form.
12 THE WITNESS: That's not exactly true either.
13 We had a long chain of events, each leading to the
14 next, leading to the next, leading to the next. So
15 there's an association, but not a direct 04:55:27
16 association. And I have no reason to think that she
17 was writing to me. And she's a politician,
18 president of the organization. I also can't easily
19 discount that she's writing it for purely political
20 purposes and the content -- I -- I -- I can't know 04:55:41
21 how much she genuinely believes the content.
22 BY COUNSEL SWAMINATHAN:
23 Q So can you tell me more generally what the
24 chain of issues was about?
25 A No. I honestly can't recall. I'm in many, 04:55:55

1 many debates on many, many different Listservs over
2 the years, and I can't any longer recall which
3 particular issue sparked this particular debate.
4 Q And you said that Zoe Peterson is a
5 politician because she's the president of the 04:56:13
6 Society for the Scientific Study of Sexuality. Why
7 did you --
8 A She --
9 Q -- say that?
10 A She's writing as a politician, in her 04:56:15
11 political capacity.
12 Q What is her political capacity as president
13 for the Society for the Scientific Study of
14 Sexuality?
15 A I don't understand that question outside 04:56:33
16 of -- you answered it exactly within the question.
17 Q I guess I'm just trying to understand what
18 makes Zoe Peterson a politician beyond her title as
19 president of the society.
20 A That she is in charge of ensuring that the 04:56:45
21 board of directors has sufficient respect in order
22 to run the organization. They were losing an
23 enormous amount of respect over their treatment of
24 me, and she was trying to shore up what she could.
25 Q How did you know that they were losing an 04:57:01

1 enormous amount of respect as a result of your ban
2 from the Listserv and your resignation?
3 A Oh, dozens and dozens and dozens of people
4 were e-mailing me directly immediately afterwards.
5 They were saying things to the list. Even though I 04:57:17
6 couldn't see the list, they were cc'ing me on their
7 responses so I could see it as they were sending it,
8 as people --
9 Q You said --
10 A -- people who resigned. 04:57:26
11 Q Apologies, I interrupted your answer. Please
12 continue.
13 A As people were resigning from the
14 organization, they were e-mailing me to let me know
15 that they were resigning from the organization. 04:57:36
16 Q You say dozens and dozens and dozens, does
17 that mean about 36 people?
18 A Oh, again, I couldn't count. Somewhere on
19 the order of under 50 would -- seems about -- feels
20 about right. 04:57:51
21 Q Did any members disagree with you in the
22 Society for the Scientific Study of Sexuality?
23 A That I recall, three or four people who were
24 post- -- if that many -- who were posting during the
25 debate itself. 04:58:13

1 Q Do you remember the names of those
2 individuals?
3 A No, I don't.
4 Q And how many members were are the society, in
5 total? 04:58:23
6 A That's a good question. Only a relatively
7 small number of members are on the Listserv, only a
8 small number of those who are on the Listserv ever
9 participate in the Listserv, but I don't know the
10 numbers of each of those categories. 04:58:40
11 Q How many members would you say actively
12 participate on the Listserv?
13 A I'd guess about a hundred.
14 Q Okay. And so of those hundred, you say only
15 three or four of them would agree with your 04:59:02
16 retracted access to the Listserv; is that correct?
17 A Well, no.
18 MR. TRYON: Objection.
19 THE WITNESS: We weren't disagreeing over my
20 access to the Listserv; we were disagreeing over 04:59:18
21 whatever scientific issue it was that we were
22 disagreeing over.
23 BY COUNSEL SWAMINATHAN:
24 Q Were there folks who were in support of your
25 resignation and your removal from the Listserv? 04:59:29

1 A The only ones I heard about were the people
2 that Zoe Peterson referred to. I never knew their
3 names. I don't know who reported me to whom, under
4 what circumstances, the number of people.
5 Q Okay. And so if we -- so sitting here today, 04:59:53
6 you're -- you're not aware of what the issue was
7 that caused?
8 A I don't recall, no.
9 Q Okay. And remind me again -- so you said
10 Sexology Today! is your blog; right? 05:00:08
11 A That's correct.
12 Q Do you control all the content of
13 Sexology Today!?
14 A Yes, I do. Except sometimes people post
15 comments. 05:00:23
16 Q So the actual blog posts are all your
17 writing, but the comments came from other people; is
18 that correct?
19 A Yes, that's correct.
20 Q Okay. About how many blog posts have you 05:00:34
21 offered on Sexology Today!?
22 A Oh, 20ish, maybe.
23 Q And when did you start your website?
24 A Maybe 15 years ago.
25 Q And so why did you feel the need to write 05:00:56

1 this open letter of resignation from the Society for
2 the Scientific Study of Sexuality on your blog post?
3 A Oh, because they were failing at their -- at
4 their own mission. I was promoting science. Again,
5 I don't remember which particular issue within it, 05:01:14
6 but it was science -- it was what was being shown in
7 the science despite whether anybody else liked what
8 was being shown in the science. By blocking me and
9 what I was saying, they were blocking the progress
10 of science -- of science itself and the purpose of 05:01:31
11 the organization.
12 Q And I understand that you can't remember the
13 incident that led to your resignation and your
14 banning from the Listserv, but do you believe that
15 you made any statements that would have been 05:01:45
16 perceived as offensive to any members of the
17 society?
18 A I can't automatically collapse together what
19 is offensive and what is called offensive. I
20 sincerely don't believe and I don't think that any 05:02:09
21 objective observer would label anything that I had
22 ever said as offensive, but that's very different
23 from whether somebody would call it offensive in
24 order to keep me from saying it because they didn't
25 like its implications. 05:02:24

1 Q I understand. So it's possible that they
2 either didn't like your implications of what you
3 said or they were actually taking offense with what
4 you had said; is that correct? Those -- those are
5 two plausible reactions? 05:02:38
6 MR. TRYON: Objection to the form of the
7 question.
8 THE WITNESS: Yes, both of those are at least
9 theoretically possible.
10 BY COUNSEL SWAMINATHAN: 05:02:51
11 Q Okay. And so, you know, we were talking
12 earlier about what you understand gender-affirming
13 care to mean versus how I use the phrase.
14 So it your opinion that the word "transition"
15 can only be applied in the healthcare setting? 05:03:08
16 A It depends on the context. It is relatively
17 recent that social transition has come to be called
18 transition at all. So if one is reading older
19 posts, older papers, older words, "transition"
20 usually would refer to somebody who has embarked in 05:03:31
21 a recognized program and is going through steps.
22 When -- people use the word "transition" today much,
23 much more broadly.
24 Q Okay. And so as you sit here today, is it
25 your understanding that the words -- the word 05:03:51

1 "transition" should only be applied in the
2 healthcare setting?
3 MR. TRYON: Objection.
4 MR. BARHAM: Objection --
5 MR. TRYON: Objection. 05:04:02
6 MR. BARHAM: Objection as to form.
7 THE WITNESS: I can't say that I have any
8 opinion about how it should be used. The only
9 important criterion to me is that a term, any term,
10 is used consistently and concretely and 05:04:18
11 objectively -- and as objectively as possible.
12 If "transition" is going to continue to mean
13 something very, very broad, then we are, once again,
14 going to need a term to refer to the more specific
15 situations, as long as we're involved in those 05:04:40
16 specific situations.
17 BY COUNSEL SWAMINATHAN:
18 Q And, Dr. Cantor, what is your understanding
19 of a competitive sport?
20 MR. BARHAM: Objection as to form and scope. 05:04:54
21 MR. TRYON: I also object.
22 THE WITNESS: I would have to say that I
23 really have no understanding of "competitive sport"
24 other than a layperson's.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q Do you have any understanding of what a
3 physical advantage is in a sport?
4 MR. TRYON: Objection.
5 MR. BARHAM: Objection to form and scope. 05:05:19
6 THE WITNESS: Again, I know the particular
7 terms in the same way that any -- that the lay
8 public would, but when questions -- when questions
9 are posed or an issue is -- arises where there is a
10 quantitative or numeric answer to it, I now have a 05:05:35
11 level of expertise for analyzing those statistics
12 for answering the question that other people don't.
13 BY COUNSEL SWAMINATHAN:
14 Q Has anyone ever posed that question to you
15 before me today? 05:05:50
16 A Not in a formal context, no.
17 Q Would you be able to tell me what your
18 understanding is of a physical advantage in a
19 competitive sport, as you sit here today?
20 MR. TRYON: Objection; scope and form. 05:06:05
21 MR. BARHAM: Same.
22 THE WITNESS: Too var- -- any variable that
23 has a causal relationship with the outcome of how
24 that sport is -- is evaluated.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q And do you agree that there are some
3 competitive sports teams where physical size is an
4 advantage?
5 A That would certainly seem so, yes. 05:06:29
6 Q Okay.
7 COUNSEL SWAMINATHAN: I'm going to introduce
8 tab 23, which will -- which was previously marked as
9 Exhibit 49. And the article is another blog post
10 from Sexology Today! titled "When is a 'TERF' not a 05:06:54
11 TERF?"
12 THE WITNESS: Got it.
13 BY COUNSEL SWAMINATHAN:
14 Q Great. And you authored this article in
15 July of 2020; correct? 05:07:14
16 A Correct.
17 Q And in this article, you write -- and I'll
18 turn your attention to the middle of the post. It
19 says (as read):
20 "I must first challenge the 05:07:27
21 ironically binary premise that
22 'exclusion' is all or none. It's
23 only in the current climate of
24 extremism that no moderate views get
25 discussed. Here is a range of some 05:07:40

1 areas in which sex/gender require
2 protection:"
3 And you list employment, housing, public
4 accommodation, with ellipses, locker rooms/showers,
5 with nudity, and in parentheses, sauna, hottub, 05:07:57
6 ellipses, close parentheses, locker room/washrooms,
7 sex segregated. And the final item you list is
8 competitive sports team, where physical size is an
9 advantage.
10 Did I read that correctly? 05:08:18
11 A Yes.
12 Q Great. And so in this blog post, you say
13 that sex/gender require protection in competitive
14 sports teams where physical size is an advantage; is
15 that correct? 05:08:39
16 A I offered it as more of an example of -- of
17 an extreme on a range, but it's hard to think of
18 something that would be even more extreme than that,
19 yes.
20 Q Is it your belief that cross-country is a 05:08:48
21 sport where physical size is an advantage?
22 MR. TRYON: Objection; scope.
23 THE WITNESS: I don't know. I would have
24 to -- I haven't read that part of the literature.
25 ///

1 BY COUNSEL SWAMINATHAN:
2 Q Have you seen any evidence that shows that
3 physical sides provide -- physical size provides an
4 advantage in cross-country?
5 MR. TRYON: Objection; scope. 05:09:15
6 MR. BARHAM: Objection.
7 THE WITNESS: No, I haven't read those
8 studies.
9 BY COUNSEL SWAMINATHAN:
10 Q Okay. Sitting here today, do you have any 05:09:19
11 opinion whether or not the plaintiff in this case,
12 B.P.J., should be allowed to run on the girls'
13 cross-country team?
14 MR. BARHAM: Objection as to scope and form.
15 MR. TRYON: Same objection. 05:09:36
16 THE WITNESS: I have no opinion in the actual
17 outcome.
18 COUNSEL SWAMINATHAN: Okay. I think this is
19 a good point for a break. I'm just going to confer
20 with my co-counsel and see if we have anything else 05:09:44
21 left to discuss with Dr. Cantor.
22 But does regrouping at 5:120 work -- sorry --
23 5:20 work for everyone, a ten-minute break?
24 MR. BARHAM: Sure.
25 COUNSEL SWAMINATHAN: Go off the record. 05:10:00

1 THE VIDEOGRAPHER: Yep. We're going off the
2 record. The time is 5:10 p.m., and this is the end
3 of Media Unit No. 6.
4 (Recess.)
5 THE VIDEOGRAPHER: All right. We are back on 05:26:05
6 the record at 5:26 p.m., and this is the beginning
7 of Media Unit No. 7.
8 Go ahead, please.
9 BY COUNSEL SWAMINATHAN:
10 Q Dr. Cantor, I'm going to ask you to take a 05:26:15
11 look back at your 2022 expert report, page 3.
12 A I'm sorry, what page again?
13 Q Page 3.
14 A Got it.
15 Q Great. And before we conclude today, I just 05:26:41
16 to confirm that you are offering no opinions beyond
17 the principal opinions that you on this page of the
18 report and the paragraph at the bottom of the page.
19 Is that accurate?
20 A Yes, it is. 05:26:56
21 Q Great.
22 COUNSEL SWAMINATHAN: Thank you so much for
23 your time, Dr. Cantor.
24 I have no further questions right now. I'll
25 tender the witness, but reserve my right to ask 05:27:03

1 questions should defense counsel ask questions.
2 So thank you so much.
3
4 EXAMINATION
5 BY MR. BARHAM: 05:27:07
6 Q I do have a few quick questions for you,
7 Dr. Cantor.
8 I want to refer to your expert report and
9 page 32 of your CV. Unfortunately, I don't know
10 which page that is in the deck. 05:27:30
11 THE WITNESS: It's the last page of it, is
12 it?
13 BY MR. BARHAM:
14 Q Correct.
15 A Goodness, next life, I get a shorter career. 05:27:57
16 Here we go.
17 Q Earlier today, when we were discussing your
18 expert testimony, were you referring -- did you have
19 this page in front of you at the time?
20 A No, I did not. 05:28:10
21 Q On here, there is a 2019 case in probate and
22 family court, a custody hearing in Boston,
23 Massachusetts.
24 Do you see that line on page 32?
25 A Yes, I do. 05:28:27

1 Q Could you describe the general issue
2 involving your expert testimony in that case?
3 A Yes. Two women, a lesbian couple, were
4 divorcing. They had joint custody of their child
5 whom they were fighting over. The child had gender 05:28:38
6 dysphoria. Now it's a female. One parent believed
7 that the child should transition; the other parent
8 did not.
9 Q Earlier today, we were also discussing the
10 instances in which you have provided care for 05:28:57
11 transgender individuals.
12 Is it the case that you have only provided
13 care for transgender individuals in your current
14 clinic?
15 A No. I was also providing care while I was at 05:29:15
16 CAMH.
17 COUNSEL SWAMINATHAN: Can I just interrupt
18 you for one quick second, Dr. Cantor?
19 Travis, I'm having trouble hearing you.
20 MR. BARHAM: Oh, I apologize. 05:29:26
21 COUNSEL SWAMINATHAN: If you could get closer
22 to the mic, I would greatly appreciate that.
23 And sorry, again, to disrupt.
24 MR. BARHAM: Court Reporter -- is the court
25 reporter having similar issues, or have we been able

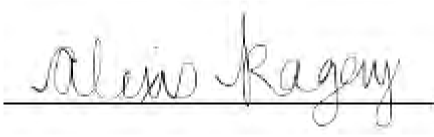
1 to get all those questions into the transcript?
2 THE REPORTER: I've been able to get them
3 all. It is a little bit difficult to hear you,
4 though.
5 MR. BARHAM: I apologize. I slid too far
6 over to my binder.
7 THE REPORTER: Thank you.
8 MR. BARHAM: I will address that.
9 THE REPORTER: Thank you.
10 BY MR. BARHAM: 05:29:46
11 Q Dr. Cantor, we also were earlier discussing
12 the different types of gender dysphoria, adult
13 onset, adolescent onset and childhood onset.
14 If we're dealing with -- if you're confronted
15 with an individual in, say, his early -- his or her 05:30:04
16 early 20s who is experiencing gender dysphoria,
17 which category would that individual likely fall
18 into? What -- what categories would be possible?
19 A Both categories are possible. Early 20s, the
20 adult onset would be more likely, but we can't be 05:30:31
21 quite as sure today as we could, say, 10, 15 years
22 ago. But they're -- until relatively recently, the
23 children who came in were children, prepubescent,
24 and the adults who came in were generally
25 middle-aged. We didn't get anybody coming in during 05:30:47

1 their teens or 20s. And so the nicknames for
2 these -- for these two groups simply became child
3 onset and adult onset.
4 As years have gone on and more people started
5 presenting, there's now a little bit more overlap in 05:31:02
6 between.
7 So when age can't be used in order to provide
8 very obvious categorization -- if somebody comes in
9 clinically, we would start ask -- asking other
10 questions that -- that would tell us what group they 05:31:16
11 belong to, such as their sexual interest patterns,
12 whether they were attracted to men, women, both and
13 so on.
14 Q And when you said a moment ago that both
15 categories would be possible, what are the two 05:31:31
16 categories that you had in mind?
17 A It's possible that the --
18 COUNSEL SWAMINATHAN: Objection to the form.
19 THE WITNESS: It's possible that the person
20 would be an adult-onset case, but coming into a 05:31:40
21 clinic relatively early, especially now that trans
22 issues are talked about so much more. Or as a
23 childhood-onset case who didn't come in for the
24 medical or other -- other care until atypically
25 late. 05:31:57

1 MR. BARHAM: All right. I believe those are
2 all the questions I need to ask.
3 Mr. Tryon, do you need to supplement?
4 MR. TRYON: Maybe I could ask just one
5 question, Mr. -- Dr. Cantor. 05:32:13
6
7 EXAMINATION
8 BY MR. TRYON:
9 Q So in the event that you were to determine
10 that someone in that age category, who was a college 05:32:18
11 student, were suffering from adult-onset dysphoria,
12 would then adult-onset dysphoria become relevant in
13 connection with the statute which we have in place
14 here, which we are discussing here?
15 COUNSEL SWAMINATHAN: Objection to form. 05:32:41
16 THE WITNESS: Yes, it would become relevant.
17 MR. TRYON: I have no other questions.
18 MS. DUPHILY: Should we go off the record?
19 COUNSEL SWAMINATHAN: Sounds great.
20 THE VIDEOGRAPHER: All right. 05:33:02
21 MR. BARHAM: Does this conclude the
22 deposition, or are we taking a break?
23 THE VIDEOGRAPHER: This --
24 COUNSEL SWAMINATHAN: It concludes our
25 questioning from plaintiff's side. 05:33:06

1 THE VIDEOGRAPHER: Everybody's had a chance;
2 otherwise, we'll --
3 MS. GREEN: Actually -- this is Roberta Green
4 on behalf of WVSSAC, and I would just like to note
5 for the record that we have no questions. 05:33:17
6 THE VIDEOGRAPHER: Okay.
7 MR. CROPP: This is Jeffrey Cropp for the
8 Harrison County Board of Education and Dora Stutler.
9 We have no questions.
10 THE VIDEOGRAPHER: Okay. 05:33:24
11 MS. MORGAN: This is Kelly Morgan on behalf
12 of the West Virginia Board of Education and
13 Superintendent Burch. I don't have any questions.
14 Thank you.
15 THE VIDEOGRAPHER: Okay. I think that's 05:33:40
16 everyone now. So with -- with that, I will take us
17 off the record.
18 Okay. We are off the record at 5:33 p.m.,
19 and this ends today's testimony given by Dr. Cantor.
20 The total number of media used was seven and 05:33:54
21 will be retained by Veritext Legal Solutions.
22 (TIME NOTED: 5:33 p.m.)
23
24
25

1
2
3
4
5 I, JAMES M. CANTOR, do hereby declare under
6 penalty of perjury that I have read the foregoing
7 transcript; that I have made any corrections as
8 appear noted, in ink, initialed by me, or attached
9 hereto; that my testimony as contained herein, as
10 corrected, is true and correct.
11 EXECUTED this _____ day of _______________,
12 20____, at ______________________, ________________.
(City) (State)
13
14
15
16 ____________________________________
JAMES M. CANTOR
17 VOLUME I
18
19
20
21
22
23
24
25

1
2
3 I, the undersigned, a Certified Shorthand
4 Reporter of the State of California, do hereby
5 certify:
6 That the foregoing proceedings were taken
7 before me at the time and place herein set forth;
8 that any witnesses in the foregoing proceedings,
9 prior to testifying, were placed under oath; that a
10 record of the proceedings was made by me using
11 machine shorthand which was thereafter transcribed
12 under my direction; further, that the foregoing is
13 an accurate transcription thereof.
14 I further certify that I am neither
15 financially interested in the action nor a relative
16 or employee of any attorney of any of the parties.
17 IN WITNESS WHEREOF, I have this date
18 subscribed my name.
19 Dated: MARCH 28, 2022
20
21
22
23
24 

ALEXIS KAGAY
25 CSR NO. 13795

1 TRAVIS C. BARHAM, ESQ.
2 tbarham@adflegal.org
3 MARCH 28, 2022
4 RE: BPJ V. WEST VIRGINIA STATE BOARD OF EDUCATION
5 MARCH 21, 2022, JAMES M. CANTOR, JOB NO. 5122845
6 The above-referenced transcript has been
7 completed by Veritext Legal Solutions and
8 review of the transcript is being handled as follows:
9 __ Per CA State Code (CCP 2025.520 (a)-(e)) - Contact Veritext
10 to schedule a time to review the original transcript at
11 a Veritext office.
12 __ Per CA State Code (CCP 2025.520 (a)-(e)) - Locked .PDF
13 Transcript - The witness should review the transcript and
14 make any necessary corrections on the errata pages included
15 below, notating the page and line number of the corrections.
16 The witness should then sign and date the errata and penalty
17 of perjury pages and return the completed pages to all
18 appearing counsel within the period of time determined at
19 the deposition or provided by the Code of Civil Procedure.
20 __ Waiving the CA Code of Civil Procedure per Stipulation of
21 Counsel - Original transcript to be released for signature
22 as determined at the deposition.
23 __ Signature Waived - Reading & Signature was waived at the
24 time of the deposition.
25

1 _X_ Federal R&S Requested (FRCP 30(e)(1)(B)) - Locked .PDF
2 Transcript - The witness should review the transcript and
3 make any necessary corrections on the errata pages included
4 below, notating the page and line number of the corrections.
5 The witness should then sign and date the errata and penalty
6 of perjury pages and return the completed pages to all
7 appearing counsel within the period of time determined at
8 the deposition or provided by the Federal Rules.
9 __ Federal R&S Not Requested - Reading & Signature was not
10 requested before the completion of the deposition.
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 BPJ V. WEST VIRGINIA STATE BOARD OF EDUCATION
2 JAMES M. CANTOR (#5122845)
3 E R R A T A S H E E T
4 PAGE_____ LINE_____ CHANGE________________________
5 ____
6 REASON____
7 PAGE_____ LINE_____ CHANGE________________________
8 ____
9 REASON____
10 PAGE_____ LINE_____ CHANGE________________________
11 ____
12 REASON____
13 PAGE_____ LINE_____ CHANGE________________________
14 ____
15 REASON____
16 PAGE_____ LINE_____ CHANGE________________________
17 ____
18 REASON____
19 PAGE_____ LINE_____ CHANGE________________________
20 ____
21 REASON____
22
23 ________________________________ _______________
24 WITNESS Date
25

&

& 3:5 4:6 6:18 7:6 261:2 314:23 315:9

0

00316 1:8 2:8 13:12
02116-3740 5:15

1

1 1:25 13:6 34:10 35:24 53:2 57:25 94:19 123:3 289:3 315:1
10 45:1,7 105:25 106:2 107:11 114:12 140:20 141:4,4,24 235:5 308:21
100 33:7 211:5
1000 6:10
10004 7:20
10005-3919 4:22
106 220:8 223:17
10:05 57:17
10:08 58:3
10th 287:5
11 20:25 105:25 106:3 109:11 175:6 206:12 207:10,10 213:5 213:15 215:17 234:4 238:25
110th 127:24 128:12,22
111th 125:23 128:25
112 3:17
11776 313:24
11:31 121:23
11:47 122:2
11th 187:12
12 21:13 24:16 25:16,20 106:1 190:8,14 191:14 192:2 194:15 195:2,6 212:14,17 228:25 229:20 243:23
120 4:20
125 7:18
12:28 151:18
13 247:13
13795 1:23 2:25 313:25
14 21:1 105:18 123:6 194:13 250:6
1411 3:8
145 9:18
14th 5:14
15 9:6 107:21 113:13 254:9 260:10,15 285:17 297:24 308:21
16 78:9,10,21,23 81:25 82:3,6,8,10 110:23 122:7,9,24 123:11 179:13,13 179:16 180:1,23 181:1 194:13 205:21 259:11 266:14
17 123:6 261:22
176 9:22
17th 277:21
18 61:23 78:13,17 82:9,10 122:9 123:8 179:16 180:1 195:24 211:23 213:19,20 265:16
186 10:1
18th 7:19
19 4:21 194:21 268:2
19.1 255:23
190 10:3
1979 203:6
1990s 122:18
1992 39:4
1993 54:23 56:5
1994 53:15,16
1997 54:23
1998 56:6 88:8
1:20 151:22

2

2 32:14 33:21 53:2 53:7 58:4 121:24 148:22 191:11 281:15
20 45:1,7 79:20,20 105:11 112:20,21 113:13 141:24 142:18 191:6 210:25 212:3 285:17 312:12
200 3:9
2000 105:17
2002 127:22,22
2003 109:13 125:17
2009 62:9 101:24 201:10 202:4,13
2010 64:13
2011 106:8,22 225:23 226:15 253:21 254:17
2012 62:9 66:4 67:11 90:17 106:7 234:23
2013 236:7
2014 64:14 97:16 100:18,20 249:25 251:7 253:8,10,21
2015 119:4 120:2 193:24 237:17,22 238:14 247:6
2016 12:1 187:11 187:12 265:13,23 270:14
2017 199:19 201:13,17,21 202:18
2018 66:4 67:11 73:25 83:13,22,24 115:23 116:7,9 236:8 266:1
2019 193:14 240:12 261:3 306:21
2019s 192:12
2020 88:19 123:14 153:20 191:7 192:5,6,7 236:3,6 236:10,11 238:17 242:6 243:16 246:9 247:4 253:14,19 261:2 287:5 290:21 302:15
2021 33:22,25 35:11 136:11,17 136:20 137:13,25 138:14,25 139:9 153:20 177:2 230:1 231:23 232:20 233:13 266:23 267:14 269:22
2022 1:20 2:23 13:1,5 35:8,16

155:16 221:25 227:1 277:21 305:11 313:19 314:3,5
2023 116:10,11,12
2025.520 314:9,12
20ish 297:22
20s 50:19 76:10,11 78:12 308:16,19 309:1
20th 290:21
21 1:20 2:23 13:1 274:9 275:4 314:5
212.549.2500 7:22
21st 13:5
22 33:25 79:20 247:18 266:23 286:14
227 10:5
22nd 35:11 136:11 137:25 138:14,25 139:9
23 35:16 123:7 125:14 190:19 302:8
230 10:9
235 10:15
239 10:21
23rd 35:8 177:2
24 225:12
243 10:25
247 11:6
25 123:6,7 127:17 130:14 244:5
250 11:11
25301 4:11 7:11
25301-3088 3:10
25305-0220 3:18
254 11:15
259 11:20
26 89:11 95:21 96:10 130:23 218:14 244:6
261 11:24
26330 6:22
265 12:1
268 12:3
27 218:5,15 287:12
274 12:7
28 232:20 313:19 314:3
286 12:10
29 212:17
2:21 1:8 2:8 13:12
2:39 212:6
2:53 212:10

3

3 86:24 87:3,10,10 87:11 89:1,2 93:13 122:3 151:19 156:23 165:3 200:12 271:20 281:15 290:16,17,18 291:1 305:11,13
30 46:21 76:7 87:17,18 89:25 90:12 97:2 122:19 286:14 315:1
30043 6:10
304.933.8154 6:23
306 9:7
30s 169:13
31 33:22
316 1:25
32 9:12 36:20 102:3 123:6 306:9 306:24
3293 155:25 157:12 158:15 163:21 164:7 167:11,19 168:4,9 168:22 169:1 172:25 173:9,19 174:15 175:12,19 176:3 177:12 178:4,8,12,15,18
34 9:15
35 76:7
36 33:24 295:17
37 90:17,21 101:1 101:1
38 122:20

4

4 87:10 89:6 95:22 96:10 145:21 151:23 155:16,20 212:7 291:22
40 92:5 101:10 207:13 211:1
400 6:21
40s 50:14 169:14
44 9:12 32:15,16 136:8 266:10
45 9:15 32:15 34:11,12 155:15 156:21 193:11 212:15 213:20 266:11
46 9:18 33:22 145:22,25 196:1
47 9:22 176:10,11
48 10:1 186:21,24 207:13
49 10:3 190:20,21 302:9
4:19 274:19
4:31 274:23
4:48 290:21

5

5 87:10 89:21 97:3 115:25 176:9 212:11 255:18 260:11 274:20 281:16,25 290:18
50 10:5 74:15,16 74:17 76:4,5 149:18 227:8,9 295:19
500 4:9 5:13 7:9
51 10:9 230:9,11
5122845 1:24 314:5 316:2
52 10:15 235:5,6
53 10:21 92:20 102:3 219:24 220:5 238:25 239:1,7
54 10:25 243:23,24 245:23
55 11:6 247:13,14
56 11:11 250:6,7
57 11:15 254:10,11
58 11:20 259:12,13
59 11:24 261:23,24
5:10 305:2
5:120 304:22
5:20 304:23
5:26 305:6
5:33 2:23 311:18 311:22

6

6 33:23 87:10 92:18,18 102:3 105:25 106:2,6 177:8 240:12 260:11 266:12,14 274:24 305:3

60 12:1 211:1 228:23 229:18 265:16,17
600 4:10 7:10
60s 76:12
61 12:3 220:5 268:3,4 269:15
617.937.2305 5:16
62 12:7 225:15 274:9,10 275:5
63 12:10 286:15,16
64 88:1
65 229:6
650,000 115:24
650,250 115:25
681.313.4570 3:19
69 35:21,23 218:8

7

7 87:3,10,11 93:6 186:20 204:23 205:19 257:14 262:24,25 305:7
73 228:24 229:19
7:14 277:22
7th 251:7

8

8 105:5,19 112:16 200:14 205:1,4,8 205:15 227:7 262:24 263:11 264:22
80 142:14 151:10 151:11
8th 191:7

9

9 105:25 106:2,13 112:16 155:20 177:3,4 230:9 290:18,18
93 130:15
952,955 119:25
99 88:8
9:03 2:22 13:2,5
9:57 57:24

a

a.m. 2:22 13:2,5 57:24 58:3 121:23 122:2 277:22
aap 88:18 94:24 95:8,16 111:9
abarr 5:20
abbreviated 128:19
able 32:25 33:1 34:15 40:25 70:24 70:25 80:25 86:4 129:19 149:24 153:12 177:4 180:8 227:12 233:18,19 235:9 254:14 262:2 266:21 271:10 275:6 285:9 286:19 301:17 307:25 308:2
absolutely 57:16 170:13 238:23 270:11 280:7
abuse 113:2,8,19 113:21,22,24
abused 282:21
abusive 289:15
academics 269:6
academy 240:3
accepted 124:9,10 129:3 196:5 200:19 232:20 240:12 251:6
access 233:2 254:14 256:19 275:6 286:2 296:16,20
accommodate 276:5
accommodation 303:4
accomplish 162:16
account 60:7 188:2
accounts 219:13
accumulate 94:9 222:25
accumulated 60:20 221:16
accumulating 29:12 36:14 60:20 218:4 220:13
accumulation 60:16
accurate 109:14 148:16 150:22 211:2 220:19 237:24 305:19 313:13
accurately 18:2 19:25 106:25 107:5 187:22 219:2 224:5 261:4 276:11
achieved 160:4
achille 234:23 235:18 238:3
acknowledge 181:8 184:15
acknowledges 281:22 282:15 283:3
aclu 14:12
aclu.org 7:21
acronym 128:13
act 157:12,13,21 157:24 158:3,6,8 158:13 159:1,6,16 160:8,19 161:13 162:1,3,9,22 163:1 163:10,12,15,23 164:11,17,20 165:13,15,16 166:11,22 171:3 172:10 177:21
action 313:15
active 147:24
actively 296:11
activities 1:11 2:11 3:3
activity 15:6
actual 111:14 150:9 182:12 183:10 242:16,17 281:11 297:16 304:16
ad 75:13
add 36:22 99:11 102:17 118:9 142:19 271:3,6
added 98:3
addict 142:23
addicted 142:24
addiction 47:2,4 140:22,25 141:1,6
addition 130:22 157:5 192:18
additional 31:23 48:22 66:16 226:22
address 32:8 70:25 91:3 308:8
addressed 157:8 281:20 282:14 283:2

addressing 275:16
adf 133:7 134:14 137:3
adflegal.org 6:11 6:12,13,14 314:2
adjudicated 151:2 151:9
adkins 31:17
administered 15:20
administrative 66:10 73:12 83:2
administrators 217:12
admitted 263:19 264:16,20
adolescence 51:4 60:1 61:17 65:19 194:16 233:3
adolescent 25:23 26:9 37:19 39:14 39:18,22 42:18 43:1,2,7 50:25 51:1 69:4 78:23 179:5,8 200:18 232:21 246:9 308:13
adolescents 11:1,8 26:23 27:6,11,23 28:5,18 52:8 54:10 60:12,23 61:4,7,10 65:12,17 65:22 68:25 78:7 78:8 88:17 106:11 107:8,16,23 109:8 115:14,18 118:22 121:2 125:6,8,10 127:15 130:8,12 132:15 167:21 168:10,15 175:14 175:20 176:4 179:11 180:16,23 181:16 182:19 184:13 186:2,6 190:7,14 192:1 200:5 207:19,25 209:22 223:24 224:7 243:18 247:9 249:16
adopted 66:12 161:3
adopting 66:20
adoption 11:25 262:8,9,19
adult 11:11 42:18 43:3 112:1 168:18 168:24 169:3,3,12 170:1,2,10,24 171:2,23 172:2,5,6 172:17 174:24 212:21 250:1 308:12,20 309:3 309:20 310:11,12
adulthood 60:1 61:12 91:24,25
adults 42:22 46:12 46:13 52:5 54:12 55:16 58:20,24,25 69:15 91:9,20 98:23 109:20,21 110:17,23 111:2 112:4,5,6 131:23 132:18,23 141:20 169:18 170:3 172:11 180:22 187:19 188:17 232:16 308:24
advanced 47:17 51:16 177:11,20 252:15
advantage 161:6 222:12 223:6 272:8,17 273:6,17 301:3,18 302:4 303:9,14,21 304:4
advertising 75:6 75:11,12
advise 82:24
advised 198:13 201:5 204:18
affect 163:16,24 174:2 278:20,23 279:9,16
affiliation 183:19
affirmation 181:4 181:12,15 182:7 182:10,14,15,18 182:25 183:6,17 183:22 184:1,6,12 200:16
affirmative 11:2 243:19
affirming 10:7,9 10:16,23 19:3 208:12,19 226:24 227:4 228:22 229:9,17 230:3 233:2 234:25 238:19 255:23 256:13,17 257:10 299:12
aforementioned 32:6
ag 133:16 138:3
ag's 133:22 134:12 135:2,7 136:5,14 136:21 138:9
age 20:25 46:14 50:10,12,15 61:19 61:20 76:5 78:13 78:16,20,21,23 81:25 82:3,6 110:6,23 111:25 169:8,8,14 171:17 179:13,13,16 180:23 181:1 190:8,14 191:14 192:1 194:13,13 194:15,17 195:2,6 195:10 242:17 246:15 309:7 310:10
aged 308:25
agency 119:23
agents 196:25
ages 78:9 82:10 180:1 254:3
ago 20:18 22:8,9 50:17 133:14 135:5,6 136:6,15 138:11,13,17 189:2 204:2 232:7 277:3 278:2 283:11 286:11 297:24 308:22 309:14
agonists 200:8
agree 133:25 163:23 172:10 174:15,25 196:9 205:24 206:24 207:18 208:11,18 210:15,15,16,20 228:1,6 232:21 238:3 248:11 258:17 271:14 275:21 277:8,10 278:14 279:8 280:11,21,25 282:13,25 296:15 302:2
agreeable 138:7
agreed 135:16 138:5

agreeing 221:20
ah 282:1
ahead 58:5 100:24 122:4 124:12 151:24 212:12 274:25 305:8
ahrens 227:19
al 13:9 92:20 193:18 225:23 226:15 227:2 230:2 234:24 237:17,21 238:13 238:18 242:7 243:17 247:6 250:1 261:3 267:15
alexis 1:23 2:24 13:16 313:24
allan 139:10
alliance 6:4 14:22 15:12 134:23
allocation 252:16
allow 13:23 84:11 180:25 206:7
allowed 174:10 175:7 194:12,14 304:12
allowing 279:19
allows 169:9 195:6 195:7,10
alter 174:2
alternate 244:14 245:3
alternative 244:20 244:24
altogether 52:11 75:23 101:23 160:14
amended 156:1
american 7:16 80:14 125:24 126:2 127:25 128:17,18,23 228:2,12 240:3,6
amount 116:1 124:24 153:20 161:5 294:23 295:1
amsel 56:13
amy 231:25
analyses 94:5 102:18,19
analysis 102:25 252:19,20 260:21 261:11,15,18 262:17 263:24 264:2 266:7,20 267:9
analyze 45:12 62:25 273:25
analyzes 238:11
analyzing 94:4 243:14 301:11
anderson 107:12
andrew 5:8 14:4 235:20
anecdotes 217:3
anna 255:6
anne 130:1 170:20
annelou 250:12
annual 123:20 124:2,15 125:24 126:3,5,14 127:7 127:11,25 128:12 128:22 285:7
another's 289:17
answer 16:22 17:5 17:7,13,20 18:25 44:24 70:24 71:18 72:2 77:24 101:6 104:1 134:4,18,25 148:25 166:18 171:10 206:7,7,11 210:12 219:11 284:3 292:22 295:11 301:10
answered 144:22 147:13 171:5 207:3 294:16
answering 20:1 90:19 301:12
answers 18:1,2
anticipate 121:8 121:11 268:13
anticipated 156:11
anxieties 54:6
anxiety 12:3 54:13 267:15 271:16,25
anybody 85:25 246:7 268:24 280:7 298:7 308:25
anybody's 268:25
anymore 85:25 126:15
apa 126:9 128:13 128:19
apart 62:21
apologies 17:3 24:21 27:19 29:22 32:15,20 35:21 38:21 42:3 50:6 67:2 79:23 83:20 90:16 91:13 96:9 117:10 119:8 141:14 155:7 183:20 206:9 218:14,18 228:5 236:9 239:10 240:8 279:25 288:1 295:11
apologize 28:11 40:22 138:23 171:21 228:11 235:18 307:20 308:5
apparent 84:5 85:19,19
appeal 262:6
appear 92:8,10 312:8
appearances 3:1 4:1 5:1 6:1 7:1 8:1
appearing 2:22 314:18 315:7
appellant 262:8
appellees 262:9
appendix 35:24
application 108:8 117:24 118:1,3,5 129:1,2
applied 117:19 120:7 299:15 300:1
applies 91:20 178:15 242:18,20 242:21,25 263:19 264:16,21
apply 118:2 171:15 172:10 178:19
appointed 49:23
appointment 215:24
appreciate 17:19 39:2 42:24 72:6 72:15 105:3 138:19 307:22
approach 100:21 182:15 195:1 196:3
approaching 253:23

appropriate 70:5 81:15 93:23 104:11 170:25 171:1 190:8,15 268:13 289:19
approximate 61:19 81:21
approximately 72:10 74:13 75:1 76:4 87:7,15 105:9 112:18 113:10 151:7
approximation 285:9
april 64:14 123:14
archives 112:25
area 139:15 148:23
areas 303:1
argument 160:16
arguments 91:1
arin 227:18
arises 301:9
armistead 1:17 2:17 155:9
armistead's 156:2
arrived 88:7
article 10:1,3 12:10 89:17 90:2 90:5 91:3 94:19 94:23 95:9,13,24 96:10,14,19 97:15 97:21,22 98:6 99:7 101:1,10 102:3,4,5,10,12,20 102:24 106:7 191:1,1,8 192:4 220:25 222:4 240:10 247:6 265:13 266:5 302:9,14,17
articles 29:19 88:1 92:1,18 93:7,10,12 93:15,21 99:23,23 114:9 153:24 204:3 220:6,8,12 220:13,15,19,21 221:2,12,17,20 222:10,22,23 223:17,22 224:5 224:12,16
articulated 157:19 159:15 160:6 165:11
arts 38:14,16,22 39:1,8,25 40:16
aside 198:16 224:4 283:3
asked 17:18 77:17 102:17 104:8 124:1,5,7 128:23 133:10 138:4,6 147:4 148:18 157:5 159:21,22 160:23 161:7 162:2 171:5 178:6 178:10,14 183:8 207:3 223:9,19 224:2 248:18 261:13 271:10 282:10
asking 30:25 60:5 77:11 82:15 98:18 126:19 134:21,22 160:11 162:19 164:25 165:14 169:3 181:11,19 190:12 206:8 211:5 229:8 247:20 309:9
asks 148:23 149:1 177:9
aspects 163:8 232:13 278:19,22 279:15
assertion 213:4
asserts 177:18
assess 160:13
assessment 123:16 188:23 189:10 216:21
assessments 51:2
assigned 18:14,20 70:3 172:20 173:7 173:21 180:5 273:5,16
assignments 68:10
assimilate 276:5
assist 36:10
assistant 40:9,11 40:19 41:4,24 55:24 56:9,11 57:3
associated 108:9 144:14,15 146:10 228:22 229:18 233:3 236:15 237:3 240:19 273:4,16 285:4
association 10:9 96:17 125:25 126:3 128:1,17,18 128:23 202:21 228:2,13 230:2 240:6 250:23 287:12 293:15,16
assume 17:13 90:1 99:15,20 118:2,13 123:24 129:2 130:18 183:18 200:11 214:2 247:7 287:7,8 292:13
athletes 26:20 28:18 121:9,13 178:16,19
athletic 121:9 160:25 161:6 162:4 177:25 178:13 222:12 223:6,18 272:7,17 273:5,17
athleticism 224:3 224:4 232:12
athletics 26:17,23 27:6,12,16 103:20 109:9 118:22 121:2,7 125:11 130:12 169:14
attached 32:17 34:13 138:24 139:8 146:1 176:12 186:25 190:22 227:10 230:12 235:7 239:2 243:25 247:15 250:8 254:12 259:14 261:25 265:18 268:5 274:11 286:17 312:8
attacking 289:11
attempt 216:22
attempted 10:11 230:4 233:4 253:2
attention 187:14 194:18 231:23 241:7,8 262:24 302:18
attorney 3:7,14,16 4:8 6:20 7:8 14:19 16:2,6 30:10 133:8 134:3,18,21 313:16

attorneys 4:19 5:12 6:9 30:8,9 32:3 34:5 35:19 134:5
attracted 141:19 141:20 189:22 309:12
attraction 76:2,3 141:12 188:13,14
attributable 237:7 242:15
attributed 237:7
atypical 59:18 60:4 61:25 63:13 63:20,23 68:9,13 87:21,22 99:10 105:14,15 122:15 122:16 139:15,16 139:23 140:11,12 142:6 147:25 149:7 188:25
atypically 309:24
audience 110:14 129:9
augmenting 280:3
august 125:17 127:22 266:1,23 287:5
author 33:13 34:24 36:8 94:23 96:19 98:2 99:24 100:13 146:18 170:18 176:21 270:2
author's 254:21 255:1
authored 87:4 88:18 95:24 105:6 107:12 187:8 191:6 192:4 229:23 233:8 236:20 246:17 270:18 277:14 287:8 302:14
authoring 36:10 87:8,16 100:22 112:19
authority 256:2
authors 108:12,17 116:20 186:13 231:24 235:17 246:4 247:25 248:18 250:11 251:16 257:24 258:4 259:4,20,25 270:2
autogynephilia 91:7,20,22 101:3,6 129:10,15 142:1,3 142:21 143:4,9,17 144:7,23 145:9 170:12
autogynephilic 128:2 142:22
automatically 101:20 298:18
available 174:3 181:8 195:14 203:9 230:20
avenue 3:17 292:16
average 50:10,12 61:20 68:3 76:5,7 110:6,15 180:1 256:6
awarded 116:2 119:23
awarding 120:9
awards 115:7
aware 19:24 95:2 117:23 152:18 159:20 163:17 166:15 174:20 176:6 178:15 182:22 183:2,3 186:1,4 189:14,17 196:13,16 200:3,9 201:18,19,22,24 202:25 203:4,5 219:15 221:8 222:17 225:5 226:22 227:1 228:21 229:16,21 229:24 230:1 233:1,6,9 234:23 236:14,18,21 238:17 240:17 243:16 246:12,18 249:14,18,25 251:10,21 256:1 257:12 264:15 265:12 267:14 270:17 272:6,15 273:3 276:1 297:6
awesome 122:9

b

b 56:17 156:1 315:1
b.p.j. 1:6 2:6 5:3 13:8 16:7 19:13 154:5 304:12
b.p.j.'s 154:15,23 155:1 177:1
back 23:14 50:6 50:20 51:12 57:17 58:2 93:13 107:21 122:1 123:11 130:23 137:11,14 151:21 152:19 166:18 185:17 200:10 201:10 212:9 266:9 274:22 284:3 288:23 305:5,11
background 102:16 116:22 135:22
bailey 4:6 7:6 109:14,17 110:9 111:18 129:21
baileywyant.com 4:12 7:12
bain 119:2
balance 161:19 165:20
ban 174:3,16 295:1
banned 291:18
banning 291:15 298:14
bans 174:4
barely 278:2,3
barham 6:5 9:7 14:21,21 25:12 26:14,24 27:14 28:8,23 32:18 33:2 35:2,12 43:25 44:23 57:13 57:20 60:25 63:8 65:13 70:13 77:6 82:24 85:4 103:15 104:17 121:19 124:3 133:18 134:15,25 136:25 142:11 159:7,18 160:21 161:14 164:18 167:12 171:5 173:2,10,23 173:25 174:18 175:22 193:11 197:24 198:4,19 206:6 207:3 208:14,22,24 210:7 211:13

222:14 223:8 225:3 229:13 234:12 239:8,12 242:8 247:21 272:10 273:7 274:13 282:17 283:6 293:11 300:4,6,20 301:5 301:21 304:6,14 304:24 306:5,13 307:20,24 308:5,8 308:10 310:1,21 314:1
barr 5:8 14:4,4
bas 119:3
base 206:5 210:12 211:22
based 59:17 215:8 225:5 264:2
bases 52:18
basic 209:18 276:7 276:17
basis 157:21 159:16 160:8 164:17,20 165:13 165:15 181:14 209:13 211:10 213:4 214:12 215:7,14 219:4 222:19 251:19 279:1 280:18
bdsm 21:20
bearing 16:9
becau 249:21
becoming 91:23 195:17 216:12 277:5
began 40:9 41:14 59:17 251:19
beginning 2:22 58:3 122:2 151:22 156:8 181:24 212:10 218:15 274:23 289:10 305:6
beginnings 107:22
begins 59:22 191:13
behalf 2:21 14:24 15:2,5 311:4,11
behavior 113:1 175:3
behavioral 246:13
behaviors 140:16 172:5 174:3
behaviours 47:21 48:8,17 49:17 59:5 64:11 73:11 149:8
belief 303:20
believe 14:15 22:15 33:21 36:20 38:18 87:3 95:22 115:22 122:18 127:17 135:12 136:18 147:1 160:19 162:20 164:14,15 175:19 177:11 190:6,13 235:5 238:21 253:11,13 255:15 259:17 267:19 273:23 275:3 284:12 288:10 289:21,23 290:17 291:5 298:14,20 310:1
believed 307:6
believes 293:21
believing 211:10
bell 287:14
belong 309:11
belongs 209:4
beneficial 264:12
benefit 70:20 192:23
benefits 198:14
best 17:24 31:16 53:21 74:18 99:18 110:17 124:18 145:14 161:16 185:3 220:7 228:20 232:23 264:14
better 69:24 84:22 104:4 152:22 188:2,2 193:9,21 206:23 208:5 252:18
beyond 31:11,19 31:24 39:16 45:17 51:17 62:11 144:16 183:2 211:8 256:1 294:18 305:16
bigger 270:14
bill 12:7 275:14,18 278:8 281:15
binary 292:2,18 302:21
binder 308:6
binik 56:14,17,19
biological 104:12 104:12
biologically 144:15
birth 18:15,21 61:12 172:20 173:8,21 257:4 273:5,16
bit 17:3 18:10 32:23 36:23 42:19 43:16 45:4 50:17 51:8 54:1 93:12 98:19 107:18 115:21 129:7 149:16 154:3 178:24 188:8,10 189:20 288:9 308:3 309:5
bizarre 258:20
blanchard 49:4,6 49:11 58:9,12 106:23 107:3 129:21 170:18
blaney 100:14
blank 32:6
bled 85:20 119:13
blend 43:2
blended 39:15 42:17
block 7:17 14:12 14:12
blocker 196:21
blockers 175:7 194:12 197:3,6 237:11,16 238:1
blocking 196:12 196:17,25 197:11 298:8,9
blog 187:3,6 207:11,12 213:6 213:17 215:18 286:22 287:2,3,4,8 287:8 297:10,16 297:20 298:2 302:9 303:12
board 1:9,10 2:9 2:10 4:3 6:16 7:3 13:9 14:25 15:3 112:25 113:4,6,11 114:2 285:24 289:7 290:1,6

291:14 294:21 311:8,12 314:4 316:1
body 10:21 196:20 238:18 240:19
boman 255:5
book 90:10 99:17 100:3,3,5 109:13 109:17,21 110:2,7 110:9,21 111:1,7,9 111:14,24
borelli 4:17 13:25 13:25
born 161:5 164:8 164:9 174:4,5
bos 246:3
boston 5:15 38:17 40:7,20,20,21 41:3 41:12,17 306:22
botch 42:3
bother 85:25
bottle 32:9,10
bottom 112:13 164:13,15 199:24 240:9 263:13 266:1 269:24 289:3 291:6,23 305:18
boulevard 6:21
boy 110:1
boylston 5:13
boys 273:21,23,24 273:24
bpj 314:4 316:1
bradley 107:12
brain 45:9 48:3 59:17,22 60:2,3,8 60:15,19 61:12,25 115:12,16 116:14 116:22 120:21 196:19,19 254:22
branch 245:22
break 17:16,17,21 57:15,17,19 58:7 103:10,12 121:18 146:3 151:15 152:3,4 199:15 212:1 273:11 274:13,15 275:4 304:19,23 310:22
breast 279:22 280:3
breasts 279:22
breland 227:18
bridgeport 6:22
brief 124:22
briefly 30:16 75:24
bring 32:5
broad 7:18 300:13
broadly 27:24 93:17 139:22 148:12 281:3,6 283:14,17 284:13 299:23
brooks 135:12 136:19,21
bränström 193:14
built 51:13
burch 1:12 2:12 4:4 7:4 15:4 311:13
button 274:12

c

c 6:5 16:15,15 47:10 156:2 225:16 237:19 314:1
ca 314:9,12,20
calculate 110:15
california 3:17 313:4
call 16:5 63:25 64:3 93:21 94:11 94:22 99:21 102:9 128:13 157:16 165:8 195:16 209:17,21 240:21 240:22 256:24 298:23
called 45:10 56:22 91:6 94:15 101:21 183:14 202:8 209:17 248:21 252:15 253:20 298:19 299:17
calling 251:20
calls 134:3,16 157:20 159:15 160:7 165:12
camera 17:2
camh 47:4,6,7,8 47:10,13 49:4,24 51:24 52:1 57:11 59:2,4,9 62:6 64:16 67:24 68:24 79:16 82:15,21 83:22 84:2 86:13 88:7 108:14,15 130:24 150:1,18 151:9 183:19,21 307:16
campbell 73:3,6
canada 53:11 71:19 125:25 126:3,6 181:21 194:7,11
canadian 71:22 80:12
cantor 1:20 2:20 9:3,12,15,20 13:7 15:19,25 16:14,17 20:8 28:13 29:2 30:20,23 31:4,6 33:5 34:2,14 35:14 36:25 40:25 58:7 72:2 88:18 89:11 90:17 119:2 122:6 137:21 146:5,12 147:14 152:2 162:18 166:22 176:18 187:4 190:6 191:9 194:6 196:12 197:19 205:20 206:11 208:11 212:14 219:11 227:13 230:14 235:10 237:9 242:5 271:14 274:15 275:3 284:11 300:18 304:21 305:10,23 306:7 307:18 308:11 310:5 311:19 312:5,16 314:5 316:2
cantor's 35:7,9 96:10 166:18 284:3
capable 216:23
capacity 1:12,13 2:12,13 201:6 204:19 294:11,12
capital 225:25
capture 211:2
captured 18:4
captures 224:5
care 10:7 11:2 19:2,3,3,4,9,9,11 20:5,6 77:1,5,9,23 78:3,6,17,22,25 79:4,8 80:4 86:19 131:23 183:11

200:20 203:2,9,21 203:24 204:5,22 205:1,4,16 226:24 227:4 228:22 229:2,4,6,9,10,17 229:18 243:19 246:24 249:24,24 256:19 260:23 281:18 299:13 307:10,13,15 309:24

career 36:15,21 79:16 114:17 148:7,14 220:14 221:17 306:15

careers 58:22

carmichael 248:2

carrie 232:1

carry 109:4

case 13:11 19:14 20:19,23 21:6,20 22:3,4,5,7,14,17 22:18,20 23:4,24 24:13 29:3 32:2 44:9 81:15 103:23 104:5,7,10,24 131:11,16 133:2,3 133:10,23 134:1 135:17,21,25 137:3,5,6,8,9,18 137:23,25 138:21 138:22 139:2,3,5,6 139:10 152:5 154:4 155:2,5,10 156:15 157:25 199:21 202:1 205:14 221:21 222:18 223:1,3,13 232:8,12 262:7,12 262:17,19 263:9 265:10 283:20 284:12 304:11 306:21 307:2,12 309:20,23

cases 21:12,14,22 21:23 23:9,12,15 23:17 24:2,4,8,9 24:16 25:9,17,20 25:22 26:2 27:16 28:2 110:11 111:1 111:4 131:14 137:4 212:20 216:12 217:11

catch 28:9

categories 296:10 308:18,19 309:15 309:16

categorization 309:8

categorize 25:5 144:5

category 308:17 310:10

catie 6:6

causal 234:21 301:23

causality 233:21 244:24

causation 244:14 244:20

caused 83:12,22 86:8 242:4 290:9 297:7

caustic 277:4

caution 71:20 85:4

cautious 183:24

caveat 222:6 249:20

cc'ing 295:6

ccp 314:9,12

cease 168:1 191:18 191:22 206:13 212:24 214:18

ceased 85:23 215:21 216:5

cecilia 255:5

center 41:13,19

centre 47:1,4 74:5 74:8 76:18 77:12 77:19,25

certain 80:20 96:21 173:13 183:5 222:7 245:4

certainly 83:25 129:20 174:21 277:2 302:5

certificate 48:22

certified 2:24 313:3

certify 313:5,14

cesalie 227:18

chain 293:13,24

chakravarty 117:8 119:3

challenge 302:20

chance 21:5 311:1

change 66:19,23 84:8 86:5 128:3 144:1 193:2 280:2 316:4,7,10,13,16 316:19

changed 64:20 72:16 73:19 139:1 139:4,9 185:17,17 192:6,8,10 193:4 195:15,16 222:25 253:3,4

changes 120:17 206:14 242:16 266:6 279:20 280:1

changing 189:21

chapter 90:8 92:6 92:7,11 97:10 98:8,10,12,13,15 99:12,15 100:5,7 100:14,22

chapters 100:3

charge 294:20

charleston 1:3 2:3 3:10,18 4:11 7:11 13:11

chavez 119:3

check 95:7,16 102:18 103:8 118:9,20 199:13 224:20 233:24 260:3

checking 77:15 88:18 114:25

checks 68:19

cherry 245:7 277:18

chicago 128:1

chief 113:1,7

child 37:15 39:9 39:18,21 42:15,17 43:2 50:3,4,21,22 59:20 60:23 69:4 72:4,5,5 117:3,5 117:15 168:1,2 179:5,8 218:10,20 219:16 223:16 277:16 307:4,5,7 309:2

child's 188:15

childhood 51:4 59:25 60:17,18,19 60:21 61:17 65:19 69:15 92:21 102:14 110:24,25 169:16 170:11 172:3,8,16 308:13

309:23
children 11:21,24 25:23,24 26:9,11 42:23 54:8 60:12 61:4,7,10,16 65:11 65:16,22 68:25 88:17 93:2,3 98:22 102:5 106:11 107:8 109:8,19,20,21 110:16 111:2 112:7 118:22 121:2 125:6,8,10 127:14 130:8,11 132:13 141:12,20 175:13,20 176:4 179:11 181:15 182:19 184:13 194:11 196:6 212:23 213:23 215:8,15 223:23 224:6 259:19 260:22 262:7,20 264:5,6,12 265:24 308:23,23
children's 194:8
choice 280:22 281:1
choices 279:1 280:18
chris 235:17
christal 235:18
chromosome 272:7,16
chromosomes 274:1
chronological 53:6
chronologically 119:12,13 154:2
chuan 117:1
chunks 101:8
circulated 171:14 192:12
circulating 174:13
circumstances 297:4
cisgender 11:3 18:13 189:1 222:12 223:6 243:20 246:15 271:17 272:3
citations 248:22
cite 160:15 213:7 220:6 233:11,13 233:22 236:23 237:1 247:17 255:14,21 260:5 261:1 267:18
cited 31:20 170:9 170:14,21,21 186:17 193:7 204:4 213:5 220:8 234:1,10 235:2 244:5 271:4
citing 248:19
citizens 166:10
city 21:3 126:8 312:12
civil 7:16 314:19 314:20
ckelley 6:12
claim 95:2,3 182:18 256:2
claimed 184:1
claims 95:7 268:19
clarification 39:2 79:23
clarify 19:8 83:20 109:3 110:21 152:6 163:9
clarifying 97:19
clarity 41:20
classic 220:15,15
classification 143:1
classifications 168:12
classified 142:25
clayton 1:12 2:12
clean 16:20
clear 17:12 138:23 142:1 159:11 183:1 223:21
clearly 40:25
client 75:10 78:11 134:3,18,21 154:8
clients 54:25 78:9 78:13 131:9 132:2 211:21 237:8
climate 302:23
clin 49:9
clinic 47:20,22 48:7,8,17 49:16,17 54:5 59:5 64:11 68:18 70:5,6,8 71:8 73:11 84:10 85:21 86:2,2 91:22 183:23 194:8 246:23 307:14 309:21
clinical 42:6,7,14 52:21 57:10 59:2 59:8 62:19,23 63:3 77:14,18 110:22 130:24 147:23 148:5,6 150:1 180:21 238:10
clinically 238:12 309:9
clinician 49:9 180:6
clinician's 125:22
clinicians 68:16 75:8,16,21 127:6 211:20 225:18,22 226:14
clinics 48:11 49:21 107:23 182:13 194:10 195:17,20 195:22 215:22 217:16 253:24
close 210:23 303:6
closely 272:23 274:5
closer 211:3 307:21
closet 107:16
coauthored 87:4 97:15 105:7
cochran 263:22
code 314:9,12,19 314:20
cognitive 39:12,17 45:9 68:8,12
cohen 250:14,22 250:25
cohort 11:17 251:11,22 255:11
colizzi 248:3
collapse 298:18
colleague 220:24
colleagues 62:24 79:19,21 82:15,16 108:14
collect 95:11
collecting 94:3 186:15
collection 117:13 210:19

college 178:16,19 310:10
collin 227:18
color 110:13
column 257:19
come 29:20 54:4 57:17 69:24 81:11 82:6,10 83:15,17 90:10 104:25 108:13 129:18,23 152:18 171:24 179:20,22 180:11 180:16 181:11 216:25 220:16 221:9 229:25 230:25 233:18 293:3,5 299:17 309:23
comes 130:1 144:2 199:3 221:6 309:8
coming 67:23 72:11,12 75:5 84:19,21 107:16 114:1 116:8 206:17 221:8 308:25 309:20
comma 266:6
comment 25:1 105:12 106:6,7,10 113:4,18
commentaries 105:6,10 106:3 109:12 224:22
commentary 106:5,14,18 107:19 113:25 225:9
commented 265:6
commenting 105:15 113:20,21 113:23
comments 114:7 205:18 297:15,17
commission 1:11 2:11 3:4 15:7
committed 70:15 71:4
common 89:14 147:4
commonly 18:10 37:3 47:6 182:5 219:23 221:4
communicate 278:1,5
communicated 217:3 251:2
communication 134:16
communications 29:9 134:5,22 135:14
community 12:4 210:6 264:9 267:16
comparable 150:15
compare 111:14 273:21,22
compared 11:3 243:19 246:15 256:11,17 257:11 264:6 277:14
comparison 253:6
comparisons 99:9
competitive 300:19,23 301:19 302:3 303:8,13
competitors 165:24
compilation 102:20
complaint 156:1
complete 36:25 38:13,16 41:4 42:8 152:14,16
completed 52:10 53:9 54:15 152:16 314:7,17 315:6
completely 19:25 73:9 283:16
completing 40:15
completion 21:21 315:10
complex 66:1 73:10
complicated 91:18 163:5,6 189:20,23 190:1,2
complication 190:4,5
component 76:16
components 195:1 225:21 226:13,18 273:11,22
comprehensive 114:19 130:22 223:22,25
computer 37:9
concedes 264:10
concentrated 156:12
concentrations 37:9
conception 59:23
concepts 189:15
concern 70:23
concerned 44:21
concerning 38:3 40:3 86:13 89:17
concerns 89:25
concierge 8:4
conclude 192:21 305:15 310:21
concluded 264:1
concludes 310:24
conclusion 189:9 215:10 229:21 234:21 237:2 258:18,20,22 259:1 266:24 293:5
conclusions 157:17 165:9 224:18,19,23 225:1 233:18 264:10
concretely 300:10
conditions 20:22
conduct 31:23 37:21 38:3 39:20 40:3 52:23 55:18 57:4 61:9 108:13 152:23 182:23 209:10 284:21
conducted 30:2 45:18,18 95:6 98:25 201:16 209:2 227:17 236:3,7 239:17 246:1 255:4 261:10 262:17 266:16 269:18
conducting 48:12 74:8
confer 304:19
conference 124:13 130:5 221:7
conferences 221:7
confidential 82:25 85:5
confidentiality 71:21

confirm 230:15 305:16
confirming 19:3
conflicts 200:24
confronted 276:4 308:14
confuse 128:17 172:7
confused 35:3 173:17
conjunction 35:10 76:20 136:9
connected 61:25 89:17
connection 22:10 27:10 30:11 35:10 93:15 117:24 136:16 137:22 153:14 162:21 221:13 310:13
connections 227:23
connectomics 115:13
consent 197:3,6 198:7,11
conservative 194:10 195:18
consider 91:14 100:10 215:12 263:3
considered 195:2 292:15
considering 278:10,14,24 280:16
consisted 256:8
consistent 158:18 158:22 174:10 175:8
consistently 206:20 300:10
constant 74:19
consult 45:11
consultation 199:9
consulted 201:20
contact 133:12 137:3 138:10 149:14,22 150:1 154:8 210:13 249:1,4 269:4 314:9
contacted 133:4,8 134:23 135:2,6 136:15,16,18 137:2,9,17,23 138:6 266:22
contacting 111:21
contacts 199:7
contained 94:25 114:9 124:20 263:24 312:9
contains 161:1
content 260:3 293:20,21 297:12
context 83:19 128:16 146:13 159:21 184:19 185:23 255:16 277:11,12,13 282:18,19 283:16 299:16 301:16
contexts 93:17 94:1 139:22
continue 91:13 116:9 119:18 120:7 156:21 169:16 191:20 215:19 295:12 300:12
continued 4:1 5:1 6:1 7:1 8:1 46:25 47:23,23 54:25 65:5 170:19 188:16 222:24 230:16 282:3 291:19
continues 59:23 59:24 130:23 223:4
continuing 103:15 119:14,20 216:16 225:13
contradict 225:6
contradiction 162:15
contradictory 225:7
contrary 224:14 224:18 225:1
contrast 172:17
contribute 104:8
contributing 143:21 144:3
contribution 102:24 103:3,6
control 237:10,15 237:25 238:14 252:4,11 255:24 256:4,7,21,25 257:3 258:1,6 297:12
controversial 111:12
conventions 263:21 264:17,22
conversation 9:19 146:11 259:18
conversations 152:3 198:23 211:8
convey 99:13
cool 41:2
cooley 5:4 14:3,5,7 14:8,11
cooley.com 5:17 5:18,19,20,21,22 5:23
copy 36:16 138:3 155:11 156:19 262:5
cordial 268:13
corner 277:21
correct 19:19 22:19 23:19 24:6 24:7,11 26:2,4 27:12 29:5 31:10 38:14,15,19,20 41:17,21,22 43:3,9 48:8 50:23,24 53:11,16 54:14,21 54:25 57:8,12 58:10 59:4 62:7 62:10 64:14,23 65:6,8,24 66:3,5 66:14 69:16 73:24 74:5 75:19 76:14 76:21,24 77:25 78:5 79:7 80:2 81:9 82:17 83:11 86:4,16 88:19 94:17,20 95:20,25 96:17,24 100:14 100:15 101:4,13 101:18 102:1 103:1,21 107:13 107:16 108:11 109:6 115:2,5 116:3,6,10 118:3 119:24 120:6,10 121:15 122:11 123:25 124:8

125:25 126:21
128:3 130:6,10,13
130:21 131:21
132:9,10 135:8,9
135:18 139:12
140:23 141:9
142:12 143:15
148:14 150:21
152:8,12 154:11
154:14 160:13
161:23,24 163:21
163:25 167:11,15
168:12,23 170:22
171:4 173:4,22
175:3 179:6,9,17
181:1,2 182:5
184:3,10 187:9,10
187:12 192:14
193:12,13,25
195:4 197:1,4,8,12
197:18,20,23
198:3,5,12 200:22
200:23 201:4,7,11
201:14 203:22
204:15,24 205:6
205:18 207:22
209:25 213:18
215:9 221:15
225:9,10 227:19
227:25 228:17
235:15 236:25
237:13 238:2
240:3 245:24
246:3 247:2,10
248:9 253:15
254:18 255:14
256:15,20 257:7
258:8,20 261:5
262:15 266:7,8
270:5,6,15 280:12
284:17,18 286:7,8
286:23 287:5,6
290:22,23 291:19
292:16 296:16
297:11,18,19
299:4 302:15,16
303:15 306:14
312:10

corrected 36:17 312:10

correcting 260:19 266:5

correction 265:8,9 265:12

corrections 312:7 314:14,15 315:3,4

correctly 123:18 128:4 147:11,16 149:10 157:22 182:2 213:2 255:12 264:13 267:3 279:6 281:23 286:1 287:23 303:10

correlation 233:21

correlations 233:20

cosmetic 279:20 279:20 280:1,2

costa 193:20,24 237:17 238:13 247:6 248:1

couching 127:4

counsel 4:4 7:4 9:6 13:18,20,22,23 14:15,22 15:24 16:6,23 17:4 18:24 19:10 24:14 24:15,17 25:9,14 26:16 27:3,18 28:11,15,16,19,21 28:24 29:1,10 30:5,18,21 31:2,5 32:18,20,25 33:3,4 34:14,14,17 35:2,6 35:13 40:22,24 44:14 45:5 46:3 47:9,11 57:13,16 57:21 58:6 61:3 61:18 63:15 64:9 65:20 71:1,13,23 71:23 72:1 77:8 83:8 85:6 86:17 86:23 96:7,9,12,13 103:8,10,14,16,17 104:3 105:2 112:11 120:5 121:17,20 122:5 124:6 133:19 134:6,7,10,20 135:3,14 137:10 137:15,20 142:13 146:2,4 151:14 152:1,4 158:20 159:10 160:2,17 161:11,22 162:17 164:5,24 166:17 166:21 167:16 171:9 172:18,23 173:5,18 174:7,22 175:4,18 176:1,8 176:13 187:2 190:18,24 191:3,5 193:13,16 198:1,6 199:1,12,17,18 206:9,9,10 207:8 208:17 209:12 210:2,11 211:16 211:25 212:13 219:8,9,10 223:2 223:11 224:11 225:8,24 226:1 227:6,11 229:14 230:8,13 234:16 234:22 235:4,8 238:24 239:4,8,10 239:15 241:21 242:11 243:22 244:3 245:1,18 247:12,16,24 250:5,10 254:8,13 259:10,16 261:21 262:1 265:15,19 268:1,6 272:14,24 273:13 274:2,8,14 275:1,2 282:2,5,5 282:9,24 283:12 284:2,8,10 286:13 286:18 293:22 296:23 299:10 300:17 301:1,13 302:1,7,13 304:1,9 304:18,20,25 305:9,22 306:1 307:17,21 309:18 310:15,19,24 314:18,21 315:7

counseling 79:9 179:11 180:16 181:1

count 21:20 88:14 149:15,24 150:6 220:7,10 295:18

counting 87:9 150:13,14

countries 216:16 225:19 226:9

country 175:8 303:20 304:4,13

county 1:10,14 2:10,14 6:16 14:25 22:16 311:8

couple 110:16,17 307:3

couples 54:19 55:12
courage 292:8
course 21:2 33:18 36:14,21 39:12,16 43:7,15,17 44:13 51:4 55:1 56:20 57:1,6,7,8 59:23 59:24,25 94:7 114:16 116:21 120:1 131:11 148:14 154:7 156:11 161:3 164:23 221:17 277:11 281:9 285:12
courses 37:14,25 39:8,11,17,25 42:15,16 43:2,11 43:13,14,23 44:4 51:9,13,14,17,23 51:24,25 56:13,14 56:16,18,23
court 1:1 2:1 13:10,16 16:20 18:1,4 19:19 21:2 22:14 23:3,4,5,6 23:10,13,16 28:12 32:17 34:13 47:9 69:20 137:10 146:1 161:19 166:17 176:12 186:25 190:22 191:3 225:24 227:10 230:12 235:7 237:18 239:2 243:25 247:15 250:8 254:12 259:14 261:18,25 262:5 264:16 265:18 268:5 274:11 284:2 286:17 306:22 307:24,24
courtesy 289:19
courts 161:18
covariance 252:19 252:20
cover 130:25
covered 52:18 142:15
covid 123:24
coworkers 73:17
crawford 261:2,8 266:19
created 33:17 34:3 35:15,17 36:13 164:22
credentials 24:25
criterion 300:9
critical 123:15 268:18,25
criticisms 241:6
cropp 6:19 14:24 14:24 311:7,7
cross 22:4,18 79:25 80:10 82:12 102:14 175:8 194:13 197:19 198:8,11,14,18 199:3 303:20 304:4,13
csr 1:23 313:25
curiosities 46:8
current 36:22 52:19 97:9 119:21 151:1,4 191:16 203:11,11,13 248:15 302:23 307:13
currently 74:7,15 140:7,8 141:24 150:19 168:14 196:4 204:25 205:8,16 206:2 207:1,20
custody 306:22 307:4
cut 24:21 189:4
cutoffs 20:20 184:21
cutting 171:21
cv 1:8 2:8 13:12 36:7,16 41:6,14,21 53:2 86:24 88:13 90:10 92:19 96:10 97:3 102:3 105:4 112:15 113:9 114:12 122:7 130:15 306:9
cycle 196:22

d

d 225:25
dane 254:22
danish 254:23 256:6
data 45:12 63:1 69:9 94:3 95:11 99:4 117:13 127:7 166:25 167:1 169:20 186:15 195:14 224:14,24 225:5 244:13,19 260:18,21 261:7 261:11 264:3 265:2 266:20
date 33:20,22,25 84:1 97:18 119:4 124:11,12 136:13 137:7 153:2 236:4 286:10 313:17 314:16 315:5 316:24
dated 35:11 136:10,11 137:8 177:1 290:21 313:19
dave 8:7 13:14 44:1 219:5
david 3:15 14:18 30:19 227:18
david.c.tryon 3:20
davis 232:1
day 73:18,18 216:3,10 277:22 312:11
days 107:20 140:20 222:1 277:5 284:25
de 225:22 226:15 246:3 250:1,12,20 250:24 253:7,7,10 278:13
dead 123:15
deal 21:14 68:14 75:9 173:12 288:16
dealing 65:18 308:14
deals 51:20 89:2
debate 275:17 288:22 290:2 291:20 294:3 295:25
debates 294:1
debating 288:18
decade 283:11
december 53:16 62:9 240:12
dechants 231:25
decide 281:8
decision 81:7 85:17 95:16 161:21 163:16,24

176:3 214:17
deck 306:10
declaration 9:12 9:15 136:8,11,17 137:24 138:25 139:9 155:1,4,13 156:2,6,14
declarations 31:17
declare 312:5
decreased 236:15 237:3
deemed 288:11,12 289:18
defamatory 289:15
defendant 1:18 2:18 9:23 21:7
defendants 1:16 2:16 6:16 14:25
defending 6:4 14:22,23 15:12 134:24
defense 30:5 306:1
define 210:24
definitely 164:25
definition 140:17 174:20 185:1,3
definitions 184:25
degree 37:14,25 38:25 40:15 42:1 42:5,9,14 44:16 46:24 56:2
degrees 52:13
del 5:6 14:10,11
delaying 79:2,25 80:9 82:4,11 132:12
delays 85:24
deleterious 243:9
demand 125:22 181:4,12,15 182:7 182:10,15,18,25 183:6,17,22 184:1 184:6,12 213:25 214:24 215:1 216:18 217:8
demeules 259:21
demographic 167:24
demographics 256:24
demonstrate 170:10 292:13
demonstrated 193:18
demonstrates 169:7
demonstrating 226:8
deny 182:21 183:14 184:4
depart 263:20 264:17,21
department 4:5 7:5 11:24 53:13 55:24 65:2 262:7
department's 263:3,9
departments 65:2 65:3
depend 279:11
depending 149:15
depends 61:1 142:25 188:22 299:16
deposed 20:7,15 21:10 22:7 23:9
deposition 1:19 2:20 13:7,13 14:23 18:12,18 20:3 22:11 29:6 29:11 30:11,15,20 30:24 31:7,12,24 137:5 152:7,10,24 230:18 231:6,7 310:22 314:19,22 314:24 315:8,10
depression 10:10 12:4 54:13 218:10 218:21 219:16 228:24 229:19 230:3 233:4 236:16 237:4 267:16 271:17 272:1
depressions 54:6
depth 93:12 148:1 186:9
der 243:17 244:2 245:24 246:2 253:16,19
derived 224:23,23
derogatory 289:13
describe 39:11 42:19 43:16 46:4 47:12 69:6 71:14 75:20 93:14,20 98:18 110:18 116:13 135:24 144:10,24 145:5 188:2 195:3 288:9 307:1
described 73:21 110:16,16 144:10 144:16 183:2 251:17 265:10
describes 110:12
describing 109:18 110:10 161:2 188:21
description 9:11
design 42:16
desire 144:1,14
desist 206:22 210:5 212:24 216:1
desistance 184:18 185:1,11,23 186:2 234:5
desisted 208:9
despite 241:2 298:7
detail 157:13 165:5 217:22 262:22
details 25:13 32:7 73:12 98:3 201:18 257:7
determination 188:8
determine 25:1 158:1 173:20 202:7 310:9
determined 314:18,22 315:7
detract 162:13
detransitioned 198:21 199:4
develop 59:25 63:20,22 166:6 218:11,22 219:17
developed 104:24 195:14 202:3,13 202:18 205:8,17
developing 201:17 201:21
development 39:13,17 45:9,10 48:3 59:18,22 60:2,4 61:12,25 64:3,4 115:17 169:8 201:9,12 204:22 205:4

device 280:3
dhejne 254:17 255:2,2,3,5 256:1 256:5,11
diagnosable 21:1
diagnosed 89:4 179:4
diagnoses 144:5
diagnosis 20:21 141:13,14,17,18 180:2,4,6 188:22
diagnostic 20:20
diana 227:17
dice 242:1 245:10
differ 185:12 257:25 258:6
difference 64:24 72:18,21 106:17 106:20 169:6 216:19 241:3,4 252:25 254:1
differences 162:4 170:1,7 240:25 254:5 264:4 273:25
different 23:4,5 56:12 59:7 72:12 72:13 93:17,18,24 93:25 94:1 99:10 139:21,21,21 150:18 169:2,15 182:8 183:8 184:20,21,21,24 184:25 185:10,16 185:18 196:19,20 196:24 210:18 240:24 243:3,14 244:18 253:23 277:11,12,13 279:24 294:1 298:22 308:12
differently 283:10 283:13
differs 35:4
difficult 149:24 253:6 308:3
dilemma 125:23
direct 31:3 77:23 108:4 154:7 166:13 172:14 217:1 253:5 293:15
direction 110:19 178:20 313:12
directly 61:5 68:25 69:2 77:1 108:22 162:3 172:4 174:2 184:7 258:10 267:5 278:23 295:4
director 74:4,7 76:13
directors 289:7 290:1 294:21
disagree 195:9 248:14 295:21
disagreed 86:18 291:14
disagreeing 296:19,20,22
disagreement 83:4 83:21,23 84:4 86:7
disagreements 82:20,23 83:2 86:12
disagrees 264:9
discipline 79:12
disclose 82:25 134:21
disclosing 29:9 76:9
discount 293:19
discourages 175:13,19
discourteous 289:10
discover 116:17
discovered 267:22
discuss 32:2 161:12 198:23 304:21
discussed 119:11 174:25 220:17 269:5 302:25
discusses 167:4,7 168:18 172:19
discussing 188:13 306:17 307:9 308:11 310:14
discussion 167:10 167:17 168:8,21 171:2 172:24 173:7 232:14,15 291:13
discussions 285:20 285:22
disingenuous 282:21
disorder 101:21 101:22 107:15 141:18 211:12
disorders 41:13,19 54:5,13 55:12 90:23 92:11 96:16 101:11,17 102:6 117:6 141:23
displaced 85:14
display 157:15 165:7
disrespect 288:11
disrespected 292:4
disrespectful 288:11,13
disrupt 307:23
dissatisfaction 10:21 238:18 240:19
dissemination 284:21
distinct 189:15
distinction 150:17
district 1:1,2 2:1,2 13:10,10 262:5,6
diverse 88:17
divided 273:24
division 1:3 2:3 13:11
divorcing 307:4
doc 96:6
doctor 9:20 81:1,8
doctoral 40:10 44:3,5,10 47:15 55:1 130:24
doctorate 40:15 42:1,5,8,14 44:16 45:14 46:24 47:25 49:23 56:2
doctors 198:17 199:2
document 32:14 32:19,25 33:1,6,7 33:10,13,15,17,20 34:2,16,20,24 35:1 35:4,8,14,17 36:4 36:8,11 68:19 136:7 137:7 139:1 146:9 148:22 153:8 176:17,21 177:4,9 185:4 200:9 213:14 262:22 265:20 277:20

documents 29:17 31:13,14,15,19 32:6 69:12 156:7 156:8
doing 17:25 51:3,3 62:22 102:19 120:8 147:24 149:25 154:21 182:13,21 183:15 184:16 209:5,8,15 209:22 216:24 223:1 230:17 238:12
dominate 139:23
dominic 269:19
donation 73:1,7
dora 1:13 2:13 6:17 15:1 311:8
doreleijers 250:13
double 102:18
doug 116:25 118:6 119:2
downloaded 240:2 240:11
dozen 20:11,12 21:13 81:22,23 88:14 170:8
dozens 170:13 295:3,3,3,16,16,16
dr 13:7 15:25 16:14,17 20:8 28:13 29:2 30:20 30:23 31:4,6,17 33:5 34:2,14 35:7 35:9,14 36:25 40:25 58:7 72:2 96:10 117:21 122:6 137:21 146:5,12 152:2 162:18 166:18,22 176:18 187:4 190:6 191:9 194:4 194:6 196:12 197:19 202:1 205:20 206:11 208:11 212:14 219:11 227:13 230:14 235:10 237:9 242:5 250:22,23 262:17 263:8,19,22,22,23 264:1,7,15,20 271:14 274:15 275:3 284:3,11 300:18 304:21 305:10,23 306:7 307:18 308:11 310:5 311:19
draft 33:15 35:1
drafting 136:17 153:15 160:5 221:25 234:18
dramatically 59:24
drawn 237:2
drew 147:7
drugs 196:13,24
dual 66:11,20
due 123:24 145:8 231:2 252:9,9 283:21
dumb 147:14,19
dunsford 248:1
duphily 8:4 310:18
durwood 259:21
dutch 194:6,7,14 195:1,5,9,13,15,18 196:3 225:22 226:14 237:10,24 238:4 246:25 247:1 251:16,18 251:20,23 252:22 253:9,10,12,14,20
duties 66:7,9
dysfunctions 46:8
dysphoria 11:9 18:11 19:5 58:21 60:12,23 61:5,11 63:6 69:1 83:10 88:22 89:4,10 90:1 91:4 92:4,13 98:7,22 101:3 105:22 107:24 110:11 115:9,14 115:18 117:16 127:19 130:9 131:10,15,17,20 132:8 144:6,12 145:2 168:1,13,19 168:25 169:16,17 170:2,2,25 171:3 171:18 173:14 174:24 176:5 178:25 179:5,8,12 179:21 180:2,17 181:16 182:19 184:13,19 186:3 188:15,21 189:12 194:8 196:7 200:19 202:5 205:25 206:25 207:19,25 209:23 210:5 212:24,25 215:23 232:10,13 232:16 247:9 249:17 256:8 257:9,25 258:2,5,7 307:6 308:12,16 310:11,12
dysphoric 26:20 38:1,4,7 40:1,4 43:12 44:22 46:9 52:5,7 55:21 57:5 58:17 79:1 88:12 89:18 90:3 91:24 92:25 93:8 119:6 123:2 125:15 143:24 145:12 169:4,9 171:23 180:10 190:7,14 192:1 200:5 213:23,24 215:8 215:15 260:22 271:15,25 281:1 283:23 288:17

e

e 3:8 16:14,15 181:19 182:3 184:7 191:4 199:7 200:14 217:4 220:24 225:25,25 232:7,9 251:2 288:23 289:6 290:7,19,25 291:2 291:7,17,20 292:12 295:4,14 314:9,12 315:1 316:3,3,3
earlier 120:23 139:14 141:25 143:3 152:9 162:23 169:5 170:20 179:1,15 184:9 192:25 193:21 199:7 216:12 245:2 251:9 253:13 259:18 299:12 306:17 307:9 308:11
early 50:14,18 76:10,11 78:12 200:18 277:22

308:15,16,19 309:21
easier 278:1
easily 142:20 242:14 293:18
easy 128:16 285:1
eaton 235:20
edge 182:25
edited 231:3
editor 113:1,7,7 248:16,16,24 249:2,3,4
editorial 112:22 112:24,25 113:3 114:2 285:24
editorials 112:15 112:19 113:15,17
editors 100:4 113:3
educate 51:7
educated 144:20
education 1:10,10 2:10,10 4:3,5 6:16 7:3,5 13:9 14:25 15:3 36:24 37:1 37:12,13,24 39:6,7 39:24 42:13 43:11 49:8 52:15 180:19 220:14 311:8,12 314:4 316:1
educational 38:6 45:13,16,20 52:13 131:3
effect 209:8
effected 173:8
effects 60:18 115:16 209:14 226:24
efficiency 83:3
effort 25:16 97:24
efforts 60:10
eight 20:17 78:18 179:16,20,25
either 21:6 23:17 49:11 70:12 99:25 109:23 112:10 137:16 145:8 154:10 162:25 173:4 220:10 242:10 250:24 269:1 293:12 299:2
elect 51:18
electronic 266:16
element 215:3 268:22
elements 150:4 158:18 268:23
elevate 248:21
elin 248:2
elizabeth 5:9 14:6 41:8 53:10
ellipses 128:6,9 303:4,6
email 266:22 287:20
embarked 299:20
emotion 188:20
emotional 246:13
emotions 144:12 144:17 145:1,11
empirical 99:8 104:20,21 190:9 190:10
employee 86:18 313:16
employees 82:21 108:15
employer 79:13
employment 53:4 53:5 79:11 303:3
encompass 27:11 27:22 71:16
encompasses 92:12
encountered 185:11
encroaching 85:12
ended 71:8
endocrine 10:16 199:19 200:4,25 201:3,5,9,16,20 202:3,10,13,18 234:25 236:15 237:2
endocrinologist 80:11 179:2
endocrinology 235:14
endogenous 272:8 272:18
ends 60:1 311:19
engage 80:18 181:7
engaged 281:12
engaging 68:6
english 53:21 55:10,10
enjoy 37:5
enormous 290:2 291:12 294:23 295:1
ensure 77:20 102:25 281:11
ensured 29:14
ensuring 25:3 294:20
entered 200:6 269:15
entire 47:20 51:3 58:23 104:21 206:18 219:7
entirely 85:18 144:21,22 198:20 270:21
entities 181:23 182:5 217:5
entitled 106:22 113:22,24 187:6
entity 76:23 95:19 96:21 184:9 228:7
enumerate 280:9
environments 276:10,25 277:4,6
equal 243:15 272:1
equally 189:23 206:19
equipment 108:7
equivalent 251:23
ereinhardt 5:21
erotophobic 289:13
errata 12:1 265:23 265:25 314:14,16 315:3,5
error 94:25 95:1 193:23
errors 214:20 215:11 260:20 263:25
especially 95:4 129:11 171:13 309:21
esq 314:1
essentially 141:2 226:20 252:16 285:2
establish 16:20
established 99:13
establishing 276:9 276:18

estimate 44:25 208:8 216:22
estimation 138:18
estrogen 197:22
et 9:22 13:9 92:20 193:18 225:23 226:15 227:2 230:2 234:24 237:17,21 238:13 238:18 242:7 243:17 247:6 250:1 261:2 267:15
europe 181:21,23 182:5 195:21
eva 250:13
evaluated 301:24
evaluating 174:13 257:20
evaluation 12:3 181:10 182:14,24 202:10 205:19 267:15
evaporated 193:1
event 310:9
events 61:16 69:7 69:10 102:13 293:13
eventually 169:17 214:18 242:1
everybody 63:1 70:5,7 214:16 277:5 288:7
everybody's 311:1
evidence 90:25 91:1 184:5 191:16 192:25 269:7 273:12 304:2
exact 126:15 153:2 206:14 215:19
exactly 77:20 85:9 85:16 90:25 91:21 98:5 100:23 133:13 170:23 206:3 226:7 243:2 243:7 257:1 271:2 273:20 288:23 293:4,10,12 294:16
exaggerate 124:24
exaggerated 282:20
exaggerating 293:2
examination 9:2 15:23 306:4 310:7
examined 15:20
example 42:20 142:21 144:14 161:5 167:22 170:12 188:6 198:21 212:19 217:21 218:16,20 224:22 279:20 303:16
exceptions 281:5
exchange 232:7
exclude 24:12,18 24:24 25:10
excluded 25:20
exclusion 302:22
executed 35:7,16 138:13,25 312:11
execution 33:20 33:25
exercise 89:7,24 92:17 122:23 123:5
exhaustive 226:20
exhibit 9:12,15,18 9:22 10:1,3,5,9,15 10:21,25 11:6,11 11:15,20,24 12:1,3 12:7,10 32:15,16 34:11,12 136:8 137:4 145:22,25 146:3 155:15 156:21 176:10,11 186:21,24 190:20 190:21 193:11 207:13 212:15 225:13 227:8,9 230:9,11 235:5,6 238:25 239:1,7 243:23,24 245:23 247:13,14 250:6,7 254:10,11 259:12 259:13 260:24 261:23,24 265:16 265:17 266:10,11 268:3,4,7 269:14 274:9,10 275:5,5 286:14,16 289:1 290:18 291:23 302:9
exhibits 9:10 32:13,19 34:9
exist 212:19 231:11,12 281:5 282:23
existence 129:10 221:19 230:22 272:7,16 273:4,15
existing 43:21 45:12 99:5 108:1 145:15 158:19 174:14 219:14 223:23
exists 94:12 186:7 205:11 224:19 280:6
expect 170:14
expectation 218:23 219:17
experience 41:25 47:13 55:20 115:14 126:24 127:3,4 131:1 148:5,6 170:11 178:25 197:9 212:25 271:15 293:1
experienced 49:3 271:25
experiences 69:16 77:17,19 110:25 126:23 144:25 292:7
experiencing 218:10,20 219:16 308:16
expert 23:21,25 24:3,5,9 25:3,17 29:3 31:21,25 35:9,24 100:11 134:1 135:17,21 137:22 138:8 139:8 155:15,16 155:21,22 157:6 157:15 159:3 161:25 162:8 165:3,7 174:8 178:3 196:23 202:3,8,12,17 205:7,13,15,21 207:24 212:15 213:19 219:25 221:21,25 239:9 305:11 306:8,18 307:2
expertise 70:24 139:15 180:15

205:11,12 301:11
experts 49:2 100:4 100:8 148:2 201:19 263:3
explain 16:19 157:13 165:5 168:24 169:6
explained 172:14 244:14,20
explanation 44:17 105:3 170:7 219:12,13
exposed 147:25
exposure 148:9
express 203:20 280:9 290:11
expressed 225:6 290:8,12,13 292:3
expresses 284:4
expressing 107:23 215:23
extend 100:16
extent 134:2,4,15 224:21
extra 51:14,14
extraordinary 25:2,5
extreme 182:16 216:18 277:18 303:17,18
extremely 49:3 58:15
extremism 302:24
eyes 242:2,2,4

f

f 191:4
faced 241:5
facilities 226:10
fact 24:5 88:18 95:7,16 119:11 251:15 252:3 260:23 263:22 271:12 283:21
factor 143:21 248:22
factors 90:19 144:4 240:24
facts 160:15,15 171:14 224:1
fail 182:23 242:2
failed 225:19
failing 298:3
fair 17:14 60:22 67:11 93:14 94:21 103:2,5 104:11 109:22 112:12 113:18 146:22 149:12 150:25 155:20 156:20 158:14 164:4 173:19 178:21 191:25 195:5 196:10 199:5 206:3 214:10 224:10 229:11 232:18 236:5 238:7 241:6,22,24 242:3 252:21 253:22 273:14
fairly 253:20
fake 280:2
fall 75:25 160:15 308:17
false 242:21,25 279:22
fame 228:8,10
familiar 128:14,15 129:15,15 176:19 176:20 181:3 188:12 227:21 232:4 235:24 239:24 247:7 250:17,19 259:25 262:12 287:25
families 11:25 216:14 262:8
family 73:3,7 154:10 199:8 306:22
far 18:7 185:13 232:25 308:5
fascinating 111:10
fazio 89:11 95:25 96:2 97:25
fazio's 96:22,23 97:22
feasible 163:6
february 35:8,16
federal 315:1,8,9
feedback 100:9
feel 16:5 75:8 142:23 143:23 169:9 189:12 191:18,21 239:5 262:21 276:21 279:24 297:25
feeling 144:17 213:24
feelings 145:12
feels 295:19
fees 285:4,7,10
fellow 49:24 97:13
fellows 108:18 130:19
fellowship 47:12 50:1,2,21 51:9,19 52:3
felt 134:8 268:8 292:4,4
female 91:10 104:13 106:24 107:3 164:10 172:20 173:7,20 174:4,5 177:25 178:13 223:15 307:6
females 161:7
fetish 188:7
fewer 246:13,14
field 43:22 44:7 55:20 147:8 210:14 220:17 228:16 263:21 264:18,22 268:12 268:17
fighting 307:5
figuring 185:15 245:20
file 269:15
filed 13:9
fill 51:14
final 47:16 153:1 263:13 303:7
finally 74:3 109:11 132:25 291:25 292:17
financially 313:15
find 69:25 70:2 94:10 102:12 152:11 153:3 216:16 220:12 229:4 243:6,13 257:9
finding 75:4 99:6 99:8 226:11 246:20,22 249:19
findings 99:3 118:17 252:22 253:9 271:6 288:19
fine 16:11 82:17 103:15 128:15 199:15 247:22

finish 206:7,11
finished 41:24 90:9 263:14
fire 162:7
firming 255:23
first 9:22 20:14 23:24 33:8 74:25 88:16 94:24 97:20 97:23 105:17 115:12,21 119:10 119:11,12,13,15 120:25 123:12 126:24 133:3 134:12,23 137:17 147:1,6 149:2 177:1,23 213:25 215:24 216:3,10 222:2 230:22 253:25 263:3 270:8 275:18 282:23,23 285:13 289:9 302:20
fit 174:21 218:24 219:18 270:22
five 57:15 68:4 74:23 87:9 103:11 116:2,5 120:1 121:18 212:1
flat 243:6
flaws 157:16 165:8
floor 4:21 5:14 7:19
florida 11:24 262:6,7
fluctuate 74:17
fluke 242:15
focus 26:8,12,15 28:4 38:23 42:4 44:4 50:3,4,4,22 51:1,5 52:4 54:3,7 54:11 55:16 58:19 58:19 59:19 60:3 60:11,22 61:2,11 61:16 63:10 65:11 87:23 88:12 92:19 99:11 103:19 105:21 109:21 112:1 123:1 125:10 127:14 130:7,11 132:4,6 140:10 142:18
focused 26:2 27:5 37:15 39:9,18,19 42:15,16 43:7,13 43:14,24 56:16 63:17,19 64:6 65:6 68:12 98:10 109:22 117:15 121:5 150:2 232:15
focuses 90:22 92:24 98:15 102:5 125:5,14 127:18 142:16
focusing 177:3
focussed 48:3
folder 32:13,19 34:9
folks 117:15 149:21 187:21,24 188:4 246:6 248:6 250:17 252:4 296:24
follow 11:15 71:2 177:24 188:12 228:25 229:20 255:9
followed 251:10
following 115:13 155:23 177:18 178:9 218:9 263:18
follows 15:21 168:6 192:9 314:8
font 257:17
footnote 289:3,4 290:16,17 291:1,1
footnotes 213:11
forbids 164:9
foregoing 312:6 313:6,8,12
form 25:12,16,18 26:14 45:22,22 61:13 63:8 64:7 65:13 70:13 77:6 86:15 104:17 112:8 120:3 124:3 124:17 126:13 128:11,25 133:18 136:25 158:16 159:7,18 160:21 161:14 164:18 167:12 173:2,25 174:18 197:6 198:11,19 210:7 211:13 225:3 234:12 242:8 244:22 272:10 273:7 282:17 283:6,24 293:11 299:6 300:6,20 301:5,20 304:14 309:18 310:15
formal 20:21 37:13,24 39:7,24 41:7,18 42:13 44:12 52:15 68:20 81:13 84:1 140:17 141:13,14,17,18 181:24 301:16
formed 72:25 222:11
former 183:19
forming 199:20 251:19
forth 313:7
forum 287:17
forward 115:25 284:20 291:20
found 145:19 206:16 220:18 222:25 228:21 229:16 233:1 236:14 242:14 249:15 251:21 271:23
four 54:22 114:22 124:12 204:2 295:23 296:15
fourth 288:2
frampton 6:7 15:9 15:10,12
frcp 315:1
free 16:5 239:5 262:22 278:11,15
freedom 6:4 14:22 15:12 134:24
french 53:19,23 55:4
frequently 45:11 126:7 269:3,4,5,8 269:12
friday 30:17 31:8 31:9
friend 1:6 2:6
front 34:18 53:3 86:25 125:19 193:10 306:19
frontline 62:22
full 47:21 52:15 55:12 111:25 199:20 257:18 271:9

fully 271:22
fulsome 188:23 189:10
function 48:3 115:12 196:15,16 226:17 249:15
functioning 10:25 11:8 76:2,3 172:6 209:18 243:18 247:8 251:22
functions 55:11 66:22
fundamental 209:16 263:25
funded 108:3,4,22 108:22
funding 108:5 109:1 114:13,15 114:23 115:5 117:19
funds 115:7 116:1 116:5,8
funny 121:4
further 115:21 248:25 262:22 267:23 305:24 313:12,14
future 114:3,8

g

gain 110:24,25 248:24
game 242:15
gamut 61:23
gap 40:14
gay 89:14 187:20 187:24 188:4 189:18 190:3 262:20 264:5,11
gender 10:7,9,16 10:23 11:2,9,13 18:11,13,19 19:3,3 19:5 22:12,21 26:20 38:1,4,7 40:1,4 43:12 44:22 47:20 48:7 49:16 52:5,7 55:21 57:5 58:17 58:21 60:12,23 61:5,10 63:6 68:25 79:1 83:5,5 83:9 87:24 88:12 88:17,22 89:4,10 89:18 90:1,3,18,22 91:4,23 92:4,8,13 92:21,22,25 93:8 95:6 96:16 98:7 98:21,21,22 101:2 101:13,17,20 102:5,14 105:22 107:15,23 109:18 110:11 115:8,14 115:18 116:24 117:3,5,15 119:6 123:2 125:15 127:1,19 128:2 130:8 131:10,14 131:14,16,19 132:8 143:23 144:5,12 145:1,12 161:2 168:1,18,24 170:1,2,2,25 171:3 171:18,23 173:14 174:11,24 175:9 176:4 178:25 179:5,8,11,21 180:2,9,17 181:16 182:19 184:13,19 186:2 188:15,21 189:12,14 190:7 190:14 192:1 194:8 196:7 200:5 200:5,19 202:4 205:25 206:25 207:19,25 208:12 208:19 209:23 210:5 211:12 212:23 213:22,24 215:8,15,23 226:24 227:4 228:22 229:9,17 230:3 232:10,13 232:16 233:2 234:25 238:19 243:19 247:9 249:17 250:3 255:23 256:8,13 256:17 257:9,10 257:25 258:1,5,7 260:22 271:15,25 281:1,19,22 282:16 283:3,23 288:17 292:2,19 299:12 303:1,13 307:5 308:12,16
genders 162:5
general 3:14 4:4 7:4 11:3 54:3 56:10 79:22 106:18 124:11 153:13 154:17 161:3 166:8 177:19 184:22 186:6 243:20 256:13 257:11 277:4 281:7 283:8 307:1
general's 14:19 133:9
generally 75:6 80:15 82:18,19 83:1 111:24 112:6 140:15 154:1 185:12 187:19 188:12 210:14,15 211:6 241:3 282:25 293:23 308:24
genitalia 273:4,15 274:1
genuinely 293:21
gestation 59:24
getting 38:22 74:3 85:14,22 120:24 150:4 216:13 237:8
gibson 267:14 269:18,19
girl 175:6
girls 174:9 175:8 222:12 223:5 273:22,24,24,25 304:12
give 32:22 66:16 124:22 125:2,9 129:5 145:23 146:17,23 148:16 151:8 153:12 160:12 186:21 206:22 208:5,8 215:2 217:22 270:7,10 285:9
given 23:21 68:2 81:11 123:13 127:21 149:19 156:17 214:23 240:24 268:11,11 311:19
glad 32:11
glaring 94:25 95:1
glazier 269:19
global 251:22
go 20:13 21:21 24:20 32:12 34:8 50:6 57:21 58:5

81:15 88:15 89:6 89:6,21,24 93:11 94:8,16 95:21 97:2 105:4 121:20 122:4,23 128:20 143:17 151:16,24 152:19,19 153:8 154:18 171:21 206:1 207:1,20,25 212:4,12 233:24 255:3 259:4 272:8 272:18 274:16,25 276:8,17 280:14 280:22 281:2 291:17 304:25 305:8 306:16 310:18
goes 93:20 159:25 160:23 173:15
going 18:9 25:7 32:13 35:2 39:5 57:13,23 60:8 70:7 82:24 85:4 90:14 107:21 121:22 122:23 134:17 145:21 148:4 150:10 151:17 154:3 156:21 160:12 165:2 176:8 177:3 185:5 186:20,21 190:18,19 199:13 212:2,5 215:25 216:1,15 217:15 219:6 227:6 229:1 230:8,9 235:4 243:22 247:12 250:5 254:8 255:3 259:10 261:21 265:15,22 266:9 268:1 270:21 274:8,18 279:21 282:2 285:20 286:13 287:7 288:23 291:21 299:21 300:12,14 302:7 304:19 305:1,10
gonadotropin 200:7
good 13:4 14:4 15:25 57:20 103:16 121:19 151:14 199:16,17 212:1 274:13 284:8 288:6 292:21 296:6 304:19
goodness 139:20 214:4 277:16 306:15
gotten 79:18,20 82:16
government 161:15 182:4 184:8 217:4 257:1
governmental 177:10 181:23
graduate 38:12,24 39:3 96:3
grant 108:8 118:2 119:7,8,9,18 120:7
granted 115:22
grants 114:19 119:23
great 16:19 17:10 17:24 18:7 19:2 19:13,17 28:24 29:6 30:21 32:11 33:3 34:1,20 35:20 36:23 41:2 41:20 50:20 52:3 53:25 62:11 64:18 68:14 80:7 87:2 88:25 89:21 90:12 93:10 97:1 100:25 107:22 115:19 119:22 123:5,8,11 146:7 152:9 173:12 176:17 177:8 187:3 190:25 205:23 218:8 220:2,5 225:11,15 227:15 230:7 235:3,12 246:1 247:25 250:11 251:17 254:17 259:17 260:15 262:4 263:2,15 268:12 268:21 269:17 270:1,13 275:1,8 275:14,23 286:22 291:7 302:14 303:12 305:15,21 310:19
greater 255:24
greatly 307:22
green 3:6 15:5,5 230:1 231:8,24,25 233:13 311:3,3
grossly 84:9
ground 16:19
grounds 25:9
group 48:14,21 50:9 67:4 167:24 171:15 237:10,15 237:25 238:14 240:23 252:6,12 253:20 255:24 256:4,7,21,25 309:10
groups 165:21,22 171:16 217:15,18 242:17 309:2
grow 187:7
growing 153:19
guess 24:23 185:8 202:11 215:13 223:4 294:17 296:13
guesses 144:20
guidelines 199:20 200:4 201:10,13 202:4,10,14 289:20,24

h

h 16:15 47:10 316:3
h.b. 155:25 157:12 158:15 163:21 164:7 167:11,18 168:4,9,22 169:1 172:25 173:8,19 174:15 175:12,19 176:3 177:12 178:4,8,12,15,18
hal 6:7 15:12
half 47:19,21 88:14 100:24 140:9 148:8
halvorson 8:7 13:14
hand 263:12
handed 96:17
handedness 89:13
handful 186:7,11
handled 86:8 314:8
hands 239:11
hang 90:14 244:1
happen 21:5 100:12 138:10

happened 25:16 60:19 61:17 85:2 132:3 204:11 291:13
happening 84:8 181:20 195:21 245:21
happens 60:16,17 80:21 209:10 268:24
happy 17:11 80:7
harassing 289:12
hard 44:25 59:21 202:6 303:17
harrison 1:10,14 2:10,14 6:16 14:25 311:8
hartnett 5:5 14:2,2
hateful 289:12
head 18:3,4 62:6,8 62:12 63:5,18 64:10,22,25,25 66:13,20,21 67:3,8 67:10 131:7 233:25
heading 225:15
health 10:5,17,22 11:20 47:2,4 59:3 59:6,13 67:9,10 73:4 75:23 80:24 81:3 202:22 203:2 227:2 232:21 235:1 238:19 240:20,24 246:9 259:19 260:25 265:23 281:18
healthcare 18:10 80:16 249:22 283:16 299:15 300:2
healthy 80:17 171:24 276:10,24
hear 40:23,25 134:14 292:6 308:3
heard 29:19 171:10 182:6 189:2 255:2 297:1
hearing 306:22 307:19
heather 1:6 2:6 4:4 7:4 13:8
held 13:13 79:12
help 33:15 35:1 70:19 110:12 127:5 171:13 176:21 181:19 194:19 218:24 219:18 276:21
helpful 44:15,16 155:14 260:6
hereto 32:17 34:13 146:1 176:12 186:25 190:22 227:10 230:12 235:7 239:2 243:25 247:15 250:8 254:12 259:14 261:25 265:18 268:5 274:11 286:17 312:9
hesitate 63:9 71:7 99:21 104:18 112:9 152:15 205:10 256:23 270:20 291:10,11
hesitation 128:16
heterosexual 91:14 264:7
hframpton 6:13
hi 14:2
higher 66:18 257:10 271:16 272:2
highly 139:22 142:6 169:9 228:2 228:7,15 232:22 248:12 268:18 275:17 289:19
hipaa 71:19 76:9 151:2
hiring 108:6
history 36:24 53:4 53:5 114:13 150:3
hit 274:12
hold 23:14 62:12 202:2,11,16 205:7 260:13
holistically 61:11
holsterom 5:11
holt 248:2
homophobic 289:13
homosexual 91:15 262:18
homosexuality 90:18,23 143:19 143:20 144:8,24 145:9
honestly 293:25
honesty 292:8
hope 218:12,22 219:17
hopefully 53:3
hormone 10:10,23 79:6 82:4 115:13 115:16 197:23 198:3 200:7 230:3 238:6,20 240:18
hormones 80:1,10 82:12 132:18,23 185:19 194:13 197:20 198:8,11 198:14,18 199:3 233:2 237:12,16 238:1
hospital 41:7,9 52:2 53:10 54:16 55:11 66:11 70:3 70:4,10 71:5,8 72:12 73:1 83:7 83:12 84:6,16,18 84:20,21,25 85:13 85:13,17 86:5,8 183:16,18
hospital's 108:25
hottub 303:5
hour 17:17 57:14 85:11,11 103:9 150:2,7,10 199:14 212:2
hours 85:12
housing 303:3
huh 100:2 115:15 182:11 237:20
human 43:14,17 43:24 46:1 56:21 56:22 59:18 60:6 75:22 76:1 87:21 87:22 116:23 122:15,17
humans 105:14
hundred 210:23 211:3,4,17 296:13 296:14
hurricane 6:10
hurt 292:4
hutchens 4:4 7:4
hypersexual 64:1

hypersexuality 64:6 65:7 90:1 140:12,14,19 141:2,5
hypothesis 209:3,4 209:7,18 219:19 219:22

i

idea 156:16,18 182:10 208:5 222:21
ideas 278:6
ideation 236:16 237:4
identification 32:16 34:12 145:25 176:11 186:24 190:21 227:9 230:11 235:6 239:1 243:24 247:14 250:7 254:11 259:13 261:24 265:17 268:4 274:10 286:16
identified 93:10 104:15 143:18
identify 13:18 15:10 58:20 143:13 177:10 180:9 206:1 207:1 207:20 208:1 211:5 229:4 230:15 266:17
identifying 143:21
identities 11:22 58:16 92:12 98:15 101:2 111:25 117:16 127:1,18 132:7 259:20 265:25
identity 18:14,20 22:12,22 47:20 48:7 49:16 87:25 90:19,23 92:8,22 95:6 96:16 98:21 101:13,17,20 102:5 107:15 109:19 116:24 117:4,5 143:6 161:2 174:11 175:9 180:12 189:14 200:17
ideological 191:15
ignore 276:6
ignoring 281:10
ii 175:7 200:6
illinois 21:4,12
illness 21:1,20 66:1 73:10
imagine 202:6 270:25
imaging 115:17 116:22
immediately 41:7 295:4
impact 10:15 166:11,14 176:2 234:24 248:22
impacted 168:3
implants 279:23
implications 298:25 299:2
important 245:22 248:23 300:9
importantly 292:1 292:18
improve 165:16 166:9
improved 236:16 237:4
improvement 192:17 226:8,12
improvements 226:16 237:6 240:20
improves 166:23 167:1
inappropriate 289:11
inaugural 72:19 72:22,24,24 73:23
incident 298:13
include 28:1,3 43:17,19,20 63:13 63:24 95:9 101:13 140:11 153:4,21 153:22 160:24 213:9 222:10 229:10 249:19 275:14
included 26:10 27:1 28:17 43:15 45:3 46:2 63:10 158:4,22 186:4 205:18 222:5 224:13,17 251:25 267:19 276:22 292:11 314:14 315:3
includes 78:1 101:15 111:4 220:6
including 29:14 108:12 116:23 170:9 222:23 237:10 281:20 290:13
inclusive 276:9,13 276:18,19,20
incomparable 150:14
incongruent 200:5
inconsistent 158:18,22
incorrect 193:19 260:18
increase 107:22 153:17 248:19
increased 249:15
increases 214:1,7 258:13,19,22 259:1
increasingly 276:1 276:4
independent 45:17 98:24 119:16
independently 30:2 261:10
index 9:1
indiana 146:10
indicate 162:14 196:19 271:18
indicated 241:17
indicates 273:12
indicating 20:24 81:17 192:16 217:13
indirect 109:1 221:10
indirectly 63:13 89:11,12 90:17,19 90:22 108:22 116:19
individual 29:13 48:13 110:11 111:1 143:13 145:10 154:4 217:11 272:17 308:15,17
individually 20:14
individuals 23:18 26:1 48:21 50:8

58:9 67:7 84:12 86:19 89:3,3,9,10 91:5 93:1,8,8 101:16 119:6 131:4 144:11,17 144:25 171:23 211:9,17 232:5,11 235:25 239:25 283:22 296:2 307:11,13
induce 181:9
inform 104:14,19 292:24
information 70:18 76:9 82:25 85:5 92:12 101:16 134:3 148:17 158:9 161:20 172:7,8,15,16 173:12,16 181:18 182:4 217:5 264:24
informative 111:10
informed 133:4 197:2,6 198:7,10
informing 287:21
informs 104:22
initial 120:9
initialed 312:8
initially 96:22 226:7
initiated 99:24
initiator 81:10
injunction 35:11 136:10
ink 312:8
input 49:8 102:11 102:15
inside 186:5
instance 265:9
instances 22:2 283:4 307:10
institute 9:18 37:2 73:4 146:9 161:16
institution 48:1 72:25
institutions 275:25
instruct 17:6 134:17
instructions 248:17
instructors 49:7
instructs 16:23
instruments 68:21
integrate 158:11 161:16
intelligence 42:21 42:22
intended 209:8
interact 139:24 142:7 210:23
interactions 248:15
interdisciplinary 37:8
interest 20:25 135:24 136:1 139:23 142:6 178:5,8,12 188:1 188:11 309:11
interested 134:8 135:17 145:16,18 188:3,3 313:15
interesting 126:10 242:23
interests 46:9 177:10,19
interfere 55:13 142:7
intern 49:18,19 57:10 59:2,9,10
international 235:14
internationally 196:3
interning 49:20
interns 68:24
internship 47:16 47:19 48:6 49:22 96:4 147:23 148:3
internships 67:25
interpreted 258:12
interrelate 63:12
interrogatories 9:23 177:1
interrogatory 177:8
interrupt 35:3,3 307:17
interrupted 295:11
intervals 120:22
intervenor 1:18 2:18 6:3 15:13 155:7,9
intervenor's 155:4 156:5
intervenors 14:22
intervention 10:17 234:25 236:15 237:3 252:10 279:11 280:1,3
interventions 238:6 278:20 279:8,12,16 280:6 280:11
interview 9:18 69:11 146:11,15 146:19,20 155:6
interviewed 69:14
interviewing 69:14
interviews 146:17 148:14,17
introduce 32:13 34:10 145:21 176:9 186:20 190:19 227:7 230:8 235:4 238:24 243:22 247:12 250:5 254:9 259:11 261:22 265:15 268:2 286:13 302:7
introducing 275:4
introduction 270:8
introductions 13:24
introductory 213:13
invasive 289:16
investiga 181:24
investigation 144:20
investigations 181:24 216:15
investigator 114:22 115:3 119:1
investigators 119:2 120:7
invitation 100:3 100:17
invite 100:4
invited 100:13
involve 25:22,25 63:5 69:3 79:1 121:1 131:23

132:11,17,20,22 285:18
involved 79:8 117:13 118:5,7 121:7 149:5 150:23 162:3 201:8,12 204:21 205:3 250:21 277:25 284:23 300:15
involvement 118:8 133:2 202:1 223:13
involving 307:2
inwards 227:18
ironically 302:21
irregular 188:24
irv 56:14,17,19
ish 151:12
isolation 218:11 218:21 219:16
issue 46:6 70:23 83:15,17 96:21 110:13 163:6 178:22 252:3,6 283:21 284:4 292:3,19,20,25 294:3 296:21 297:6 298:5 301:9 307:1
issued 12:1 265:13
issues 21:22,24 22:13,22 26:5 45:2 46:9 48:4,25 49:1,3 55:13 58:16 65:17,18 69:3,5,6 75:9 83:5 83:9 88:22 89:17 91:4 92:24 101:13 103:23 104:15 131:19 132:2,8
161:20 269:6 277:17,17 288:16 293:2,24 307:25 309:22
italiano's 106:7
item 303:7
items 177:22
ix 177:24 178:9

j

j 16:14 88:18 109:14,17 129:21
jackson 1:6 2:6 13:8
jama 228:5,6,9,12
james 1:20 2:20 9:3,12,15,20 13:7 15:19 16:14 146:12 312:5,16 314:5 316:2
jamescantor.org 12:8 275:11
january 66:4 187:12
jblock 7:21
jeffrey 6:19 14:24 311:7
jeffrey.cropp 6:24
jenifer 250:12
jennifer 235:20
jensen 31:17 202:1
jessica 269:19
job 1:24 41:15 314:5
jobs 41:14
johansson 255:6
johnson 6:18
johnson.com 6:24
joined 284:24 285:13
joint 307:4
jokes 289:14
jonah 231:25
jonathon 227:17
josephson 22:3,5 23:4 139:10
josh 14:12
joshua 7:17
journal 99:22,23 99:24,25 100:12 113:2,5,8,21,24 114:3,4,5,8 228:1 228:4,12 232:21 235:14 240:5 246:9 248:9,11,16 248:20,20,23 249:1,6,8,10,11 251:8 285:24,24
journal's 248:21
journals 114:10
julie 5:10
july 115:23 116:7 116:9,10 191:6,7 192:4,6,7 251:7 290:21 302:15
june 33:25 35:11 54:23 116:11,12 136:11,17,20 137:13,25 138:14 138:25 139:9
justified 175:13
justin 146:18
jveroff 5:22

k

k 56:17 97:10
kagay 1:23 2:24 13:16 313:24
kang 5:7 14:8,8
katelyn 5:7 14:8
kathleen 5:5 14:2
katie 259:22
keep 74:18 152:19 153:7 199:13 298:24
kelley 6:6
kelly 4:7 7:7 15:2 311:11
kettenis 250:14,22 250:25
khartnett 5:17
kibblewhite 107:13 108:19
kid 78:23 123:15 123:15
kids 78:4 116:15 123:17 167:4,8,18 167:20,20 168:7,8 168:10,10,16 186:8 187:7,17 191:18,20 192:17 205:25 206:25 210:5 226:9 229:5
kim 227:19
kimberly 235:20
kind 21:18 68:5 108:6 114:7 146:19 150:5 166:13 173:16 189:3,9 201:15,19 208:4 216:25 233:18
kinds 82:23 99:10 173:17 183:9
kingly 28:10
kinsey 9:18 146:9
kkang 5:18
kmorgan 4:12 7:12
knew 95:3,5 297:2
know 17:11 24:25 27:8 32:21 34:15 42:25 55:19 66:6

68:23 71:18 72:17 75:24 76:5 77:21 77:22 82:16 83:2 84:16,23 100:10 100:18 101:7 104:1 110:13,22 110:24 121:12 129:14 135:15 137:22 148:1,16 152:17 154:5,19 157:1 160:4 161:17 162:19 163:5,7 164:23 166:24 172:1 175:24 176:15 181:18 183:5 185:6 186:10,13 197:13,19 198:17 198:22 201:15,25 202:20 203:1,13 203:16 204:12,25 206:18 207:17 213:14 215:25 216:2,4 217:17,21 222:21 223:13 227:12 228:14,16 228:18 230:22 232:25 235:9 244:23 245:2,3,9 246:6 248:6 254:14,25 257:8 261:17,19 262:2 262:14 263:4,14 265:20 269:2,8,14 273:23 275:6 280:2 286:19 288:23 289:25 292:11,22 293:20 294:25 295:14 296:9 297:3 299:11 301:6 303:23 306:9

knowledge 25:8 56:24 84:15 110:25 156:15 166:13 183:17,21 199:2 203:8 216:9 217:2 222:19 223:14,14 228:20 232:23

knowledgeable 58:16

known 37:3 47:6 73:4,6 98:21 99:2 99:19 130:4 148:2 183:23 193:21 206:16 207:22 221:19 264:24 268:11,16,18 284:25

kristina 259:21 267:6 268:10 269:19 270:1

kuper 238:17 239:14,18 242:6

l

l 16:15

lab 49:8 120:18

label 298:21

laboratory 85:10

lack 128:7 265:5

lacked 252:6

lai 117:1

lainey 1:17 2:17 155:9

lamb 263:22

lambda 4:15 13:22 13:23 14:1 16:3

lambdalegal.org 4:23,24,25

landén 255:6

lane 235:21

langhofer 6:8

language 42:4 281:21 282:15 283:2,20

large 73:1,7 129:24 181:20 206:13,21 207:7 284:25

largely 73:16 150:1 285:21

larger 186:5 214:20

largest 83:4 129:25 194:8

late 46:15,16 50:18 76:12 192:12 309:25

latest 193:11 203:8

lau 239:19

laura 239:18

law 3:7,16 4:8,19 5:12 6:9,20 7:8 59:3,6,13 67:9,10 71:22 162:13 166:9 172:4 174:1 174:6 175:2 261:18 264:16

lawmaker 161:23

lawrence 130:1 170:20

laws 71:19 151:2

lawyer 164:1,3 174:19

lawyers 69:22 133:4,6

lay 109:18 301:7

layperson's 300:24

lead 85:17 131:13 131:19

leading 293:13,14 293:14

leads 268:20,22

learn 133:3

learning 42:20 44:5

leave 83:12,22 85:17 86:9

leaving 83:6 114:2 184:16 224:4

led 149:8 273:23 288:21,22 298:13

left 75:22 84:1 89:13 96:17 128:7 257:18,19 263:12 304:21

legal 4:15 13:22,23 14:1 16:3 80:20 134:17 149:9,14 149:22 158:10 159:21 311:21 314:7

legitimately 94:14 281:4,4

lehmiller 146:18 147:2 148:23 149:1

length 251:17

lengthy 263:12

lesbian 187:21,24 188:4 189:25 264:5 307:3

letter 80:14,23 81:5,17,20 82:2 106:5,5,14,15,16 106:19 107:7,18 225:9,16 298:1

letters 81:24 105:6 105:10 106:3

109:12 224:22
level 38:12,24 44:5 44:10 45:14 62:22 130:25 301:11
levels 271:16,25
libelous 289:16
liberties 7:16
licensed 79:3,5,24 80:4,16
licensing 180:19 180:20,21,24
lichtenstein 255:5
life 60:16 69:8 139:24,25 142:8 169:11 175:14,21 236:17 237:5 306:15
lifespan 51:4 58:23
lifetime 109:23
liked 298:7
lily 259:21
limit 103:2 282:22
limited 26:10 91:25 112:3,3,5 150:1 172:1
lindsay 8:4
line 17:19 147:5 147:20 287:24 306:24 314:15 315:4 316:4,7,10 316:13,16,19
list 53:3 87:3 88:25 89:22 90:15 105:5 112:14 114:15,19 130:17 130:22,24 152:19 153:7 204:6,8,10 207:16 220:6,19 221:16 222:5 223:22 224:5,13 224:17 226:20 291:13 295:5,6 303:3,7
listed 31:20 41:6 41:21 88:1,13 89:2 105:19,19 113:15 114:13 122:21 123:12 125:18 130:20 177:22 207:11 224:2,2
lists 122:10
listserv 285:22 286:3,5 287:22 288:5 290:10,12 291:9,15,18 292:5 293:9 295:2 296:7 296:8,9,12,16,20 296:25 298:14
listserv's 289:20
listservs 294:1
liter 222:21
literature 29:16 29:21,24 101:8 104:21,21 105:1 129:24 152:11,17 153:4,14,18,25 169:13 198:16 201:16 222:17,20 222:21 223:20 230:16 266:17 270:22 303:24
litigation 23:22 155:24 156:1
little 17:2 32:23 44:25 45:4 54:22 59:21 60:14 91:18 93:12 98:19 121:4 184:16 189:20 202:6 308:3 309:5
live 143:9 166:11 281:20 282:16 283:3
lives 48:15 165:17 166:12,23 167:1 278:24
living 48:15 145:20
llp 14:3,7,9
load 32:24 176:14 268:8
lobaugh 117:9 119:3
local 53:20
locate 266:21
locked 314:12 315:1
locker 303:4,6
long 11:15 35:21 40:11 85:24 87:7 87:15 105:9 112:18 113:10 161:9 221:9 255:9 276:8,17 285:14 292:4 293:13 300:15
longer 61:16 84:10 98:11 192:20 217:11 249:5 287:15 294:2
longitudinal 10:15 234:24
look 33:8 60:15 68:11 75:12 107:11 122:24 123:12 195:24,25 200:10,12,14 218:8 241:20 247:25 250:11 257:18 266:9 271:20 279:23 285:16 286:10 290:15 291:22 305:11
looked 204:6
looking 17:1 60:18 60:20 75:18 80:16 88:25 97:22 176:19,20 189:11 203:18 222:9 239:9
looks 79:19 118:25 119:22 122:20 236:2 246:2 290:19
lopez 239:19
losing 294:22,25
lot 36:20 49:1 68:8 74:17 146:17 268:18
loud 288:8
loudest 210:17
loudoun 22:16
love 53:4 115:20 146:23 205:20
lower 228:23,24 229:18,20 233:3 260:24 285:13
lowering 195:23
luck 147:15,19
lunch 151:15 152:3,4
långström 255:6

m

m 1:20 2:20 5:6 6:19 9:3,12,15 15:19 16:14,15 47:10 117:9 312:5 312:16 314:5 316:2
machine 313:11

madeleine 259:21
magnetic 115:17
maia 4:18
mail 181:19 182:3 220:24 232:7 251:2 289:6 290:7 290:19,25 291:2,7 291:17 292:12
mailing 184:7 295:4,14
mails 199:7 217:4 232:9 288:23 291:20
main 139:14 158:24
mainstream 269:11 277:17
major 38:23 254:6
majority 55:15 191:17,20 206:13 206:21 207:7 212:23 240:25
majors 38:24
maker 81:7
making 158:12 214:19 234:20 268:19 277:18 279:5
male 91:10 106:24 107:3 161:5 164:8 164:9 174:4,5 223:15 272:9,18 273:5,16
males 104:12
mallar 117:8
man 109:13,16,25
manuscript 97:18 221:2
manuscripts 248:20
march 1:20 2:23 13:1,5 33:22 277:21 313:19 314:3,5
marco 248:3
marcus 255:5
marginalized 292:5
marked 32:13,14 32:16,18 34:8,10 34:12 136:7 145:22,25 176:9 176:11 186:21,24 190:19,21 227:7,9 230:9,11 235:6 239:1 243:24 247:13,14 250:6,7 254:9,11 259:11 259:13 261:22,24 265:16,17 266:10 268:2,4 274:9,10 275:4 286:14,16 302:8
marks 235:5
massachusetts 5:15 306:23
master 39:1
master's 38:14,16 38:22 39:6,8,25 40:16
masters 130:25
match 18:20 65:3
matched 257:4 288:20
matches 18:14
material 30:7,7 51:15 124:20
materials 30:3 156:12
math 215:8,12
mathematics 37:9 214:13
matter 13:7 16:8 38:25 89:15 135:23 262:9
matters 27:22
maturing 196:21
maximize 70:19
maxine 49:10,12 58:12 129:22
mccuskey 3:5
mcgill 42:10,12,17 43:8,12 45:19 46:19 55:24 56:24
mcguire 250:12
mclaughlin 259:22
mean 18:13,19 19:1,9,11 24:25 45:16 46:14 52:12 52:12,16 66:24 71:14 72:22 77:18 81:11 89:12 91:24 93:24 102:15 116:8 124:23 130:18 143:25 147:18 165:19 180:19 181:6 183:1,18 184:19 185:22 187:25 188:10 189:5 213:10 214:2,14 214:21 215:1 226:6 231:16,17 231:19 243:9 244:23 254:21 265:7 276:18,19 276:25 277:12 279:18 280:4,4,9 295:17 299:13 300:12
meaning 185:6 229:2
meaningful 110:9 216:20,21,22
meaningfully 232:6 252:24 253:1 282:23
means 61:1 162:16 243:5
meant 127:5 185:5 185:7 231:4 239:3 283:10 286:5
measure 248:23 253:5
measures 241:17
measuring 166:16
media 13:6 57:24 58:4 75:14 121:23 122:3 151:18,23 181:20 199:9,9 212:7,11 216:14 217:10,19 218:1 241:1,5,7,8,9,11 241:12 269:6,10 269:12,12 274:19 274:24 278:3 305:3,7 311:20
medical 19:4,9,11 20:6 48:14,21 50:8 69:19 79:3 80:13,15,18 81:1,8 81:16,18 154:15 154:18,23 192:19 192:21,22 197:16 209:2 214:9 216:25 228:2,12 229:6,10,18 246:24 249:23,24 252:9 256:19 278:20 279:8,11 279:12,15,25

280:3,12,23 281:2 281:9,11 309:24
medically 181:9
medicine 63:7 248:9,12 249:8,11
meet 30:5,23 31:6 75:17
meeting 30:17 123:20 124:2,16 125:24 126:3,13 126:14,18,19 127:8,11,13,25 128:12,22,24
meetings 126:5
megha 117:8
member 72:19,23 72:25 73:23 134:23 167:24 204:16 284:16 285:10,14 286:2
members 113:4 167:23 199:8 276:2 286:5 290:5 290:21 291:19 292:2,19 295:21 296:4,7,11 298:16
membership 285:7,18,19 290:9
memory 41:13,19
men 188:13 198:2 309:12
meng 117:1
mental 10:5,17,21 11:20 21:1,20 47:2,4 59:3,6,13 66:1 67:9,10 73:4 73:10 75:23 80:16 80:24 81:3 227:2 235:1 238:19 240:20,24 249:21 259:19 260:24
265:23
mentally 80:17 171:24
mention 97:5 101:10
mentioned 21:14 22:17 24:17 29:18 45:8 50:22 58:15 62:3 96:15 98:14 99:5 100:19 101:1 102:2,4 111:1 119:5 129:21 140:21 144:7,7 149:18 169:20 170:20,24 182:24 186:11 193:3 199:7 213:16 217:6,21 234:4 238:13
merely 160:16 162:13 217:16 224:21
meritorious 157:10,19 158:2 159:15 160:7 165:11
messages 289:18
met 30:6,14,16 111:20 154:6 246:7 250:24
method 72:13 194:10 196:5 238:9,10,11 242:18 252:8
methodological 262:17
methodologically 233:15
methodology 44:7
methods 118:11 148:24 181:8
221:10 243:13
mic 307:22
michael 16:14 109:14,17 111:18 129:21 248:1
middle 17:19 191:12 203:10 264:22 288:1 302:18 308:25
midlife 169:13
miesen 243:17 244:2 245:24 246:2 253:16,19
mikael 255:6
millon 100:14
mind 25:4 93:11 129:18,23 130:1 143:20 144:2,4 188:24 209:2 210:18 222:25 309:16
minds 164:21 165:1
mindset 271:1
mine 97:13
minor 83:2
minority 213:22 215:7,15 269:12
minors 200:17
minute 50:6 57:15 57:19 103:11 121:18 145:23 212:1 304:23
minutes 199:14 212:3
misapply 172:2
mischaracterizing 94:17
misconstruing 145:11
misinformation 171:14
mispronounced 117:10
mispronouncing 235:19
misrepresent 93:19
misrepresented 245:5 269:11,13
misrepresenting 293:2
missed 77:21
missing 195:12 266:6
mission 298:4
mistake 144:11 145:1,9 216:4
mistakes 215:11
misunderstanding 67:15
misunderstood 24:1 27:20 137:1
misuse 85:16
misusing 84:6,16
mix 111:3
model 251:20
moderate 228:23 229:19 302:24
modest 240:20
moment 32:24 33:5 36:19 78:12 87:2 146:23 156:25 176:14 177:5 186:22 194:23 257:21 270:10 309:14
monday 1:20 2:23 13:1
money 85:20 120:12

monitoring 197:10 197:13
month 228:25 229:20
months 124:12 133:13 135:1,4,5 136:6,15 138:11 138:12,16 150:11 231:2 249:16
montreal 53:11,20 54:17
moot 188:9,10
morbidities 258:23 259:2
morbidity 258:14
morgan 4:7 7:7 15:2,2 311:11,11
morning 13:4 14:4 15:25 152:9
mortality 258:14
mother 1:6 2:6
motion 35:11 136:10,10
motivate 143:8,23 143:25
motivated 83:6 144:13
motivatives 91:9
motivator 91:8,22
motivators 189:11
move 86:24
moved 59:3
mri 106:22 107:2 117:14
multiple 110:5,6 143:12,12 144:3
myeshia 231:25 232:6
mzelkind 4:25

n

n 16:15 56:17
n.r.g. 262:9
naivety 38:21
name 13:14 16:1 16:13 21:6 41:7 41:18 56:15,20 67:8 97:20,22,23 129:19,25 170:15 182:16 185:17 193:8 196:14 201:24,25 211:5 254:22 255:1 272:25 313:18
names 129:20 153:24 186:10 193:9 274:3 296:1 297:3
nancy 117:8
narrow 202:9
nasty 289:10
natural 57:14
naturally 17:17
nature 20:19 22:20 45:6 85:9 113:24
ne 6:10
necessarily 46:2 80:21 217:11
necessary 165:16 314:14 315:3
need 16:5 17:5,16 32:22 100:11 103:10 153:8 158:10 161:17,20 199:15 239:21 260:3 262:23 268:8 274:15 297:25 300:14 310:2,3
needed 48:23 51:15 60:6 116:22 120:13,14,16,18 120:19 153:21,21
needs 36:17 75:18 120:18 163:17 165:20 172:1,6 173:15 276:4
negative 242:19 242:24 243:3,5,9 243:11,15
neither 96:22 162:12 313:14
netherlands 194:9 251:12
network 228:5,6
neuro 118:10
neuroimaging 118:10
neuropsychology 40:9,12 41:24
neuroscience 51:15,17,20
neuroscientists 117:3,13
never 43:6 83:15 83:17 86:18 154:6 154:9 179:7 185:24 197:2,5 198:10 201:5 208:9 209:1 246:7 265:8 290:11 297:2
new 4:22,22 7:20 7:20 21:18,19 23:15 29:15,19,25 90:9 97:5 99:6 106:22 107:2 108:6 152:18 153:13 220:16 249:3,4 271:6,6
newly 72:25
news 182:3 184:8 217:5 240:11
nexus 101:5
nicholas 235:19
nicknames 309:1
niklas 255:6
nodding 18:3
non 165:25 167:2 188:4 292:2,18
nonbinary 10:6,13 227:3 230:5
nonconforming 292:2,19
nonhospital 85:10
normal 43:10
normative 272:1
notating 314:15 315:4
note 17:1 18:9 20:4 30:19 154:18 154:20 311:4
noted 31:14 71:24 72:19 85:6 134:6 219:9 282:6 311:22 312:8
notepad 32:6
notes 20:3 29:12 29:19
notice 222:18
notified 230:21
november 64:13 177:2
nudity 303:5
null 209:3,4,6,18
number 9:11 13:12 74:18 89:11 89:25 90:12,17 92:5,20 95:21 96:7 97:2 101:1 106:1,2,13 107:11

107:22 109:11 110:14 114:1 123:3,7,7 125:14 148:13 150:13,14 155:20 181:20 203:13 205:24 206:14,15,16,23 206:24 207:6,15 207:18,24 214:20 215:19 248:19,22 250:20 255:17 260:7,11 263:25 281:16,24,25 296:7,8 297:4 311:20 314:15 315:4

numbers 105:25 206:19 215:19 296:10

numeric 301:10

o

o 16:15 237:19

oaks 6:21

oath 15:20 19:18 313:9

object 68:15 82:24 85:4 136:25 219:6 282:2 300:21

objection 18:23 19:7 25:12 26:14 26:24 27:14 43:25 44:1,23 45:22 60:25 61:13 63:8 64:7 65:13,15 70:11,13 71:6,17 71:24 77:6 85:6 86:15,21 103:24 104:17 112:8 120:3 124:3,4 133:18 134:2,6,15 136:23,25 142:11 158:16 159:7,17 159:18 160:9,21 161:14 162:10 164:2,18 167:12 167:14 171:5,6 172:12,22 173:1,2 173:10,23,24 174:17,18 175:1 175:16,22,23 197:24 198:4,19 207:3,4 208:14,22 208:24 209:24 210:7 211:13 219:8 222:14 223:8 224:9 225:3 229:13 234:12,19 241:16 242:8 244:22 245:17 272:10,11,19 273:7,9,19 282:6 282:17 283:6,7,24 293:11 296:18 299:6 300:3,4,5,6 300:20 301:4,5,20 303:22 304:5,6,14 304:15 309:18 310:15

objectionable 289:14

objections 177:17

objective 102:13 160:4 166:15 298:21

objectively 68:15 68:18 300:11,11

objects 17:4

obscene 289:16

observations 94:8 94:10 219:14

observer 298:21

observing 107:20

obtain 69:9 80:9

obtained 119:17 197:2 198:7

obtaining 46:23

obvious 309:8

obviously 44:15 94:25

occupation 52:19

occur 124:25 133:12

occurred 65:18

occurrence 20:13

occurring 69:7 238:7

october 136:16 232:20

oddly 126:7

odds 228:23,24 229:19,20 233:3

offender 148:9

offenders 47:23 48:18 65:8 148:9 149:6,25 150:24 151:3,9

offense 70:15 71:3 71:12,15,15 299:3

offensive 289:15 298:16,19,19,22 298:23

offer 163:14,20 219:12

offered 51:24 163:11 173:12,13 297:21 303:16

offering 105:9 158:5,7,14 161:4 161:25 162:7,20 162:24 174:8,12 175:5,10 178:3,7 178:11 205:15 207:23 208:3 271:7 305:16

offhand 21:8 186:12,16 234:3 234:15 238:16 255:17 256:3 273:2

office 14:19 133:9 133:16,22 134:12 135:2,7 136:5,14 136:22 138:9 314:11

officers 69:21

official 1:12,13 2:12,13

offshoot 228:13

oh 21:3 24:4 29:24 51:12 52:11 59:7 67:8 73:3 74:11 74:21 87:11,17 90:16 98:20 110:8 124:11 133:7 135:11 138:15 139:20 140:7 141:3 145:18 146:6 152:15 155:19 170:8 171:12 196:14 200:2 203:1 210:22 213:12 214:4 218:14 219:23 220:13,23 226:3 228:5 231:10 239:3,5,10 254:21,21,21 270:25 277:16,25 282:11 284:24 285:19 295:3,18 297:22 298:3 307:20

okay 13:4 14:17 15:8,14,15,17 17:4 20:7 21:9 22:14 23:20 24:7,12 25:8,15,22 26:7 27:19 28:7,15,21 32:12 38:10 39:16 39:20 41:2,8,15,23 43:10 45:13 46:18 46:22 47:3,12 49:15 50:20 51:22 52:10 53:1,5,25 54:15 55:2,9,18,23 56:5,9,22 57:9,21 58:7,25 59:7,15 61:9,24 62:4,15 65:10 68:1,5,22 69:23 73:3,25 74:11,20 76:25 78:3,19,25 79:8,18 82:14 83:15 86:24 87:7 88:8,11 89:6 89:21 90:12 92:15 92:17,21 93:3 94:6,16,23 95:12 95:21 96:14,19,23 97:1,19 98:4 100:16,25 101:9 103:13,14,16 106:2 107:7,25 108:21 109:7,11 111:5 112:12,18 113:14,23 114:6 114:12 116:7,12 116:17 117:18 118:12,20,25 121:16,17 122:6 124:1 125:13,21 126:10,22 127:13 127:17,21 128:10 128:12 129:2 130:14 131:3,22 132:11,25 133:15 133:25 134:11 135:9,13 136:4 138:4,15 139:13 140:4,10,21 141:3 141:8,25 142:9,14 143:16 145:7,16 145:21 146:7 148:20 150:22 151:13 154:3 155:1 156:20 157:2 163:9,19,23 164:6,16 166:6 171:2 172:19 175:12 176:8,24 178:3,7,11,21,24 179:10 180:14,24 181:3 182:1 184:5 184:11,18 185:21 186:1,10,17,20 187:14 188:15 190:5,18 194:2,4,5 196:12 197:2,19 198:13,16 199:2 199:10,13,17 200:10 202:2,16 202:20 203:1,8 204:13,21,25 205:14,20 207:18 207:23 208:11 210:3 211:4,8,23 212:17 213:19 214:5,12 216:17 217:1 218:5 219:24 220:12 221:16 222:4,9 223:21 224:12,16 225:11 227:1,6,15 228:1,14,18,21 229:23 230:1 231:12,22 232:18 234:9,23 235:12 236:2,12 238:13 238:17 239:12,13 239:24 240:15,17 242:18 243:4,12 243:16 244:12 245:19 246:6,8,17 247:11 248:8 249:11,25 251:6 252:17 254:7 256:1,4,11,16,21 257:8,14 258:21 259:4,9 260:5,9 261:6,13,17,20 262:16 263:16,17 265:22 267:14,21 269:14,17 270:10 273:3 274:7,22 275:11 278:7 280:14 281:6,14 284:9,16 285:18 286:6,12 287:3,11 288:4 289:3 291:4 291:16,22 296:14 297:5,9,20 299:11 299:24 302:6 304:10,18 311:6 311:10,15,18

old 21:1 46:11 76:8 110:2 175:6 288:23

older 138:16 299:18,19,19

oldest 76:11,12

olson 12:1 193:18 259:21 260:18 261:7,11 265:1,8 265:13,23 266:7 266:18,20 267:1,6 267:12 268:10,10 268:14 269:19 270:1,14

olson's 260:17,23 261:14

once 30:14 192:20 192:25 193:21 300:13

one's 193:1 238:21

ones 71:8 105:24 115:11 194:5 210:22 215:25 216:1 220:16 241:2 243:14 254:6 297:1

ongoing 100:20 118:13 120:21 144:19,19 150:9

online 51:23 123:24 228:13 287:17

onset 168:1,18,24 169:3,12,16 170:1 170:2,10,11,24 171:2,17,18,23 172:2,3,5,7,8,16 172:17 174:24 200:18,18 208:13 208:20 308:13,13 308:13,20 309:3,3 309:20,23 310:11 310:12

ontario 180:22

onus 209:4

onward 46:16

ooh 146:6

open 205:23 298:1

openly 130:2

opine 160:5

opining 175:12

opinion 104:15,22 104:23,25 157:6

157:14 161:4,25 162:8,24 165:6 168:15 174:9,12 175:5,10 178:3,7 178:11,20,22 190:12,16 192:6,8 193:1 195:8 200:24 206:5 209:13 214:12 215:6 219:4 222:11 223:5,12 253:8 261:14 262:5 280:10 290:4,8 299:14 300:8 304:11,16

opinions 157:25 158:8,21 159:23 160:12 163:20,21 178:18 199:20 203:20 205:15 207:24 224:21 225:7 271:6 305:16,17

opportunities 149:4 150:23

opportunity 116:18 136:2 148:11 184:16

opposed 72:11 112:6 126:18 224:22

opposing 24:14,15 24:17 25:9

opposite 225:4

opted 51:14

order 48:23 53:6 62:25 63:10,11 70:18 101:6 110:12,12 124:15 161:15,18 171:12 172:15 173:14 253:5 271:9 286:2 293:3 294:21 295:19 298:24 309:7

ordinary 64:3

organization 44:2 44:3 157:18 159:14 160:6 165:10 285:1 292:6 293:18 294:22 295:14,15 298:11

organizations 157:7 158:1,25 159:5

orientation 64:4 87:24 143:19 188:8 189:15

orientations 91:17

original 94:3 95:1 95:3,9 102:21,22 102:23 107:25 108:2 127:10 137:2,11 170:17 195:18 201:9 202:4,13 226:19 257:6 260:20 265:6 314:10,21

osipoff 235:20

outcome 11:12 166:16 250:2 293:3 301:23 304:17

outcomes 10:5,22 227:2 238:19 253:5

outlets 199:9 241:9

outlier 210:5

outliers 210:16

outpatients 54:4

outside 25:2 160:23 166:14 190:16 194:7 201:19 223:13 272:21 279:23 282:4 283:16 294:15

overall 27:2

overlap 47:14 142:20 162:14 309:5

overstating 277:19

overview 161:1

owned 240:6

oxford 90:8 92:6 97:6 99:17

p

p.m. 2:23 151:18 151:22 212:6,10 274:19,23 290:21 305:2,6 311:18,22

pachankis 193:14

page 9:11 32:23 33:7,21,22,23 35:21,23 53:2,7 86:24 89:1,2,6,8 89:21 90:5 92:2 92:15,18,18 93:4,6 93:6,7,13 95:22 96:10 97:3 102:3 105:5,19 112:13 112:14,16 114:12 122:7,9,24 123:4,6 123:8,8,10,11 130:14,15,20,23 138:1 147:1 148:21,22 155:16 155:20 156:23,23 157:1,3 165:3 177:3,4 187:16 191:1,11,12 194:18,21,25 195:24,25 200:12 205:21 211:23 212:14,17 213:10 213:12,19,20 218:5,14,15 219:24 220:3 225:12 240:10 244:5 247:18 255:17,18 257:14 257:18 260:11 262:25 263:6,7,10 263:11,13 264:22 266:2,5,12,14 267:24 269:24 270:8 271:20,22 275:8 277:21 281:14,15 288:2 288:25 289:4 290:15 291:22,23 305:11,12,13,17 305:18 306:9,10 306:11,19,24 314:15 315:4 316:4,7,10,13,16 316:19

pages 1:25 33:8 36:20 87:3,9,11 88:15 114:15 130:25 220:5 260:11 262:24 290:17 314:14,17 314:17 315:3,6,6

paid 76:17,19 125:2 129:5

palmert 117:9

paper 94:24 122:10,25 125:23 127:24 236:18 249:23

papers 29:13 117:23,25 152:18 192:11 248:19 299:19
paragraph 124:17 124:19 149:2 157:3 187:15 191:12 196:1,2 200:14 212:17 213:10,12,13,20 218:8 219:7 225:15 257:19,21 260:7,8,10,15 263:4,6,11,12,13 266:4,14 271:23 288:2 289:9 291:25 305:18
parameters 226:17
paraphilia 89:25 90:18,24 91:6,17 139:19,20 140:2 142:3,5,10 143:4,5 143:7,11 188:7
paraphilias 63:24 87:24 88:5,6 139:16 140:6 144:6
pardon 96:7
parent 262:20 307:6,7
parental 217:3
parentheses 303:5 303:6
parenting 262:19
parents 181:18 182:3 184:7 217:14 264:5,7,11
parole 69:21 70:16 70:17,21
parsing 101:21
part 27:1 37:13,24 39:7,24 41:12 42:4,13 43:10 44:12 50:2 51:5,8 52:3 57:6,7,8 59:5 66:1 74:14 84:10 120:8,23 128:9,10 161:8 162:2 167:6 197:16 199:6 201:2 204:13 216:20 222:24 223:10,19 230:16 274:6 303:24
participant 168:5
participants 2:22 120:21 121:6,13 276:3
participate 104:12 133:11 222:2 257:1 296:9,12
participated 64:2
participates 168:5 249:5
participating 15:11 26:23 27:11 98:1 109:8 125:11 130:12 167:22
participation 118:21 121:1 126:17 285:21
particular 20:25 44:22 90:7 98:1 99:17 109:2 166:4 189:19 205:14 217:23 219:19 220:23 222:18,24 228:18 237:1 240:10 245:21 248:19 276:15 280:10 294:3,3 298:5 301:6
particulars 217:25 218:2
parties 313:16
parts 118:7 162:14 162:15 196:19,20 253:3
passed 270:23
pathway 175:14 175:20
patiel 254:2
patient 50:16 69:11 75:18 76:8 80:25 81:11 82:2 82:6,9 85:11,11 150:10 181:11 197:5 198:10 211:22 253:23 254:2 281:13
patient's 81:17
patients 46:5,11 46:11,18 50:10 65:11,21 69:14,19 69:21,24,25 70:9 71:4 72:7,11 74:13,16 75:1,4,17 76:4,6 80:3,9 82:8 84:17,18,19,24,25 85:11,13,14,15,22 148:6 149:13,18 149:21 151:1,4,8 179:16,20,20,25 197:10,14 198:13 198:18 199:3,4 211:12,18 237:8 240:23 255:22 256:8,12,16,18 257:9 258:1,6
pattern 142:7 188:11
patterns 62:25 76:3 94:4,10 99:9 139:16 309:11
paul 255:5
payment 76:23
pdf 35:21 130:15 138:1 262:24 314:12 315:1
pediatric 235:14
pediatrics 240:3,5 240:7 251:8
pedophiles 149:6
pedophilia 20:21 63:24 64:6 65:7 141:9,11
pedophilic 141:18 141:23
peer 99:20,21,22 99:23 100:7,12 221:3 226:23 228:19 232:24 240:15 248:17 249:12
peers 11:4 243:20 246:15 271:17 272:3
peggy 250:14
pelet 5:6 14:10,10
penalty 312:6 314:16 315:5
people 18:11 19:5 26:3 38:1,4,7 40:1 40:4 43:12 44:22 45:15,21,25 46:2 48:13,15,15 55:21 57:5 58:17 63:25 67:4,16 68:9 70:22 73:15 77:2 77:5,10,18,23 78:1 78:2,16 79:1 83:10,16 86:1,14

88:12,23 89:14,18 90:3,22 91:4,23 93:18 94:11,12,22 95:5 96:15 98:6,7 101:7 103:20 105:22,22 108:6 110:12,15,18,23 111:13 114:1 115:9 120:24 123:1,2 124:24 125:15,15 126:25 127:19 129:10,12 129:24 130:5 131:5 139:21 140:15 147:22 150:6,13,15 163:16,18,24 164:8,9 165:23 169:4,16 172:19 173:7 174:4,5,23 174:24 179:22 181:18 182:3,20 183:12 184:3,7,20 184:24 186:14 188:12 198:21,21 201:22,24 203:3 208:7,8 210:20,21 211:2,4 214:15,17 214:18,23 215:19 215:22 216:9,20 217:7,15 225:6 227:21,24 232:10 237:11,15,25 245:7 246:23 251:11 258:5 268:19 275:19 277:17 278:10,14 278:23,24 280:16 281:17 282:13,25 283:15 284:14 288:17,17 289:15 292:14 293:1 295:3,8,10,13,17 295:23 297:1,4,14 297:17 299:22 301:12 309:4

perceived 279:4 298:16

perceives 161:19

perceiving 68:16

percent 45:1,7 140:20 141:4,5,24 142:15,18 151:10 228:23,24 229:6 229:18,19

percentage 72:10 151:8 205:25 206:24 207:19,24 208:3

percentages 142:19

perfect 244:7

perform 44:6

performance 121:9 160:25 162:5 223:16,18

performing 44:5

period 48:6 116:2 136:20 137:13 195:3 314:18 315:7

periods 69:7

perjury 312:6 314:17 315:6

permanent 86:6

permitted 85:10

permitting 181:7

persist 188:16 213:23 215:8,16 216:1,23

person 26:6 67:3 70:19 80:17 81:7 81:15 125:18 136:18 142:21 143:1,1,8,23 150:2 150:5,7,10 154:6 169:11,12,15 173:20 175:15,21 181:7 184:22 185:4,13,14,16 189:9,20 202:7 209:5 215:2,3 272:8,18 278:21 279:9,16,21,24 280:8 281:7,8,10 309:19

person's 70:19 139:23 142:8 280:22 281:1

personal 227:23

personally 154:12 179:4,7 182:22 183:1 197:9 198:17 201:8 202:12 204:21 205:3

persons 11:16 149:7 255:10 257:4,24

pertain 37:11 39:6 42:11 49:25 93:7 167:10,18 168:21 172:5,24 173:8 175:2 180:25 232:9,11

pertaining 21:19 42:25 69:4,5 92:25 137:17

pertains 88:21 168:8,25 173:13

pertinent 101:16 161:9 267:9

petersen 49:10,12 58:9,12 129:22

peterson 291:3,8 292:11 293:8 294:4,18 297:2

ph.d. 47:16

phd 1:20 9:3,13,16 15:19

phenomena 110:10 169:10 188:1

phenomenon 145:5 167:25 172:1 186:5 189:1

phone 251:4

phrase 92:8 244:18 276:24 280:24 299:13

phrased 121:3 162:12 179:24

phrases 189:19

physical 301:3,18 302:3 303:8,14,21 304:3,3

physically 231:17 231:19,20

physicians 198:24

physics 37:10

pick 148:3 245:7

picking 277:18

piece 102:22,23 107:25

pieces 163:7 195:12

pile 153:7,10

place 147:6 151:15 213:25 310:13 313:7

placed 313:9

plaintiff 1:7 2:7,21 4:14 5:3 7:15

13:22 14:1,3,5,7,9 14:11,13 16:7 19:14 21:6 154:4 176:25 304:11
plaintiff's 9:22 156:14 310:25
plaintiffs 157:15 165:7
plan 242:15
planned 148:12
plans 114:2
plausible 299:5
plausibly 237:6
play 164:9 173:21 174:4,5,10 175:8 216:25
playing 106:11 107:8 164:10
please 13:18 15:15 15:17 16:12 17:11 18:1 28:12 32:12 34:8 35:20 36:19 58:5 115:11 122:4 122:6,24 123:6,9 137:11 145:23 148:21 151:24 156:22,25 166:18 176:15 206:11 208:16 211:23 212:12,14 218:5 219:24 225:12 254:15 257:14,22 262:21 266:12 269:14 274:25 275:5 280:24 284:3 286:19 289:1,4 290:15 295:11 305:8
pllc 4:6 6:18 7:6
point 82:12 83:25 115:11 147:21 149:19 169:23 209:11 236:3 248:25 253:12 260:7 268:15 280:5 285:19 304:19
pointing 240:9
points 255:21
polarization 268:12,21 269:9
polarized 275:17 277:7
pole 275:16
policies 161:16 217:13,14 276:9 276:13,18,20,21
policy 86:5 88:18 95:17 136:3 158:11 249:5 276:15
political 158:10 164:22 279:3 280:19 293:3,19 294:11,12
politically 292:16
politician 293:17 294:5,10,18
politicians 164:22 165:1
polly 248:2
polytechnic 37:2
poorly 179:24
pop 230:10
popma 246:3
popular 126:8 141:1
population 11:4 125:7 150:18,19 167:11,18 168:9 168:22,25 172:25 173:8 174:23 243:20 251:23 256:6,14,25 257:11
populations 45:3 125:1
pornog 72:5
pornographic 289:16
pornography 72:5 142:24
portion 18:8 79:15 96:25 98:1,14,18 98:20 127:13 167:7 277:14
portions 222:8
posed 28:13 91:2 162:11 272:22 274:6 301:9,14
position 41:5 48:6 53:18 54:2,7 55:4 55:16,18 59:16,19 60:11 61:5 62:12 62:17 64:19,20 65:5 67:19 68:22 72:16 73:16 76:16 113:12 157:10,20 159:8,15 160:7 165:12 276:7,17
positions 49:13,16 67:16 73:17 76:25 77:4,9,15 158:2,5 158:15
positive 225:20 226:13,18,24 241:2,10,12,13,14 241:18,20,23 242:6,14,22 243:13 252:21 253:9
positives 242:21 242:25
possess 75:21 180:15
possession 72:5
possibility 245:15 264:11 279:19
possible 60:7 70:18 159:12 163:17 189:8,11 190:16 206:19,19 209:6,9,14 219:13 221:11 244:19 299:1,9 300:11 308:18,19 309:15 309:17,19
possibly 138:12
post 96:6 187:3,6 187:8 286:22 287:4,8 295:24 297:14 298:2 302:9,18 303:12
postdoc 49:19
postdoctoral 46:25 47:15 49:23 51:8,18 59:11,11 97:13
posted 207:11
poster 221:7
posting 295:24
posts 207:12 297:16,20 299:19
potential 198:14
potentially 71:11
practica 46:20
practice 52:21,24 62:19 74:9,10,11 74:13,14,23,25 75:12 76:14,20 130:25 149:19 150:20 185:9 197:16,17

practices 77:21 84:7
practicum 45:20 45:24 46:1,4 47:18 53:10 54:16
practitioner 81:6
practitioners 211:10
praid 76:19
precise 280:5
precision 216:24
predates 41:13
predict 169:10,10
predoctoral 53:9 54:16
predominant 51:5 103:3,5 144:9
predominantly 54:12 87:19 105:12 112:22 113:18 122:13
preliminary 10:19 35:10 136:9
prematurely 283:15,18,22 284:13
premise 302:21
preparation 30:15 30:24 31:7,12 34:4 35:18 152:23 221:13 231:16
prepare 29:6,10 31:24 155:22
prepared 33:11 34:23 137:7 155:16 231:11
preparedness 81:17
preparing 127:6 152:10 231:5
prepubertal 25:23 26:9,11 78:4,23 167:4,8,17,20 168:7,8,9,16 205:25 206:25 210:4 211:11
prepubescent 141:19 191:18 308:23
prescribe 79:6,25 81:1
prescribed 132:13 197:23 198:3
prescribing 79:2 132:18,22
prescription 196:24
present 8:3 31:8 122:13 124:1,9,15 126:13,19 127:7 127:10 128:11,24 129:1 196:6 224:13
presentation 123:12,13 125:3,5 125:9,17,21 126:12 127:14,21 127:23 129:5,8 130:7
presentations 122:10,20,25 221:7
presented 99:4 123:20 125:23 127:24 245:6
presenter 125:19 127:23
presenting 107:23 122:16 126:22,23 127:2 129:9 309:5
presently 74:4
preserve 134:18
president 291:3 293:18 294:5,12 294:19
pressure 278:12 278:16
preston 239:18
presumably 116:9
presume 137:23 146:12
pretty 74:18 153:17
prevent 19:21,25 139:24 144:4
previous 73:16 101:12 126:11
previously 73:4,6 100:17 264:15 266:10 302:8
price 231:25 232:6
primarily 33:18 45:9 47:22 48:2 63:16,19 64:5,8 65:7 79:8 87:23 102:11 112:24 177:19
primary 44:4 49:8 91:22 98:2 131:15 132:4,6 143:18 148:23 149:4 150:23 211:15 254:1
principal 115:3 119:1 305:17
principle 242:20
principles 166:8
print 221:9 236:11
prior 27:16 35:4,8 67:3,15 86:11 92:5 97:22 100:20 137:4,5,7,8 138:4 138:7,22 139:3,10 223:3 231:7 248:16,24 313:9
privacy 289:17
private 52:21,23 74:9,10,11,12,14 74:22,25 76:14,20 84:7,17,18 85:14 149:18 150:20
privilege 134:19
privileges 165:20
proba 214:1
probability 214:2 214:7 245:21
probably 145:18 211:3 214:3
probate 306:21
probation 69:21 70:17,17,21
problem 55:9 115:1 117:11 131:8 159:11 177:6 194:24 239:16,22 242:21 244:4,8 252:7 274:17
problems 246:13 246:15
procedure 314:19 314:20
procedures 281:11
proceed 15:17
proceedings 313:6 313:8,10
process 108:9 112:24 116:15,16 118:3,6 126:15 128:20 158:10 185:13 186:14 209:19 278:21

279:10,17 281:17 282:13 283:1,9
processes 182:12
produce 153:8 233:20
produced 27:9
professional 157:7 157:18 158:1 159:4,14 160:6 165:10 180:14 185:9 202:21
professionals 290:14
professor 56:10,15 266:22 268:9
professors 56:12
profiles 254:3
program 42:17 44:3,17 47:17,18 51:13 56:11 59:3 59:6,13 66:1 67:9 67:11 73:10 150:5 299:21
programs 75:23
progress 298:9
projects 48:2 277:25
prominent 129:18
promote 284:21
promoted 64:22
promoting 298:4
pronounce 47:7 254:20,25
pronounced 253:7
pronouns 16:4,17 281:21 282:15 283:2
proof 209:4,7
proper 44:6 86:19
properly 160:10 284:14
properties 92:23
property 241:25
proportion 97:24
proposal 124:8
prospective 208:4 233:17 234:8
protagonist 110:2 110:4
protagonists 110:5 110:7
protect 157:11 177:23,25
protecting 178:5 178:13
protection 177:20 303:2,13
protocol 194:6,7 194:14 195:5,9,13 195:16,19 237:25 238:4 253:3
prove 209:6,10,14
provide 17:20 22:6 30:2 48:19 48:23 79:5 80:4 80:23,25 131:3 133:1 136:2 157:6 170:25 171:1 179:10 180:15,25 182:18 183:11 184:1 197:3 198:8 304:3 309:7
provided 19:4 22:24 23:21,25 24:9,13 25:17,19 26:8 27:22 29:17 50:7,11 69:20 77:1,5,9 78:4,6,17 78:22,25 80:8 102:11 119:25 156:7,14 183:17 183:22 184:6
220:21 307:10,12 314:19 315:8
provider 80:15,16 80:24 81:4,12
providers 80:4 181:14 182:7,17 182:23 183:5,11 183:25 184:12,15
provides 69:18 272:7,17 273:5,17 304:3
providing 77:23 79:3 131:23 158:9 159:3 181:15 182:7,13,21 183:6 183:13 184:3,4,12 307:15
psychiatric 84:6 84:12,24 128:18
psychiatry 53:13
psychological 10:25 11:6,11 125:24 126:2 127:25 128:17,23 226:17 243:17 247:7 249:15 250:2 254:3
psychologist 52:22 59:12 62:14,15 66:18 180:21
psychologists 262:18
psychology 37:15 37:19 38:11,19,23 38:23 39:1,9,14,18 39:22 40:10 42:6 42:7,14,15,18 43:1 43:3,7 50:3,5,21 50:23,25 51:2 53:22 55:25 57:10 59:2,9,20 62:20
69:4 75:13
psychometric 92:22
psychopathology 90:8 92:7 99:18
psychosocial 11:7 247:8
psychotherapy 54:3 150:9 179:10 180:15,25 192:18 192:24 229:7,10 229:17 237:7 238:6 246:24 252:5,7,9
pubertal 167:20 168:10
puberty 11:6,12 79:2,25 80:9 82:4 82:11 132:12 175:6 191:19,21 194:12 196:12,17 196:21,25 197:3,6 197:11 200:6 206:14 208:13,20 213:1 215:20 216:6 246:14 247:8 249:16 250:2 251:12 272:9,18
public 109:18 136:3 210:18 278:1 301:8 303:3
publication 88:16 88:21 89:2,8 92:24 93:21 95:22 105:17,18 108:10 228:3,19 232:22 232:24 240:12,15 248:12 249:12 251:7

publications 87:4 87:8,16 88:2,11 89:22 103:18,19 103:22 104:14,19 104:24,25 105:21 112:14,23 113:14 114:1
publicly 210:17
publish 99:25,25
published 52:12 94:24 100:18 109:17 129:25 153:20 203:17 221:3 224:20 232:20 235:13 236:9 240:5 246:8 248:8 249:8 251:7 265:10,25 267:10 287:4
publishes 203:2
publishing 203:5
pull 62:21 230:14
pulled 200:11 277:20
purely 279:20 293:19
purpose 99:12 159:20 160:3 166:9 229:12 257:20 284:19,20 298:10
purposes 18:12,18 63:2,3 229:8 282:21 293:20
pursue 48:14
pursuing 40:14 44:8 48:13,21 50:8
pursuits 52:13
put 34:5 70:19 100:19 135:4 182:4 265:11
putting 217:5

q

quad 291:3
qualified 25:1 48:19 75:8 80:3 111:13 134:9 135:18,21 194:11
qualify 25:3 188:20,22
quality 236:17 237:5
quantitative 301:10
quarter 72:14 75:7
quebec 53:21
queen 41:8 53:10 109:13,16,25
question 17:10,13 17:18 21:18 24:2 27:7 28:10,13,22 31:1 42:25 44:19 45:23 67:15 69:25 70:23 77:16 80:5 87:14 90:20 91:16 97:19 104:2,4,9 117:25 120:3 121:3 131:10 137:2,2,11,14,16 144:21 147:1 149:1 152:22 157:17,20 159:16 160:7,11,22,22 161:4,7,8,10 162:18,19 163:2,3 163:4 165:9,12 169:2 182:8 183:7 190:9,10 202:6,11 206:8 222:24 223:9,12 229:8,12 229:15 244:9,18 244:22 272:21 282:8 283:19 284:1 288:6 292:21,22 294:15 294:16 296:6 299:7 301:12,14 310:5
questioned 261:18
questioning 25:6 180:17 310:25
questionnaire 92:22 208:10
questions 16:22 17:5,6,19 20:1 31:4 37:11 39:5 42:11 49:25 60:5 71:2 101:6 147:4 148:17,25 157:8 159:21 162:11 180:13 208:7 247:20 269:1 272:22 274:6 282:3,3 301:8,8 305:24 306:1,1,6 308:1 309:10 310:2,17 311:5,9 311:13
quick 71:2 97:19 306:6 307:18
quickly 130:1
quite 18:10 59:23 80:5,13 82:18,19 142:19 163:6 257:17 283:25 308:21
quote 149:3 157:4 164:17 196:2,8 209:15 218:9,19 225:17 258:9 260:16 266:15 267:2
quotes 200:21

r

r 16:15 56:17 191:4 225:25 316:3,3
r&s 315:1,9
racist 289:12
raised 292:3,19
raising 195:20
ramifications 80:20
ran 49:7 61:22 119:13
randomly 257:3
range 20:25 55:12 55:13 111:25 120:24 206:18,23 207:6 208:5 224:1 272:1 302:25 303:17
rank 66:18
rarely 191:21
rarer 189:1
rate 153:18 255:24 256:12,16
rates 123:16
ratios 254:4
ray 49:4,6,11 58:12 129:21 170:18
reach 224:17 225:1 267:5,11 268:9
reached 134:12 135:10 136:5
reaching 126:18
reaction 293:8
reactions 292:7 299:5

read 28:14 94:9,9 106:25 107:5 109:14 123:18 128:3 137:11,14 137:19 147:2,11 147:13,16 149:3 149:10 155:1,4,13 155:21 156:5 157:4,22 164:11 164:13,25 165:2,4 166:18 174:1 177:16 184:11 187:16,22 191:13 196:2 199:23 200:15 204:7 212:18 213:2,21 214:6,10 218:9,18 218:19 219:2 220:16 222:4 225:17 236:12 255:12 257:21 258:10 260:16 261:4 263:2,4,11 263:17,18 264:13 264:19 266:4,15 267:3 271:9 275:24 276:11 278:9,18 279:6 280:15 281:16,23 284:3,5 287:19,23 289:20 302:19 303:10,24 304:7 312:6
readers 99:13 280:5
reading 49:1 153:7,7 185:5 281:24 299:18 314:23 315:9
reads 157:3 275:23 277:9 278:18
ready 80:17 81:7 157:1 239:14 244:12 255:20
realigned 65:3
reality 277:19
realized 85:24 148:10
realizing 184:22
really 15:11 67:23 70:2 104:22 106:17 138:17 185:2 282:22 283:19 285:11,19 300:23
reanalysis 265:1
reanalyzed 192:13 260:19 261:7
reason 19:24 71:10 97:20 111:8 111:9 120:11 156:13 173:11 191:15 213:7,11 216:7 268:8 271:13 277:23 281:9 288:6,7 293:16 316:6,9,12 316:15,18,21
reasonable 108:24 282:22
reasonably 183:14
reasons 143:12,16 245:3
reassignment 11:13,17 125:22 250:3 255:10 257:25 258:6,13 258:18,22 259:1,6
rebuttals 31:18
recall 25:13 27:15 31:16 41:7,18 67:8 73:12 86:22 100:23 105:25 108:19 110:8 111:20,21 113:9 133:13 153:6 154:21 155:3 170:23 180:3,4 194:16 203:15 217:24 218:2 220:23 232:13,17 234:14 249:9 274:3 285:11 293:25 294:2 295:23 297:8
recalled 92:21
recalling 154:17
recant 170:14
receive 81:5,8 82:3 217:4
received 49:22 114:20,23 115:4 116:5 137:3 221:2 222:2,18 237:11 237:15 238:1 246:23 252:5 287:20 289:6
receiving 10:7 47:25 192:18,18 195:22 227:3 229:5,7 249:21
recess 58:1 121:25 151:20 166:20 212:8 274:21 305:4
recheck 257:6
recipient 114:16
recite 170:17
recognize 187:3 210:3 215:2 257:24 258:4 260:2
recognized 192:15 192:20 299:21
recollection 20:16 50:16 81:21 110:3 111:23 124:18 146:25 153:10 194:20 288:15 290:8
recommend 200:4
recommendation 158:12
recommendations 200:25
record 13:5 16:13 28:14 57:22,24 58:3 68:15 121:21 121:23 122:2 137:19 151:16,18 151:22 154:18 212:4,6,10 274:16 274:19,23 284:5 304:25 305:2,6 310:18 311:5,17 311:18 313:10
recorded 13:6 217:24
recording 41:14 62:23
records 69:18,19 85:1 154:16,23
recounting 69:15
recurrences 113:5
reduce 140:16
reducing 240:19
refer 16:5 19:2 32:7 47:3,10 75:16 80:3 94:13 142:22 184:22 217:2 238:22 244:1 255:15 268:20 299:20

300:14 306:8
reference 204:6,8 204:10 222:7 239:5 246:20 247:19
referenced 246:19 246:22 259:17 283:5 314:6
references 171:1 204:4,11 220:3,19
referencing 218:2
referral 80:8,19 80:21 81:1,8 85:23
referrals 86:1
referred 70:10,22 72:8,11 75:7 85:22,23 216:11 251:8 268:17 297:2
referring 19:4,14 20:5 85:25 147:21 160:20 170:16 207:9,14 247:20 253:16 274:4 276:13,15 277:4 292:25 306:18
refers 139:22 181:7
reflect 104:20 194:19
reflecting 97:24
reflection 242:16
reflesh 146:24 290:7
refresh 32:23 146:24 176:14 290:7
refused 248:25
regard 90:3
regarding 26:17 26:19,22 38:1 40:1 43:11 137:4 162:1,8 244:9 266:19 267:6,12
regardless 46:6 160:14
registered 84:25 180:22 254:23
regret 185:21,22 212:20
regrets 185:20
regretted 214:15
regrouping 304:22
regular 85:22 120:22 187:20,24 188:4 210:13
regularly 85:22
rehabilitation 48:18 70:20
rehearsal 30:6
rehearse 30:17
reinhardt 5:9 14:6 14:6
rejected 271:12
relate 92:2 98:6 103:22,25 223:17
related 20:21 23:17 27:22 31:18 38:7 45:2,14,20,24 46:1 47:24 60:9 61:10,24 71:9,10 71:11,11 83:5,9,10 90:23 91:7 96:15 101:2,3 109:1,7 115:8 118:21 131:5,10 132:4 142:24 155:24 163:21 238:10
relates 60:4 89:9 90:2,6
relating 83:16 197:6 198:11 288:16
relationship 301:23
relationships 55:14
relative 153:17 161:6 174:14 189:22 313:15
relatively 95:5 148:5 219:23 285:1 296:6 299:16 308:22 309:21
released 70:16 314:21
releases 184:9
releasing 200:7 221:5
relevance 154:19
relevant 27:16 28:1 29:14 80:21 90:7 118:7 119:5 132:8 135:23 148:7 156:9,10,12 157:7 161:13,19 163:10,11,14 166:10 168:6 171:3,8,8,11,12 172:14 198:22 222:8,23 232:8 270:23,24 271:2,3 290:5 291:20 310:12,16
reliable 102:13 265:1
reliably 225:20
relied 271:7
relief 133:1
religious 279:3 280:20
rely 234:18
relying 170:6 228:8,10
remain 249:5 256:24
remained 40:20 40:20,21 64:21
remaining 21:22 144:9 256:25
remains 243:7
remarks 289:14
remember 21:3,5 23:6 53:20 55:7,7 97:18 113:10 124:11 126:15 135:11 136:6 146:15,16,17,18 153:2,24 203:11 203:18 207:15 220:25 232:15 287:15 288:14,22 296:1 298:5,12
remind 20:4 29:22 98:5 286:25 297:9
remotely 2:22
removal 296:25
removed 101:22 287:16 288:4
renaming 73:8
rensselaer 37:2
reorganization 65:1 73:2,8
repeat 28:10,12 56:15 229:15
repeatedly 63:10 95:1
rephrase 17:11 43:20 80:7

replace 279:22
replicate 225:20 226:11 253:3,8
replicated 195:19 252:23 253:1,1,14
replication 253:21 253:22
replied 265:8
report 31:14,21,25 33:11 34:23 35:7 35:9,24 118:17 124:21 137:22 138:4,8,20,24 139:6,8 144:10 153:5,11,15 155:15,17,21,22 156:11,22 157:14 158:22 160:5,25 161:1,8,13 162:12 162:21 163:10,11 163:20 165:3,6 167:4,7 168:18 170:9,15,22 172:19 186:18 193:7,10,11 194:19,22 195:25 200:11,12 203:20 203:23 205:18,21 211:24 212:15 213:8,19 217:23 218:6 219:25 220:5,7,8 221:13 221:25 222:10 223:10 224:14,18 225:2,13,16 229:24 230:24,24 231:2,18 233:8,11 233:14,23 234:2 234:10,18 235:2 236:20,23 238:21 239:3,6,9 241:1 242:2,3 243:21 244:2,5 245:8 246:18,21 247:18 247:20,21 249:19 251:17,25 255:14 255:16,18 260:4,6 260:10,12,16,17 266:11,14 267:20 270:18 271:8 305:11,18 306:8
report's 173:6
reported 1:22 67:2 67:4 94:8 123:16 125:1 166:14 216:13 225:21 226:14,16 241:9 241:23 249:18 288:19 297:3
reporter 2:24 13:16 16:20 18:1 18:4 28:12 32:17 34:13 47:9 137:10 137:12 146:1 166:17 176:12 186:25 190:22 191:3 225:25 227:10 230:12 235:7 237:18 239:2 243:25 247:15 250:8 254:12 259:14 261:25 265:18 268:5 274:11 284:2,6,9 286:17 307:24,25 308:2,7 308:9 313:4
reporting 94:4 121:8,11 241:13
reports 157:15 165:7 181:20 195:22 216:11 217:2,10,20 218:1 241:1,11 242:19
represent 16:7 30:19 167:25 176:24 247:17 260:5 262:4,16 265:22
representation 262:21
represented 244:20
representing 14:20 30:11
reputable 224:6
reputation 250:18 250:19 268:11,16
request 34:5 35:18 81:14 82:7,10,13 95:19 109:5 111:16 215:4 222:2
requested 95:12 96:20 126:17 201:23 315:1,9,10
requesting 126:13
requests 199:8
require 23:9 81:12 120:21 188:23 303:1,13
required 23:12,15 57:4 108:5,5,6
requirements 71:21
requires 101:7 164:8 172:16
requiring 48:16
reread 29:12,13 226:19 282:7
resealing 85:5
research 27:9 30:1 30:7 31:11,23 37:21 38:3 39:20 40:3,8,11,19 41:4 41:13,19,24 43:21 44:5,6,6,20 45:6 45:17,18 47:24 51:3 55:19 57:4 59:17 60:2 61:9 61:14,15,20,22,24 62:1,5,11,19 63:2 63:4,5,11,17 64:2 64:11,22,24,25 66:14,20,21 67:3 70:7 73:4 76:15 76:15,22,23 86:3 93:16,18,22 94:2 94:11,13,15,22 95:5,10 96:21,24 98:24 99:9 102:9 102:21,22,23 108:1,1,2,3,13 111:14 117:14 118:10 119:17,18 119:20 120:8 122:14 123:21 127:10 132:12,17 132:20 141:9 142:16 145:15,17 145:19 147:24 148:4,10,11,24,25 149:4,25 150:23 212:22 221:24 223:1,23 226:8 238:9,11 266:17 267:23 284:22 285:25
researcher 46:25 102:19 117:2 147:3,10,20
researchers 211:7 228:15,15 285:23 290:14

researches 129:18 245:12
researching 59:22 88:4 140:5,18,22 141:6,22
reserve 305:25
reserved 85:13
resign 286:9
resignation 291:8 295:2 296:25 298:1,13
resignations 290:2
resigned 285:17 286:6 295:10
resigning 292:14 292:14 295:13,15
resonance 115:17
resources 84:18 85:20 155:23
respect 77:22 79:11 86:13 157:24 178:4,8,12 195:10 268:10 275:20 276:8,17 294:21,23 295:1
respected 228:2,7 228:15 232:22 248:12
respects 281:19
response 106:6 149:3 177:15 265:5 266:25 267:10 268:13 291:8,11,12 293:7
responses 9:22 176:25 266:18 295:7
responsibilities 48:10
responsibility 66:6
responsible 70:6
rest 90:14 104:20 213:14 276:22
result 241:14 252:8 295:1
results 10:19 62:24 94:4 119:16 192:14 225:21 226:11,14 236:9 240:17 241:10,12 241:13,14,18,23 242:6,14,22,24 243:13,15 245:4,5 245:7,11 246:12 249:14 251:19 258:11 267:6,12
resumé 72:20 132:25
retained 29:3 311:21
retitled 92:7
retracted 192:13 193:4,15 296:16
retroactively 110:24
retrospective 233:6,16,17,19,22 234:1,5,11,17
retrospectively 208:6
return 314:17 315:6
reused 137:6
reveal 134:5
reverse 241:12
review 31:13,19 33:6 36:19 69:12 87:2 94:13,19 99:1,5 100:12 108:1 109:12 111:7,16,19,21 118:9 146:24 152:11,14,23 155:18 156:25 157:25 162:2 199:11,19 201:16 203:24 204:1 231:5,21 262:22 270:7 271:22 289:4 314:8,10,13 315:2
reviewed 29:23 30:3 35:5 98:20 99:15,20,21,22,23 100:7,9 136:7 153:14 154:15,23 155:23 156:8 198:17 204:3,8,10 226:23 228:19 231:7 232:24 240:15 249:12
reviewer 221:3
reviewers 248:18
reviewing 91:1
reviews 114:9 248:17
revising 203:10
rgreen 3:11
rhonda 56:13
right 17:25 24:10 25:7 27:23 28:20 29:4 30:15 37:3 42:1 43:8 52:13 52:19 54:17,24 55:25 56:8 57:11 58:2,13,17,21 60:13,24 62:1,6,9 64:11 65:23 66:2 67:16 72:8 74:1,9 74:23 75:18 76:20 76:23 77:11 78:4 78:7,14 79:6,9,16 80:1 81:2 83:16 83:22 86:9,14 87:5 88:2,23 89:19 90:3,12,24 91:20 92:13 93:1 95:10,17 97:6,7,10 97:16 98:16 99:16 99:20 101:17,25 102:6 103:6,20 105:7 106:3,8 108:10 111:3 112:2 113:15 114:10,13,17,24 116:4 117:6 118:14,18,18 119:6,23 120:2 121:14 122:1,21 123:22 125:16,19 126:20 127:3,19 127:20 130:9,20 131:20 135:5 136:12,22 138:1 139:2,7,11,17 142:10 143:14 148:18 149:1,20 150:5,20 151:21 152:7,25 153:23 153:25 154:10,13 154:24 155:5 158:3,15 159:16 160:8,18 162:1,9 167:5,8 168:11,19 168:22 170:3,4 172:11,25 174:24 174:25 176:22 178:22 179:2,5,8 179:12 183:11 184:2,9 187:13 191:8 194:15 196:25 197:3,7,11 197:15,17 198:11

198:18 200:25 201:3,6,10,13 202:5,14,18,20 203:21 204:9,14 204:23 205:5,9,17 207:2 208:1,13,20 209:20,23 212:9 214:4,5 217:6 220:11 221:14,17 221:21 227:24 228:16 234:11 236:24 239:13 241:15,23 242:19 245:6,9 246:10,25 247:3,6 251:17 252:1,12 255:24 256:9,14,19,22 257:5 258:2,7,19 258:23 259:2 262:14 270:19 271:8 275:12,19 278:11,15,25 280:17 281:18 282:14,20,20 283:1 287:9,17,18 291:18 295:20 297:10 305:5,24 305:25 310:1,20

rights 12:7 165:20 275:15,18 278:8 281:15
rigid 141:13,15,16
rigorous 106:19
ring 287:14
risk 257:10 258:19 258:23
risking 216:24
risks 198:14 214:9 216:25 259:2
road 6:10
roberta 3:6 15:5 311:3
roger 135:12 136:19,21
role 20:23 22:10 26:4 57:3 66:20 67:3 72:18 73:21 76:13 92:22 103:4 128:2 131:13,19 157:24 158:24 159:3,13 160:13 160:14
roles 66:19
roll 241:25 245:10
romantic 55:14
room 303:6
rooms 303:4
rooted 91:15
rosalia 248:1
rough 138:17
roughly 21:15,17 22:8,9 40:17 45:1 46:21 71:10 72:14 74:15 88:10,14 105:11 113:13 122:18 124:17,20 126:16 133:13 135:8,9 140:20 141:24 146:18 150:2 179:18,19 179:19 180:8 285:16 286:11
routine 25:3 75:6 75:11,12 113:3
royal 54:16
rpi 37:3,5,12 38:8
rules 16:19 315:8
run 294:22 304:12
running 116:21 131:6 188:20 189:3,6,7
runs 241:18

s

s 16:14 97:10 225:25 237:19 291:3 316:3
safer 31:17
safety 177:25 178:13
salary 108:25
sample 12:4 253:23 254:2 267:16 270:14
sauna 303:5
saw 65:11,22 70:5 99:8 151:9 273:10
saying 27:21 128:20 181:14 209:5 215:6,10 217:7 237:24 241:12 245:9 284:11 288:21 291:13 295:5 298:9,24
says 54:23 109:25 115:24 116:7 130:23 147:13 155:21 165:3 177:15 187:11 194:25 214:2 225:17 226:7 240:10 264:20 268:25 287:19 292:17 302:19
sbc 48:17
scan 29:24 31:11 60:15
scanned 120:24
scanning 120:22
scans 116:14
schedule 314:10
school 1:11 2:11 3:3 15:6 154:13 217:13,22,23
schools 217:12
schumm 261:2,2,7 262:17 263:8,19 264:1,7,15,20,25 266:19,22 268:9
schumm's 261:17 263:23 265:8,9
science 20:24 22:12,21 26:5,7,8 27:2,5,10,21,24 37:8,9 93:25 94:7 99:14 135:23 136:1,2 158:9,19 159:24 160:14,18 160:20,25 161:2 161:12,16,18 162:1,3,8,14,22 163:5,7,18 166:14 169:7 174:14 190:10,17 192:8,9 192:10 193:2 209:1,2,2,16 221:4 271:18 288:19,20 298:4,6,7,8,10,10
scientific 105:1 201:15 209:19 210:6 226:23 264:9 284:17 286:3 287:13 289:22 290:20 294:6,13 295:22 296:21 298:2
scientist 65:25 66:8,13,21 67:5,18 68:23 72:18,19 73:22,23 221:5
scientists 210:14 210:19

scope 161:14 164:19 167:12 173:2,25 174:18 198:19 222:14 223:8,25 225:3 272:10,21 273:7 282:4,17 283:6 300:20 301:5,20 303:22 304:5,14
score 210:24
scores 210:22 211:1,9
scouring 152:17
screen 230:10
scroll 35:22
se 258:13
search 266:16
searching 222:22
second 21:9 22:17 36:18 97:21,23 119:14 120:7,12 120:16,20 131:6 138:1 145:24 153:15 177:24 187:15 190:25 238:22 239:21 244:11 266:4 270:7 278:8 307:18
secondary 1:11 2:11 3:3 15:6
seconds 189:2
section 62:6,8,12 63:5,18 64:25 98:8 105:4 170:24 204:4 244:2
sections 118:9
see 17:2 29:25 32:25 33:1,22 34:15 35:23 38:13 42:19 51:7 53:2,9 54:15 55:23 61:19 63:4,16 65:4,21 66:12,19 68:1 69:23 70:9 73:9 78:8 80:23 81:19 82:8 85:10 86:7 89:25 97:15 101:24 105:5 108:8 114:6 115:24 119:16 120:25 146:5 155:11 156:3,8 177:13 178:1 179:16,25 182:1 182:17 189:13 190:23 191:11,23 195:24 204:7,11 210:4 212:6 220:2 220:9 224:20 226:2,19 227:12 227:16,20 231:24 232:2,19 235:9,11 235:22 236:3 239:7,9,11,20 240:4,13 241:22 247:23 248:4 250:15 255:4,7 258:15 259:7,23 262:2,3,10 264:14 264:20,23 266:1 269:16,20,23 270:1,3,13 271:1,2 272:4 275:7 277:20 286:19 287:11,16 291:16 291:21 292:9 295:6,7 304:20 306:24
seeing 32:19 46:5 46:10 54:25 63:1 84:17,24 107:21 138:15 287:24
seeking 82:11 135:13
seen 33:10 34:20 36:2 46:19 78:12 176:17 186:7 220:24 270:4 271:11,13 272:20 273:1,14 275:8 304:2
segregated 166:5 303:7
select 100:4
selected 257:3
self 70:22 72:8,11
send 75:9 80:18
sending 295:7
senior 65:25 66:7 66:13,21 67:4,18 68:22 72:18,19 73:22,23
sense 80:6 133:1
sent 99:24 100:8 221:12 248:20
sentence 70:16 165:3 196:1 218:15 219:7 289:9
separate 73:9 99:4
separated 104:23
separately 48:7
separating 252:8
september 54:23 56:5 62:9 119:4 120:2
series 9:19 54:5 146:11 183:8 193:6,6 196:18
serve 49:12 113:1 133:25 135:16,21 161:6 221:20
served 70:15
serves 178:4,8,12
serving 24:2
sessions 84:20
set 37:11 39:5 42:11 49:25 85:9 101:7 177:1 313:7
sets 94:10
setting 299:15 300:2
seven 47:24 57:19 114:23 115:4,7 311:20
severe 228:23 229:19
sex 11:17 18:14,20 48:17 54:19 55:11 65:8 71:9,10 79:25 80:10 82:12 115:13 117:2 123:21 125:22 140:22,25 141:1,6 143:9 144:15,18 145:16,19 147:3,9 147:19,24 148:9,9 149:5,25 150:24 151:3,9 166:5 172:20 173:7,20 189:21,22 194:13 197:19 198:8,11 198:14,18 199:3 211:7,7 219:1 254:4 255:10 257:4,25 258:5,12 258:18,22 259:1,5 273:5,11,12,16 284:21 285:23,24 290:14 303:1,7,13
sexes 162:5
sexist 289:12

sexology 10:1,3 12:10 187:8 286:23 287:1 297:10,13,21 302:10
sexual 20:25 46:7 46:8 47:21,22 48:4,8,16,17 49:17 55:12 59:5 64:4 64:11 70:15 71:12 71:15,15 73:11 75:9 76:2,2,3,3 87:24 91:17 92:11 101:11 113:1,2,8 113:18,20,22,24 139:15,23,25 140:16 141:12 142:6,8,23 143:19 188:1,8,11 189:14 248:9,11 249:8,11 309:11
sexualities 59:18 60:4 62:1 63:14 63:20 68:9,13 87:21 99:10 105:16 139:16 140:11 147:25 149:8
sexuality 43:14,17 43:24 44:9,11,21 46:1 56:14,16,18 56:21,22 60:6 63:23 74:5,8 75:22 76:1,18 77:11,19,25 87:21 87:22,23 105:14 116:23 122:15,17 140:12 284:17 286:4 287:13 289:23 290:20 294:6,14 295:22 298:2
sexually 141:19
shaking 18:3
share 180:8 239:7 269:15 275:5
shared 166:7
sharing 292:7
shoals 6:10
shore 294:24
short 103:11
shorter 306:15
shorthand 2:24 313:3,11
shortly 230:10
show 145:23 158:24 159:4,14 169:21,22,25 184:11 186:22 206:13 240:18 267:23 274:8
showed 240:25 246:13 260:21
showers 303:4
showing 193:23 226:23 242:19 272:6,15 273:3,15
shown 171:24 192:14 207:12 212:22 298:6,8
shows 219:15 304:2
shuffling 73:13,14
shuman 3:5
shumanlaw.com 3:11
sibling 272:2
siblings 272:3
sic 15:6 33:24 60:23 194:19 271:12
side 91:2 160:12 160:16 162:25 257:18 263:12 269:1 310:25
sides 277:19 304:3
sign 197:5 198:10 314:16 315:5
signals 196:18
signature 138:1,2 138:13 291:6 313:24 314:21,23 314:23 315:9
signed 291:5
significant 79:15 264:4
significantly 260:24 271:16
signing 285:3
signs 166:15
similar 21:17 22:21 51:16 55:4 108:9 110:21 119:10 122:23 128:11,25 144:23 246:14,25 252:3 269:13 307:25
similarly 129:15 238:4
simply 95:6 134:22 165:14 309:2
simulating 61:23
simultaneous 41:16
simultaneously 60:6 62:22
sincerely 288:14 298:20
single 110:4 128:16 207:7 220:18
sit 203:23 299:24 301:19
site 148:3
sitting 113:6,11,11 153:23 230:17 231:7,17,19,20 297:5 304:10
situated 238:4
situation 21:11 86:8 150:15 166:9
situations 300:15 300:16
six 21:11,13,16 78:18 93:10,12 103:18 124:12 133:13 135:5 136:6,15 138:11 138:12,16 179:16 179:19,25 231:2 249:16
size 120:18 153:10 257:17 270:14 302:3 303:8,14,21 304:3
skagerberg 248:2
skeptical 249:6
skew 244:16
skewed 244:14
skorska 117:9
slash 115:25
slicer 3:5
slid 308:5
slight 67:14
slightly 182:8 184:20 272:2
slow 153:18
small 186:7,11 257:17 296:7,8
snake 242:1,2,4
social 75:14 190:6 190:13 191:25

194:14 195:1,6,10 210:4 211:11 217:14,17 218:11 218:21 219:16 226:17 269:10 278:3 299:17
socially 185:16 217:16 271:24
societal 279:3 280:20
societies 275:25
society 111:11 123:21 181:19 184:7 199:19 200:4,25 201:3,5,9 201:16,20 202:3 202:13,18 276:22 277:12 284:16,19 284:23 285:5,10 285:15 286:3,7 287:12,16 289:22 289:25 290:3,4,20 291:9,14 294:6,13 294:19 295:22 296:4 298:1,17
society's 202:10
sole 127:22
solely 39:6 42:12 43:7 76:14 112:1 118:6 237:11
solutions 311:21 314:7
somebody 116:22 141:19 185:18 188:6 288:21 298:23 299:20 309:8
somewhat 190:11
soon 88:6 215:3 249:10
sorry 24:21 28:8 30:25 33:7 50:20 77:3 79:6 82:11 82:14 87:10,14 98:11 107:1 108:18 110:20 115:24 119:8 132:21 133:8,20 136:11 155:8 159:2,8 171:10,12 171:21 179:23 202:24 207:13 216:8 218:13 226:5 230:24 254:22 258:3,24 264:19 266:10 272:12 281:24 282:7,8 283:25 304:22 305:12 307:23
sort 118:3
sound 102:25 233:15
sounds 57:20 103:16 121:19 127:20 182:8 220:10 257:7 287:24 310:19
source 73:7 144:1 192:23 211:15 220:22 265:1
sources 85:23 182:4,6 183:9,10 184:8 199:6,6 217:6
southern 13:10
space 128:7 225:25
span 79:19
spanned 58:22 109:23
spans 290:17
sparked 294:3
speak 17:24 53:23 110:23 111:18 210:17 269:9
speaking 39:21 41:16 44:1 55:10 82:14 90:6 93:17 111:23 141:25 165:22 171:16 172:11 281:3,6
speaks 112:6,10
specialize 117:5
specializing 117:3
specialty 75:20 211:20
specific 22:2 25:24 26:6 28:4 31:13 55:22 60:10 91:6 114:8 131:11 139:6 146:20 153:10,11,24 154:19 158:12,13 160:25 162:16 165:18 169:23 173:21 175:10 194:17 206:22 207:6 211:19 224:23 277:2 300:14,16
specifically 16:5 17:6 19:9 20:6 26:25 28:18 38:25 39:12,21 43:6 45:1,25 61:9 63:6 71:9 75:7 88:6 89:2,9 91:3,10 93:2,3 98:8 109:9 112:15 118:23 121:8 131:13,16 131:18 146:16 147:21 150:3,3 153:6 162:4 166:1 175:3 180:22 205:13 224:3 234:7 248:18 273:17 274:1
specifics 221:1
speed 244:4
spell 16:12 237:18
spend 40:18 140:5 140:18,22 141:3 141:22
spending 221:5
spent 79:15
spoke 23:8,20 26:2 46:20 48:20 50:21 57:10 59:1 119:19 126:12 141:5 160:18 184:9 185:21 211:2 247:5
spoken 75:24 77:1 133:22 136:21 142:16 154:9,12 182:17 219:21
sport 157:12 166:4 300:19,23 301:3 301:19,24 303:21
sports 106:11 107:9 168:6 173:21 174:10 177:21,23,25 178:5,13 302:3 303:8,14
spot 124:15
sruti 4:16 13:21 16:2
sswaminathan 4:23
staff 84:6,12,24 108:25 120:17

134:17 281:11
stage 91:15 120:20 120:25 175:7 200:6
stagiaire 53:20
standard 42:21,22 106:18 200:20 203:9 222:7
standardized 68:20
standards 195:21 195:23 203:2,6,21 203:24 204:5,22 205:1,4,16 263:20 264:17,21
start 13:23 35:24 38:11 88:4 91:23 105:15 113:6 115:21 122:16 147:7 209:7,11 262:25 297:23 309:9
started 47:14 59:10 74:25 116:8 147:22 170:18 193:22,22 194:7 215:23 249:10 309:4
starting 20:14 120:1 182:15 220:14 271:23 291:25
starts 168:13 169:9 209:3 225:16 257:19
state 1:9,12,14 2:9 2:12,14 3:13 4:5 7:5 9:24 13:8 14:20 16:12 21:4 21:18 176:25 177:9,11,15,18
196:2 200:15 212:17 213:20 216:7 218:9,19 222:17 260:16 266:15 280:14 312:12 313:4 314:4,9,12 316:1
stated 50:7 284:20
statement 196:9 261:2 275:21,23 277:8,10 278:18 279:4 280:20
statements 277:18 298:15
states 1:1 2:1 91:1 263:17 275:18 278:8 281:16
stating 215:7
statistic 215:12,14 257:2
statistical 102:11 102:15,18,19,25 241:19,25 242:15 252:15 260:20 261:11,15,17 263:20,24 264:17 264:21
statistically 189:1 264:3
statistician's 261:14
statisticians 117:12
statistics 45:11 51:16,21,22 56:13 102:17 116:23 118:10 243:5,12 244:10,17 245:22 266:6 301:11
statute 310:13
stay 187:7
staying 47:25
stays 243:6
steensma 246:3 250:13
stephanie 239:18
stepney 227:18
steps 299:21
steptoe 6:18,24
stewart 239:18
stipulation 314:20
stop 292:14
stops 196:21,22
story 147:9
street 3:8 4:9,20 5:13 7:9,18
strike 132:21 216:8
strive 148:16
strongest 91:9
strongly 91:7,8
structure 66:10 113:4 114:7
structured 44:18
student 44:7 96:3 120:17 169:14 284:24 310:11
students 62:25 67:20,21,23 68:2,6 108:17 130:19 131:9,12,22 165:17,18,24 166:12,23 167:2 285:12
studied 38:18 49:4 58:8 167:3 176:7 186:9
studies 40:10 47:15,16 52:10,11 52:12 55:1 59:11 95:2 106:23 107:2
115:20 121:10 169:19,20,22,25 170:6,8,10,15,21 170:23 184:11 186:1,4,8,11,14,17 192:16 193:3,4,6,8 193:22,22 206:12 206:20 207:9,11 207:16 208:4,6,7 213:5,8,15,16 215:17 223:15 224:6 225:1,5,18 226:23 229:24 231:6 233:17,19 233:22 234:1,4,6,8 234:10,17 238:15 242:18,24 244:15 244:21 245:4,5,15 247:1 248:22 249:7 250:20 253:2,12,21,25 257:8 271:3,6 272:6,15,20,25 273:3,10,21 274:4 304:8
study 11:18 37:7 38:10 40:6 44:20 49:2,5 93:22,23 95:3 102:9 108:6 108:12,21 109:2,3 109:7 111:9 114:24 115:5,8,18 116:13,14,21 117:20 118:13,21 118:24 119:1,4,7 120:20,23 121:1,4 121:6,13 147:8 170:14 184:17 186:5 193:20 206:15,15 207:7 208:12,18,21

209:10,21 210:1 219:15 221:5,6,6 227:2,16 228:19 228:21 229:3,16 230:2,15,19,21,24 231:8,9,10,15,24 231:25 232:19 233:1,9,11,13,17 234:24 235:13 236:2,7,12,14,21 236:23 237:2,9,10 237:14 238:4,18 239:17 240:2,18 241:5,10,15,23 242:7 243:17 245:22,24 246:1,4 246:8,13,18,25 247:18 248:1,8 249:15 250:1 251:6,10,16,21,25 252:4,7,22 253:8,9 253:10,14,17,19 254:17 255:4,11 255:14,22 256:1,5 256:11 257:6,15 258:4,10,17,21,25 259:18,18 260:2,6 267:6,12,15,19 268:10 269:18,22 270:2,5,13,14,18 270:24 271:5,20 271:23 272:23 273:15 274:5 284:17 286:3 287:13 289:22 290:20 294:6,13 295:22 298:2

studying 38:11 96:3 139:15 149:5 150:24

stutler 1:13 2:13 6:17 15:1 311:8

subject 21:14 27:15 38:25 79:12 130:4 135:23 144:19 205:11

subjectively 68:16

subjects 37:22 39:21 61:15,15,20 61:22 87:23

submission 139:3

submit 100:5 124:14 128:11,24 139:5

submitted 35:9 97:18 117:24 118:1 124:8 126:12 129:1 136:9 137:24 139:4 153:1 230:21,25 231:18 249:7

subscribed 313:18

subset 200:14

substance 129:8 152:7

substantial 84:9 102:16 135:22 153:17,19 285:12

substantive 18:8 114:9 232:8

subtype 173:13

successfully 25:20

suffer 58:20 200:17

suffering 176:4 179:21 209:22 232:16 310:11

sufficient 80:15 182:14,23 294:21

suggested 290:4

suicidal 236:16 237:4

suicidality 123:16 124:25 228:24 229:20

suicide 10:11,12 124:25 230:4,4 233:4 255:24 256:12,16 257:11 258:19

suite 3:9 4:10 7:10

sum 105:1

summarize 22:12 22:21 26:4 94:13 162:14 223:19

summarized 215:17,18

summarizing 20:24 26:7 27:1 43:21

summary 27:4 124:17,19,22 145:14 171:1

sunita 239:18

superintendent 1:13,14 2:13,14 4:3 6:17 7:3 15:1 15:4 311:13

supervise 49:15 67:19 68:3

supervised 67:1 67:16 84:13 131:4 131:12

supervising 66:25 68:24 96:23 131:19

supervision 45:19 66:23 68:7 130:24 131:16,22 132:11 132:17,20,22

181:10

supervisor 49:12 130:19

supervisors 131:12 147:22

supplement 310:3

supplied 156:18

support 11:6 48:16 106:23 107:2 108:25 158:5,8,15,17 162:13,25,25 163:7 191:14,25 211:11 234:5 247:7 258:17,21 258:25 296:24

supported 11:21 120:19 159:24 160:20 259:20 265:24

supporting 192:25

supports 162:1,8 162:22 191:17 208:12,18,21

suppose 285:21

suppression 11:7 11:12 200:7 246:14 247:8 249:16 250:2 251:12

sure 13:20 15:10 28:7,21 52:17 57:20 64:8 66:24 71:20 77:4 98:11 104:1,4,9 110:8 121:12 134:20 173:14 179:24 180:11 208:18 215:5 229:12 239:5 241:24 244:19 258:4,25

271:10 272:15 274:14 278:4 304:24 308:21
surgery 11:17 185:19 255:11,23 256:13,17 257:10
surgical 251:13
surprised 121:5 221:1
survey 186:8 233:6
suspecting 185:14
suspects 288:8
suspend 290:9
suspended 287:22 288:5
suspension 291:9 293:9
sutton 97:10,12 98:2,2,13,25
sutton's 97:21
swaminathan 4:16 9:6 13:20,21 14:15 15:24 16:2 16:6,6 18:24 19:10 25:14 26:16 27:3,18 28:11,15 28:19,24 29:1 30:21 31:2,5 32:20 33:3,4 34:14,17 35:6,13 40:22,24 44:14 45:5 46:3 47:9,11 57:16,21 58:6 61:3,18 63:15 64:9 65:20 71:1 71:13,23 72:1 77:8 83:8 85:6 86:17,23 96:9,12 96:13 103:8,14,16 103:17 104:3 105:2 112:11 120:5 121:17,20 122:5 124:6 133:19 134:6,10 134:20 135:3 137:10,15,20 142:13 146:2,4 151:14 152:1 158:20 159:10 160:2,17 161:11 161:22 162:17 164:5,24 166:17 166:21 167:16 171:9 172:18,23 173:5,18 174:7,22 175:4,18 176:1,8 176:13 187:2 190:18,24 191:3,5 193:13,16 198:1,6 199:1,12,17,18 206:9,10 207:8 208:17 209:12 210:2,11 211:16 211:25 212:13 219:8,10 223:2,11 224:11 225:8,24 226:1 227:6,11 229:14 230:8,13 234:16,22 235:4,8 238:24 239:4,10 239:15 241:21 242:11 243:22 244:3 245:1,18 247:12,16,24 250:5,10 254:8,13 259:10,16 261:21 262:1 265:15,19 268:1,6 272:14,24 273:13 274:2,8,14 275:1,2 282:5,9,24 283:12 284:2,8,10 286:13,18 293:22 296:23 299:10 300:17 301:1,13 302:1,7,13 304:1,9 304:18,25 305:9 305:22 307:17,21 309:18 310:15,19 310:24
swear 15:15
sweden 11:18 255:11
swedish 254:19 255:22 256:13
switch 239:21
sworn 13:19 15:16
symposia 122:11 123:1
synonym 141:2
system 70:17 80:13 85:8 100:12 143:1 145:23 149:9,14,22 164:22 248:25
systematic 106:19 202:9 208:4
systematically 62:23

t

t 16:15 191:4 237:19 316:3,3
tab 32:14 34:10 145:21 176:9 186:20 190:19 207:13,15 227:7 230:9 235:5 238:25 243:23 247:13 250:6 254:9 259:11 261:22 265:16 268:2 274:9 275:4 286:14 302:8
tafuri 235:20
taggart 235:19
tailored 138:20
take 17:16,20 23:14 33:5,8 36:19 37:14,25 39:8,25 42:15 43:11 51:9,12,14 51:18 57:16,19 67:14 87:2 103:11 116:14 121:18 125:18 131:18 145:22 146:20 154:18 156:25 166:8 177:6 200:10,12 207:23 252:3 257:21 305:10 311:16
taken 2:21 43:6 157:9 158:2 185:19 313:6
takes 32:23 176:14
talk 36:23 115:20 132:2 133:2 178:24
talked 29:4 103:19 183:25 309:22
talking 18:9 83:18 94:3 98:12,12 114:3,4 166:1,3 169:19,25 171:18 193:4,24 210:21 217:14 226:3 241:2 244:10 253:11 267:25 292:20 299:11
tangentially 96:15
tanner 175:7 200:6
tara 4:17 13:25

target 269:3,8
targeted 44:11
targets 269:4
tasks 276:7,16
taught 56:23 57:1
tbarham 6:11 314:2
tborelli 4:24
teach 56:19
teaching 52:2 55:24 56:9,11 57:3 130:17 131:1
team 120:6 133:7 134:24 135:11 137:3 173:22 175:8 246:2 251:18 265:6 266:18 267:12 303:8 304:13
teammates 165:25
teams 104:13 164:10 165:17,19 165:23 166:1,5 167:22 174:5,6,10 302:3 303:14
technical 174:20
technically 285:20
technique 252:15
teenagehood 167:23
teens 46:15,16 50:18 309:1
teeters 182:24
tell 22:1,5 54:1 55:3 59:15 62:16 64:18 74:12 100:11 102:8 107:18 119:9 122:24 129:7 131:25 149:16 169:24 196:14 198:18 199:2 217:19 237:14 293:23 301:17 309:10
ten 20:17 113:14 113:17 199:14 257:3 277:3,24 278:2 304:23
tend 210:16
tender 305:25
tenet 209:16
tenille 235:19
terf 191:2,6 302:10,11
term 11:15 53:21 128:21 139:20 141:1 144:24 145:3,4 181:3,6 214:25 252:18 255:9 300:9,9,14
terminology 18:23 19:7 26:24 27:14 43:25 44:23 60:25 167:13 172:22 173:3,10,25 197:24 198:4 208:14,24 210:8 211:14 222:15 229:13 234:13 273:8
terms 25:25 26:7 46:14 65:10 73:17 106:20 112:22 238:5,5 301:7
test 42:22,23 68:18
tested 219:20
testified 15:21 26:17,19,22 58:8 86:11 91:19 126:11 137:21 139:14 143:3 152:10 179:1 253:13 263:23
testify 23:10,12,15 195:8
testifying 19:18,19 19:22 313:9
testimony 22:2 23:1,20,22,25 24:10,13,18 25:10 25:17,19 26:8,13 27:8,10,22 28:4 90:21 112:1 145:7 154:22 159:4 162:20 163:10,19 179:15 223:4 224:25 234:9 242:5,9,12 243:1 271:5 293:7 306:18 307:2 311:19 312:9
testing 39:13 42:20 68:8,14,20 69:3
testosterone 198:2
tests 241:19
text 99:20 164:11 207:17 222:8
textbook 90:8 92:6 97:6 99:12,18 101:15
texts 99:19 222:7
thank 15:25 16:8 16:11,16 28:23 30:21 34:1,7 35:12 39:2 41:2 42:24 46:22 62:4 65:4 71:23 72:6 85:6 96:11 105:3 106:21 111:6,6 115:19 134:7 139:13 141:21 194:4 199:10 231:22 244:7 255:19 282:5 292:6 305:22 306:2 308:7,9 311:14
themself 154:8
theo 250:13
theoretically 299:9
theory 154:6 210:3 234:5
therapists 211:7
therapy 10:10,23 46:6 48:12,14,20 48:22,24 50:8,9,11 54:19 55:11,12 79:6 82:4 123:21 230:3 237:11,15 238:1,20 240:18
thereof 313:13
thing 13:20 127:6 143:8 268:24 273:21 279:13
things 52:14 60:7 93:24 128:3 259:5 295:5
think 21:25 24:1 24:21 27:7 28:8 31:3 33:24 41:1 46:18 50:15 57:1 74:3 76:10 86:11 103:2,9 106:1 109:22 126:8 130:15 136:24 137:15 140:21 142:14 145:3,6,18 147:14 148:11,22 149:17 152:20 158:7 159:19 162:18 163:2,4

164:4,21 166:22 171:10 183:4 185:2 202:19 206:3 207:12 211:25 212:2 223:21 224:4,8,10 224:12,16 232:6 233:25 234:3 238:15 243:2,10 243:10 244:16 245:23 265:3 268:22 270:24 277:3 288:2 291:12 293:16 298:20 303:17 304:18 311:15
thinking 264:25 268:25
third 72:14 177:24 191:12 257:18 262:6
thirds 71:10
thomas 235:21 250:13
thought 43:22 84:9 111:12 148:5 153:4 189:4 270:22,25 290:1
thoughts 10:11 230:4
thousands 150:6
threatening 289:12
three 21:17 40:13 40:14,18 41:4,25 68:4 81:22,23 87:9 115:4 135:4 177:22 204:2 232:7 286:11 290:17 295:23 296:15
tile 128:10
time 16:1 20:14 21:9 29:15 37:5 40:7 42:12 43:22 43:22 46:19 47:19 47:21 48:11 50:17 52:6,9 56:24 57:14 59:1 63:4 63:17 65:22 67:20 68:2 70:20,21 84:6,16 85:17,21 86:4,12 95:4 97:14 99:2 100:24 108:16 109:18 111:15 119:25 120:12,16 128:1 129:16 130:3 138:18 140:5,9,18 140:22 141:4,22 142:15 149:19 153:8 159:9 177:6 187:18 188:17 193:10 195:13,15 200:1 212:1 218:3 218:25 229:7,23 233:8 236:20 238:7 246:17 249:22 270:18 271:21 274:13 290:3,23 305:2,23 306:19 311:22 313:7 314:10,18 314:24 315:7
timeframe 67:11 88:9
times 20:10 23:8 40:23 81:20 114:23 115:4 242:1 245:10 255:23
timing 135:15
title 53:18 55:4,6,8 62:11 64:20 66:7 66:12,17 90:25 92:9,9,10 101:11 101:12,22 127:24 128:9 177:24 178:9 260:3 262:6 267:18 294:18
titled 88:16 92:11 107:2,15 123:14 125:21 128:1 191:1 220:2 227:2 230:2 234:24 238:18 243:17 250:1 255:9 259:19 267:15 302:10
titles 62:13 65:2 66:11 170:17
tlanghofer 6:14
today 10:1,3 12:10 16:1,9,21 17:25 18:8 19:18,22 29:7 30:6,10,17 32:5 33:12 34:4 34:23 35:18 75:13 154:22 158:24 162:21 171:14 187:8 195:8 231:17,19,20 242:5 255:3 283:21 286:23 287:1 297:5,10,13 297:21 299:22,24 301:15,19 302:10 304:10 305:15 306:17 307:9 308:21
today's 29:11 232:8,12 282:19
311:19
told 125:14 133:9 199:4 220:24 270:4 288:10
top 97:3 149:2 164:13,14 177:9 187:15 194:25 199:23 218:14 220:3 227:16 233:25 271:22
topic 27:24 28:1 83:16 100:4,8,11 102:12 114:4,5 118:24 121:4 167:3 170:25 202:9 205:12,13 223:25
topics 60:9 63:12 86:13 87:19 99:2 101:5 105:12 112:21 122:13,14 142:20
tordoff 227:1,17 230:15 231:9,10 231:15,21
toro 5:6 14:10,11
toronto 47:1 52:1 52:2,25 53:1 67:22 74:5,8 76:18 77:11,19,24 125:25 126:8
torturous 289:17 289:18
total 296:5 311:20
totality 116:4
totally 150:16 199:15
touching 72:4
tough 60:14,14 62:21 80:12

tracked 209:21
tracking 186:2
trained 42:21
trainee 53:22,25
training 38:6 45:14,16,20 48:23 48:25 67:20,25 75:23 130:18 131:1,4 180:14
trajectory 169:11
trans 21:22 45:2,2 48:15 49:3,9,9 77:18 78:1 89:14 123:15,16 125:1 130:2 131:9 132:2 132:4 148:6 163:16,18,24 165:24,25 166:12 166:23 169:3 184:23 185:15 186:6 187:6,7,17 191:19,21 211:21 309:21
transcribe 18:2
transcribed 313:11
transcript 16:21 308:1 312:7 314:6 314:8,10,13,13,21 315:2,2
transcription 313:13
transgender 10:6 10:12,18 11:1,20 12:5 18:11,19 19:4 21:24 23:18 25:23,25 26:3,9,19 26:22 27:5,5,11,23 28:5,17 38:1,4,7 40:1,4 43:12 44:21 45:15,21,25 46:2,9 52:4,7 55:20 57:4 58:16 58:20 63:6 77:2,5 77:10,23 78:4,7,16 78:22 79:1 83:10 83:16 86:14,19 88:12,16,22 89:3,9 89:18 90:2,22 91:4 92:2,12,25 93:7 96:15 98:6 98:15 101:2,16 103:20 105:22 106:11 107:8 109:8 111:25 115:9 118:22 119:5 121:1,9 125:6,8,10,15 127:14,18 130:8 130:11 131:5,23 132:8,13,15,18,23 140:1 142:9 143:5 143:6,11,13,22 144:5 145:8,8 167:2 174:9 175:6 175:15,21 180:9 189:7,18,24 190:3 197:22 198:2 200:16 202:21 203:3 206:1 207:1 207:20 208:1 211:18 222:11 223:5,23 224:6 227:3 230:5 232:9 232:11 235:1 236:17 237:5 243:18 251:11 256:18,22 259:19 265:24 267:16 271:15,24 280:22 281:1 288:17 292:1,18 307:11 307:13
transgendered 123:1
transgenderism 98:9
transi 216:2
transition 48:14 48:21 50:9 91:10 91:16 171:25 173:16,17 176:3 181:9 185:13,25 187:18 188:16 190:7,13 192:1,17 192:19,22,22,23 193:1 194:15 195:2,6,11 206:14 210:4 211:11 212:20 213:25 214:8,16,18,23 215:1,20 216:5,18 218:24 219:18 226:9 277:16 278:10,12,13,13 278:15,16,19,22 278:25 279:15 280:17 281:17 282:14 283:1,9,9 283:10 299:14,17 299:18,19,22 300:1,12 307:7
transitioned 198:22 215:24 216:2,10,21 217:8 217:17 271:24
transitioners 112:2 212:21
transitioning 110:18 214:16,19 214:21 279:9
transitions 78:2 116:16 185:16
translation 53:21
transsexual 11:16 12:7 255:10 275:15,19 276:2 280:8 281:15
transsexualism 98:22 106:24 107:4 109:19
transsexuality 27:25 43:15,18 63:25 110:10
transsexuals 128:2 276:21
travis 6:5 14:21 30:12,13,14 103:10 146:2 307:19 314:1
treat 18:11 19:5 211:18
treated 179:7
treating 200:4
treatment 68:8,12 75:5 79:2,25 80:9 80:18 81:16,18 82:4,11 115:8,13 115:16 132:5,7,12 150:5,9 178:25 196:6,17 197:11 202:4 208:13,19 238:7 251:13 280:23 281:2 294:23
treatments 81:2,9
tried 24:12,17,24 110:17 226:10
triggered 73:2,8
trouble 307:19
true 146:13 198:20 202:15,19 208:25 237:9 242:23 243:12

245:13,14 293:12 312:10
truth 240:21,22
truthfully 19:22
try 17:11,17 24:25 25:9 68:15 208:6 280:9
trying 62:18 77:20 84:22 109:24 110:21 139:7 140:15 149:17 155:12 159:13 170:5 183:4 185:8 186:8 189:21 215:13 248:24 277:1,1 292:13 294:17,24
tryon 3:15 14:18 14:18 18:23 19:7 30:18,19,22,25 31:3,6 44:1,1 45:22 61:13 64:7 65:15 70:11 71:6 71:17 86:15,21 96:7,11 103:24 112:8 120:3 124:4 134:2 136:23 158:16 159:17 160:9 162:10 164:2 167:14 171:6 172:12,22 173:1,24 174:17 175:1,16,23 207:4 209:24 219:5,5 224:9 234:19 241:16 244:22 245:17 272:11,19 273:9,19 282:2 283:7,24 296:18 299:6 300:3,5,21 301:4,20 303:22 304:5,15 310:3,4,8 310:17
turn 35:20 53:6 93:13 104:19 106:13 121:7 122:6 123:11 126:25 130:14 148:21 155:15 156:22 177:4 187:14,20 190:25 191:11 194:18,21 205:21 211:23 212:14 218:5 219:24 225:12 231:23 257:14 262:24 263:10 266:12 281:14 288:25 302:18
turned 192:12 260:17
tutorial 127:5
twitter 278:4
two 21:25 22:1 23:15 26:2 33:19 51:20 56:12 58:8 71:2,10 81:22,23 100:24 114:15 115:20 117:2 130:25 150:2,7 207:12,16 238:5 286:11 299:5 307:3 309:2,15
type 171:17 172:2 172:5,7,9 197:13
types 172:3 196:24 278:6 308:12
typical 139:25
typically 45:7 46:11 54:4 68:6 69:20 70:3,14 71:3 72:4 74:17 75:4 81:24 126:5 144:11 148:24 165:25 197:14,23 198:3 252:11 273:21 275:16
typology 106:23 107:3
tyson 6:8

u

u.s. 13:9 80:19 181:21 195:22
uh 100:2 115:15 182:11 237:20
ulterior 283:4
ultimately 70:6 83:6 84:7 264:1
un 289:17
unable 75:17 84:8 86:5 226:10 239:11
unanimously 206:21 207:6 212:22
unaware 270:20
uncivil 289:11
uncontested 101:19
unde 190:10
undecided 190:11
undergo 257:10
undergoing 11:16 189:10 197:10 255:10 278:21,25 279:9,16 280:16
undergraduate 37:1,12,14,16,17 37:25
undermine 157:11 158:3
undermined 158:25 159:5
undersigned 313:3
understand 16:24 17:8,10,22 18:5,16 18:22 19:1,6,12,15 19:17 27:7 28:20 44:17 46:13 50:16 62:18 72:3 75:25 77:24 80:19 84:3 87:13 109:24 110:20 115:22 117:25 122:10 123:13 130:17 139:7 141:8,11 149:17 152:2 159:13 162:23 170:5 171:13 172:6,15 173:15 176:22 179:1 182:1 183:4 184:18 185:3,8,22 214:25 215:5,14 229:3,9 231:4 243:10 256:7 276:23,24 283:19 294:15,17 298:12 299:1,12
understanding 25:15 28:3 33:9 35:6 43:1 63:21 84:23 104:5,10 135:20 139:19 142:2 145:13 146:8 153:13 155:12 160:10 164:6,16 165:15 166:7 168:3 174:6 176:2 185:10 189:24 215:13 244:13 261:6 263:8 271:21 284:1,4 286:1

292:24 299:25 300:18,23 301:2 301:18
understands 264:8
understood 17:14 28:21 100:13 109:24 150:16 152:20 160:3
underwent 255:22 256:12,17
undue 278:11,15
unethical 84:9
unfair 206:18
unfamiliar 129:11 129:12
unfortunate 243:9
unfortunately 18:3 277:6 306:9
union 7:16
unit 13:6 54:20 57:25 58:4 121:24 122:3 151:19,23 212:7,11 274:20 274:24 305:3,7
united 1:1 2:1
univer 51:25
university 38:17 40:7 42:10 47:1 52:1,2 67:21 146:10
unkind 289:10
unknown 206:2 207:2,21
unlawful 289:18
unnecessary 214:8 214:9
unprofessional 289:11
unprotected 292:5
unrealistic 218:23 219:17
unsigned 287:20
update 153:9 230:16
updated 36:17 139:5 153:5 201:13 277:23
updates 152:11 153:3 201:17,21 202:18
use 16:4,17 18:1 20:5 93:18,25 94:2 138:5,7 139:4,10 145:4 148:24 184:20 229:2 243:14 244:17 284:14 299:13,22
useful 111:11,11 111:12 150:4
usual 142:8 148:5
usually 47:7 67:23 81:10 91:21 94:2 299:20
utilized 196:5

v

v 11:25 56:17 225:25 314:4 316:1
va 41:12,17
vacuous 209:1
vague 124:4 293:4
valeria 5:6 14:10
valued 289:19
van 243:17 244:2 245:24 246:2 253:16,19
vanderlaan 116:25 117:21,22 118:6 119:2
var 301:22
variable 301:22
variance 252:16
variations 185:10
variety 157:16 165:8
various 157:25 273:11
venues 181:17 278:2,5 290:13
verbal 18:1
verify 24:25 266:23
veritext 8:4 13:15 13:17 311:21 314:7,9,11
veroff 5:10
versa 63:3
verse 25:5
version 90:9 92:6 92:10 97:5,9 101:12 153:1 182:16 195:18 203:12,14,16 204:23 205:1,4,8 205:15,19 216:19 221:25 247:2
versus 13:8 62:19 111:2 160:12 252:9 262:8 273:21 299:13
vice 63:3
victoria 54:16 248:2
video 13:6
videoconference 3:1
videographer 8:6 13:4,15 14:14,17 15:8,14,17 57:23 58:2 121:22 122:1 151:17,21 212:5,9 274:18,22 305:1,5 310:20,23 311:1,6 311:10,15
videotaped 1:19 2:20
vie 124:15
view 113:17 140:1 158:25 159:5 188:18
views 269:10 302:24
violated 289:23
violating 71:21 151:2
violative 76:9
virginia 1:2,9,11 1:15 2:2,9,11,15 3:3,8,10,13,14,18 4:3,9,11 6:22 7:3 7:9,11 9:24 13:8 13:11 14:19,20 15:3,6 34:6 133:9 133:16,23 134:13 135:2,6 136:14,22 138:3 177:11 311:12 314:4 316:1
virginia's 157:11 176:25
virtual 84:20
virtually 13:13 31:8
volition 96:20
volume 1:21 2:21 9:4 312:17
voted 290:1
vpeletdeltoro 5:19
vries 225:22 226:15 246:3 250:1,12,20,24 253:7,10

vs 1:8 2:8

w

w 1:11 2:11
wagenaar 250:13
wait 155:17 209:7
waiting 195:3 268:7
waived 314:23,23
waiver 177:17
waiving 314:20
walk 53:4
wall 4:20
want 18:9 28:20 36:23 57:19 71:19 75:2 91:9 93:19 103:8,11 133:1 137:14 142:1,22 143:9 144:18 146:24 159:11 178:24 187:14,18 188:16 199:12 206:13 214:13,18 215:5,20 216:5 230:15 245:11 247:21 263:7 270:7 284:7 293:4 306:8
wanta 227:17
wanted 52:17 70:18 84:10 135:15
washrooms 303:6
watchful 195:3
water 32:9,10
way 30:8 32:7 44:10 45:3 59:7 80:13,14 84:9 89:16 99:22 100:7 102:13 108:4,23 121:3 140:16 142:25 145:19 149:24 158:11 160:11,15 166:24 172:14 174:3,16 174:20 175:24 183:2 209:1 229:1 229:4 243:11 244:17,18 253:4 256:23 269:10 276:8,17 289:25 301:7
ways 89:13 93:18 139:21 184:21 243:3 252:13,14 253:4 269:13
we've 52:18 57:13 75:24 77:1 142:14 142:16 212:2
wearing 279:22 280:2
website 275:12,15 276:14 277:9,15 277:24 297:23
websites 75:13
week 150:10 200:2 200:3
weeks 152:25 231:13
went 29:15 41:25 57:9 62:5 64:10 102:9 148:4
west 1:2,9,10,15 2:2,9,10,15 3:3,10 3:13,14,18 4:3,11 6:22 7:3,11 9:24 13:8,10 14:19,20 15:3,6 34:5 133:9 133:16,23 134:13 135:2,6 136:14,22 138:3 157:11 176:25 177:11 311:12 314:4 316:1
western 1:2 2:2
when's 200:1
whereof 313:17
whichever 290:5
white 6:21
wide 157:16 165:8
widely 196:4
wider 120:23
widespread 145:3
willing 133:10
wilson 235:21
windows 239:21
wishes 185:24 281:12
withholding 208:12,19,21 210:4 211:11
witness 9:2 13:19 15:15,16 19:8 24:3,5,5 25:13 26:15,25 27:15 28:17 29:3 33:1 44:2,25 45:24 61:1,14 63:9 64:8 65:14,16 70:12,14 71:7,20 77:7 83:1 85:8 86:16,22 103:13,25 104:18 112:9 120:4 124:5 134:8,16,21 135:1 136:24 137:1 142:12 159:8,19 160:10,22 161:15 162:11 164:3,20 167:15 171:7 172:13 173:4,11 174:1,19 175:2,17 175:24 187:1 190:23 193:14 197:25 198:5,20 199:16 207:5 208:15,23,25 209:25 210:9 211:15 222:16 223:9 225:4 234:14,20 239:3,8 239:13 241:17 242:9 244:1,23 247:22 250:9 259:15 272:12,20 273:10,20 274:12 282:7,18 283:8,25 293:12 296:19 299:8 300:7,22 301:6,22 302:12 303:23 304:7,16 305:25 306:11 309:19 310:16 313:17 314:13,16 315:2,5 316:24
witnesses 263:9 313:8
woman 130:2
women 174:9 188:14 197:22 222:11,13 223:5,6 307:3 309:12
women's 157:12 177:21,23,25 178:5,13
wondering 24:23 48:13 103:10 110:1 111:6 243:8
word 20:5 24:24 28:9 53:19 93:18 93:23 94:2 101:22 185:10 229:2 243:2,5,8 244:16 282:20 283:9 284:12 299:14,22 299:25

words 25:2 93:25 184:20 258:9,11 279:14 299:19,25
work 47:23 50:3 52:4 54:1,7 55:3 55:15,19 57:9 58:23 59:15,19 60:11 61:4 62:16 62:23,24 63:16,19 64:5,18,21 65:6,8 65:10 68:5,11,24 70:1 73:18,20,22 76:19 80:13 93:14 93:19 100:19 110:22 147:6,20 149:13 304:22,23
worked 40:8 47:22 54:12 61:21 73:15 75:2 116:19 133:15 150:18
working 106:2 126:25,25 150:19 205:1
workload 74:21
works 57:18 80:24 97:6 262:18
world 67:24 99:19 181:21 202:21 279:23
worries 96:12
worse 259:5
wpath 202:20 203:1,5,9,21,24 204:4,14,16,18,22 204:25 205:4,16
write 81:16,24 87:19 95:12 111:16 112:22 187:16 290:24 297:25 302:17
writing 81:13 88:4 90:9 111:18,22 293:17,19 294:10 297:17
writings 58:22
written 81:19 82:2 106:8 107:19 111:10 191:8 291:7
wrong 192:13 214:17 261:15 274:12
wrote 20:4 97:9 106:6 111:9,21 187:11 203:23 251:16 266:24 275:10 276:19 277:2 282:18,23 291:10,11,12
wvago.gov 3:20
wvssac 311:4
www.aappublic... 240:11
wyant 4:6 7:6

x

x 315:1
x.x.g. 262:9
ximena 239:19
xxg 11:25

y

y 272:7,16
yeah 16:8 36:19 50:13 84:22 111:5 138:6 146:6 245:2 245:14 260:14
year 22:8,9,23 40:14 41:4,25 47:14,16,20,21 97:17 100:24 113:9 116:4 175:6 203:11,19 233:5 257:4 287:12
years 20:17 21:1 29:13,21 33:19 40:8,13,18 47:24 54:23 74:23 79:20 79:20 83:24 87:17 87:18 100:24 101:18 105:11 107:21 112:20,21 113:13 115:25 116:2,5 120:1 122:19 126:24 204:2 221:5 232:7 253:24 277:3,24 278:2 285:17 286:11 294:2 297:24 308:21 309:4
yep 151:17 212:5 305:1
yesterday 30:16 31:9
york 4:22,22 7:20 7:20 21:18,19 23:15
young 11:11 46:12 46:13 144:11,17 144:25 250:1 251:11
younger 145:10
youngest 50:15,18 76:8,10 78:11
youth 10:13,22 12:5 230:5 236:17 237:5 238:19 240:18 267:17 271:15,25
youths 10:6,19 227:3 235:1

z

zelkind 4:18
zero 75:2
zholstrom 5:23
zoe 5:11 291:3,8 292:11 293:8 294:4,18 297:2
zoom 3:1
zucker 92:20 102:4,20 107:12 119:3 250:23

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.

Exhibit C

The Kinsey Institute Interview Series: A Conversation with Dr. James Cantor

By Justin Lehmiller

What is a day in the life of a sex researcher like?

In this interview series, I'll be talking to some of the world's foremost authorities on sex in order to answer this question, but also to provide a glimpse into what they're currently working on and what they think about some of the most pressing issues facing the field of sex research today.

For this interview, I spoke with Dr. James Cantor, a clinical psychologist based in Toronto who specializes

in research on unusual sexual interests. Below is the transcript of our email conversation.

James Cantor. University of Toronto; Toronto, Canada.

Lehmiller: As a sex researcher, one of the most common questions you get asked is how you got into this line of work in the first place. So let's start there—what is it that drew you to this field of study? What's the story behind how you became a sex researcher?

Cantor: I think it was mostly dumb luck. I actually started out in computer science, doing my degree surrounded by other math-and-science folks. But I was also working as a peer counsellor in the dorms, and I eventually figured out that I was enjoying that even more than my formal studies. So, I decided to switch and try to get into clinical psychology. This was during the peak of the Dr. Ruth days, and I had come out at a time when psychology hadn't yet really grappled with LGBT issues in psychotherapy—so, I thought I'd have a niche in doing couples' therapy for gay couples. But first, to get into a competitive PhD program, I had to get some psychology experience as a research assistant, and I found a job where they trained me to do neuropsych assessments. Eventually, I found a doctoral program at McGill, where there was a professor who wanted to get a computer to do sex therapy. Who could possibly be a better match than me —someone with an interest in sex therapy who also happened to have a background in computers? I never could have planned this, of course, but it was just the right combination. The other stroke of dumb luck came at the end of my doctorate when it was time for my clinical internship. There weren't (and still aren't) many good sites for training in sex or couples therapy, but there was someplace that came close. The Clarke Institute of Psychiatry (now the Centre for Addiction and Mental Health, or CAMH) provided clinical training in sex and gender related issues. While I was there

training in treating pedophiles, they received a grant for which they needed an additional pedophilia researcher, this time with a background in…neuropsych assessment! As I said, I couldn't plan this. But my experience is that cross-pollinating fields is extremely valuable! It all worked out very well, but still feels only like a fluke.

Lehmiller: What is your primary area of research and what methods do you typically use to answer your research questions?

Cantor: My primary research opportunities have involved studying sex offenders, mostly pedophiles and persons with other atypical sexualities whose behaviours led them into the legal system. I have also been able to do some work on (so-called) hypersexuality. I've gotten to use a range of methods to get at the questions I'm trying to answer. The best known of my work used various neuropsychological and MRI techniques—these gave us very direct evidence of the association between pedophilia and the brain. Also extremely important to my research is "phallometry": study participants (male) wear a device on their penis while they are exposed to different kinds of erotic stimuli. This procedure is extremely sensitive, quantitative, and escapes many self-report problems. Although those highly quantitative methods have provided the compelling evidence for many of my hypotheses, it was still the front-line exposure to a wide diversity of sexual issues coming into our clinic that provided the qualitative information that yielded many of those hypotheses. I think too many researchers try to do one type of research without the other.

Lehmiller: You have published research on a range of topics, including homosexuality, pedophilia, and hypersexuality. Tell us a little bit about what you're working on now.

Cantor: At the moment, I want to go big--I'm after a "Grand Unified Theory" of the atypical sexualities. Rather than viewing pedophilia and sex addiction and homosexuality and asexuality and so on as all being different ways to be different, I think they are all pieces that fit together in a bigger puzzle of how the human sexual attraction/interest/orientation system works. I don't know if I will ever get it, but I'm sure going to give it my best!

Lehmiller: As you well know, what people believe to be true about sex doesn't always match up with what the research shows. In your experience, what are some common beliefs about sex that are just plain wrong?

Cantor: It's hard for me to answer this question without first addressing how much that extremist politics have pushed people's beliefs away from the science. I point out examples both from extreme right and the extreme left. On the right, we have folks who believe in "reparative therapy" to turn homosexuals into heterosexuals, despite research showing the failure of such therapies and documentation of its harm. On the left, however, we have folks who oppose helping transgender children to be happy with their sex of birth, despite all the research showing that the great majority of such kids turn out to be gay or lesbian in adulthood, but cisgender instead of trans. It has become very difficult to discuss the science of these issues at all, without the conversation degrading entirely into politics.

Within my own field, I think the most common belief about sex that's just plain wrong is that "pedophilia" is a synonym for "child molestation." Pedophilia refers to the actual sexual interest (or "orientation") towards children, and child molestation refers to the overt behaviour. I've found that once people appreciate that distinction, they start to appreciate what it must be like

for a person to realize that—through no fault of his own —he is attracted to children, but chooses to live a life of celibacy rather than molest a child. In making just that distinction, we suddenly find ourselves feeling sympathy where we didn't think possible.

Lehmiller: You are actively involved in the dissemination of sex science through both popular media interviews and Twitter. However, the topics you've spoken publicly about, such as pedophilia, are rather controversial and polarizing. As a result, you've encountered a fair amount of resistance and criticism along the way. So how do you attempt to combat this? How do you try to reach people who don't necessarily want to hear what you're saying?

Cantor: Lots of people have strong opinions about lots of aspects of sex. The debates and public reactions have depended on the nature of the sexual minority under discussion, the personalities of the activists involved, and (maybe even most) on the leadership of whichever forum hosted the debate. Wikipedia, for example, has a complete process and open forum with an arbitration committee to whom evidence could be brought and discussed. Wikipedia supported my dissemination of science over the activists who disliked what the science said. Reddit, however, banned me from posting in the psychology group because a single moderator disliked that same science, but there was no open process (nor appeal I could find). So, in that forum, each moderator apparently has the authority to censor open discussion of legitimate science.

The people who don't want to hear what I am saying are not going to hear what I am saying, and it's not a liberal or conservative thing. It's an extremist thing. There are so-called conservatives who are trying merely to convince us of their virtuousness, and there are so-called liberals who are trying merely to convince

us of theirs. I don't think this is really about sex, however. It's about the ability and willingness of people in our culture today to evaluate what they are told on the basis of evidence rather than what one is told by whatever authority or popularized by whatever peer group.

Lehmiller: We are in the midst of a "replication crisis" in psychology—and science more broadly—and there's a lot of talk about the need for reforms in the way that we approach research. What's one thing that needs to change in the way that we conduct sex research, or what do you think sex researchers need to do differently going forward?

Cantor: There is, of course, a lot of bad research. There are underfunded ideas, overtaxed professors, and trainees who don't really want to do research, yet who are forced to come up with *anything* in order to graduate. There are also people who have such strong convictions about what they want the answer to be that they are unable to read the evidence in front of them. But, all that said, I think the real problem is that there are not enough sex researchers. If you think it's a problem that so many ideas turn out wrong when checked, just imagine how many of the *unchecked* ideas are wrong!

Lehmiller: Last question--if you're a sex researcher, people tend to assume that you know everything there is to know about sex. However, the truth of the matter is that no one does—like everyone else, we're all constantly learning. Tell us about one new thing you recently learned about sex that absolutely fascinated you.

Cantor: That sex doesn't end at 50.

Dr. Justin Lehmiller is an award winning educator and a prolific researcher and scholar. He has published articles in some of the leading journals on sex and relationships, written two textbooks, and produces the popular blog, Sex & Psychology. Dr. Lehmiller's research topics include casual sex, sexual fantasy, sexual health, and friends with benefits. He is currently the Director of the Social Psychology Graduate Program and an Assistant Professor of Social Psychology at Ball State University.

Support Kinsey

Love is more than an emotion. It is essential to our individual and collective well-being. Your support will help the Kinsey Institute advance research and education in the science of love and give a diverse field of researchers the resources they need to make new discoveries.

Pledge your support

CONTACT US

Kinsey Institute
Phone: (812) 855-7686

Collections + library

Publications

Education + outreach

News + events

Support Kinsey

Search our library catalog

Download the Kinsey Reporter app

Email: kinsey@indiana.edu
Lindley Hall 305,
150 S Woodlawn Ave.,
Bloomington, IN
47405

Kinsey Institute Library & Special Collections

Phone: (812) 855-3058
Email: libknsy@indiana.edu

Exhibit D

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
3 CHARLESTON DIVISION
4 * * * * * * * *
5 B.P.J., by her next friend and *
6 Mother, HEATHER JACKSON, *
7 Plaintiff * Case No.
8 vs. * 2:21-CV-00316
9 WEST VIRGINIA STATE BOARD OF *
10 EDUCATION, HARRISON COUNTY *
11 BOARD OF EDUCATION, WEST *
12 VIRGINIA SECONDARY SCHOOL *
13 ACTIVITIES COMMISSION, W. *
14 CLAYTON BURCH in his official *
15 Capacity as State Superintendent,* VIDEOTAPED
16 DORA STUTLER in her official * VIDEOCONFERENCE
17 Capacity as Harrison County * DEPOSITION
18 Superintendent, PATRICK MORRISEY * OF
19 In his official capacity as * ARON JANSSEN, M.D.
20 Attorney General, and THE STATE * April 4, 2022
21 OF WEST VIRGINIA, *
22 Defendants *
23 Any reproduction of this transcript
is prohibited without authorization
24 by the certifying agency.

1 VIDEOTAPED VIDEOCONFERENCE DEPOSITION
2 OF
3 ARON JANSSEN, M.D., taken on behalf of the Defendant,
4 State of West Virginia herein, pursuant to the Rules of
5 Civil Procedure, taken before me, the undersigned, Lacey
6 C. Scott, a Court Reporter and Notary Public in and for
7 the State of West Virginia, on Thursday, April 4, 2022,
8 beginning at 9:09 a.m.
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

1 A P P E A R A N C E S
2
3 JOSHUA BLOCK, ESQUIRE
4 American Civil Liberties Union Foundation
5 125 Broad Street
6 New York, NY 10004
7 COUNSEL FOR PLAINTIFF
8
9 KATHLEEN R. HARTNETT, ESQUIRE
10 ANDREW BARR, ESQUIRE
11 ELIZABETH REINHARDT, ESQUIRE
12 VALERIA M. PELE DEL TORO ESQUIRE
13 Cooley, LLP
14 3 Embarcadero Center, 20th Floor
15 San Francisco, CA 94111-4004
16 COUNSELS FOR PLAINTIFF
17
18 SRUTI SWAMINATHAN, ESQUIRE
19 Lambda Legal
20 120 Wall Street, 19th Floor
21 New York, NY 10005-3919
22 COUNSEL FOR PLAINTIFF
23
24

1 A P P E A R A N C E S (cont'd)

2

3 DAVID TRYON, ESQUIRE

4 State Capitol Complex

5 Building 1, Room E-26

6 Charleston, WV 25305

7 COUNSEL FOR STATE OF WEST VIRGINIA

8

9 ROBERTA F. GREEN, ESQUIRE

10 Shuman McCuskey Slicer, PLLC

11 1411 Virginia Street East

12 Suite 200

13 Charleston, WV 25301

14 COUNSEL FOR WEST VIRGINIA SECONDARY SCHOOL

15 ACTIVITIES COMMISSION

16

17 SUSAN DENIKER, ESQUIRE

18 Steptoe & Johnson

19 400 White Oaks Boulevard

20 Bridgeport, WV 26330

21 COUNSEL FOR HARRISON COUNTY BOARD OF EDUCATION and

22 HARRISON COUNTY SUPERINTENDENT DORA STUTLER

23

24

1 A P P E A R A N C E S (cont'd)

2

3 KELLY C. MORGAN, ESQUIRE

4 Bailey Wyant

5 500 Virginia Street East

6 Suite 600

7 Charleston, WV 25301

8 COUNSEL FOR WEST VIRGINIA BOARD OF EDUCATION and

9 SUPERINTENDANT W. CLAYTON BURCH

10

11 RACHEL CSUTOROS, ESQUIRE

12 Alliance Defending Freedom

13 15100 North 90th Street

14 Scottsdale, AZ 85260

15 COUNSEL FOR INTERVENOR, LAINEY ARMISTEAD

16

17 TRAVIS C. BARHAM, ESQUIRE

18 LAWRENCE WILKINSON, LAW CLERK

19 1000 Hurricane Shoals Road NE

20 Suite D 1100

21 Lawrenceville, GA 30043

22 COUNSEL FOR INTERVENOR, LAINEY ARMISTEAD

23

24

1 I N D E X

2

3 DISCUSSION AMONG PARTIES 11 - 13

4 WITNESS: ARON JANSSEN, M.D.

5 EXAMINATION

6 By Attorney Barham 13 - 295

7 EXAMINATION

8 By Attorney Tryon 295 - 388

9 CERTIFICATE 390

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

1 EXHIBIT PAGE

2

3

4

	NUMBER	DESCRIPTION	PAGE IDENTIFIED
5	1	Expert Report	14
6	2	Endocrine Society's Guidelines	32
7	3	World Health Organization	35
8	4	Harvard Medical School Study	43
9	5	American Psychological Association	
10		Guidelines	48
11	6	Lisa Littman Study	53
12	7	Study	76
13	8	Article by Vandenbussche	82
14	9	Article by Lily Durwood	84
15	10	Statement by Royal Australian and	
16		New Zealand College of	
17		Psychiatrists	97
18	11	Policy Change Regarding Hormonal	
19		Treatment of Minors	101
20	12	Article by Lisa Nainggolan	106
21	13	Study	107
22	14	Article Published on Medscape.com	108
23	15	Article in National Health Service	110
24	16	Article by Roberto D'Angelo	115

EXHIBIT PAGE

NUMBER	DESCRIPTION	PAGE IDENTIFIED
17	Study by Gibson, et al.	126
18	Errata Sheet	130
19	Article by Tordoff, et al.	131
20	Article by Amy Green, et al.	133
21	Article by Turban, et al.	134
22	Article by Achille, et al.	135
23	Article by Kuper, et al.	137
24	Article by van der Miesen, et al.	138
25	Article by De Vries	140
26	Article by Biggs	142
27	Article by Costa, et al.	145
28	Article by Edwards-Leeper	148
29	Article by Edwards-Leeper	149
30	Interview by Lisa Selin Davis	176
31	Label of Lupron	218
32	Puberty Blockers Document	224
33	Endocrine Society's Guidelines	228
34	Article by Blakemore	232
35	Article by Guss, et al.	245
36	Article by Moseson, et al.	247

EXHIBIT PAGE

NUMBER	DESCRIPTION	PAGE IDENTIFIED
37	Article by Steensma	251
38	Analysis	251
39	Article by Rae, et al.	256
40	Article by Carmichael, et al.	262
41	Washington Post Article	268
42	Out Sports Article	271
43	Article by Turban, et al.	276
44	Article by Ryan, et al.	280
45	Article by Klein and Golub	281
46	Form	315

1 OBJECTION PAGE

2

3 ATTORNEY PAGE

4 Block 17, 18, 19, 21, 22, 23, 24, 27, 29, 30, 31, 33,

5 34, 35, 36, 37, 38, 39, 40, 41, 42, 44, 45, 46, 49, 50,

6 52, 54, 56, 57, 58, 59, 66, 68, 69, 70, 71, 72, 74, 75,

7 77, 78, 79, 80, 81, 82, 85, 86, 87, 88, 89, 91, 92, 95,

8 96, 97, 98, 99, 100, 101, 102, 104, 105, 106, 107, 109,

9 111, 113, 114, 115, 117, 118, 119, 120, 120, 121, 122,

10 123, 125, 129, 130, 132, 134, 138, 141, 142, 144, 145,

11 147, 153, 154, 156, 157, 158, 160, 161, 163, 165, 166,

12 167, 169, 172, 173, 174, 175, 177, 178, 179, 180, 181,

13 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 193,

14 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 206,

15 207, 208, 209, 210, 211, 213, 214, 217, 218, 219, 220,

16 221, 222, 223, 224, 226, 228, 229, 231, 234, 27, 238,

17 240, 241, 242, 243, 244, 245, 246, 247, 250, 254, 255,

18 258, 259, 260, 261, 264, 265, 266, 268, 269, 270, 272,

19 274, 275, 282, 284, 286, 288, 289, 290, 291, 292, 293,

20 294, 295, 298, 300, 301, 302, 303, 304, 308, 309, 310,

21 311, 312, 313, 314, 316, 317, 318, 319, 320, 321, 322,

22 323, 324, 325, 326, 327, 330, 331, 332, 333, 334, 336,

23 337, 337

24

1 S T I P U L A T I O N
2 --
3 (It is hereby stipulated and agreed by and between
4 counsel for the respective parties that reading,
5 signing, sealing, certification and filing are not
6 waived.)
7 --
8 P R O C E E D I N G S
9 --
10 ATTORNEY BARHAM: Counsel has stipulated
11 that our court reporter present this morning can swear
12 in the witness, so I will let the court reporter take
13 care of that.
14 ---
15 ARON JANSSEN, M.D.,
16 CALLED AS A WITNESS IN THE FOLLOWING PROCEEDINGS, AND
17 HAVING FIRST BEEN DULY SWORN, TESTIFIED AND SAID AS
18 FOLLOWS:
19 ---
20 VIDEOGRAPHER: My name is Jacob Stock.
21 I'm a Certified Legal Video Specialist employed by
22 Sargent's Court Reporting Services. The date today is
23 April 4th, 2022. The time on the video monitor reads
24 9:09 a.m. This deposition is being taken remotely by

1 Zoom conference. The caption is in the United States
2 District Court for the Southern District of West
3 Virginia, Charleston Division, BPJ, et al., versus West
4 Virginia State Board of Education, et al. Civil Action
5 Number 2:21-CV-00316. The name of the witness is Aron
6 Janssen. Will the attorneys present state their names
7 and the parties they represent?
8 ATTORNEY BARHAM: My name is Travis
9 Barham. I represent the intervenors in this case. And
10 with me is Lawrence Wilkinson.
11 ATTORNEY CSUTOROS: Rachel Csutoros also
12 for intervenor.
13 ATTORNEY TRYON: This is David Tryon of
14 the West Virginia Attorney General's Office,
15 representing the State of West Virginia.
16 ATTORNEY DENIKER: Good morning. Susan
17 Deniker. Counsel for Defendants Harrison County Board
18 of Education and Superintendent Dora Stutler.
19 ATTORNEY MORGAN: This is Kelly Morgan on
20 behalf of the West Virginia Board of Education and
21 Superintendent Burch.
22 ATTORNEY GREEN: This is Roberta Green
23 here on behalf of West Virginia Secondary School
24 Activities Commission.

1 ATTORNEY BLOCK: For Plaintiff BPJ, this
2 is Josh Block from the ACLU.
3 ATTORNEY SWAMINATHAN: This is Sruti
4 Swaminathan from Lambda Legal on behalf of Plaintiff.
5 ATTORNEY HARTNETT: Good morning. This
6 is Kathleen Hartnett at Cooley on behalf of Plaintiff.
7 ATTORNEY BARR: Andrew Barr from Cooley
8 on behalf of Plaintiff.
9 ATTORNEY PELET DEL TORO: Good morning.
10 This is Valeria Pelet Del Toro from Cooley on behalf of
11 Plaintiff.
12 ATTORNEY REINHARDT: This is Elizabeth
13 Reinhardt from Cooley on behalf of Plaintiff.
14 VIDEOGRAPHER: If that's everyone, the
15 witness has already been sworn in and we can begin.
16 ---
17 EXAMINATION
18 ---
19 BY ATTORNEY BARHAM:
20 Q. Good morning, Dr. Janssen.
21 A. Good morning.
22 Q. Have you ever had a deposition before?
23 A. No.
24 Q. All right.

1 I'm going to ask you a series of questions
2 about this case and your involvement in it. Do your
3 best to answer audibly. Just nodding the head, while it
4 can be captured on video cannot be captured by our court
5 reporter, and so we'll try to make her life as easy as
6 possible.
7 I'm going to do my best to wait until you finish
8 an answer before starting the next question. And I will
9 ask that you do the same. We'll probably violate that
10 rule a few times, but cross talk doesn't translate well
11 on the record. So if you need to take a break at any
12 time today, please let me know and we will do our best
13 to facilitate that as quickly as possible. I know we
14 need to take a break at two o'clock.
15 A. I think about 2:30, 2:45, something like that.
16 Q. Okay.
17 You just let us know when you need to take it.
18 All right.
19 ATTORNEY BARHAM: I'm going to show you a
20 document we're going to mark as Exhibit-1. This will be
21 Tab 90 for online purposes.
22 ---
23 (Whereupon, Exhibit 1, Expert Report, was
24 marked for identification.)

1 ---
2 BY ATTORNEY BARHAM:
3 Q. This is a copy of your expert report in this
4 case.
5 Is that correct?
6 A. Yes, that is correct.
7 Q. If you'll turn to the first page of your CV.
8 It's probably page 21 of this document. Do you
9 have ---?
10 VIDEOGRAPHER: This is the videographer.
11 Can I ask Counsel to speak up? You are kind of getting
12 cutoff at the end of your sentences.
13 ATTORNEY BARHAM: Pardon. I will do my
14 best.
15 BY ATTORNEY BARHAM:
16 Q. Do you have a degree in adult psychiatry?
17 A. There is not a degree in psychiatry.
18 Q. Okay.
19 So your academic training in psychiatry began
20 with your psychiatry residency? Is that how it works?
21 A. I did a medical degree, where there is
22 psychiatry training and then a residency in adult
23 psychiatry and a fellowship in child psychiatry.
24 Q. Do you consider yourself trained and

1 professionally competent in using the American
2 Psychiatric Association's Diagnostic and Statistical
3 Manual, DSM-V, to make child and adolescent metal
4 illness or psychiatric diagnoses generally beyond just
5 gender dysphoria?
6 A. Yes.
7 Q. Do you have any residency or fellowship in
8 pediatrics?
9 A. No.
10 Q. Do you have any residency or fellowship in
11 endocrinology?
12 A. No.
13 Q. Do you have any training in sports physiology?
14 A. No.
15 Q. Do you have any training in sports medicine?
16 A. No.
17 Q. Have you published any papers, conducted any
18 research or given any lectures relating to sports
19 physiology?
20 A. No.
21 Q. Have you published any papers, conducted any
22 research or given any lectures relating to sports
23 medicine?
24 A. No.

1 Q. Have you published any papers, conducted any
2 research or given any lectures relating to male
3 physiological advantages in athletics before, during or
4 after puberty?
5 A. No.
6 ATTORNEY BLOCK: Objection to form. You
7 can answer.
8 BY ATTORNEY BARHAM:
9 Q. Have you published any papers, conducted any
10 research or given any lectures relating to the impact of
11 any drugs or hormones on athletic performance?
12 A. No.
13 Q. Have you published any papers, conducted any
14 research or given any lectures relating to the impact of
15 testosterone suppression on athletic performance?
16 A. No.
17 Q. Have you published any papers, conducted any
18 research or given any lectures relating to the effect of
19 transsex surgeries on athletic performance?
20 A. No.
21 ATTORNEY BLOCK: Objection. Objection to
22 terminology.
23 BY ATTORNEY BARHAM:
24 Q. Have you published any papers, conducted any

1 research or given any lectures relating to the safety
2 issues and risks to women associated with transgender
3 participation in female athletics by male athletes?
4 ATTORNEY BLOCK: Objection to form.
5 Sorry, objection to form.
6 THE WITNESS: Yeah, I think there's a bit
7 of a premise in there that I don't agree with, but I
8 have not given any lectures about transgender
9 participation in sports.
10 BY ATTORNEY BARHAM:
11 Q. Do you consider --- do you have any professional
12 expertise related to the concept of fairness?
13 A. I do not.
14 Q. Do you have any professional expertise on the
15 definition of fairness?
16 A. I do not.
17 Q. Would you agree that fairness is an elusive,
18 subjective concept with malleable boundaries?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: I do not have an opinion on
21 the definition of fairness.
22 BY ATTORNEY BARHAM:
23 Q. Have you treated or personally examined BPJ?
24 A. I have not.

1 Q. You have no direct knowledge as to what Tanner
2 stage BPJ started puberty blockers at the age.
3 Correct?
4 A. Correct.
5 Q. You do not know how BPJ's physiology or athletic
6 capabilities compare with genetic females at the same
7 age?
8 A. I do not.
9 ATTORNEY BLOCK: Objection to
10 terminology.
11 BY ATTORNEY BARHAM:
12 Q. This report, Exhibit-1 of 20 pages sets out the
13 complete statement of all opinions that you will testify
14 to at trial.
15 Correct?
16 A. Which report are you referring to?
17 Q. The report in front of you, Exhibit-1, Tab 90.
18 A. And can you repeat the question? Sorry.
19 Q. This report sets out a complete statement of all
20 opinions that you will testify to at trial.
21 Correct?
22 A. I do not know the answer to that. I mean, I
23 would assume so, but I don't know. I've never been in a
24 trial, so I don't know if there will be questions asked

1 outside of this document.
2 Q. Does this report identify all facts and data
3 that you considered in forming the opinions that you set
4 forth in your report?
5 A. I wouldn't say it has all facts because I don't
6 think it is possible to include all facts in an expert
7 report, but the relevant facts, yes.
8 Q. This includes the facts that you'll rely on in
9 supporting those opinions.
10 Correct?
11 A. That's correct.
12 Q. Does your report set out all the reasons for the
13 opinions that you propose to offer?
14 A. Yes.
15 Q. Your footnotes cite to I believe 32 scientific
16 or professional articles and you reference some others
17 in your CV. Are those all the articles that form the
18 basis of the opinions you propose to offer?
19 A. No.
20 Q. What other articles form the basis of the
21 opinions you propose to offer?
22 A. I guess the question is what has formed my
23 professional expertise around gender health, and I've
24 read a lot that aren't necessarily going to be apropos

1 to this specific report.

2 Q. But those are the articles that you cited and

3 referenced in this document are those that you relied

4 upon as the basis of opinions that you intend to offer.

5 Correct?

6 A. That is correct.

7 Q. You currently serve as the Clinical Associate

8 Professor of Child and Adolescent Psychiatry.

9 Correct?

10 A. Yes.

11 Q. And what institution is that with?

12 A. It is with Northwestern University Feinberg

13 School of Medicine, and Ann and Robert H. Lurie

14 Children's Hospital of Chicago.

15 Q. And how much of your time in this position is

16 related to discussing or treating gender dysphoric

17 children and adolescents?

18 ATTORNEY BLOCK: Objection to

19 terminology.

20 THE WITNESS: It's hard to quantify.

21 Probably about 40 percent of my time is allocated in

22 some way to either clinical care, research or academics

23 around gender health.

24 BY ATTORNEY BARHAM:

1 Q. And what is your compensation for this position?
2 A. It is roughly $265,000 a year in salary.
3 Q. You also serve as the Vice Chair of the
4 Pritzker Department of Psychology and Behavioral Health
5 at the Ann and Robert H. Lurie Children's Hospital of
6 Chicago.
7 Correct?
8 A. That's correct.
9 Q. And how much of your time in this position is
10 related to discussing or treating gender dysphoric
11 children and adolescents?
12 ATTORNEY BLOCK: Objection to
13 terminology.
14 THE WITNESS: Again, it is hard to parse
15 out what specific about my leadership role is around
16 gender health but it is a minority of my day-to-day
17 work in that role.
18 BY ATTORNEY BARHAM:
19 Q. Do you have an approximate percentage?
20 A. No.
21 Q. Twenty-five (25) percent, more or less?
22 A. Probably ten percent.
23 Q. Ten percent. Okay.
24 And what is your compensation for that

1 position?
2 A. I get a stipend of around $30,000.
3 Q. You currently serve as the Medical Director of
4 Outpatient Psychiatric Services at the Lurie Children's
5 Hospital of Chicago.
6 Is that correct?
7 A. That;s correct.
8 Q. And how much of your time in this position is
9 related to discussing or treating gender dysphoric
10 children and adolescents?
11 ATTORNEY BLOCK: Objection to
12 terminology.
13 THE WITNESS: About 25 percent of my time
14 is probably spent discussing or related to the health of
15 transgender youth or transgender --- gender diverse
16 youth.
17 BY ATTORNEY BARHAM:
18 Q. And what is your compensation for that position?
19 A. There is no compensation.
20 Q. You currently serve as the Clinical Director of
21 the NYU Gender and Sexuality Services.
22 Is that correct?
23 A. That is not correct.
24 Q. When did you conclude your role in that

1 position? I'm referencing page one of your CV.
2 A. That was when I moved to Chicago a few years
3 ago.
4 Q. Okay.
5 So where it says 2011 to present Clinical
6 Director, NYU Sexuality Service, that is just a typo?
7 A. That is a typo, yes.
8 Q. You currently serve as the Associate Professor
9 of Child and Adolescent Psychology at Northwestern
10 University, and we have already discussed that. Is
11 there a difference between Clinical Associate Professor
12 and Associate Professor of Child and Adolescent
13 Psychiatry?
14 A. No.
15 Q. You serve as the Vice Chair of Clinical Affairs
16 at the Pritzker Department of Psychiatry and Behavioral
17 Health at the Lurie Children's Hospital.
18 Correct?
19 A. That's correct.
20 Q. And how much time in this position is related to
21 discussing or treating gender dysphoric children and
22 adolescents?
23 ATTORNEY BLOCK: Objection to
24 terminology.

1 THE WITNESS: I think I answered that one
2 with the guess of about ten percent.
3 BY ATTORNEY BARHAM:
4 Q. Okay?
5 So that's the same as the Vice Chair of the
6 Department of Psychiatry?
7 A. Correct.
8 Q. You currently serve as the Associate Editor for
9 Transgender Health.
10 Correct?
11 A. That is correct.
12 Q. And what is your compensation for that position?
13 A. There is no compensation for that position.
14 Q. What is that publication's annual income?
15 A. I do not know.
16 Q. You serve as a reviewer for LGBT Health.
17 Correct?
18 A. Yes.
19 Q. And how much of your time is related --- in that
20 position is related to treating or discussing
21 transgender children and adolescents?
22 A. I would say 100 percent of my review time with
23 LGBT health is around gender.
24 Q. Do you receive any compensation for that

1 position?
2 A. I do not.
3 Q. Do you receive any compensation for your role as
4 a reviewer with the Journal of the Academy of Child and
5 Adolescent Psychiatry?
6 A. I do not.
7 Q. You served in various positions with different
8 professional organizations according to paragraphs 11
9 and 12 of your report. Do any of those positions
10 provide you financial compensation?
11 A. No.
12 Q. You founded and directed Gender Variant Youth
13 and Family Network.
14 Correct?
15 A. Correct.
16 Q. What's your compensation for that position?
17 A. Zero.
18 Q. What is the entity's annual income or budget?
19 A. Zero.
20 Q. You indicate in your report that you have seen
21 approximately 500 transgender patients.
22 Is that correct?
23 A. That is correct.
24 Q. How many patients do you see per year?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: I'd have to look at my
3 report. I don't have the information in front of me
4 right now.
5 BY ATTORNEY BARHAM:
6 Q. Do you have a ballpark of how many patients you
7 see in a year?
8 A. I don't.
9 Q. Does this include --- and I'm assuming that your
10 colleagues see additional patients beyond just those
11 that you see.
12 Correct?
13 A. Correct.
14 Q. How frequently do you see each patients?
15 A. I see --- the frequency with which I see
16 patients is dependent upon their clinical need, so
17 between once or twice a week to once every three months.
18 Q. And how much are patients charged per
19 appointment?
20 A. Everything is billed to their insurance, so I'm
21 not sure.
22 Q. Do you receive any other income related to your
23 work on gender dysphoria?
24 A. I'm being paid for my expert report for this, so

1 that's the only other income I receive.
2 Q. Do you receive any speaking fees?
3 A. I have received speaking fees for participation
4 and grand rounds as an example.
5 Q. And how much would those speaking fees run?
6 A. It is typically about a thousand dollars per
7 event.
8 Q. Before the last four years had you provided any
9 expert testimony on issues related to gender dysphoria?
10 A. Can you clarify the difference between
11 testimonies and reports? I've submitted a report but
12 not ---.
13 Q. Okay.
14 So you have submitted a report?
15 A. Correct.
16 Q. Do you remember what case that involved?
17 A. That involves Medicaid and top surgery in
18 Arizona.
19 Q. Okay.
20 Have you ever provided any testimony in trial
21 or deposition before related to gender dysphoria?
22 A. I have not.
23 Q. And how much compensation have you received so
24 far in this case?

1 A. This case so far, none thus far.
2 Q. How much are you expecting to receive so far in
3 this case?
4 A. I haven't added up my invoice yet, but I imagine
5 it's probably around $10,000.
6 Q. Okay.
7 Do you have any professional expertise related
8 to the legal definition of relevance?
9 A. I do not.
10 Q. Do you have any legal training or education?
11 A. I do not.
12 Q. When you were preparing your report did you
13 consult the Federal Rules of Evidence or any other legal
14 sources as to the meaning of relevance?
15 A. I did not.
16 Q. Several people in this case have referenced
17 disorders of sexual development. Would you agree that
18 gender dysphoria is not a disorder of sexual
19 development?
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: Gender dysphoria has not
22 been classified as a disorder of sexual development.
23 BY ATTORNEY BARHAM:
24 Q. Of the approximately 500 transgender patients

1 you had seen how many suffered from disorder of sexual
2 development?
3 A. A minority of patients, less than ten.
4 Q. So you would agree that the vast majority of
5 individuals with gender dysphoria or who assert a
6 transgender identity do not suffer from a disorder of
7 sexual development.
8 Correct?
9 ATTORNEY BLOCK: Objection to form.
10 THE WITNESS: The data we have speaks to
11 the majority of people with gender dysphoria do not have
12 a disorder of sex development.
13 BY ATTORNEY BARHAM:
14 Q. Do you have any reason to believe that BPJ
15 suffers from a disorder of sexual development?
16 A. I have not reviewed BPJ's case.
17 Q. Are you aware of any instance in which an
18 individual with a disorder of sexual development has
19 attempted to play on a girls' or women's sports team in
20 West Virginia?
21 A. I am not aware.
22 Q. Is it your opinion that a person's gender
23 identity is durable?
24 ATTORNEY BLOCK: Objection to form.

1 THE WITNESS: Can you define durable?
2 BY ATTORNEY BARHAM:
3 Q. Unchanging.
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: It is my testimony that
6 there is a concept of gender identity that remains
7 generally fixed for most people throughout their lives.
8 BY ATTORNEY BARHAM:
9 Q. So it's your opinion that a person's gender
10 identity cannot be changed with medical or mental health
11 intervention.
12 Correct?
13 COURT REPORTER: Sorry, Counsel, that
14 question one more time.
15 BY ATTORNEY BARHAM:
16 Q. So it's your opinion that a person's gender
17 identity cannot be changed with medical or mental health
18 intervention.
19 Correct?
20 A. Yes.
21 ATTORNEY BARHAM: I'm going to hand you
22 what we're going to mark as Exhibit-2. This will be
23 Tab 5.
24 ---

1 (Whereupon, Exhibit-2, Endocrine
2 Society's Guidelines, was marked for
3 identification.)
4 ---
5 BY ATTORNEY BARHAM:
6 Q. If you'll turn to page 3873 of this document.
7 This document is the Endocrine Society's Guidelines,
8 Endocrine Treatment of Gender Dysphoric or Gender
9 Incongruent Persons, Endocrine Society Clinical Practice
10 Guideline published in 2017.
11 Correct?
12 A. That is correct.
13 Q. On page 3873 of this document the Endocrine
14 Society indicates that this continuum gender identity
15 ranged from all male through something in between to all
16 female yet such a classification does not take into
17 account that people may have gender identities outside
18 this continuum. For instance, some experience
19 themselves as having both a male and female gender
20 identity whereas others completely renounce any gender
21 classification. There are also reports of individuals
22 experiencing a continuous and rapid involuntary
23 alternation between a male and female identity.
24 Do you see that?

1 A. I don't see that.
2 Q. Second column, towards the bottom of the page.
3 A. Yes, I see that.
4 Q. Is this consistent with your understanding of
5 gender identity?
6 ATTORNEY BLOCK: Can you give him time to
7 read?
8 ATTORNEY BARHAM: Gladly.
9 THE WITNESS: I think there is a
10 difference between a gender identity and how people
11 understand and express that gender identity. And in the
12 context of this article the rapid involuntary alteration
13 between male and female identity as an example is a case
14 reported of single individuals subjective experience of
15 their gender according to the reference.
16 BY ATTORNEY BARHAM:
17 Q. And by that you're referring to note ten?
18 A. Correct.
19 Q. So according to this document, someone can be
20 one sex or the other, both, neither or in between.
21 Correct?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: I can't speak for the
24 conclusions drawn by the author of this article.

1 BY ATTORNEY BARHAM:
2 Q. And according to the Endocrine Society a
3 person's gender identity can change rapidly.
4 Correct?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: I'm not a part of the
7 Endocrine Society, so I'm not sure how they discuss
8 this.
9 BY ATTORNEY BARHAM:
10 Q. According to this document, the Endocrine
11 Society is indicating that there are reports, plural, of
12 individuals, plural, experiencing a continuous and rapid
13 involuntary alternation between male and female gender
14 identity.
15 Correct?
16 A. That is documented in the article.
17 Q. Okay.
18 A. I'm not sure of the governance of the Endocrine
19 Society.
20 Q. Do you think the Endocrine Society Guidelines
21 are wrong?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: I think anything relating
24 to gender identity has to be taken in a broader context

1 within both the article in and of itself but in broader
2 practice and specifically around children and
3 adolescents.
4 BY ATTORNEY BARHAM:
5 Q. So what is your basis for indicating that this
6 statement is potentially inaccurate?
7 ATTORNEY BLOCK: Objection to form.
8 THE WITNESS: I think there is more
9 context that's needed in order to understand the intent
10 of the authors in this particular section.
11 ATTORNEY BARHAM: I'm going to hand you
12 what we will mark as Exhibit-3. This is the document
13 from the World Health Organization entitled Gender and
14 Health.
15 ---
16 (Whereupon, Exhibit-3, World Health
17 Organization, was marked for
18 identification.)
19 ---
20 BY ATTORNEY BARHAM:
21 Q. Are you familiar with the World Health
22 Organization?
23 A. I've heard of them.
24 Q. Do you agree with these World Health

1 Organization statements?
2 ATTORNEY BLOCK: Objection to form. Can
3 he have time to read the document?
4 ATTORNEY BARHAM: Of course.
5 VIDEOGRAPHER: Counsel, is that Tab 10?
6 LAW CLERK WILKINSON: Tab 10.
7 ATTORNEY BARHAM: It is.
8 VIDEOGRAPHER: Okay. Thank you.
9 THE WITNESS: Can you repeat the
10 question?
11 BY ATTORNEY BARHAM:
12 Q. Do you agree with these World Health
13 Organization statements?
14 A. Not in their entirety.
15 Q. In what parts do you dispute?
16 A. The word gender as a concept is much more
17 complicated and I do not agree with their
18 characterization in this page.
19 Q. So the World Health Organization says that
20 gender itself is a social construct and can change over
21 time.
22 Correct?
23 ATTORNEY BLOCK: Objection to form. Does
24 this document have a URL to it?

1 ATTORNEY BARHAM: It does, but I don't
2 see it printed on the document.
3 LAW CLERK WILKINSON: We can get it.
4 ATTORNEY BARHAM: We can supply that.
5 THE WITNESS: I agree that it says on the
6 document that gender varies from society to society and
7 can change over time.
8 BY ATTORNEY BARHAM:
9 Q. And according to the World Health Organization,
10 gender identity refers to a person's experience of
11 gender which is a social construct.
12 Correct?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: I don't see in the document
15 where it refers to gender identity or defines gender
16 identity.
17 BY ATTORNEY BARHAM:
18 Q. It says gender interacts with different sex,
19 which refers to the different biological and
20 physiological characteristics of males, females,
21 intersex persons such as chromosomes, hormones and
22 reproductive organs.
23 Correct?
24 A. That is correctly read. I don't see gender

1 identity defined in this document.
2 Q. Gender identity refers to a person's deeply held
3 internal and individual experience of gender.
4 Correct?
5 A. That's what it says here, yes.
6 Q. If an individual asserts an identity of man or
7 both, how can a clinician verify whether that individual
8 is telling the truth?
9 ATTORNEY BLOCK: Objection to form.
10 THE WITNESS: I'm not sure what exactly
11 that means. The process of an assessment for gender
12 care involves a complex series of interviews,
13 diagnostics.
14 BY ATTORNEY BARHAM:
15 Q. So how does the clinician assess whether the
16 patient is accurately relating their experiences?
17 A. In the typical process, particularly around
18 child and adolescent psychiatry, part of the assessment
19 involves information gathered from multiple contexts.
20 Q. Such as?
21 A. Such as parents, schools, caregivers, other
22 providers, history over time, et cetera.
23 Q. And if --- so how does one assess from those
24 various contexts whether someone who's claiming to be

1 male or both is accurately relating what's going on?

2 ATTORNEY BLOCK: Objection to form.

3 THE WITNESS: Yeah, I guess I don't

4 understand the question exactly. You know, my job is

5 not necessarily to define what is accurate in someone's

6 own experience. It's to understand how that fits into

7 typical processes and developmental expectations for the

8 broad range of gender diversity over time.

9 BY ATTORNEY BARHAM:

10 Q. How do you determine whether someone in that

11 scenario is accurately understanding his own subjective

12 feelings --- his or her subjective feelings?

13 ATTORNEY BLOCK: Objection to form.

14 THE WITNESS: The context of the

15 treatment is really important. If an individual is

16 seeking specific interventions that require a mental

17 health assessment, there are specific components of that

18 mental health assessment that must be met.

19 BY ATTORNEY BARHAM:

20 Q. So what are the treatments that would require a

21 mental health assessment?

22 A. Puberty blocking medications, hormones or

23 surgery.

24 Q. And what are the interventions that would not

1 require mental health evaluations, in your opinion?
2 ATTORNEY BLOCK: Objection to form.
3 THE WITNESS: It depends upon what
4 guidelines you're talking about and what recommendations
5 that the family is looking for.
6 BY ATTORNEY BARHAM:
7 Q. Well, what are some of the inventions? You said
8 there's some interventions that would require a mental
9 health evaluation, so that implies that there are some
10 that would not. What are the interventions that would
11 not require a mental health evaluation?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: You know, parents giving
14 hugs to their kids is not something that a mental health
15 assessment would require. Providing a way of helping
16 families to understand their kids or asking questions is
17 not something that requires a mental health evaluation
18 and some children will socially transition prior to any
19 assessments by any mental health professional.
20 BY ATTORNEY BARHAM:
21 Q. How do you determine --- if an individual
22 asserts a gender identity of male or both, how do you
23 determine whether the individual is making a statement
24 based on societal expectations for a particular gender

1 rather than ---?

2 ATTORNEY BLOCK: Objection. Travis, I'm

3 sorry, the male or both phrasing, is that a quote from

4 something. I don't have the paper in front of me, so

5 just want to clarify.

6 ATTORNEY BARHAM: No, that's not a

7 question from something. That's just my question.

8 ATTORNEY BLOCK: Okay.

9 THE WITNESS: Can you repeat the

10 question?

11 BY ATTORNEY BARHAM:

12 Q. If an individual asserts a gender identity male

13 or both, how can a clinician verify whether the

14 individual is making the statement based on societal

15 expectations for a particular gender rather than his own

16 genuine gender?

17 ATTORNEY BLOCK: Objection to form.

18 THE WITNESS: I personally never had

19 anybody assert an identity of male or both, but part of

20 the assessment of --- if we are diagnosing gender

21 dysphoria is understanding the cultural and social

22 contexts and ensuring that folks are not presenting with

23 a gender identity that is incongruent with their sex

24 assigned at birth because of actual or perceived

1 cultural advantages.
2 BY ATTORNEY BARHAM:
3 Q. And how does one go about assessing the
4 motivations behind the claimed gender identity or
5 transgender sex?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: For any psychiatric
8 assessment this is through a combination of interviews,
9 gathering history from relevant data sources and
10 sometimes for some people structured interviews or
11 scales.
12 BY ATTORNEY BARHAM:
13 Q. And how long does it take to conduct such an
14 assessment?
15 A. There is no specific timeframe involved in this
16 assessment. It really depends upon contextual factors
17 that are hard to nail down.
18 Q. So if you were treating a child or teenager, how
19 many relevant data sources would you need to get
20 information from in order to make a complete assessment
21 of the child's motivations?
22 A. I don't think there's ever going to be a
23 concrete answer in terms of how many. There's not a
24 specific answer of how many sources are necessary. It's

1 however many sources are necessary to gather the
2 relevant information.
3 Q. So how do you determine whether you have
4 gathered enough information to make a competent
5 assessment?
6 A. It's hard to state this in a non-pithy way, but
7 that's kind of what the process of psychiatry and child
8 psychiatry training helps you to learn.
9 Q. Could you explain to someone who doesn't have
10 the training how you come to the conclusion, okay, I've
11 gathered enough information to make a competent
12 assessment?
13 A. Sure. I can try. How accurate is the reporter
14 in their description of their history. How much does it
15 align with reports from other informants, how much does
16 it match with or is deviant from expected phenotypic
17 processes with the disorders in question and what is the
18 impression of the evaluator about the accuracy of the
19 statements.
20 ATTORNEY BARHAM: I'm going to show you
21 what we will mark as Exhibit-4, this will be Tab 12.
22 ---
23 (Whereupon, Exhibit-4, Harvard Medical
24 School Study, was marked for

1 identification.)
2 ---
3 BY ATTORNEY BARHAM:
4 Q. Are you familiar with this study? This is a
5 study from the Harvard Medical School entitled Gender
6 Fluidity: What it Means and Why Support Matters?
7 ATTORNEY BLOCK: Objection.
8 THE WITNESS: This looks like a popular
9 website article and not a study.
10 BY ATTORNEY BARHAM:
11 Q. Are you familiar with the author, Dr. Sabrina
12 Katz --- Sabra Katz-Wise?
13 A. Dr. Katz-Wise has published in the world of
14 transgender health. I'm not familiar with them
15 personally, I don't know them.
16 Q. Do you know Dr. Katz-Wise at least by
17 reputation?
18 A. I don't. I've only read some studies.
19 Q. But you would agree that she is highly respected
20 in this area.
21 Correct?
22 A. I would not be able to offer an opinion.
23 Q. But she is widely published in this area.
24 Correct?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: From my recollection, yes.
3 BY ATTORNEY BARHAM:
4 Q. At the bottom of page two of this document, Dr.
5 Katz-Wise indicates that while some people develop a
6 gender identity early in childhood others may identify
7 with one gender at one time and then another gender
8 later on.
9 Is that correct?
10 A. You're reading that accurately, yeah.
11 Q. So according to this article, on page three a
12 gender fluid person is one whose gender identity changes
13 frequently.
14 Correct?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: I do not --- I have not
17 read it in here that it is defined in that way and
18 that's not how I would define gender fluidity.
19 BY ATTORNEY BARHAM:
20 Q. At least you see the statement at the first full
21 paragraph at the top of page three, ultimately anyone
22 who identifies as gender fluid, is a gender fluid person
23 often the term is used for a person's gender expression
24 or gender identity, essentially their internal sense of

1 self changes frequently?

2 ATTORNEY BLOCK: Objection. We're

3 jumping quickly from pages. Can you give him some more

4 time to read before answering the question?

5 ATTORNEY BARHAM: Certainly.

6 THE WITNESS: Yes. I'm not seeing where

7 that is here. Can you point that out for me?

8 BY ATTORNEY BARHAM:

9 Q. Top of page three, just above that, how is

10 gender fluidity related to health in child and teens?

11 A. Gender fluidity is a very nonspecific term that

12 means very different things to different people. In the

13 practice of the clinical work with transgender and

14 gender diverse youth, kids who are self identifying as

15 gender fluid, I want to understand what it means to them

16 and what that definition is for that individual. I

17 don't think there is one established definition of

18 gender fluidity that has been agreed upon.

19 Q. But at least some respected professionals in

20 this arena indicate that the term gender fluidity means

21 that the person's internal sense of self, their gender

22 identity changes frequently.

23 Correct?

24 ATTORNEY BLOCK: Objection to form.

1 THE WITNESS: I can't speak to what Dr.
2 Katz-Wise is using to define it. The way I would
3 describe gender fluidity, again outside the context of
4 how my patients are actually using the term, is that
5 understanding of the expression of gender identity may
6 change over time.
7 BY ATTORNEY BARHAM:
8 Q. So you said that their understanding of gender
9 identity can change over time. Dr. Katz-Wise says that
10 their gender identity changes frequently?
11 Is that correct?
12 A. That's what it stated in this popular press
13 article.
14 Q. And Dr. Katz-Wise is an Assistant Professor in
15 Adolescent and Young Adult Medicine at Boston Children's
16 Hospital.
17 Is that correct?
18 A. I would have to take your word for that.
19 Q. Okay.
20 Are you aware that she co-directs the Harvard
21 Sexual Orientation and Gender Identity Expression Equity
22 Research Collaborative?
23 A. I do not know the term, no.
24 ATTORNEY BARHAM: I'm going to show you

1 what we will mark as Exhibit-5, and this will be Tab 13.
2 ---
3 (Whereupon, Exhibit-5, American
4 Psychological Association Guidelines,
5 was marked for identification.)
6 ---
7 BY ATTORNEY BARHAM:
8 Q. This document is the American Psychological
9 Association Guidelines for Psychological Practice with
10 Transgender and Gender Non-Conforming People.
11 Correct?
12 A. That is correct.
13 Q. And on page 836 of this document the APA writes
14 just as some people experience their sexual orientation
15 as being fluid or variable, some people also experience
16 their the gender identity as fluid.
17 Correct?
18 A. Can you show me on the page where that is?
19 Q. The bottom of the first paragraph in the first
20 column of page 836.
21 A. Yes.
22 Q. So the APA Guidelines say that gender identity
23 can be fluid or changing.
24 Correct?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: Well, I think the important
3 piece is some people experience gender identity as fluid
4 or variable.
5 BY ATTORNEY BARHAM:
6 Q. So it can be fluid or changing?
7 Correct?
8 ATTORNEY BLOCK: Objection to form.
9 BY ATTORNEY BARHAM:
10 Q. For at least some people.
11 Correct?
12 THE WITNESS: As I would describe it and
13 understand it, that's the experience of expression of
14 gender identity can be fluid over time, which is
15 different.
16 BY ATTORNEY BARHAM:
17 Q. How is that different to say that one's gender
18 identity changes?
19 A. It's getting a little complicated in terms of
20 the concepts that we're talking about, but the identity
21 that gender identity is something that is inherently
22 fixed, that how people understand, experience it and
23 express it can change over time. That's the difference.
24 Q. But the American Psychological Association at

1 least describes gender identity as being fluid.
2 Correct?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: In the article that you
5 have put in front of me it describes that people's
6 experience of their gender identity is fluid over time.
7 BY ATTORNEY BARHAM:
8 Q. Let's go back to Tab 5, which is Exhibit-2. Are
9 you familiar with the Endocrine Society Guidelines?
10 A. I am.
11 Q. Is it your view that these guidelines were
12 developed through rigorous scientific processes?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: I agree.
15 BY ATTORNEY BARHAM:
16 Q. Would you agree that these guidelines were
17 developed by among the most respected researchers in the
18 field?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: I wouldn't disagree with
21 that, no.
22 BY ATTORNEY BARHAM:
23 Q. Do you respect Dr. Hembree of Columbia
24 University Medical Center?

1 A. I do.

2 Q. Do you respect Dr. Cohen-Kettenis of the

3 University of Amsterdam?

4 A. I would say I respect all of these clinicians

5 and researchers, although Sabine Hannema I am not

6 familiar personally.

7 Q. If you will turn to page 3879 of this document.

8 Right under the heading evidence this article reports

9 that the large majority, about 85 percent of prepubertal

10 children with a childhood diagnosis did not remain GD,

11 slash, gender incongruent in adolescence.

12 Is that correct?

13 A. That is correctly read, yes.

14 Q. And footnote 20 of this document cites to Dr.

15 Steensma, de Vries, Cohen-Kettenis article in 2013?

16 A. That's correct.

17 Q. These are extensively published original peer

18 reviewed research --- peer reviewed researchers in the

19 field.

20 Correct?

21 A. Correct.

22 Q. So this committee reveals evidence that the

23 large majority of children, about 85 percent, with a

24 childhood diagnosis do not remain gender dysphoric in

1 gender adolescence.
2 Correct?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: Yeah, in these studies have
5 been published primarily by the Dutch clinic the rates
6 of dissentience of the diagnosis of gender dysphoria has
7 been upwards of 85 percent.
8 BY ATTORNEY BARHAM:
9 Q. And at the bottom of the first column of
10 page 3879 the committee indicates that their clinical
11 experience suggests that the persistence of gender
12 dysphoria or gender incongruence can only be reliably
13 assessed after the first signs of puberty.
14 Is that correct?
15 A. That is what is written, yes.
16 Q. You have not offered an opinion in your report
17 as to whether or --- whether or to what transgender
18 identity has a biological basis.
19 Is that correct?
20 A. Let me just make sure that I'm reviewing it. I
21 have not offered an opinion.
22 Q. If you will turn to page 76 of Exhibit-2, Tab 5.
23 The committee with all of its experience and presenting
24 all the evidence said that gender dysphoria in children,

1 quote, does not invariably persist into adolescence and
2 adulthood.
3 Is that correct?
4 A. That is correct.
5 Q. In fact, this committee concluded that that
6 gender dysphoria, a minority of prepubertal children
7 appears to persist in adolescence.
8 Is that correct?
9 A. That is correct.
10 Q. I'm going to turn your attention to --- this
11 will be Tab 15, Exhibit-6.
12 ---
13 (Whereupon, Exhibit-6, Lisa Littman
14 Study, was marked for identification.)
15 ---
16 BY ATTORNEY BARHAM:
17 Q. This is a 2021 study by Lisa Littman entitled
18 Individuals Treated for Gender Dysphoria with a Medical
19 and/or Surgical Transition who Subsequently
20 De-transitioned.
21 Is that correct?
22 A. That is correct.
23 Q. Are you familiar with this study?
24 A. I am.

1 Q. The study was based on survey responses from a
2 hundred adult individuals who were approved for hormonal
3 and/or surgical transition, underwent such transition,
4 lived in a transgender identity for a period of years
5 and then decided to de-transition or revert to a gender
6 identity associated with their biological sex.
7 Is that correct?
8 A. That is my understanding of the study, yes.
9 Q. And all of the subjects had detransitioned by
10 discontinuing their medications, having surgeries to
11 reverse the effects of transition or both.
12 Correct?
13 ATTORNEY BLOCK: Objection to form. Are
14 you reading something?
15 ATTORNEY BARHAM: I'm referencing
16 page two, column two, at the bottom of the page.
17 THE WITNESS: My recollection from the
18 study was that this was all self report, so there was no
19 way to verify if that was correct or true.
20 BY ATTORNEY BARHAM:
21 Q. But that's at least what the participants
22 reported.
23 Correct?
24 A. From my recollection. I'd have to reread the

1 entire study to say for sure but that is my
2 recollection, yes.
3 Q. And if you turn to page eight of the second
4 column, under the heading de-transition?
5 A. I don't have page numbers on mine.
6 ATTORNEY BLOCK: Do you reference the
7 page number at the top?
8 ATTORNEY BARHAM: The source contains no
9 page numbers, making it difficult.
10 BY ATTORNEY BARHAM:
11 Q. Under the heading detransition it's the page
12 right before table four.
13 ATTORNEY BLOCK: I'm sorry. Can I see
14 the heading on the document? Just for the record, this
15 doesn't appear to be a paginated version of the article
16 where, you know, when I pull it up I get a publication,
17 date and pages. So I don't know if this is the final
18 version of the article or not, but you can proceed with
19 the questions.
20 ATTORNEY BARHAM: Counsel, I'll return to
21 your concerns, Mr. Block.
22 BY ATTORNEY BARHAM:
23 Q. Do you see the one page before the page that
24 contains Table 4?

1 A. I do.

2 Q. Do you see the heading detransition?

3 A. I do.

4 Q. And it says there that when participants decided

5 to detransition they were a mean age of 26.4 years old.

6 Correct?

7 A. That is correct.

8 Q. Have you read this study before today?

9 A. I have.

10 Q. So doesn't this study at least suggest that

11 patients may think they have a sense of belonging to the

12 opposite sex but can be mistaken?

13 ATTORNEY BLOCK: Objection to form.

14 THE WITNESS: I think what this study

15 does is hear experiences from a select group of

16 individuals who are motivated to participate in the

17 study about detransition and hear their experiences of

18 their care.

19 BY ATTORNEY BARHAM:

20 Q. But the study still indicates that those

21 individuals had a sense of belonging to the opposite sex

22 and later concluded that they were were mistaken.

23 Is that correct?

24 A. You will have to forgive my clinician nature

1 here, but language is important when working with
2 patients who are transitioning. I don't know if that's
3 the language that they would use or if that is the
4 language that was used in this particular survey.
5 Q. But the effect of detransitioning is that they
6 at one time thought they belonged to the opposite sex
7 and then later concluded that they did not?
8 ATTORNEY BLOCK: Objection to the form.
9 THE WITNESS: Again, I think we would
10 want to know specifically what each individual person,
11 how they described their process. I don't know what
12 detransition means to those who are taking a relatively
13 anonymous survey, so it's hard to draw a conclusion
14 about the specific nature of it. The generally accepted
15 upon definition of detransition is generally aligned
16 with somebody who reverts back to a gender identity or
17 gender expression that is more aligned with their sex
18 assigned at birth.
19 BY ATTORNEY BARHAM:
20 Q. This study defines detransition as discontinuing
21 medications, having surgeries to reverse the effect of
22 transition or both.
23 Is that correct? It is on page two?
24 A. Show me where on page two.

1 Q. The second column of page two, at the bottom of
2 the page?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: Yeah. I'm not seeing that
5 Dr. Littman is specifically defining detransition but
6 describing the objective of the study for folks who
7 detransitioned by those aspects that you noted.
8 BY ATTORNEY BARHAM:
9 Q. Okay.
10 But she notes in the last paragraph on that
11 page the objective of the current study was to describe
12 the population of individuals, skipping, who then
13 detransitioned by discontinuing medications, having
14 surgery to reverse the effects of transition or both?
15 A. That's correct.
16 Q. So she is indicating what she understands
17 detransitioning to mean in this article.
18 Correct?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: Again I'm not sure how she
21 specifically defines detransition. It is not
22 necessarily made clear in that statement.
23 BY ATTORNEY BARHAM:
24 Q. Is it true that people may mistake feelings

1 resulting from trauma, mental illness or homophobia for
2 a genuine sense of transgender identity?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: I think there are a lot of
5 complicated experiences that people may have that make
6 them question their gender identity.
7 BY ATTORNEY BARHAM:
8 Q. So it's at least possible that people could
9 mistake feelings resulting from trauma, mental illness
10 or homophobia for genuine sense of transgender identity.
11 Correct?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: I don't disagree with that,
14 no.
15 BY ATTORNEY BARHAM:
16 Q. You said it's complicated, so it sounds like it
17 would be hard sometimes for a clinician to tell with
18 certainty what's going on?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: What I would describe is
21 that in anything related to mental health that there are
22 complications and nuances. This is no different.
23 BY ATTORNEY BARHAM:
24 Q. Now, I believe you alluded to this a moment ago.

1 You mentioned that this is a self-reporting study and it
2 obviously concerns an emotionally fraught area of gender
3 identity. So is it your position that this does not
4 produce scientifically meaningful results?
5 A. I don't know what you mean by scientifically
6 meaningful.
7 Q. Do you believe that this --- the results of this
8 article are scientifically reliable?
9 A. It depends upon what question is being asked.
10 As a blanket, any kind of selection bias, particularly
11 for this study based upon where the participants were
12 drawn from makes us not want to draw conclusions about
13 their generalized applicability of this study to other
14 transgender folks, including other folks who may have
15 detransitioned, but the goal of science is not
16 necessarily to draw widely applicable conclusions, but
17 to put us in a position where we can ask more questions
18 and improve our care for our patients.
19 Q. Now, why do you say --- why do you highlight
20 concerns about where the participants were drawn from?
21 A. I highlight that because it creates a sense of
22 selection bias, which potentially, as I said, can reduce
23 the why applicability of the conclusions drawn.
24 Q. And why do you say that there is a potential for

1 selection bias in this article?
2 A. Based upon the websites that Dr. Littman has
3 drawn her participants.
4 Q. And why do you have concerns about those
5 websites?
6 A. I have concerns about the websites because of
7 the contents of those websites.
8 Q. And what is contents of those websites that
9 causes you concern?
10 A. The content of the websites is unscientific.
11 And I guess I'm not sure how to articulate it in a most
12 defined way very specific to answering a set of
13 questions that reenforces the prestudy hypotheses.
14 Q. So which websites that she drew participants
15 from cause you concern?
16 A. As an example, Fourth Wave Now is a website that
17 Dr. Littman had used for some of her study recruitment.
18 Q. And why are you concerned about the use of
19 Fourth Wave now in the recruitment process?
20 A. What I would say is that when you're designing a
21 study that presupposes the conclusion and the website is
22 designed to attract people who presuppose that
23 conclusion, that limits the applicability of the
24 results. It just have to be taken into account. It

1 doesn't mean that there isn't data from this kind of
2 snowball recruitment that isn't valuable and I wouldn't
3 say that there isn't value to some of Dr. Littman's
4 work, specifically this study as compared to the last,
5 though you have to take it in the context with which it
6 was developed.
7 Q. So are you suggesting that Dr. Littman
8 presupposed the conclusion that she wanted to reach in
9 designing this survey?
10 A. I'm less familiar with the design of this study
11 than previous studies that she has designed, which I
12 would say that was correct.
13 Q. What other websites did she use in the process
14 to cause you concern?
15 A. I'm not as familiar with this study, so I don't
16 know if she specifically identified which websites. And
17 I can't recall right now on the others which they were.
18 Q. If you look at page three she discusses the
19 method and the participants and procedures. Would
20 reviewing that refresh your recollection as to any
21 concerns about participants?
22 A. It would not because she does not describe the
23 specific fora. She describes a closed Facebook group,
24 Tumbler, Twitter and Reddit, but those are large

1 websites that have a lot of different kind of content.
2 Q. So is it your position that it's not possible to
3 know whether anonymous or any results have any relation
4 to true fact in actual case histories?
5 A. That is not my position.
6 Q. Do you have any --- you mentioned earlier
7 something about how these were anonymous results. So is
8 it possible to know whether they actually corresponded
9 with true cases?
10 A. I think anonymous surveys, you have to really
11 dig into the specifics of the survey design in order to
12 draw conclusions. And again, with any study in any
13 survey in particular you just want to make sure you have
14 an understanding of that context how broadly to draw
15 conclusions.
16 Q. Would you agree that online recruitment does not
17 provide a statistically meaningful sample?
18 A. I would not agree with that.
19 Q. Is it your position --- how can an online
20 recruitment produce a statistically meaningful sample?
21 A. I think I would need to understand the context
22 of what you mean by statistically meaningful. There is
23 a difference between a survey that could be potentially
24 poorly designed and yet reach statistical significance.

1 You would need to understand the broader context in
2 order to draw conclusions about what that statistical
3 significance means and that means really digging into
4 the specific methodology of this study. There is a vast
5 literature about efficacy of survey data and it really
6 depends on the specifics.
7 Q. We've previously referenced paragraph eight of
8 your report where you mention you've seen approximately
9 500 transgender patients.
10 ATTORNEY BLOCK: Travis, sorry, not to
11 avoid a pending question, but we're almost at one hour,
12 so if this is a good time, if you're moving to a
13 different subject maybe this would be a good time to
14 break.
15 ATTORNEY BARHAM: Let me wrap up a few
16 more and then we will do that.
17 ATTORNEY BLOCK: Thanks.
18 BY ATTORNEY BARHAM:
19 Q. Your clinical practice for children and
20 adolescents started in 2013, about eight years ago.
21 Is that correct?
22 A. No, I finished medical school in 2011 and have
23 been working with adults, children and adolescents since
24 then.

1 Q. Okay.
2 A. Actually that's when I finished --- to go back,
3 that's when I finished my residency and fellowship. I
4 finished medical school in 2006. I can't believe it's
5 been long.
6 Q. And when did you begin your work in child and
7 adolescent psychiatry?
8 A. I had child and adolescent psychiatry
9 experiences when I was in medical school.
10 Q. When did you begin practicing child and
11 adolescent psychiatry?
12 A. That's not a very specific term. I practiced
13 child psychiatry as a medical student in my training.
14 Q. When were you licensed, when were you first
15 licensed to practice child and adolescent psychiatry?
16 A. There's no specific license to practice child
17 psychiatry. Anybody who is --- has a medical license
18 can practice any medical specialty. I was Board
19 Certified in Child and Adolescent Psychiatry, which is a
20 different process and I would have to look through to
21 recall the date. I'm assuming that it's 2012 or 2013.
22 2013 is when I was Board Certified.
23 Q. So when did you begin --- and you finished your
24 fellowship in child and adolescent psychiatry when?

1 A. 2011.
2 Q. 2011. When did you begin treating as a child
3 and adolescent psychiatrist children with gender
4 dysphoria?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: I saw children with gender
7 dysphoria during my residency and in my fellowship.
8 BY ATTORNEY BARHAM:
9 Q. And your fellowship?
10 A. Between 2006 and 2009.
11 Q. And what proportion of those patients socially
12 transitioned?
13 A. Of all of the patients that I saw in my training
14 or in all of the patients that I've seen over my time as
15 a physician?
16 Q. Let's go first with the training.
17 A. It was a much smaller number, so probably if I
18 were to guess, and I'm going back, probably close to
19 95 percent.
20 Q. Ninety-five (95) percent socially transitioned
21 when you were in training?
22 A. Yes.
23 Q. And how many of your patients overall have
24 socially transitioned?

1 A. I'm not sure how to answer that question. Over
2 the course of our time working together, before I
3 started seeing them or --- I'm not sure how to
4 accurately answer that question.
5 Q. Over the --- just in general how many of your
6 patients socially transitioned, not just while they were
7 being treated under your care?
8 A. And these are patients who are seeing me
9 specifically through the context of gender or of those
10 500 transgender patients?
11 Q. Of the 500 transgender patients.
12 A. Probably --- I mean, it's a guess but probably
13 in the order of 85 percent.
14 Q. And what proportion of the 500 patients used
15 puberty blockers?
16 A. Probably a minority of those patients. If I had
17 to guess, probably 20 percent or less.
18 Q. And what percent of those 500 transgender
19 patients used cross sex hormones?
20 A. I don't have my records in front of me, so it
21 would really just be a guess, but probably close to the
22 same percentage that socially transitioned, probably a
23 little bit less than that.
24 Q. If I recall correctly that's about 85 percent?

1 A. Probably somewhere on the order of that.
2 ATTORNEY BLOCK: Would now be a good time
3 for that break?
4 ATTORNEY BARHAM: One last question.
5 BY ATTORNEY BARHAM:
6 Q. What systems do you have in place to track these
7 patients five years after they have been in your care?
8 A. I have the same systems as most psychiatrists.
9 We see the patients within our care. Folks will reach
10 out to us after time has passed and it's one of the
11 great pleasures of being a child psychiatrist, we get to
12 see folks longitudinally. So there is not a specific
13 system apart from mutual care.
14 Q. So you rely on them to reach out to you.
15 Is that correct?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: It depends on context.
18 BY ATTORNEY BARHAM:
19 Q. But do you have any systematic way of tracking
20 all patients five years after they leave your care?
21 A. There is no systematic way of tracking all
22 patients.
23 ATTORNEY BARHAM: All right. Let's take
24 a break. How long would you all like?

1 ATTORNEY BLOCK: Five minutes.
2 ATTORNEY BLOCK: Should we go off the
3 record?
4 VIDEOGRAPHER: Going off, 10:14 a.m.
5 OFF VIDEOTAPE
6 ---
7 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
8 ---
9 ON VIDEOTAPE
10 VIDEOGRAPHER: Back on the record. The
11 time is 10:27 am.
12 BY ATTORNEY BARHAM:
13 Q. Moments ago we were discussing Dr. Littman's
14 2021 study, that was Tab 15, Exhibit 6. Are you aware
15 of any studies that contradict Dr. Littman's data?
16 A. Can you be more specific?
17 Q. Are you aware of any studies that contradict Dr.
18 Littman's work survey in this article in Exhibit-6 that
19 find fault with her data?
20 ATTORNEY BLOCK: Objection to the form.
21 THE WITNESS: Yeah. I'm sorry. I don't
22 think I understand the question. There are other
23 articles that have been written about detransition and
24 clinical experiences of patients that have

1 detransitioned who have described those experiences.
2 There has not been a specific survey designed of
3 detransitioners outside of this one that I'm aware of.
4 BY ATTORNEY BARHAM:
5 Q. Has anyone written an article finding fault with
6 the way Dr. Littman interpreted the data that ---?
7 ATTORNEY BLOCK: Objection to form.
8 THE WITNESS: For this specific data set
9 or for previous?
10 BY ATTORNEY BARHAM:
11 Q. For this specific data set?
12 A. For this specific data set, from my
13 recollection, this was studied --- or published just
14 recently so I'm not aware of any. It doesn't mean that
15 there aren't.
16 Q. Are you aware of any studies that contradict Dr.
17 Littman's conclusions in this 2021 article?
18 A. If you give me a moment I will read the
19 conclusion.
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: Insomuch as Dr. Littman's
22 conclusion is that there's no single narrative to
23 explain the experiences of all individuals who
24 detransitioned and we should take care to avoid painting

1 the population with a broad brush, I agree with that
2 conclusion.
3 BY ATTORNEY BARHAM:
4 Q. Are you aware of any studies that contradict her
5 conclusions not just in the conclusion section but her
6 description of the detransitioners?
7 ATTORNEY BLOCK: Objection to the form.
8 THE WITNESS: I think it's hard to
9 provide a specific answer to that question. We have to
10 look at each study and judge each individual study based
11 upon the merits. The conclusions she draws are from a
12 subset of patients with a very specific viewpoint, and I
13 agree with her and her conclusion that there needs to be
14 more research to better understand the broader
15 implications of this care.
16 BY ATTORNEY BARHAM:
17 Q. You're not aware of any article that has been
18 published specifically critiquing this 2021 study by Dr.
19 Littman.
20 Is that correct?
21 A. Not that I'm aware of.
22 ATTORNEY BLOCK: Objection to form.
23 BY ATTORNEY BARHAM:
24 Q. A few moments ago we were also talking about the

1 patients that you have treated, the 500 transgender
2 patients you referenced in your report, and you
3 mentioned that about 20 percent or less of those had
4 used puberty blockers. I'm wondering why that
5 percentage is so low.
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: I don't know. Low compared
8 to what? I think it's important to understand the
9 context that in 2011, when I first started my gender
10 program, that puberty blocking medications were not
11 widely available, cost upwards of $3,000 a month and
12 were not covered by most insurance. So puberty blockers
13 were not something that were available in the same way
14 they are now. And I also saw a fair number of adults
15 and older adolescents for whom puberty blockers are not
16 indicated.
17 BY ATTORNEY BARHAM:
18 Q. So of the 500 patients that you reference in
19 paragraph eight of your report, what percentage of those
20 are adults?
21 A. I would really have to go back and look. I
22 mean, in my current practice, I see adolescents and
23 young adults, so kind of parsing out artificially who is
24 18 and up, it would take some time to do that. Probably

1 in the order of 75 percent are children in adolescence,
2 25 percent adults. But of course, over 2011 to now, a
3 lot of those folks are now adults.
4 Q. And when I'm asking about these percentages I
5 mean when you were treating them. What percentage of
6 the patients you were treating were children?
7 A. That's my best guess.
8 Q. Seventy-five (75) percent?
9 A. Yes.
10 Q. And are you distinguishing between prepubertal
11 children and adolescents in that 75 percent or both?
12 A. That's both.
13 Q. Of that 75 --- of all the patients you've seen,
14 at the time you saw them, how many were prepubertal
15 children?
16 A. Probably --- and again, I have to give this a
17 major caveat. I would have to go back and look through
18 everything, but I would say probably 25 percent of that
19 75 percent were prepubertal at the time of initial
20 assessment.
21 Q. And so then the remaining 75 percent of 75 would
22 be adolescents.
23 Is that correct?
24 A. Correct.

1 ATTORNEY BLOCK: Objection to form.

2 BY ATTORNEY BARHAM:

3 Q. How many of your patients of those 500 patients

4 have detransitioned in a year?

5 A. It's kind of a hard question to answer. The one

6 patient who self identifies as having detransitioned

7 started seeing me after she had detransitioned.

8 Q. Have any of your patients detransitioned while

9 under your care?

10 A. Not that I'm aware of.

11 Q. And is the one patient who detransitioned before

12 starting to see you, is that the only patient you're

13 aware of of the 500 that has detransitioned?

14 A. That is the only one that I'm aware of, yes.

15 But can I clarify that of those 500 patients there are

16 certainly those who did not choose to transition.

17 Q. And how many of the 500 chose not to transition?

18 A. If I had to guess, probably about 10 to 20,

19 probably ten percent.

20 Q. And did they make that decision before puberty

21 began?

22 A. It was a mix.

23 Q. Of those who chose not to transition, how many

24 were children when they made that decision?

1 A. I couldn't tell you at that point, but
2 significantly more were the prepubertal youth than
3 adolescents.
4 Q. This is a sensitive question. I mean no offense
5 by it, but how many of the 500 patients have made the
6 sad decision to commit suicide?
7 ATTORNEY BLOCK: I'm sorry. I couldn't
8 heat that. Can you speak up?
9 BY ATTORNEY BARHAM:
10 Q. How many of the 500 patients have made the sad
11 decision to commit suicide?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: Is your question how many
14 have completed suicide?
15 BY ATTORNEY BARHAM:
16 Q. Correct.
17 A. Of those 500 patients, zero.
18 Q. How many of those 500 patients have been
19 hospitalized for a psychiatric illness?
20 A. I do not have that information in front of me.
21 Q. Do you have any general idea?
22 A. I don't.
23 Q. After five or more years what percentage of your
24 patients would be characterized as lost to follow-up?

1 A. Lost to follow-up is a specific term used in
2 studies, so it's not something that I would use to
3 describe my patients.
4 Q. How many patients do you lose contact with after
5 five years?
6 A. Again, I don't know how to answer that question.
7 I've been at my current role for three, so I haven't
8 lost touch with any significant number of patients.
9 Q. What about patients that you saw before you were
10 in your current position?
11 A. I'm not in contact with patients from my
12 previous role.
13 ATTORNEY BARHAM: All right. Let's go to
14 Tab 110. This is Exhibit-7 I believe.
15 ---
16 (Whereupon, Exhibit-7, Study, was marked
17 for identification.)
18 ---
19 BY ATTORNEY BARHAM:
20 Q. Are you familiar with this study?
21 A. I am not.
22 Q. Have you seen it before today?
23 A. I have not.
24 Q. On page one this again has been --- it's

1 paginated in the top right corner or top inside corner.
2 On page one the first sentence of the last paragraph
3 says gender transition is as scientifically fascinating
4 as it is socially controversial for it poses significant
5 professional and bioethical challenges for those
6 clinicians working in the field of gender dysphoria.
7 Do you agree that gender detransition poses
8 significant professional and bioethical challenges for
9 professionals treating gender dysphoria?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: I don't necessarily agree
12 with the language. And certainly don't agree with the
13 author to use something that's scientifically
14 fascinating. What I think is that every decision that
15 we make in child psychiatry in particular is fraught
16 with ethical challenges. This is not any different from
17 the ethical challenges that we face with a lot of other
18 interventions.
19 BY ATTORNEY BARHAM:
20 Q. What challenges does detransition pose to your
21 profession in your view?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: I don't see how it poses
24 any challenges to my work.

1 BY ATTORNEY BARHAM:
2 Q. Page three of this article, the authors identify
3 several things that may prompt a person's decision to
4 detransition including understanding how past trauma,
5 internalized sexism and other psychological difficulties
6 influence the experience of gender dysphoria.
7 Correct?
8 ATTORNEY BLOCK: Objection. Can you give
9 him a chance to read?
10 ATTORNEY BARHAM: Of course.
11 THE WITNESS: And can you repeat what you
12 said?
13 BY ATTORNEY BARHAM:
14 Q. On page three the authors identify several
15 things that may prompt a person's decision to
16 detransition including, quote, understanding how past
17 trauma, internalized sexism and other psychological
18 difficulties influence the experience of gender
19 dysphoria.
20 Correct?
21 A. Sorry. Just give me a second to look at the
22 context here.
23 Q. Sure.
24 A. I agree that's how it is written and there

1 appears to be no basis from which the author has built
2 that assertion. There is no methods described in this
3 whatsoever.
4 Q. I believe the author in that instance is citing
5 Dodsworth 2020, Gonzalez 2019, Herzog 2017, and one,
6 two, three, four other studies.
7 Do you see that?
8 A. I see those studies. I'd have to look at the
9 specific studies in order to understand the implications
10 and the context.
11 Q. But the authors obviously seem to have a basis
12 or at least a citation basis for what they're saying.
13 Is that correct?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: Again, without knowing the
16 specifics of those studies it's hard for me to say.
17 BY ATTORNEY BARHAM:
18 Q. The authors also indicate that solving previous
19 psychological or slash emotional problems that
20 contributed to gender dysphoria may prompt the decision
21 to detransition.
22 Is that correct?
23 A. Where is that?
24 Q. They are citing Butler and Hutchinson, 2020,

1 Stella 2016. It is the same paragraph.
2 A. Got it. Yeah I don't know what solving a
3 psychological or emotional problem means in this
4 context.
5 Q. But these authors are at least indicating that
6 solving these problems, however they mean the term, may
7 prompt a decision to detransition.
8 Is that correct?
9 ATTORNEY BLOCK: Objection to form.
10 THE WITNESS: I think I've answered how I
11 can answer that.
12 BY ATTORNEY BARHAM:
13 Q. Okay.
14 Let's go back to Tab 15, which is Exhibit-6.
15 This was the Littman study that we were discussing a
16 moment ago. On page three --- excuse me, according to
17 Table 5, on page nine, 60 percent of the participants in
18 this survey reported that they became more comfortable
19 identifying as their natal sex.
20 Is that correct?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: I see 65 percent of those
23 assigned female at birth and 48 of those assigned male
24 at birth reported that.

1 BY ATTORNEY BARHAM:
2 Q. So 45 and 15 is 60, so that would be 60 percent
3 of the 100 participants in the study.
4 Correct?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: I believe.
7 BY ATTORNEY BARHAM:
8 Q. I'm sorry. I didn't hear your answer.
9 A. I trust your math, yes.
10 Q. Okay.
11 And on page 12, under the heading discussion,
12 this survey indicates that only a small percentage of
13 detransitioners, 24 percent, informed the clinicians and
14 clinics that facilitated their transfer that they ---
15 their transition that they had detransitioned.
16 Is that correct?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: Yes, the participants in
19 the study, that is correct.
20 BY ATTORNEY BARHAM:
21 Q. And you testified a moment ago, if I recall
22 correctly, please correct me if I'm wrong, that you are
23 aware of only one patient in your career that has
24 detransitioned.

1 Is that correct?
2 A. That I'm aware of, yes.
3 Q. Let's go to Tab 116, which is Exhibit-8.
4 ---
5 (Whereupon, Exhibit-8, Article by
6 Vandenbussche, was marked for
7 identification.)
8 ---
9 BY ATTORNEY BARHAM:
10 Q. Are you familiar with this article?
11 A. I have not read this article.
12 Q. And this is a 2021 article by I believe a
13 gentleman named --- or an individual named
14 Vandenbussche, Detransitioned Related Needs in Sports.
15 Is that correct?
16 A. That is correct.
17 Q. Did you review this article when preparing your
18 report?
19 A. I did not.
20 Q. If you look at page four this article examined a
21 sample survey of 237 detransitioners.
22 Is that correct?
23 ATTORNEY BLOCK: Objection. Can you give
24 him time to read the document he has never seen before.

1 ATTORNEY BARHAM: Certainly.
2 THE WITNESS: Can you repeat the
3 question?
4 BY ATTORNEY BARHAM:
5 Q. This article highlights the results of a survey
6 of 237 detransitioners.
7 Correct?
8 A. Yes, as they are defining detransitioning, yes.
9 Q. And on page five these authors --- these
10 researchers report that 70 percent of participants
11 detransitioned because they realized that their gender
12 dysphoria was related to other issues.
13 Correct?
14 A. Correct.
15 Q. And that was the most common reported reason for
16 detransitioning.
17 Correct?
18 A. As they stated, yes.
19 Q. In paragraph 43 of your report you cite Lisa
20 Littman's 2018 study. Paragraph 43. And you highlight
21 what you describe as serious methodological flaws that
22 render the study meaningless.
23 Is that correct?
24 A. Correct.

1 ATTORNEY BARHAM: I want to show you
2 Tab 117, and this will be Exhibit 9. It will be an
3 article by Lily Durwood entitled Mental Health and Self
4 Worth in Socially Transitioned Transgender People.
5 ---
6 (Whereupon, Exhibit-9, Article by Lily
7 Durwood, was marked for identification.)
8 ---
9 BY ATTORNEY BARHAM:
10 Q. Are you familiar with this article?
11 A. I am.
12 Q. You cited this in footnote nine of your report
13 as demonstrating the treatment associated with social
14 transitions.
15 Correct?
16 A. I have to look at the specific footnote. I know
17 I cited it, but I don't know if it was citing to that
18 specific conclusion.
19 Q. By all means take a look.
20 A. Can you point me to where my footnote is?
21 Q. Footnote nine is --- let me find it myself.
22 ATTORNEY SWAMINATHAN: It's page 11.
23 THE WITNESS: Yes.
24 BY ATTORNEY BARHAM:

1 Q. The Durwood article in 2017 is a survey of
2 children and their parents about the children's mental
3 health.
4 Is that correct?
5 A. Correct.
6 Q. The children in the Durwood article were not
7 surveyed or assessed by clinicians.
8 Is that correct?
9 A. I don't know the answer to that. I'd have to
10 look at the specific ---.
11 Q. Well, if this is a self report it would be
12 reporting what the children themselves said.
13 Correct?
14 ATTORNEY BLOCK: Objection. Let him have
15 time to read the article.
16 THE WITNESS: The trans youth project was
17 directed by Dr. Ulson involved clinicians in the
18 assessment of the children and their families. So I'm
19 not sure specifically. I would have to go through the
20 methods of this one particularly for me to recall.
21 As you will see from the procedure on
22 page 117 whenever possible parents and children
23 completed the measurements in separate rooms or far
24 enough in the same room to be out of ear shot. And so

1 they were researchers who were boarded who were
2 participating in these interviews with the kids and
3 their families.
4 BY ATTORNEY BARHAM:
5 Q. But those researchers were just recording what
6 the students said out loud?
7 A. Correct.
8 Q. So there's no clinical assessment of the
9 children as part of this survey.
10 Is that correct?
11 ATTORNEY BLOCK: Object to form.
12 THE WITNESS: I wouldn't be able to
13 answer that question. It depends upon how it's used.
14 In a research context you might be using the same
15 instruments that we would use for clinical assessments,
16 but for the sake of research purposes it's not used in
17 that way.
18 BY ATTORNEY BARHAM:
19 Q. But the purpose of this article was just to
20 record what the children said as a self report.
21 Is that correct?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: As far as I understand the
24 point of this article, they utilized child self report

1 which is what is typically used in children mental
2 health studies.
3 BY ATTORNEY BARHAM:
4 Q. According to page --- the second page of this
5 article, which is page 117, the participants were
6 recruited through word of mouth, national and local
7 support groups, summer camps and online forums for
8 families of transgender and gender nonconforming youth.
9 Correct?
10 A. That is correct.
11 Q. Frequently in your report you refer to
12 gender-affirming care. What in your view are the
13 components of gender-affirming care?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: I think that there is no
16 one agreed upon use of that term and it is used by
17 different people in different context to mean whatever
18 they want it to mean, depending upon who is asking the
19 questions. The way that I define it, for my own
20 practice, is that it's important for children to be
21 heard and listened to, that any particular gender
22 identity outcome is not better than any other and that
23 the child and families should be directing the process
24 with appropriate assessments and interventions.

1 BY ATTORNEY BARHAM:
2 Q. How do you handle a situation where parental
3 desires may be differ than the child's desires?
4 A. That is almost a universal phenomenon of
5 parenthood, so there's not an atypical process. When
6 there is disagreement about specific issues in the
7 treatment plan those interventions are going to be
8 tailored to the individual families based upon their
9 need.
10 Q. So when you use gender-affirming care what do
11 you view as the different components or different
12 aspects of gender-affirming care in your practice?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: I think that is also going
15 to be highly context dependent. I'm a psychiatrist and
16 I see a lot of children with complex psychiatric needs,
17 so my process for gender-affirming care is going to be
18 different than what somebody else might describe as
19 gender-affirming care, but I think I highlighted what I
20 see as the components of it for myself.
21 BY ATTORNEY BARHAM:
22 Q. I've missed in your list of the different
23 components, so could you explain again what do you see
24 as the components of gender-affirming care?

1 A. That it should be child and family led, that
2 listening to and understanding the child is an important
3 aspect of the process and that there is no gender
4 identity outcome that is privileged over another. I'm
5 sure I said it slightly differently than the last time
6 around but the concepts are the same.
7 Q. Do you consider social transition to be a
8 component of gender-affirming care?
9 A. I think that understanding the risks, benefits
10 and alternatives of social transition is a part of
11 gender-affirming care. In that way, sometimes
12 recommending not socially transitioning is a part of
13 gender-affirming care.
14 Q. But gender-affirming care can be an approach
15 used as part of gender-affirming care.
16 Is that correct?
17 ATTORNEY BLOCK: Objection to the form.
18 THE WITNESS: Can you repeat the
19 question?
20 BY ATTORNEY BARHAM:
21 Q. Social transitioning can be a method used as
22 part of gender-affirming care.
23 Correct?
24 A. It is an option.

1 Q. An available tool.
2 Correct?
3 A. Yes.
4 Q. Is it your belief that social transition is a
5 type of medical or mental health treatment for gender
6 dysphoria?
7 A. It's a hard question to answer. Social
8 transition is a pretty diverse concept that's hard to
9 get as a categorical variable to study, but the
10 implication is that there's a lot of things that are
11 often helpful for mental health that aren't specifically
12 mental health treatments, right, like exercise, regular
13 sleep. These aren't specific mental health
14 interventions but nevertheless have impacts on mental
15 health outcomes.
16 Q. Well, in paragraph 90 --- I mean paragraph 36 of
17 your report you say that social transition is a
18 treatment for gender dysphoria?
19 A. Yeah I would agree with that.
20 Q. So what kind of treatment is it?
21 A. It's a psychosocial intervention.
22 Q. Psychosocial. What does social transitioning
23 include in your view?
24 A. I have to recall if I provided an operational

1 definition for it in my report. Essentially what we're
2 talking about is an alignment of gender role and gender
3 identity. So that's transition of name, pronouns, hair,
4 participation in sex-segregated activities, et cetera.
5 Q. And so social transition in your view means the
6 participation in girls or boys athletic teams in
7 competitions consistent with ones gender identity.
8 Is that correct?
9 A. Again, it's going to be context dependent. It
10 is not a yes or no question around social transition.
11 What we're going to be doing in the context of an
12 assessment is understanding the risks and benefits of
13 all the various options that we have.
14 Q. I understand that it can differ from person to
15 person, but participation in girls or boys athletic
16 teams in competition consistent with one's gender
17 identity is an aspect, a possible aspect, of social
18 transitioning.
19 Correct?
20 A. It may be an option for some students, yes.
21 Q. Do you consider the use of puberty blockers to
22 be an available tool as part of gender-affirming care?
23 A. I do.
24 ATTORNEY BLOCK: Objection to form.

1 BY ATTORNEY BARHAM:
2 Q. Do you consider the use of cross sex hormones to
3 be an available tool as part of gender-affirming care?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: Gender-affirming care can
6 include hormones.
7 BY ATTORNEY BARHAM:
8 Q. Are there any other available tools that you use
9 as part of gender-affirming care?
10 A. Yes, there is a lot of tools that I use that are
11 involved in gender-affirming care. Work with the family
12 is one big piece of it. Work with the school is
13 another. Referrals for surgery when indicated,
14 recommendations for assessment and treatment of any
15 co-occurring mental health disorder is a part of it.
16 Q. What is your role in the prescribing of puberty
17 blockers?
18 A. I'm occasionally in the role of doing a mental
19 health assessment prior to initiation of those
20 medications.
21 Q. And are you the individual who would prescribe
22 the puberty blockers?
23 A. I am not.
24 Q. What type of professional would be responsible

1 for the prescribing?
2 A. In the clinics that I have worked these are
3 either adolescent medicine specialists or pediatric
4 endocrinologists.
5 Q. And is the same true with cross sex hormones?
6 A. Yes.
7 Q. In your report you describe gender-affirming
8 care as the prevailing model of care for transgender
9 youth.
10 Is that correct? And I'm referencing
11 paragraph 15 of your report.
12 A. Yes.
13 Q. Later on in your report you refer to prevailing
14 standards of care, paragraph 18, paragraph 26, for
15 example. By that are you referring to gender-affirming
16 care?
17 A. Which paragraph?
18 Q. Eighteen (18) and 26.
19 A. I would say that it is a part of what I'm
20 referring to but not the entirety of what I'm referring
21 to.
22 Q. What else are you referring to in paragraph 18
23 and 26 when you say prevailing standards of car?
24 A. This would include a lot of components,

1 including both the Endocrine Society Guidelines, the
2 World Professional Association for Transgender Health
3 Guidelines as well as recommendations and ethical
4 guiding principles of the various governing bodies that
5 we all work with.
6 Q. And you would describe those various documents
7 that you just referenced as reflecting gender-affirming
8 care.
9 Correct?
10 A. I would have to go through, for example, the
11 Endocrine Society Guidelines to know whether or not they
12 use that specific term. Again, I think I just want to
13 make sure that I'm emphasizing that gender-affirming
14 care does not have an agreed upon definition so it's
15 controversial and I wouldn't know how to answer that
16 question.
17 Q. As you use the term and as you define the term
18 in your practice, would you consider the WPATH standards
19 to fall under the umbrella of gender-affirming care?
20 A. I would yes.
21 Q. And would you consider the Endocrine Society
22 Guidelines to fall under the umbrella of
23 gender-affirming care?
24 A. I would, yes.

1 Q. In paragraph 15 of your report you claim that
2 gender-affirming care is endorsed by at least five
3 professional associations.
4 ATTORNEY BLOCK: Objection to form.
5 BY ATTORNEY BARHAM:
6 Q. And you reference others. What other
7 organizations are you alluding to in paragraph 15 of
8 your report?
9 A. I don't want to get the name of the organization
10 incorrect, but National Association of Social Workers
11 and the National Association of Marital and Family
12 Therapists have released statements about it, but I
13 don't have specific recollection of those sitting here
14 today.
15 Q. Okay.
16 Are there any other organizations besides those
17 and those listed in paragraph 15?
18 A. There likely are but none that are coming to
19 mind today.
20 Q. When you were preparing your report did you
21 consult the standards of care articulated by any
22 international professional organizations?
23 A. Yes.
24 Q. Which ones?

1 A. Both the Endocrine Society Guidelines as well as
2 the WPATH standards of care.
3 Q. Any other international or professional
4 organizations?
5 A. Not that I can recall, no.
6 Q. Are you aware that international and
7 professional organizations have been moving away from
8 using puberty blockers and cross sex hormones on
9 children and adolescents under the age of 16?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: I don't see that that is
12 necessarily accurate. I'm going to have to take a break
13 in five minutes if that is okay.
14 ATTORNEY BARHAM: This would be the
15 perfect time.
16 THE WITNESS: I will be quick.
17 VIDEOGRAPHER: Going off the record. The
18 current reads 11:01.
19 OFF VIDEOTAPE
20 ---
21 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
22 ---
23 ON VIDEOTAPE
24 VIDEOGRAPHER: Back on the record. The

1 current time is 11:06 a.m.
2 ATTORNEY BARHAM: I'm going to show you
3 what we will mark as Exhibit 10, this will be Tab 91.
4 ---
5 (Whereupon, Exhibit-10, Statement by
6 Royal Australian and New Zealand College
7 of Psychiatrists, was marked for
8 identification.)
9 ---
10 BY ATTORNEY BARHAM:
11 Q. This is a statement from the Royal Australian
12 and New Zealand College of Psychiatrists.
13 Correct?
14 ATTORNEY BLOCK: Objection. Can you give
15 him a chance to look at the document?
16 THE WITNESS: It's what it says. I don't
17 know what the government structure of this organization
18 is or how they release their statements or how they are
19 developed.
20 BY ATTORNEY BARHAM:
21 Q. This is Position Statement 103, according to the
22 document.
23 Correct?
24 A. I will take your word for it if that's what it

1 says.

2 Q. Right below the title. And it was published in

3 August of 2021.

4 Is that correct?

5 A. I don't know where it says that.

6 Q. Right below the tab.

7 A. Got it.

8 Q. The Royal Australian and New Zealand College of

9 Psychiatrists is the professional body of psychiatrists

10 for those two countries.

11 Is that correct?

12 ATTORNEY BLOCK: Objection.

13 THE WITNESS: I do not know that.

14 BY ATTORNEY BARHAM:

15 Q. I'm sorry. I didn't catch your answer.

16 A. I do not know.

17 Q. According to page three of this document, the

18 Royal College has concluded that there are, quote,

19 polarized views and mixed evidence regarding treatment

20 options for people presenting with gender identity

21 concerns, especially children and young people.

22 Do you see that?

23 A. I see that.

24 Q. Do you agree with their assessment?

1 A. Yes.
2 Q. So this means that professionals can disagree
3 with each other as to how to treat children and young
4 people with gender dysphoria.
5 Is that correct?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: Yeah. I think any
8 treatment decision, you're going to have professionals
9 disagreeing with you about the best course of action.
10 This isn't any different than that.
11 BY ATTORNEY BARHAM:
12 Q. And on page four of the document the Royal
13 College says that psychiatric assessment and treatment
14 should be both --- should be both based on available
15 evidence and allow for full exploration of a person's
16 gender identity. And it emphasizes the importance of
17 the psychiatrist's role to undertake for assessment in
18 evidence-based treatment ideally as part of a
19 multidisciplinary team, especially highlighting
20 distinguishing issues which may need addressing and
21 treating. Do you agree with the Royal College's
22 emphasis on psychiatrists' role and how it's important
23 to ensure appropriate care for gender dysphoria?
24 ATTORNEY BLOCK: Objection to form.

1 THE WITNESS: Psychiatrists are often a
2 useful adjunct to the team, but isn't a necessary
3 requirement. There are many other mental health
4 professionals who have expertise and can fill this role.
5 BY ATTORNEY BARHAM:
6 Q. And what other professionals do you think could
7 fill this role?
8 A. This would be licensed clinical mental health
9 professionals.
10 Q. And those would include?
11 A. Psychologists, social workers, marital and
12 family therapists and there are probably other titles
13 that are governed by their regulatory boards that I
14 don't recall right now.
15 BY ATTORNEY BARHAM:
16 Q. And on what are you basing your disagreement
17 with the Royal College's emphasis on the importance of
18 the psychiatrist's role
19 ATTORNEY BLOCK: Objection to form and
20 characterization of the document.
21 THE WITNESS: The WPATH standards of care
22 as an example does not dictate necessary involvement of
23 a psychiatrist. And I would have to review the
24 Endocrine Society, but I don't believe that they

1 specifically --- from my guild either.
2 BY ATTORNEY BARHAM:
3 Q. Is it true that psychiatrists have training and
4 skills that psychologists and marital therapists and
5 social workers do not have?
6 A. That is correct.
7 ATTORNEY BARHAM: I'm going to hand you
8 what we will mark as Exhibit-11. And this will be
9 Tab 92 for those watching online.
10 ---
11 (Whereupon, Exhibit-11, Policy Change
12 Regarding Hormonal Treatment of Minors,
13 was marked for identification.)
14 ---
15 BY ATTORNEY BARHAM:
16 Q. This document is an announcement of a policy
17 change regarding hormonal treatment of minors with
18 gender dysphoria at Astrid Lidgren Children's Hospital.
19 Are you aware that this is the main gender clinic in
20 Sweden?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: I don't see any specific
23 information about this document that reports where it's
24 from.

1 BY ATTORNEY BARHAM:
2 Q. Are you aware of Astrid Lindgren Hospital by
3 reputation?
4 A. I don't know if that's the name of it. No, I
5 don't recall the specific name of the Swedish Children's
6 Hospital.
7 Q. Are you aware that the Swedish Agency for Health
8 Technology Assessment and Assessment of Social Services
9 published an overview of the knowledge base which showed
10 a lack of evidence of both long-term consequences of the
11 treatments of gender dysphoria?
12 A. I have heard ---.
13 ATTORNEY BLOCK: Objection to form and
14 where are you quoting from?
15 ATTORNEY BARHAM: Halfway through the
16 first paragraph of the background section on page one.
17 ATTORNEY BLOCK: I'm sorry. Where was
18 this document obtained from?
19 ATTORNEY BARHAM: I can supply that
20 information, but this is an announcement of a policy
21 change from a Children's Hospital in Sweden.
22 ATTORNEY BLOCK: Just for the record,
23 this doesn't seem to have a walk --- like --- it just
24 looks like words on a page without other sourcing on it.

1 ATTORNEY BARHAM: Your objection is
2 noted.
3 THE WITNESS: I mean without speaking to
4 the providence of the document, I have heard that there
5 was a change within the Swedish establishment in regards
6 to prepubertal youth or prepubertal youth.
7 BY ATTORNEY BARHAM:
8 Q. And what was your understanding of that change?
9 A. I would have to look through the specifics to
10 know for sure.
11 Q. What is your general understanding of the nature
12 of that change?
13 A. My general understanding was there was a pause
14 on some of the treatments, medical treatments available
15 for children with gender dysphoria.
16 Q. And by pause, at least according to this
17 document, it means that they had decided hormonal
18 treatments, i.e. puberty blocking and cross sex
19 hormones, will not be initiated in gender-dysphoric
20 patients under the age of 16.
21 Correct? First bullet point in executive
22 decisions.
23 A. Again, not knowing the providence of this
24 document, that's what this document says, yes.

1 Q. Are you aware that the United Kingdom's National
2 Health Service put an end to initiating hormone
3 treatment in new cases of individuals under 16?
4 ATTORNEY BLOCK: Objection to form and
5 foundation.
6 THE WITNESS: My understanding is that
7 it's under litigation right now and a final decision has
8 not been reached, but I could be wrong about that.
9 BY ATTORNEY BARHAM:
10 Q. Are you aware that that's at least a current
11 practice to put an end to initiating hormonal treatment
12 in new patients --- in new cases of individuals under
13 16?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: Can you repeat the
16 question?
17 BY ATTORNEY BARHAM:
18 Q. Are you aware that the United Kingdom's National
19 Services' current practice is to put an end to
20 initiating hormonal treatments in new cases of
21 individuals under 16?
22 ATTORNEY BLOCK: Objection to form and
23 foundation.
24 THE WITNESS: I do not have the NHS

1 policies in front of me, so I cannot speak to that.
2 ATTORNEY BARHAM: The document Exhibit
3 --- what number are on, 11.
4 LAW CLERK WILKINSON: 11, yes
5 BY ATTORNEY BARHAM:
6 Q. Exhibit 11 indicates, quote, the United
7 Kingdom's National Health Service put an end to
8 initiating hormonal treatment in new cases of
9 individuals under 16. Do you have any reason to believe
10 that that statement is inaccurate?
11 ATTORNEY BLOCK: Just objection that this
12 document came out at a certain time and so it's just not
13 clear what timeframe, you know, this question is
14 referring to. And just another objection to this
15 document. This appears to be a translation ---.
16 ATTORNEY BARHAM: Your objection is
17 noted. And we've already agreed that there are the
18 three objections, so I will ask you to cease the
19 speaking objections.
20 THE WITNESS: I have reason to doubt it.
21 Yes.
22 BY ATTORNEY BARHAM:
23 Q. What is your reason to doubt it?
24 A. My understanding is that there were legal

1 processes involved that have changed the landscape of
2 this care in the U.K.
3 Q. Are you aware of the National Health Service
4 reinitiating hormonal treatments in new cases of
5 individuals under 16?
6 A. I am unsure. That's where my doubt is.
7 Q. But you're aware that at one time they put an
8 end to those treatments for individuals under the age of
9 16?
10 A. Yes.
11 ATTORNEY BLOCK: Objection to form.
12 THE WITNESS: Yes.
13 ATTORNEY BARHAM: I'm going to show you
14 what we will mark as Exhibit-12. This is a document ---
15 an article by Lisa Nainggolan. I'm probably butchering
16 the last name.
17 LAW CLERK WILKINSON: Tab 93.
18 ATTORNEY BARHAM: Tab 93, entitled
19 Hormonal Treatment of Youth with Gender Dysphoria Stops
20 in Sweden.
21 ---
22 (Whereupon, Exhibit-12, Article by Lisa
23 Nainggolan, was marked for
24 identification.)

1 ---

2 BY ATTORNEY BARHAM:

3 Q. In the fourth paragraph it indicates that other

4 centers in Sweden that treat gender dysphoria youth in

5 Loom and Licopene will follow the lead of the ALB. Are

6 you aware that those two clinics had made the same

7 decision as the Astrid Lindgren Children's Hospital?

8 A. I am not.

9 ATTORNEY BARHAM: I'm going to show you

10 what we will mark as Exhibit-4 --- I mean, I'm sorry

11 Tab 94, Exhibit 13.

12 ---

13 (Whereupon, Exhibit-13, Study, was marked

14 for identification.)

15 ---

16 BY ATTORNEY BARHAM:

17 Q. Are you aware that Finland has similarly

18 reversed its course issuing new guidelines that allow

19 puberty blockers only on a case by case basis after

20 extensive psychiatric assessment?

21 ATTORNEY BLOCK: Objection to form. And

22 can you give the witness and me a chance to see this

23 document? Can the document be scrolled down?

24 THE WITNESS: What I can say about this

1 document is that I don't --- I've not heard of what
2 Cohere Finland is and how their recommendations impact
3 policies on the ground in Finland.
4 BY ATTORNEY BARHAM:
5 Q. So are you not familiar with Cohere as an
6 entity?
7 A. Correct.
8 Q. And that was a question. Are you?
9 A. I am not.
10 Q. Have you seen this document before today?
11 A. I have not.
12 ATTORNEY BARHAM: I'm going to show you
13 what we'll mark as Exhibit 14, and this will be Tab 95
14 for those watching at a distance.
15 ---
16 (Whereupon, Exhibit-14, Article Published
17 on Medscape.com, was marked for
18 identification.)
19 ---
20 BY ATTORNEY BARHAM:
21 Q. This is an article by Betsy McCall published on
22 Medscape.com on October 7th, 2021.
23 Is that correct?
24 A. Yes.

1 Q. If you look at the third paragraph from the
2 bottom. Ms. McCall reports that Scandinavian countries,
3 most notably Finland, once eager advocates for the
4 gender-affirmative approach, have pulled back and issued
5 new treatment guidelines in 2020, stating that
6 psychotherapy rather than gender reassignment should be
7 the first line of treatment for gender dysphoric youth.
8 Do you see that?
9 A. I see that.
10 Q. Do you agree with that approach?
11 ATTORNEY BLOCK: Objection to form.
12 THE WITNESS: Medscape is a popular press
13 forum for discussing issues and the language that is
14 used by this author implies to me that this is not
15 somebody who has a great deal of expertise or
16 understanding in this field.
17 BY ATTORNEY BARHAM:
18 Q. Do you agree with using psychotherapy rather
19 than gender reassignment as the first line of treatment
20 for gender dysphoric youth?
21 A. The term gender reassignment in and of itself is
22 not a meaningful term in this context, and so it's
23 unclear what this particular author is trying to get
24 across. And it's a false dichotomy that is being

1 positive that doesn't actually happen.
2 Q. Are you aware that Finland had issued new
3 treatment guidelines in 2020?
4 A. I don't recall the specifics of when guidelines
5 were recommended. But based upon the document that you
6 placed in front of me it seems to be yes. But I think
7 the description of those guidelines and what you put in
8 front of me as the Cohere guidelines, which again I'm
9 not sure what they actually represent in terms of their
10 policies, there are contradictions there.
11 ATTORNEY BLOCK: I'm sorry. I want to
12 put on the record this document about Finland also
13 appears to be a translation from the original by the
14 Society for Evidence Based Gender Medicine whose website
15 describes it as an unofficial translation. So I just
16 want to note that for the record.
17 ATTORNEY BARHAM: So noted. I'm going to
18 show you what we will mark as Exhibit 15, Tab 96.
19 ---
20 (Whereupon, Exhibit-15, Article in
21 National Health Service, was marked for
22 identification.)
23 ---
24 BY ATTORNEY BARHAM:

1 Q. And I will direct your attention to page 13.
2 This is a --- to identify the document for the record.
3 This is an Evidence Reviewed Gonadotrophin Releasing
4 Hormone Analogs for Children and Adolescents with Gender
5 Dysphoria, from the National Health Service in 2021 ---
6 or in 2020. On page 13, right at the beginning of the
7 conclusions section the authors indicate that the
8 results of studies that reported impact on the critical
9 outcomes of gender dysphoria and mental health and the
10 important outcomes of body image and psychosocial impact
11 in children and adolescents with gender dysphoria are a
12 very low certainty using modified grade. They suggest
13 little change with GnRH analogs from baseline to
14 follow-up. Do you see that?
15 A. I do not.
16 Q. First paragraph, under the conclusion.
17 A. Yes, I see that.
18 Q. Do you have any scientific basis for disputing
19 this conclusion?
20 ATTORNEY BLOCK: Objection. Let him read
21 the document.
22 THE WITNESS: I mean, without having seen
23 this before, I'm not sure what the scoping was for how
24 they defined which studies to include, which ones were

1 excluded, which would be required in a validated
2 metaanalysis type approach. So without a very specific
3 description of the methodology it's going to be hard for
4 me to make an educated statement.
5 BY ATTORNEY BARHAM:
6 Q. If you look at page three of the document, under
7 executive summary it highlights the nine observational
8 studies that were included in the evidence review.
9 A. Yeah, in a metaanalysis or even a systematic
10 review one of the processes that occurs is you define as
11 the authors what you are searching for, what are the
12 exclusionary and inclusionary criteria for each
13 individual study and a list of every single study that
14 was reviewed and why or why not it was included. That
15 is missing here, so it's --- I don't know how the
16 authors decided which ones to include or which ones not
17 to include, which makes it hard to draw a conclusion
18 from the report as it stands.
19 Q. Have you seen any other reports that suggest
20 that the evidence being discussed on page 13 under the
21 conclusions heading isn't anything higher than a very
22 low certainty using modified grade?
23 A. I'm not 100 percent familiar with modified grade
24 as a methodology, so I can't speak to how that would

1 apply to other studies.
2 Q. And the next paragraph the authors indicate that
3 studies found differences in outcome could represent
4 changes that are either a questionable clinical value or
5 the studies themselves are not reliable and changes
6 could be due to confounding bias or chance. Do you
7 agree that that is possible?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: Well, I agree that all
10 things are possible, that scientific literature is not
11 always 100 percent drawing any conclusions. But again,
12 without knowing specifically how they included what they
13 included or why they included what they included and why
14 they opt to remove others, it's not possible for me to
15 draw a specific conclusion from this.
16 BY ATTORNEY BARHAM:
17 Q. In paragraph 34 of your report you distinguish
18 Dr. Levine's approach to treating gender dysphoria as
19 --- or you describe it as gender identity conversion
20 model. Do you recall that?
21 A. Yes.
22 Q. In your view are there two approaches to
23 treating gender dysphoria in children and adolescents,
24 the gender-affirming model and the conversion therapy

1 model?
2 ATTORNEY BLOCK: Objection to form.
3 THE WITNESS: I would not agree with that
4 characterization.
5 BY ATTORNEY BARHAM:
6 Q. How many other approaches do you see? How do
7 you categorize the different approaches for treating
8 gender dysphoria in children and adolescents?
9 A. I don't agree with the premise, but there
10 specific defined treatment paradigms that are used. I
11 think there are --- there are elements of conversion
12 therapy as I referred to in my report. There are
13 elements of gender-affirming care and there is a
14 spectrum in between that.
15 Q. What are the elements --- what are the elements
16 of identity --- gender identity conversion model in your
17 mind?
18 A. I think the primary element as I understand it
19 in conversion therapy is a presupposition that a
20 transgender outcome is an inherently negative outcome
21 and that engagement or interventions should be put into
22 place in order to make that outcome the least likely as
23 possible.
24 Q. And in your mind gender-affirming care is care

1 that affirms that child's gender identity.
2 Correct?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: As I described earlier,
5 there are multiple components to how I would define
6 gender-affirming therapy.
7 ATTORNEY BARHAM: Let's go to Exhibit 16,
8 this will be Tab 97.
9 ---
10 (Whereupon, Exhibit-16, Article by
11 Roberto D'Angelo, was marked for
12 identification.)
13 ---
14 BY ATTORNEY BARHAM:
15 Q. This is an article by Roberto D'Angelo published
16 in 2020, entitled One Science Does Not Fit All. Are you
17 familiar with these authors?
18 A. Not personally, no.
19 Q. Are you familiar with them by reputation?
20 A. Looking at Dr. D'Angelo's footnotes, given that
21 he works for the Society for Evidence Based Gender
22 Medicine, then I might draw some conclusions from that.
23 Q. And what conclusions would you draw from that?
24 A. That there is a presupposition that transgender

1 identity is a negative outcome.
2 Q. And why would you draw that conclusion from that
3 association?
4 A. Based upon the description of the care on the
5 website. But that would be an assumption. I would
6 never do that on any individual basis for any of these
7 authors without knowing them.
8 Q. Beyond the association, do you have any reason
9 to doubt the scholarly integrity of the authors here?
10 A. I think you can't really talk about scholarly
11 integrity when it's a letter to the editor. It's not
12 the same --- same level of evidence as another study
13 would be.
14 Q. It's a letter to the editor that cites 37
15 different sources.
16 Is that correct? I'm looking at the last page.
17 A. The sources aren't numbered, so I don't know how
18 many sources it has, but ---.
19 ATTORNEY BLOCK: Let him look at it.
20 BY ATTORNEY BARHAM:
21 Q. The references at the end are numbered. Excuse
22 me. I apologize. I was looking at the wrong document.
23 A. There are 37 footnotes. I would assume that you
24 are correct on that.

1 Q. We are talking about this letter to the editor
2 --- let me clarify for the record because I was looking
3 at the wrong document prior to questioning for which I
4 apologize. This letter to the editor contains
5 approximately two pages of typed materials listing the
6 references that it uses.
7 Correct?
8 A. Yes, correct.
9 Q. Did you review this article when preparing your
10 report?
11 A. I did not.
12 Q. Did you review this article before today?
13 A. I have not.
14 Q. The article reviews the document published by
15 Turban, et al., in 2020, a study by Turban, et al, in
16 2020.
17 Is that correct?
18 A. It does.
19 ATTORNEY BLOCK: Objection to form.
20 BY ATTORNEY BARHAM:
21 Q. If you look at the last page, that article is
22 the same article that you cited in paragraph 34 of your
23 report.
24 Is that correct?

1 A. That's correct.
2 Q. This D'Angelo, et al. criticized Turban on
3 page one for his simplistic affirmation versus
4 conversion binary --- or I should state permeates his
5 narrative and establishes a foundation for their
6 analysis and conclusions. Do you see that on the first
7 page?
8 A. What page?
9 Q. The first page, second column, middle paragraph.
10 A. I see that, yes.
11 Q. These authors state the notion that all therapy
12 interventions for gender dysphoria can be categorically
13 classified into this simplistic binary betrays a
14 misunderstanding of the complexity of psychotherapy.
15 Would you agree with that statement?
16 ATTORNEY BLOCK: Objection to form and
17 asking him questions about an article he hasn't read.
18 THE WITNESS: The premise of that
19 statement implies a cognition on behalf of the authors
20 of that study that I don't think is necessarily
21 accurate. I don't think that the authors of the Turban
22 study would suggest that there is a simple binary of
23 therapy interventions.
24 BY ATTORNEY BARHAM:

1 Q. And you would also say there's not a simplistic
2 binary.
3 Is that correct?
4 A. That is correct.
5 Q. So in paragraph 34 of your report you're not
6 trying to draw a --- you're not trying to draw some sort
7 of dichotomy between Dr. Levine's approach and yours?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: It is less helpful for me
10 to describe it as identifying a dichotomy but really
11 more focused on the goals of treatment approach. And if
12 the goal of the treatment approach is a conversion type
13 goal, then I think there is a draw between that and the
14 standard of care of the affirmative model.
15 BY ATTORNEY BARHAM:
16 Q. So that in your view are there two different
17 treatment goals when treating gender dysphoria? We can
18 categorize treatment approaches by the goals, conversion
19 therapy versus the gender-affirming model that you have
20 outlined?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: The way I would describe
23 the goal of the gender-affirming model is to have a
24 healthy, resilient child whatever the gender identity

1 ends up being, whether that is a cisgender identity or
2 transgender identity. The difference between that and a
3 conversion therapy is again a presupposition that a
4 transgender identity is an inherently worse outcome
5 which is not focused on the overall mental health and
6 wellbeing of the child.
7 BY ATTORNEY BARHAM:
8 Q. I understand the distinction that you're making.
9 I'm trying to understand are there --- as we assess
10 different people's approaches to this area, can we
11 characterize them by the goals of their approach into a
12 gender-affirming model and a conversion therapy model
13 and those are basically two different camps.
14 Is that correct?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: We cannot.
17 BY ATTORNEY BARHAM:
18 Q. And in saying that I'm not trying to say that
19 therapeutic techniques belong in one or the other. I'm
20 just trying to say can we categorize treatment
21 approaches by the goals?
22 ATTORNEY BLOCK: Objection to form.
23 BY ATTORNEY BARHAM:
24 Q. Because that seems to be what you are doing in

1 paragraph 34 of your report.
2 A. There's a process versus an outcome question
3 that I'm just not understanding the distinction between
4 for as I'm defining conversion therapy here, it is a
5 specific goal that a transgender outcome is a negative
6 outcome. For gender-affirming therapy or interventions
7 there is no presupposed outcome that is better than
8 another other than building the mental health and
9 well-being of the child.
10 Q. Okay.
11 A. And there is many different ways of approaching
12 that question and intervening that are going to be
13 outside of the scope of a goal-based approach.
14 Q. It still sounds and again I'm just trying to
15 explore and understand what you're saying here. It
16 still sounds like there is one approach that has a goal
17 in your view of having the child return to comfort with
18 the child's natal sex and then there is another approach
19 that has a goal that says I don't care where you end up.
20 Is that fair to say?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: Again, I think it really
23 narrows down what's a highly complex question, so it's
24 really hard to give an answer to that. But if we define

1 conversion as approach one and everything else outside
2 of that, I can work with that if that is helpful for
3 having further discussion or asking more questions.
4 BY ATTORNEY BARHAM:
5 Q. Is that the way you would describe this
6 situation in the field at present?
7 A. It is not the way I would describe the situation
8 in the field.
9 Q. On page five of this article ---.
10 ATTORNEY BLOCK: I'm sorry, which
11 article?
12 ATTORNEY BARHAM: On Tab 97 of
13 Exhibit 16. Dr. D'Angelo's article.
14 BY ATTORNEY BARHAM:
15 Q. It sounds to me like you are rejecting what
16 these authors describe as a conflation of ethical
17 non-affirming psychotherapy and conversion therapy, next
18 to the last paragraph on the page.
19 ATTORNEY BLOCK: Objection. Please give
20 him time to read the page.
21 THE WITNESS: I've never seen of or heard
22 a definition for ethical non-affirmative psychotherapy,
23 so I don't know what that means.
24 BY ATTORNEY BARHAM:

1 Q. Is it your position that there is no such thing?
2 A. I have never heard of such a thing.
3 Q. On page six, in the first column, the authors
4 write, in fact, some homophobic societies and indeed
5 families that reject homosexuality among their children
6 have embraced the affirmative biomedical pathway, which
7 poses questions as to whether, quote, affirmative care
8 in some cases in some instances serve the role of gay
9 conversion therapy. Do you believe that that's a
10 legitimate concern?
11 A. I do not.
12 Q. Why not?
13 A. As I mentioned before, affirmative care is not
14 presupposed any one specific outcome.
15 Q. Do you think that someone can have a concern
16 that affirmative care could serve the role regardless of
17 its dole, serve the role of gay conversion therapy?
18 ATTORNEY BLOCK: Objection to form.
19 THE WITNESS: Well, the authors appear to
20 have that concern. It is not a concern that has been
21 borne out by the literature in my clinical experience.
22 BY ATTORNEY BARHAM:
23 Q. Do you believe that the authors are reasonable
24 in having that concern?

1 A. I can't speak to what the authors' motivations
2 are for writing this. I do not know.
3 Q. Based on your knowledge of the field, do you
4 believe that that's a reasonable concern?
5 A. I do not.
6 Q. Why not?
7 A. Because understanding the overlap and the
8 interaction between gender identity and sexuality and
9 sexual orientation is a part of the assessment process
10 in affirming care.
11 Q. At the bottom of page one the authors write, if
12 anything other than affirmation is viewed as GICE ---.
13 A. What page is that?
14 Q. On page six, I'm sorry. Same page you were on
15 with the gay affirmative therapy or gay conversion
16 therapy. The last paragraph in column one of page six.
17 If anything other than affirmation is viewed as GICE, it
18 follows that the provision of psychotherapy in these
19 clinical scenarios can be seen as harmful conversion
20 efforts. If these therapeutic efforts do not aim to
21 convert or consolidate an identity but instead aim to
22 help individuals gain a deeper understanding of their
23 discomfort with themselves, the factors that have
24 contributed to their distress and their motivations for

1 seeking transition. Is it your position that there are
2 no therapeutic interventions that do not aim to convert
3 or consolidate an identity?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: What I would say is that
6 helping individuals gain a deeper understanding of their
7 discomfort with themselves, the factors contributing to
8 their distress and their motivations for seeking
9 transition is a vital and inherent part of
10 gender-affirming care.
11 BY ATTORNEY BARHAM:
12 Q. But a moment ago you indicated that you were not
13 aware of any ethical non-affirmative psychotherapy?
14 A. That is not a phrase that I have heard or have
15 heard described. What the passage that you are
16 referring to describes is a very typical process
17 involved in any kind of standard of care around anything
18 really is understanding motivations and understanding
19 distress. There is nothing --- there is nothing novel
20 about that description of care that is not already under
21 the umbrella of affirming care.
22 Q. And a little bit later in that paragraph, I
23 believe at the top of column two of page six, the
24 authors right both conversion and affirmative therapy

1 efforts carry the risk of undue influence potentially
2 compromising patient autonomy. Do you agree that that
3 is a possibility?
4 A. Again, I'm not sure what the authors are
5 referring to when they say affirmation therapy efforts
6 because what they're describing as ethical,
7 non-affirmative interventions falls to me under the
8 clear rubric of affirming care, so I don't know what
9 they mean by this.
10 Q. Okay.
11 In paragraph 35 of your report you indicate ---
12 you stated research indicates that social transitioning
13 significantly improves the mental health of transgender
14 young people.
15 Is that correct?
16 A. Yes.
17 ATTORNEY BARHAM: And I'm going to show
18 you what we will mark as Exhibit 17. This is Tab 118
19 for those following from a distance. This is a study by
20 Gibson, et al. published in 2021.
21 ---
22 (Whereupon, Exhibit 17, Study by Gibson,
23 et al., was marked for identification.)
24 ---

1 BY ATTORNEY BARHAM:
2 Q. You've cited this article in footnote nine of
3 your report.
4 Is that correct?
5 A. Let me just double check. I believe so. Yes.
6 Q. Under methods on page one of Exhibit-17 it
7 indicates this a cross-sectional study.
8 Is that correct?
9 A. That is correct.
10 Q. Can cross-sectional studies be used to
11 demonstrate causation?
12 A. Not on their own, no.
13 Q. So this study does not show that social
14 transitions caused any improvement in mental health.
15 Correct?
16 A. This study demonstrated that there was a
17 correlation between improved mental health and social
18 transition.
19 Q. So it did not show causation.
20 Is that correct?
21 A. It did not show causation.
22 Q. I'm going to show you Exhibit 9. Let's go back
23 to Exhibit 9.
24 LAW CLERK WILKINSON: Tab 117.

1 BY ATTORNEY BARHAM:
2 Q. Tab 117. This is the article by Lily Durwood,
3 et al. published in 2017. You cited this article also
4 in footnote nine of your report.
5 Is that correct?
6 A. That is correct.
7 Q. And we have previously discussed how this
8 article reports what children and parents said about the
9 children's mental health.
10 Is that correct?
11 A. That is correct.
12 Q. Really a self report.
13 Correct?
14 A. I think we went through that earlier. It was
15 not just a self report. These were interview led
16 evaluations.
17 Q. But an interview led self report.
18 Correct?
19 A. There were also parent reports that were ---.
20 Q. And so self reports of children, parental
21 reports about their children.
22 Correct?
23 A. Correct.
24 Q. Okay.

1 And then in footnote nine you also cite a study
2 by Olson, et al. in 2016, footnote nine of your report.
3 Correct?
4 A. That is correct.
5 Q. And in footnote nine you indicate that alleged
6 statistical errors in that article have already been
7 corrected in 2018.
8 Correct?
9 A. Correct.
10 Q. And for that assertion you cite a study by
11 Olson, et al. in 2018.
12 Is that correct?
13 A. I don't see that.
14 ATTORNEY BLOCK: Objection. Where are
15 you at?
16 THE WITNESS: I don't see it. If you can
17 point to me where that is.
18 BY ATTORNEY BARHAM:
19 Q. Footnote nine, on page 11, small statistical
20 errors in Olson 2016 had already been corrected in 2018,
21 see Olson, et al., 2018, mental health of transgender
22 student who are supported in their identity throughout.
23 A. Yes.
24 Q. Is that correct?

1 A. Yes.
2 ATTORNEY BARHAM: I'm going to show you
3 what we are going to mark as Exhibit 18. This will be
4 tab 119.
5 ---
6 (Whereupon, Exhibit-18, Errata Sheet, was
7 marked for identification.)
8 ---
9 BY ATTORNEY BARHAM:
10 Q. This is the errata sheet that you cited in
11 footnote nine of your report.
12 Is that correct?
13 A. That is correct.
14 Q. The only change in this 2018 article is the
15 highlight and missing common from the 2016 article.
16 Is that correct?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: Yes.
19 BY ATTORNEY BARHAM:
20 Q. In paragraph 40 of your report you say that
21 studies have repeatedly documented puberty blocking
22 medication and gender-affirming hormone therapy are
23 associated with mental health benefits in both the short
24 and long term.

1 Is that correct?
2 A. That is correct.
3 Q. And the studies that you're citing for that
4 assertion are those listed in footnote 14 of your
5 report.
6 Correct?
7 A. That is correct.
8 Q. Are there any others that you are referencing?
9 A. Those are the only that I'm referencing.
10 Q. In paragraph 41 of your report you claim that
11 Dr. Cantor fails to discuss many of the studies
12 documenting the benefits of puberty blocking medication.
13 Which of the studies in footnote 14 did he fail to
14 discuss?
15 A. I would need to review Dr. Cantor's report to
16 know specifically.
17 Q. Do you recall now which ones he failed to
18 discuss?
19 A. I do not.
20 ATTORNEY BARHAM: All right. I'm going
21 to show you what we will mark as Exhibit-19, and this is
22 Tab 98.
23 ---
24 (Whereupon, Exhibit-19, Article by

1 Tordoff, et al., was marked for
2 identification.)
3 ---
4 BY ATTORNEY BARHAM:
5 Q. This is an article by Tordoff, et al, published
6 in 2022, entitled Mental Health Outcomes in Transgender
7 and Non-Binary Youth Receiving Gender-Affirming Care.
8 This is one of the studies that you cited in footnote 14
9 of your report?
10 A. That is correct.
11 Q. According to table one on page five of this
12 report 65 percent of the participants were also
13 receiving mental health therapy.
14 Is that correct?
15 A. That is correct.
16 Q. So it's not possible to determine how much of
17 the improvement was due to puberty blocking medication
18 and gender-affirming hormone therapy and how much was
19 due to the mental health therapy.
20 Correct?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: There is a lot of questions
23 in that one singular question about study design and
24 what we know about the history of transgender health

1 outcomes prior to the existence of gender-affirming
2 care. As this study is designed, it is not designed in
3 such a way to be able to specifically keep that apart.
4 ATTORNEY BARHAM: All right.
5 I'm going to show you what we will mark
6 as Exhibit-20, and this will be Tab 99.
7 ---
8 (Whereupon, Exhibit-20, Article by Amy
9 Green, et al., was marked for
10 identification.)
11 ---
12 BY ATTORNEY BARHAM:
13 Q. This is the second article. This is an article
14 by Amy Green entitled ---- it says et al. entitled
15 Association of Gender Affirming Hormone Therapy with
16 Depression, Thoughts of Suicide and Attempted Suicide
17 Among Transgender and Nonbinary Youth published in 2021.
18 This is the second article that you cited in footnote 14
19 of your report.
20 Is that correct?
21 A. That is correct.
22 Q. On page six of this report, column two, the
23 authors indicate that causation cannot be inferred due
24 to this study's cross-sectional design.

1 Correct?
2 A. That is correct.
3 Q. This study also does not prove that puberty
4 blocking medication and gender-affirming hormone therapy
5 caused any improvements.
6 Correct?
7 ATTORNEY BLOCK: Objection to form.
8 THE WITNESS: This study was not designed
9 to show a causal outcome, no.
10 ATTORNEY BARHAM: Let's go to Exhibit 21,
11 this will be Tab 100.
12 ---
13 (Whereupon, Exhibit-21, Article by
14 Turban, et al., was marked for
15 identification.)
16 ---
17 BY ATTORNEY BARHAM:
18 Q. This is an article by Turban, et al. published
19 in 2020 entitled Pubertal Risks for Transgender Youth
20 and Risks of Suicide Ideation --- Suicidal Ideation?
21 ATTORNEY BLOCK: Objection to misreading
22 the name of the study.
23 BY ATTORNEY BARHAM:
24 Q. This is the third article that you cited in

1 footnote 13 of your report.
2 Is that correct?
3 A. That is correct.
4 Q. And on page seven of this article the authors
5 also indicate that limitations include the
6 cross-sectional --- the study's cross-sectional design,
7 which does not allow for determination of causation.
8 Is that correct?
9 A. That is correct.
10 Q. So this study does not prove that puberty
11 blocking medication and gender affirming hormone therapy
12 caused any improvements.
13 Correct?
14 A. This study was not designed to demonstrate
15 causation.
16 ATTORNEY BARHAM: I'm going to show you
17 what we will mark as Exhibit-22. This is an article by
18 Achille, et al. entitled Longitudinal Impact of Gender
19 Affirming Endocrine Intervention on Mental Health and
20 Well-being of Transgender Youths, Preliminary Results
21 published in 2020.
22 ---
23 (Whereupon, Exhibit-22, Article by
24 Achille, et al., was marked for

1 identification.)

2 ---

3 BY ATTORNEY BARHAM:

4 Q. You also cited this article in footnote 14 of

5 your report.

6 Is that correct?

7 A. Yes, I did.

8 Q. And on page two of this report, the bottom of

9 the first column, the authors write that most

10 subjects --- quote, most subjects were followed by

11 mental health professionals, closed quote, and quote,

12 those that were not were encouraged to see a mental

13 health professional.

14 Correct?

15 A. That is correct.

16 Q. And on page three, the first column, the authors

17 say that after statistically adjusting for psychiatric

18 medication and engagement in counseling, quote, most

19 predictors did not reach statistical significance.

20 Is that correct?

21 A. Where are you?

22 Q. Page three, column one, under regression

23 analysis.

24 A. Correct.

1 ATTORNEY BARHAM: I'm going to show you
2 what we will mark as Exhibit-23, this is Tab 102.
3 ---
4 (Whereupon, Exhibit-23, Article by Kuper,
5 et al., was marked for identification.)
6 ---
7 BY ATTORNEY BARHAM:
8 Q. This is an article by Kuper, et al. published in
9 2020, entitled Body Dissatisfaction and Mental Health
10 Outcomes of Youth on Gender Affirming Hormone Therapy.
11 On page six --- let me rephrase that for the record.
12 You cited this article in footnote 14 of your report.
13 Is that correct?
14 A. That is correct.
15 Q. According to Table 2 on page six none of the
16 results for those receiving puberty suppression were
17 statistically significant.
18 Correct?
19 A. I need a few minutes.
20 Q. Take your time.
21 A. As I read the bottom of that table, there are a
22 number of analyses that reached statistical
23 significance.
24 Q. But if you look at the lines for each one under

1 each of the scores, body dissatisfaction, depressive
2 symptoms, depressive symptoms QIDS, anxiety symptoms,
3 panic symptoms, generalized anxiety symptoms, social
4 anxiety symptoms, separation anxiety symptoms, school
5 avoidance symptoms, the lines marked puberty suppression
6 have no superscript on them.
7 Is that correct?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: That is correct.
10 BY ATTORNEY BARHAM:
11 Q. So none of those --- none of the specific
12 findings regarding individuals on puberty suppression
13 only were statistically significant.
14 Is that correct?
15 A. None of them were statistically significant as
16 measured by their reports.
17 ATTORNEY BARHAM: I'm going to show you
18 what we will mark as Exhibit-24. This will be Tab 103.
19 ---
20 (Whereupon, Exhibit-24, Article by van
21 der Miesen, et al., marked for
22 identification.)
23 ---
24 BY ATTORNEY BARHAM:

1 Q. This is an article by van der Miesen, et al.,
2 published in 2020 entitled Psychological Functioning in
3 Transgender Adolescents Before and After Gender
4 Affirmative Care Compared with Cisgender General
5 Population of Peers. You cited this article in footnote
6 14 of your report.
7 Is that correct?
8 A. That is correct.
9 Q. The authors on page five, in column two, the
10 authors of this study ---.
11 A. What page?
12 Q. Page five.
13 A. I have that in the 700s.
14 Q. Oh 703, sorry. 703. The fifth page, but it's
15 paginated 703. The authors of this study indicate that,
16 quote, due to its cross-sectional design, the present
17 study cannot provide evidence about the direct benefits
18 of puberty suppression over time and long-term mental
19 health outcomes?
20 Correct?
21 A. I don't see where that is.
22 Q. Next to the last paragraph in the second column.
23 The third and most important --- skipping the
24 cross-sectional design of this study different

1 participants in the groups before and after puberty
2 suppression may potentially limit the results?
3 A. Yes, I see that.
4 Q. The present study can therefore not provide
5 evidence about the direct benefits of puberty
6 suppression over time and the long-term mental health
7 outcomes.
8 Is that correct?
9 A. That is correct.
10 Q. So the authors of this study indicate that
11 conclusions about the long-term benefits of puberty
12 suppression should thus be made with extreme caution,
13 meaning prospective long-term follow-up studies with
14 repeated measured design of individuals being followed
15 over time to confirm.
16 Is that correct?
17 A. That is correct.
18 ATTORNEY BARHAM: I'm going to show you
19 what we will mark as Exhibit-25. This will be Tab 104.
20 ---
21 (Whereupon, Exhibit-25, Article by de
22 Vries, was marked for identification.)
23 ---
24 BY ATTORNEY BARHAM:

1 Q. This is an article by van der Miesen --- or I
2 mean De Vries, et al --- excuse me, De Vries, et al.,
3 2014, Young Adult Psychosocial Outcome After Puberty
4 Suppression and Gender Reassignment. This is the last
5 article you cite in footnote 14 of your report.
6 Is that correct?
7 A. That is correct.
8 Q. At the Dutch clinic patients who receive puberty
9 blockers also receive psychotherapy.
10 Is that correct?
11 A. That is correct.
12 Q. So again, there is no way to determine how much
13 of the improvement reflected in this study is due to the
14 puberty blockers and how much is due to the
15 psychotherapy.
16 Correct?
17 ATTORNEY BLOCK: Objection to the form.
18 THE WITNESS: Let me restate my response
19 to the previous question. The Dutch clinic always
20 recommends participation in therapy. I'm not a
21 100 percent certain that every participant participated
22 in the therapy as directed.
23 BY ATTORNEY BARHAM:
24 Q. For the most part, the Dutch model combined

1 psychotherapy with puberty blockers.
2 Correct?
3 ATTORNEY BLOCK: Objection.
4 THE WITNESS: That is correct. And may I
5 state that I think that is part of the reason that the
6 van der Miesen study is quite important because it does
7 start to look at the impact of being on the wait list
8 and the impacts of just getting psychotherapy alone
9 versus access to puberty suppression and/or hormones.
10 ATTORNEY BARHAM: I'm going to show you
11 what we're going to mark as Exhibit-26. Tab 105.
12 ---
13 (Whereupon, Exhibit-26, Article, was
14 marked for identification.)
15 ---
16 BY ATTORNEY BARHAM:
17 Q. This is an article by Michael Biggs published in
18 2020, Gender Dysphoria and Psychological Functioning in
19 Adolescents Treated with GnRHa. Are you familiar with
20 this study?
21 ATTORNEY BLOCK: Objection,
22 mischaracterizes the document.
23 BY ATTORNEY BARHAM:
24 Q. Are you familiar with this letter to the editor?

1 A. I have not read this letter to the editor.
2 Q. If you look at bottom of page one continuing
3 onto page two, the author writes an additional
4 complication with this treatment is that the Dutch model
5 combines GnRHa with psychological support so the two
6 effects are inevitably conflated. Do agree with that
7 statement?
8 A. I do not.
9 Q. Why?
10 A. Use of GnRH logs for this kind of intervention
11 were first used in 1999. So every --- every transgender
12 person prior to 1999 had no access to this kind of
13 treatment. Between 1999 and probably about 2014 these
14 medications were not widely available and so unavailable
15 for use for most people. So we have the clinical
16 experience of adults, talking retrospectively, about
17 their experiences as well as the patients that we have
18 treated that did versus did not have access to these
19 interventions. So we have both clinical experience and
20 some retrospective data that looks at this question
21 specifically.
22 Q. Can retrospective data demonstrate causation?
23 A. In some cases it can.
24 Q. But retrospective data is subject to recall by

1 us in other drawbacks that undermind its reliability.
2 Correct?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: It depends upon the type of
5 data that is being calculated.
6 BY ATTORNEY BARHAM:
7 Q. Why do you mean by that?
8 A. If it is qualitative interview data, yes, there
9 is retrospective data that reviews contemporary
10 documentation and charts, lab results, imaging results,
11 et cetera. That is less confounded by that kind of
12 bias.
13 Q. When we are talking about people recalling their
14 experiences before hormone therapy was available that
15 would be the qualitative type of data.
16 Correct?
17 A. Correct. And when analyzing that data you have
18 to take that into account.
19 Q. So that still doesn't help me understand why you
20 disagree with that statement because the Dutch model
21 combines hormones with psychosocial --- psychological
22 support, the two effects are inevitably conflated?
23 A. We have a long history of people receiving
24 psychological support alone. And with the addition of

1 these interventions and this model of care, outcomes
2 improve with specific measures around gender dysphoria.
3 Q. Over that time the psychological support would
4 have evolved as more understanding was gained.
5 Correct?
6 A. One would hope, yes.
7 ATTORNEY BLOCK: Objection to form.
8 BY ATTORNEY BARNHAM:
9 Q. But for the individuals who receive treatment
10 under the Dutch model, receiving both the hormones and
11 the psychological support, it's impossible to determine
12 how much improvement was due to the psychological
13 support and how much was due to the hormones.
14 Correct?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: There has not been a study
17 that has sought to identify the specific percentage of
18 impact of those two.
19 ATTORNEY BARHAM: All right.
20 I'm going to show you what we will mark
21 as Exhibit 27.
22 ---
23 (Whereupon, Exhibit 27, Article, was
24 marked for identification.)

1 ---
2 BY ATTORNEY BARHAM:
3 Q. Tab 106. This is an article by Costa, et al.
4 In 2015 Psychological Support, Puberty Expression and
5 Psychosocial Functioning in Adolescents with Gender
6 Dysphoria.
7 Is that correct?
8 A. That is correct.
9 Q. You cite this article in footnote 14 of your
10 report.
11 Is that correct?
12 A. That's correct.
13 Q. Now, in this study there were two groups of
14 adolescents, those who receive both puberty --- I mean,
15 both therapy and puberty blockers at the outset and
16 those who received just therapy at the outset.
17 Correct?
18 A. I'll need a minute to refresh myself.
19 Q. Sure. And I'm referencing pages 228, the second
20 column over to 229, the top of the first column.
21 A. That's correct.
22 Q. And on page 2211 going over to 2212, the
23 author's note that the difference between the
24 immediately eligible group and the delayed eligible

1 group failed to reach significance.
2 Correct?
3 A. So as I read this, immediately eligible group
4 who had a higher in psychosocial functioning did not
5 show any significant improvement after 12 months, but
6 after 12 months there was a statistical difference.
7 Q. Then it says finally, even if the end or
8 follow-up study, plan three, immediately eligible group
9 had a five point higher CGAS score than the delayed
10 eligible group, this difference failed to reach
11 significance.
12 Correct?
13 A. That's correct. What I have to point out there,
14 is CGAS is the children's global assessment scale, and
15 not a measure of gender dysphoria or quality of life or
16 distress in body.
17 Q. Is it a measure of a child's mental health?
18 ATTORNEY BLOCK: Objection.
19 THE WITNESS: It is a rough and very
20 precise measure of general functioning.
21 BY ATTORNEY BARHAM:
22 Q. But it is the scale that this study was using.
23 Correct?
24 A. That is correct.

1 ATTORNEY BARHAM: Let's go to tab 28.
2 ---
3 (Whereupon, Exhibit 28, Article by
4 Edwards-Leeper, was marked for
5 identification.)
6 ---
7 THE WITNESS:
8 And to clarify the CGAS is something that
9 is clinician rated of remedy objective criteria.
10 BY ATTORNEY BARHAM:
11 Q. Do you want to take a break?
12 A. In a few minutes if that's okay.
13 Q. Are you aware of Dr. Edwards-Leeper's reputation
14 in the field?
15 A. I am.
16 Q. Are you personally acquainted with Dr.
17 Edwards-Leeper?
18 A. I am.
19 Q. Have the two of you worked together in the
20 American Psychiatric Academics Association?
21 A. We have not worked together through the American
22 Psychiatric Association. Dr. Edwards-Leeper is a
23 psychologist.
24 Q. She served as a member of the task force to

1 develop practice guidelines for working with transgender
2 individuals? Have you served in a similar capacity with
3 the American Psychiatric Association?
4 A. I have. And we both worked together on the
5 WPATH standards of care provision.
6 Q. You anticipated my next question. So you would
7 agree that Dr. Edwards-Leeper is considered an
8 international expert in this area.
9 Correct?
10 A. Yes. Dr. Edwards-Leeper is a complicated figure
11 right now, but yes, she has a lot of expertise.
12 ATTORNEY BARHAM: I want to show you what
13 we will mark as Exhibit 29. This is Tab 29.
14 --
15 (Whereupon, Exhibit 29, Article by
16 Edwards-Leeper, was marked for
17 identification.)
18 ---
19 ATTORNEY BLOCK: I imagine you have a lot
20 of questions about this next document, and I just want
21 to make sure the witness has a chance to have a bathroom
22 break if it's going to go on for ten minutes or more.
23 ATTORNEY BARHAM: I have no objection to
24 that.

1 THE WITNESS: Five minutes.
2 ATTORNEY BARHAM: We will take five
3 minutes.
4 VIDEOGRAPHER: Going off the record. The
5 time is 12:12 p.m.
6 OFF VIDEO
7 ---
8 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
9 ---
10 ON VIDEO
11 VIDEOGRAPHER: We are back on the record
12 the current time reads 12:21 p.m.
13 BY ATTORNEY BARHAM:
14 Q. A moment ago we were discussing Dr.
15 Edwards-Leeper and you commented that she is a
16 complicated individual.
17 What did you mean by that?
18 A. What I mean is that she has published some
19 things in popular press that have led me to be talking
20 about her here.
21 Q. And would one of those be the document before
22 you Exhibit 29?
23 A. That is correct.
24 Q. This is an article published in the Washington

1 Post by Dr. Edwards-Leeper and Dr. Anderson.
2 Is that correct?
3 A. That is correct.
4 Q. What is it --- are there any other publications
5 that Dr. Edwards-Leeper has written recently that caused
6 you to describe her as a complicated figure?
7 A. No, no.
8 Q. So just this one article.
9 Is that correct?
10 A. Yes.
11 Q. Are you familiar with Dr. Anderson?
12 A. I am.
13 Q. She is a clinical psychiatrist?
14 A. She is a psychologist.
15 Q. A psychologist. And Dr. Anderson has been
16 working with transgender youth for a long time.
17 Is that correct?
18 A. I'm not a hundred percent familiar with Dr.
19 Anderson's history, I don't know.
20 Q. Was she in the field before you?
21 A. I don't know.
22 Q. Dr. Anderson is also a transgender.
23 Is that correct?
24 A. That is correct.

1 Q. Dr. Anderson is a member of the American
2 Psychological Association Committee tasked with writing
3 guidelines and working with transgender individuals.
4 Is that correct?
5 A. I do not know.
6 Q. Dr. Anderson is a former president of the U.S.
7 Professional Association for Transgender Health.
8 Is that correct?
9 A. That is correct.
10 Q. Dr. Anderson is a former board member for the
11 World Professional Association for Transgender Health.
12 Correct?
13 A. I'm not sure.
14 Q. Beyond the committee assignments listed on
15 page two of your CV have you held any committee
16 assignments for the USPATH or WPATH Organizations?
17 A. Not additional committee assignments than WPATH
18 or USPATH, no.
19 Q. In this copy published in the Washington Post
20 Dr. Edwards-Leeper and Dr. Anderson summarizes a
21 situation of a 13-year old natal girl with no prior
22 history of gender dysphoria. Some issues of sexual
23 assault and depression and then an abrupt announcement
24 of this child of transgender identity.

1 Does that summarize the scenario they outline?
2 A. That is the scenario they outlined.
3 ATTORNEY BLOCK: Objection to form.
4 BY ATTORNEY BARNHAM:
5 Q. What percent of your patients first present as a
6 team without a prior gender dysphoria diagnosis?
7 A. Well, first I just want to address the scenario
8 with Patricia, this is a popular press article, so I
9 have no idea if Patricia is a real person or an amalgam.
10 Q. Understood.
11 A. I hope it's an amalgam, because it would be
12 unethical to not have consent to publish this story.
13 Whether or not a child has a diagnosis of gender
14 dysphoria before they come to see me is dependent upon
15 if they've had previous evaluations, so it's dependent.
16 I don't have a specific number for you.
17 Q. In general, how many of your patients first
18 present as a team versus first presenting as a child?
19 A. That is very different, depending upon which
20 cite that I was practicing at. So in New York I saw
21 more prepubertal youth than I do in Chicago.
22 Q. So in New York, what percent of your patients
23 first presented as adolescents versus children?
24 A. I think I answered that question earlier. If I

1 remember it was 25 percent of the 75 percent.
2 Q. And in Chicago how many --- what percentage of
3 your patients present as adolescents versus as teen?
4 A. Probably 90 percent during adolescence.
5 Q. And are those all adolescents who first
6 presented as adolescents or did they first present with
7 gender dysphoria as a child?
8 A. It's a combination of both.
9 Q. So of your adolescent patients how many
10 presented first as an adolescent, and how many presented
11 as a child?
12 A. I don't have that information in front of me.
13 Q. Do you have a general ballpark idea?
14 A. No, I mean, the question --- I guess what I'm
15 struggling with is that there are a lot of adolescents
16 who I see who presented the first as adolescent, but
17 have clear symptoms of gender dysphoria going back to
18 childhood. So I'm not sure how to characterize those
19 children in your question.
20 Q. What percent of the patients that present
21 themselves to you first as an adolescent are natal
22 female?
23 ATTORNEY BLOCK: Objection to
24 terminology.

1 THE WITNESS: I would say in the clinic
2 where I'm practicing, currently certainly over half of
3 the children presenting in adolescence for the first
4 time are assigned female at birth.
5 BY ATTORNEY BARHAM:
6 Q. And in New York, what percent of the patients
7 that presented to you first as an adolescent or natal
8 female?
9 A. In New York it was more even split between those
10 assigned female and those assigned male at birth.
11 Q. And here when you say it's more than 50 percent
12 are we talking 75 percent, we're talking 80 percent,
13 90 percent?
14 A. I don't have that information in front of me, so
15 I couldn't tell you specifically. It would be a guess.
16 Q. Do you have a range?
17 A. I don't. I don't. More than 50 is the closest
18 that I can get right now.
19 Q. More than 75 percent?
20 A. Probably not, no.
21 Q. So somewhere between 50 and 75?
22 A. That's a good guess.
23 Q. What proportion of teen girls presenting at your
24 clinic have suffered sexual assault or abuse of any

1 sort?
2 A. So if we're talking assigned females at birth,
3 is that what you mean?
4 Q. Yes. Natal females.
5 A. Between one out four and one out of eight
6 assigned females at birth who do not identify as
7 transgender have exposure to sexual assault and trauma f
8 some kind. What we know from the literature is that
9 rates of sexual assault and sexual abuse of transgender
10 youth is higher than that and my patients are relatively
11 similar to that, so probably in the order of 25 to
12 30 percent.
13 Q. What policies do you have in place to ensure
14 adequate counseling and therapy for that trauma before
15 making any decisions regarding hormones?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: Assessing co-occurring
18 psychiatric disorders or stressors or traumas is an
19 inherent part of any assessment.
20 BY ATTORNEY BARHAM:
21 Q. Beyond just it being an inherent part of any
22 assessment, do you have any other policies or standards
23 that you use to ensure that the trauma is addressed
24 before making decisions regarding hormones?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: I mean, I don't have a
3 written down policy. Incorporating understanding of
4 trauma is always going to be an important part of any
5 informed assessment prior to moving forward with an
6 intervention.
7 BY ATTORNEY BARHAM:
8 Q. Do you agree or disagree that before prescribing
9 hormones to a teen girl who has suffered sexual abuse or
10 depression, medical professionals have a responsibility
11 to confirm that the patient has received a thorough
12 mental health assessment, including investigating how
13 other mental health issues and any other changes in her
14 life might be contributing to her desire are perceived
15 transgender identification?
16 ATTORNEY BLOCK: Objection to form and
17 terminology.
18 THE WITNESS: So for any child regardless
19 of gender, who we are recommending a medical or surgical
20 intervention, we are assessing for the presence of
21 gender dysphoria, the presence of co-occurring
22 psychiatric disorders and their impact on that diagnosis
23 or the capacity to consent to treatment, and a clear
24 understanding of the risks, benefits and alternatives of

1 whatever that intervention may be.
2 BY ATTORNEY BARHAM:
3 Q. So then --- and that would include investigating
4 how other mental health issues and other changes in her
5 life might be contributing to her desire or perceived
6 transgender identification?
7 A. That is correct.
8 ATTORNEY BLOCK: Objection to terminology
9 and pronouns.
10 BY ATTORNEY BARHAM:
11 Q. Do you agree or disagree that the standards of
12 care recommend mental support and comprehensive
13 assessment for all dysphoric youth before starting
14 medical interventions?
15 A. I would agree that the current recommendations,
16 which are in the process of being updated recommend that
17 a mental health assessment be in place. And it's not a
18 mandate that psychotherapy is a requirement prior to
19 initiation of medical care for gender dysphoria, and it
20 is not indicated for every patient.
21 Q. And that's partly because the standards of care
22 are guidelines not mandates.
23 Correct?
24 A. It's mostly because of the indications for the

1 patient's best interest that psychotherapy is not a
2 requirement for folks who are otherwise doing well.
3 Q. But it's also true that the standards of care
4 are guidelines not mandates.
5 Correct?
6 A. That is correct. They are guidelines.
7 Q. On page two of this article the author is ---
8 and by this article I'm referring to tab 29. The author
9 has indicated that a study of ten pediatric gender
10 clinics in Canada found that half do not require
11 psychological assessment before initiating puberty
12 blockers or hormones.
13 Is that your policy?
14 A. Where is this in the article? I don't see it.
15 Q. The bottom of page two?
16 A. What I want to emphasize is this is an opt ed
17 and a popular press outlet and not a study. So I have
18 no idea where they gathered their information about this
19 or the accuracy of the statement, nor do I know what the
20 authors meant by a psychological assessment.
21 Q. I understand. I did not mean to imply that
22 this article Exhibit --- tap 29 is a study. I was
23 merely quoting the authors, that a study of ten
24 pediatric gender clinics found that half do not require

1 psychological assessment before initiating puberty
2 blockers or hormones. My question to you is, is that
3 your policy?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: Again, I can't speak to the
6 accuracy of Dr. Edwards-Leeper and Dr. Anderson's
7 description of a study that I haven't seen.
8 BY ATTORNEY BARHAM:
9 Q. I'm not asking you to. I'm asking do you have
10 --- is it your policy at your clinic that you do not
11 require psychological assessments before initiating
12 puberty blockers for hormones?
13 A. We require psychological assessments prior to
14 initiation, yes.
15 ATTORNEY TRYON: Travis, it's Dave Tryon.
16 You referred to this as Tab 29, I believe you mean
17 Exhibit 29. Is that right?
18 ATTORNEY BARHAM: It's both Exhibit 29
19 and Tab 29.
20 BY ATTORNEY BARHAM:
21 Q. When patients come to you referred by a
22 pediatrician or counselor with no expertise in gender
23 dysphoria assessment or diagnosis, what policies do you
24 have to ensure that the patients receive full and

1 adequate course of mental healthcare before prescribing
2 life altering hormones?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: As a mental health
5 professional I'm not the person who is prescribing those
6 treatments.
7 BY ATTORNEY BARHAM:
8 Q. Before you recommend someone for eligibility for
9 life-altering hormones?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: Prior to making a
12 recommendation of hormone initiation I'm doing my own
13 assessment and ensuring that those standards are met.
14 BY ATTORNEY BARHAM:
15 Q. So beyond your own assessments do you have any
16 policies that guide that process?
17 A. Our clinic has its own policies dependent upon
18 clinical practice or whether or not patients are
19 enrolled in a particular trial, but it is the standard
20 of care as laid out by both Endocrine Society and WPATH
21 that adolescent patients have a psychological
22 assessment. There's a lot of latitude for what that
23 actually means.
24 Q. And on page three of this document, Exhibit 29,

1 the bottom of the first paragraph the authors write as a
2 result we may be harming some of the young people we
3 strive to support, people who may not be prepared for
4 the gender transitions they are being rushed into.
5 Do you share the concern of these authors?
6 A. I don't have numbers on my end. Which --- where
7 is it?
8 Q. (Indicating).
9 A. Got it. Can you repeat the question? Sorry.
10 Q. The authors express concern that we may be ---
11 quote, we may be harming some of the young people we
12 strive to support, people who may not be prepared for
13 the gender transitions they are being rushed into.
14 Do you share the author's concern?
15 A. I do not. These are tested hypotheses that can
16 be researched, and this is not what this is.
17 Q. You said you have no concern that people are
18 being rushed into gender transitions?
19 A. This is a supposition by these two authors that
20 people are being rushed into gender transition. I'm not
21 sure what that means, and that has not been the clinical
22 experience that I've had nor what the guidelines
23 recommend.
24 Q. So you were not aware of people being rushed

1 into transitions that they are not ready for?
2 A. That has not been my experience, no.
3 Q. On page four towards the bottom of the page, the
4 authors reference a recent study of 100 detransitioners,
5 38 percent of whom reported that they believe their
6 original dysphoria had been caused by something specific
7 such as trauma, abuse or mental health condition.
8 Fifty-five (55) percent of whom said they did not
9 receive adequate evaluation from a Dr. Or mental health
10 professional before starting transition.
11 Are you aware of that study that authors
12 reference here?
13 ATTORNEY BLOCK: Object to form.
14 THE WITNESS: I am --- I'm assuming
15 because I think they have a footnote in here somewhere,
16 but it is not in this particular article, but they are
17 receiving to the recent 2021 Littman study
18 detransitioners.
19 BY ATTORNEY BARHAM:
20 Q. Do you share the concern that some have been
21 misdiagnosed as transgender when their gender dysphoria
22 was, in fact, not innate, but cause by something
23 specific, such as trauma, abuse or mental health
24 condition?

1 A. I really don't mean to parse this, but I don't
2 know what Dr. Edwards-Leeper or Dr. Anderson's concerns
3 are, but the evidence that we have from the literature
4 and from our clinical experience is that this is not a
5 broad experience of most children.
6 Q. And what literature, are you referencing when
7 you say we referenced the literature?
8 A. I'm referencing the literature that I cited in
9 my report.
10 Q. And which specific portions of your report are
11 you referencing?
12 A. Let me just take a moment. What I'm referencing
13 is the longitudinal studies in particular that have
14 followed these kids over time.
15 Q. And which ones would those be in your report?
16 A. Really anything from the Dutch clinic is going
17 to have a longitudinal focus to them, but I think what's
18 more important is that in all of these studies, which
19 include some of the Dutch studies both in childhood and
20 adults that have looked at regret rates or detransition
21 have shown that this is a very infrequent occurrence,
22 and there has been nothing I've read within the
23 scientific literature that in, any way, tries to
24 operationalize this idea of children being forced into

1 or pressured into transition.
2 Q. What steps do you take to ensure that gender
3 dysphoria, the child's --- the child's or teen's gender
4 dysphoria was not caused by something specific such as
5 trauma, abuse or mental health condition before
6 recommending someone for puberty blocking or cross sex
7 hormones?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: I perform a thorough
10 evaluation.
11 BY ATTORNEY BARHAM:
12 Q. Anything beyond the thorough evaluation?
13 A. A very thorough evaluation. It involves
14 multiple steps as I described earlier.
15 Q. So this comprehensive --- the authors actually
16 talk about a comprehensive assessment on page three of
17 their article. And they indicate that comprehensive
18 assessment and gender exploratory therapy helps ---
19 quote, helps a young person peel back the layers of
20 their developing adolescent identity and examines
21 factors that contribute to their dysphoria. And those
22 include --- so what steps did you take to identify the
23 factors that may contribute to a child's or teen's sense
24 of dysphoria?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: It is a thorough assessment
3 and there are multiple factors within that assessment
4 that speak to those concerns specifically.
5 BY ATTORNEY BARHAM:
6 Q. And what are those multiple factors?
7 A. Understanding developmental history, getting
8 multiple performance, doing the diagnostic assessment of
9 any co-occurring mental health conditions and ensuring
10 that those are adequately explored and understood.
11 Q. What factors in a transgender identity do you
12 identify as most often contributing to gender dysphoria?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: I think it's complicated to
15 answer that in a short way, because not every child who
16 identifies as transgender would meet diagnostic criteria
17 for gender dysphoria. And specifically, if we agreed
18 with the premise that the gender dysphoria is being
19 caused by trauma that's specifically a rule out of the
20 diagnosis of gender dysphoria. So that is part of what
21 we're doing in an assessment is to understand the role
22 of other potential factors in helping a kid explore and
23 understand their identity.
24 BY ATTORNEY BARHAM:

1 Q. Then allow me to clarify the question. What
2 factors other than an innate transgender identity do you
3 identify as most often contributing to a child's
4 transgender identification?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: The children that I have
7 treated over my years of doing this work that describe a
8 gender identity that is inconsistent who don't
9 ultimately meet the criteria for gender dysphoria are
10 often children who have been subjected to multiple types
11 of trauma. That would be one of the factors.
12 BY ATTORNEY BARHAM:
13 Q. What other ones would you identify?
14 A. The other factors are around parental conflicts.
15 That's probably the other large cohort of kids when
16 exploration is the full come around which parents,
17 particularly divorcing parents, are acting in conflict.
18 Q. So by that you mean, for example one parent
19 supporting an affirmation approach and the other raising
20 concerns about proceeding in that direction?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: That's not an infrequent
23 occurrence and this is a very rare outcome to that, but
24 in that cohort of patients who desist, I would say in

1 their identities that is a shared characteristic of some
2 of the patients that I have seen.
3 BY ATTORNEY BARHAM:
4 Q. So you have not only two factors that could
5 contribute to a child's transgender identification,
6 other than ---?
7 A. Can I stop you, sir? I'm not identifying that
8 as a cause or a causal factor in a core gender identity.
9 It is the understanding and expression of that identity
10 that often changes.
11 Q. Okay.
12 And that is why I was trying to talk about
13 transgender identification more broadly. But you've
14 identified two factors that contribute to that not
15 necessarily causal but contribute. Are there any others
16 that you have identified as most often contributing
17 as ---?
18 A. Not that I have seen.
19 Q. The authors on page three express a concern
20 about other influences that patients can be subjected
21 to, so as in these assessments patients reflect on the
22 duration of the dysphoria they feel they continue a
23 gender --- the intersection of sexual orientation, et
24 cetera, social media, internet and peer influences.

1 Do you share concerns that teens maybe misled by
2 TikTok or other social media to self diagnose as
3 transgender when, in fact, other factors have driven
4 their gender dysphoria or their transgender
5 identification?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: To clarify transgender
8 isn't a diagnosis, so I'm not concerned about that
9 specifically. And I think that's the study of all
10 phenomenon, whether or not this is occurring, but again,
11 as a part of a comprehensive gender assessment, we are
12 looking at multiple factors beyond a child's
13 self-report.
14 BY ATTORNEY BARHAM:
15 Q. So do you share concerns that teens may be
16 misled by social media to self declare as transgender
17 when, in fact, other factors have driven their gender
18 dysphoria?
19 ATTORNEY BLOCK: Objection.
20 THE WITNESS: I would not characterize it
21 in that way.
22 BY ATTORNEY BARHAM:
23 Q. How would you characterize it?
24 A. I would characterize it by taking exploration of

1 an identity via TikTok for what it is, as a normal
2 process of adolescent development and having a child who
3 self identifies as transgender as a result of seeing a
4 video on TikTok is not going to be the child who meets
5 the typical phenomenology that we would see with gender
6 dysphoria. That is part of the assessment that we are
7 evaluating.
8 Q. Okay.
9 So then in general, you don't agree with the
10 concerns that the authors raise regarding the influence
11 of social media, internet and peer influences.
12 Correct?
13 A. I would say it's a matter of degree. I don't
14 think social media has been a particularly healthy thing
15 for kids in general, and understanding how it impacts
16 kids is something that we all need to be learning more
17 about.
18 Q. In the last paragraph on page three, the authors
19 talk about how the WPATH recommends collaborative
20 approach that involves parents and take into account the
21 complexities of adolescents.
22 Do you see that?
23 A. Yes.
24 Q. Do you understand the WPATH standards of care

1 for adolescents to call for a collaborative approach
2 that involves both parents whenever possible?
3 A. There is not a specific call out within the
4 standards of care for my recollection that say both
5 parents need be involved, but that's certainly implied
6 and is the general practice to include all parents or
7 all family members who are involved in the child's life
8 whomever is going to need to be in the room in order to
9 both get a clear understanding of what's going on as
10 well as make sure the child gets the adequate support to
11 be able to thrive.
12 Q. So is it your understanding that the WPATH
13 standards of care would allow treatment to proceed based
14 on the consent of one parent?
15 A. As we talked about earlier, these are guidelines
16 and not mandates. In practice within the United States
17 almost all consent processes for puberty suppression and
18 hormones go through a two parent consent process
19 whenever possible, even though that is not a requirement
20 of the law.
21 Q. What I'm trying to get to is what is the
22 requirements of the guidelines, recognizing that the
23 guidelines are not mandatory, but do the guidelines
24 allow for treatment based on the consent of one parent?

1 A. I think one of the limitations of an
2 international document is that there is not going to be
3 that level of specificity because consent laws are going
4 to be different from state to state, not to mention
5 country to country.
6 Q. Okay.
7 On page two --- I'm sorry, on page three ---
8 let me clarify again. I'm sorry I confused myself. On
9 page two the authors write that after exploring who she
10 was --- after a year of exploring who she was, Patricia
11 no longer felt she was a boy, she decided to stop
12 binding her breasts and wearing boys clothes.
13 What proportion of those who present at your
14 clinic change their minds and decided to remain with or
15 return to the gender identity of their natal sex before
16 undergoing any hormonal treatments?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: I'm one practitioner in my
19 clinic, so I don't have the data on everybody. And I
20 think a lot of that is going to depend upon the
21 population that you are seeing.
22 BY ATTORNEY BARHAM:
23 Q. What proportion of your patients then changed
24 their mind and decide to remain or return to the gender

1 identity of their natal sex before undergoing any
2 hormonal treatments?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: I would say a minority of
5 patients.
6 BY ATTORNEY BARHAM:
7 Q. Do you have a range?
8 A. I don't. I think when you were asking those
9 questions at the beginning about my 500 transgender
10 patients in that cohort, and I think 75 percent pursued
11 some things, but being that 25 percent that didn't.
12 Somewhere in there.
13 Q. On page five of this document, the last page the
14 authors report a rising a number of detransitioners that
15 clinicians report seeing. Are you aware of this rising
16 number of detransitioners?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: I'm aware that these two
19 authors are raising that it's a possibility. It is not
20 something that I've seen published in the literature.
21 BY ATTORNEY BARHAM:
22 Q. Have you seen a rising number of detransitioners
23 at your clinic?
24 A. I think the question is whether or not the

1 percentage is changing and that's not an answer we know.
2 I think by definition the more people you see the more
3 folks --- the detransition you're going to see. And the
4 difference of children who had access to gender care now
5 compared to a decade ago is just orders of magnitude
6 different. But I don't know or there has not been any
7 evidence that I've seen that the percentage of kids who
8 detransition is any different now than it was a decade
9 ago.
10 Q. A few paragraphs above what we were just looking
11 at, it says only a quarter of these individuals told
12 their doctors they had reversed their transitions making
13 this population especially hard to track. Would you
14 agree that this population is difficult to track?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: Again, this is not a study
17 and so it's hard to kind of make a pronouncement about a
18 population without a defined understanding of what that
19 population actually is. Our folks who don't talk to
20 their medical professionals about dissatisfaction in
21 their care, a difficult population to treat, I think,
22 probably by definition that is true.
23 BY ATTORNEY BARHAM:
24 Q. And to be clear, I wasn't asking if they're

1 difficult to treat, I was just asking would you agree
2 they're difficult to track?
3 A. I think by definition, yes, if they are not
4 reaching out to their providers or dropping out of
5 studies, yes.
6 Q. The next to last paragraph of this article
7 begins by saying the pressure by activists, medical and
8 mental health providers along with a national LGBT
9 organizations to silence the voices of detransitioners
10 and sabotage the discussion around what is occurring in
11 the field is unconscionable. Do you agree that it is
12 concerning that certain organizations are seeking to
13 silence the voice of detransitioners?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: It is not my experience
16 that organizations are seeking to silence the voices of
17 folks who identify as detransitioners, no.
18 BY ATTORNEY BARHAM:
19 Q. If they were would you agree that that is
20 unconscionable?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: My job as a psychiatrist
23 and a child psychiatrist in particular is to understand
24 the kid who is sitting in front of me in that very

1 moment. I want to understand how to best meet their
2 needs. So anything that is going to interfere with me
3 being able to understand that is going to be a problem
4 for me.
5 ATTORNEY BARHAM: I'm going to show you
6 what we will mark as Exhibit-30. This is also Tab 30.
7 ---
8 (Whereupon, Exhibit-30, Interview by Lisa
9 Selin Davis, was marked for
10 identification.)
11 ---
12 BY ATTORNEY BARHAM:
13 Q. This is an interview written up by Lisa Selin
14 Davis of Quillette entitled Trans Pioneer Explains her
15 Resignation from the U.S. Professional Association for
16 Transgender Health, published at the beginning of 2022.
17 Are you familiar with this article?
18 A. I am not.
19 Q. I'm going to direct your attention to
20 page three. This is an interview with Dr. Anderson, the
21 same individual who is a co-author of the Washington
22 Post article we were just discussing.
23 Correct?
24 A. That is correct.

1 Q. On page three Dr. Anderson states, the data are
2 very clear that adolescent girls are coming to gender
3 clinics in greater proportion than adolescent boys and
4 this is a change in the last couple of years and it's an
5 open question, what do we make of that. We really don't
6 know what's going on and we should be concerned about
7 it. Does her experience match your experience?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: I think it's consistent in
10 the literature that we've seen more assigned females at
11 birth presenting for care than in the past.
12 BY ATTORNEY BARHAM:
13 Q. And have you seen this change in balance since
14 approximately 2015?
15 A. I don't know if I would say --- I could point to
16 one specific year, but with each year it seems like
17 that's --- I think probably that's when the data came
18 out that that demonstrated it.
19 Q. When do you recall beginning to see this trend
20 develop?
21 A. I think one of the challenges is that the scope
22 of the literature is limited to a few very specific
23 subsets of where clinical care is practiced, and so we
24 have to just be careful not to completely generalize.

1 So in these specific clinics what we have seen is a
2 preponderance and an increase of assigned females at
3 birth. I can't speak to this being a national
4 phenomenon, but the literature probably certainly all
5 points in that direction. I think personally for me I
6 just started to see more assigned females at birth
7 presenting in adolescence I think in the mid 2010s is
8 not unreasonable.
9 Q. Is there any test in scientific understanding as
10 to why this trend in the literature is developing?
11 A. There is not.
12 Q. Do you agree that this is something that
13 practitioners should be very concerned about before
14 agreeing to administer sterilizing cross sex hormones to
15 teen girls?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: The thing that's important
18 is what are the specific factors of the child in the
19 family that is sitting in front of you and how to ensure
20 that that child has gotten appropriate care and that
21 we're making a recommendation based upon the best
22 interest of that individual child that is irrespective
23 of population-based changes that are happening.
24 BY ATTORNEY BARHAM:

1 Q. Don't you need to assess though whether the
2 individual in front of you is exemplar of that national
3 --- of that trend in the literature?
4 A. That's where --- that's where an assessment
5 comes in.
6 Q. So you would agree then that practitioners
7 should be concerned about this trend before deciding to
8 administer hormones.
9 Correct?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: What I'm stating is that
12 the guidelines for what's involved in assessment have
13 been relatively clear and that we want to make the
14 decisions based upon what's in the best interest and
15 understanding of the patient and family that we are
16 seeing. We should always be concerned. We should
17 always be building up our understanding of the field, as
18 well as some of the epidemiology of the field. But that
19 doesn't change the individual experiences of the patient
20 and the family that we're meeting with.
21 BY ATTORNEY BARHAM:
22 Q. Okay.
23 At the bottom of page four Dr. Anderson says
24 that she is, quote, worried that there is a new group of

1 adolescents who have preexisting mental health problems
2 and are looking for an explanation about who they are.
3 And there's a bit of I would say fantasy about seeking
4 to form an identity that may then explain their
5 distress. You would agree that the adolescent years can
6 be distressing for many teens, whether they are
7 transgender or not.
8 Correct?
9 ATTORNEY BLOCK: Objection to form.
10 THE WITNESS: I would wholly agree with
11 that, yes.
12 BY ATTORNEY BARHAM:
13 Q. Do you share the concern that some teens who
14 present at clinics are indulging in a fantasy about what
15 a transgender identity will do for them and their
16 distress?
17 A. I would not put it in that way, no.
18 Q. As part of your assessment do you have to --- as
19 part of your thorough assessment do you have to assess
20 whether the teen is incorrectly assessing what a
21 transgender identity would do for them and their
22 distress?
23 A. A part of any formed --- informed consent
24 process is assessing the understanding of the child and

1 the family's understanding of the risks, benefits and
2 alternatives of that specific intervention. That would
3 include an unrealistic belief about what the potential
4 benefits may be.
5 Q. All right.
6 I want to go to page five of this document.
7 Dr. Anderson indicates earlier today I talked to some
8 parents who brought their child to a health
9 professional. The child is seen three times by a
10 therapist and then recommended for hormones. The
11 therapist never talked to the parents. Do you share her
12 concern that three sessions with a mental health
13 providers is far less than required before a competent
14 diagnosis of a durable transgender identity can be made?
15 ATTORNEY BLOCK: Objection to the form.
16 THE WITNESS: I would not. The objection
17 as I read it in this article that you've put in front of
18 me with the interview with Dr. Anderson, her concern
19 seems to be more about not having spoken to the parents
20 prior to the recommendation. And I can't take her word
21 for it that this was true. We hear a lot of things from
22 parents who express frustration with care that is
23 ultimately found not to be accurate.
24 BY ATTORNEY BARHAM:

1 Q. Would you share the concern that prescribing
2 hormones if one parent is strongly opposed to it is
3 creating a likelihood of family conflict that is going
4 to likely be destabilizing and harmful to the child?
5 ATTORNEY BLOCK: Objection to the form.
6 Are you referencing something in the article or is this
7 your own question?
8 ATTORNEY BARHAM: I am referencing
9 page six, where Dr. Anderson says you don't want to rush
10 ahead with a kid, giving them encouragement that they're
11 going to get hormones until we bring their parents
12 along. Battling the parents is a no win proposition.
13 BY ATTORNEY BARHAM:
14 Q. So just to be clear about the question do you
15 share the concern that prescribing hormones if one
16 parent is strongly opposed is likely creating the
17 likelihood of family conflict that may be separately
18 destabilizing and harmful to the child?
19 ATTORNEY BLOCK: Objection to the form
20 and foundation.
21 THE WITNESS: What I hear Dr. Anderson's
22 concern from this is that battling with parents is a
23 no-win proposition. I think that's different from
24 recommending a treatment that not all parents agree to.

1 I think it's about the work of psychotherapy, which
2 involves understanding and hearing parents' experiences
3 and objections.
4 BY ATTORNEY BARHAM:
5 Q. Do you think that prescribing hormones if one
6 parent is strongly opposed is likely creating family
7 conflict that may be separately destabilizing and
8 harmful to the child?
9 A. I can't answer that question without a specific
10 family scenario in front of me. I have seen the
11 opposite be the case where the conflict is the creation
12 of the lack of consensus as opposed to the other way
13 around. And I've seen kids in my experience treating
14 kids who had parents who have opted out of any
15 decisional capacity and the kid's medical care but
16 nevertheless do much better when given access to this
17 care.
18 Q. But it is also possible that prescribing
19 hormones over the objection of one parent can create
20 conflict within the family.
21 Correct?
22 ATTORNEY BLOCK: Objection to the form.
23 THE WITNESS: Understanding the impact of
24 any intervention is a part of that consent process.

1 BY ATTORNEY BARHAM:
2 Q. I'm just asking if that's a possible outcome?
3 A. Yes.
4 Q. All right.
5 Is it your opinion that it's unreasonable to
6 exclude from female teams biological males, and by that
7 I mean people with XY chromosomes, who have gained a
8 physiological advantage as a result of undergoing male
9 puberty?
10 A. This is outside of the scope of what I was
11 providing my testimony on.
12 Q. Well, in paragraph 52 of your report you say no
13 reasonable mental health professional could think the
14 act in question is anything but harmful to the mental
15 health of transgender youth and that preventing
16 transgender youth from participating in the same
17 activities as their peers undermines their ability to
18 socially transition and prevents transgender youth from
19 accessing important educational and social benefits.
20 So I'm asking you is it your opinion that it's
21 unreasonable to exclude from female teams biological
22 males who have gained a physiological advantage as a
23 result of undergoing male puberty?
24 ATTORNEY BLOCK: Objection to form and

1 scope.
2 THE WITNESS: Again, I can testify to the
3 mental health aspects of exclusion. I can't testify to
4 the endocrinologic changes of the physiologic changes in
5 sports specifically.
6 BY ATTORNEY BARHAM:
7 Q. I'm not asking you to testify to the
8 endocrinology aspects of this. I'm just asking is it
9 your opinion that if we assume that an individual has
10 gained physiological advantage as a result of undergoing
11 male puberty that it is still unfair to --- or
12 unreasonable to exclude them from competing on a women's
13 team?
14 ATTORNEY BLOCK: Objection to form and
15 scope.
16 THE WITNESS: That is not an assumption I
17 feel comfortable making.
18 BY ATTORNEY BARHAM:
19 Q. Well, if you say that it is no reasonable mental
20 health professional can say that this Act is anything
21 but harmful to the mental health of transgender youth
22 that doesn't depend upon whether the child has undergone
23 male puberty or not.
24 Is that correct?

1 A. That is correct.
2 Q. So even if the child --- even if the individual
3 has undergone male puberty you're saying that no
4 reasonable mental health professional could think that
5 the Act is anything but harmful, barring them from
6 competing on the women's team is anything but harmful.
7 Is that correct?
8 A. I would say exclusion and isolation from access
9 to same aged peer activities is likely to be harmful
10 from a mental health perspective.
11 Q. To what extent can puberty blockers started
12 late, such as age 14, unring the bell by reversing
13 physical changes in male puberty?
14 ATTORNEY BLOCK: Sorry, I can't hear the
15 questions.
16 BY ATTORNEY BARHAM:
17 Q. To what extent do puberty blockers started late,
18 for example age 14, unring the bell by reversing the
19 physical changes of male puberty?
20 ATTORNEY BLOCK: Objection to form and
21 scope.
22 THE WITNESS: It is a complicated
23 question that is best left to an endocrinologist to
24 answer.

1 BY ATTORNEY BARHAM:
2 Q. Can puberty blockers reverse the physical
3 changes of male puberty to the genitals?
4 ATTORNEY BLOCK: Objection to form and
5 scope?
6 THE WITNESS: It's the same answer. I
7 would defer to an endocrinologist on that response.
8 BY ATTORNEY BARHAM:
9 Q. Can puberty blockers reverse the physical
10 changes to the hair?
11 ATTORNEY BLOCK: Same objections.
12 THE WITNESS: Again, I would defer to an
13 endocrinologist.
14 BY ATTORNEY BARHAM:
15 Q. Can they reverse the physical changes to the
16 voice or the muscles?
17 ATTORNEY BLOCK: Same objections.
18 THE WITNESS: Same answer.
19 BY ATTORNEY BARHAM:
20 Q. Can they reverse the effect --- the physical
21 changes of male puberty to the heart or lung size?
22 ATTORNEY BLOCK: Same objection.
23 THE WITNESS: Same answer.
24 BY ATTORNEY BARNHAM:

1 Q. Isn't it true that puberty blockers just stop
2 further typical male development?
3 ATTORNEY BLOCK: Same objections.
4 THE WITNESS: I would --- I would give
5 two responses. One, I would want an endocrinologist to
6 weigh in on the specifics, but clearly puberty blockers
7 are also prescribed to folks assigned females at birth
8 as well. There's more than just impacts on testosterone
9 as a result of these medications.
10 BY ATTORNEY BARHAM:
11 Q. I understand, but you make recommendations for
12 whether people are eligible to receive puberty blocking
13 hormones.
14 Is that correct?
15 A. That is correct.
16 Q. So you have to have some understanding of the
17 effects of these medications.
18 Is that correct?
19 A. That is correct.
20 Q. So isn't it true that puberty blockers
21 administered to natal males should stop further typical
22 male development?
23 ATTORNEY BLOCK: Objection to form and
24 scope.

1 THE WITNESS: I'd have the same answer,
2 and they do more than that.
3 BY ATTORNEY BARNHAM:
4 Q. What else do they do?
5 A. Again, I would defer to the endocrinologist for
6 the specific pathophysiology of how GnRH analogs affect
7 a complicated physiology of the body.
8 Q. But what is your understanding of how they
9 affect because you said they also do other things?
10 ATTORNEY BLOCK: Objection to form and
11 scope.
12 THE WITNESS: I think I answered it. In
13 the GnRH analogs are given an anatomic manner compared
14 to the pulsatile way in which GnRH is released during
15 the puberty, which is what causes the suppression of
16 other hormones more than just testosterone and estrogen.
17 BY ATTORNEY BARNHAM:
18 Q. If puberty blocking hormones are administered to
19 a natal male, do they cause that individual to undergo
20 typically female pubertal development?
21 ATTORNEY BLOCK: Objection to form and
22 scope.
23 THE WITNESS: They do not.
24 BY ATTORNEY BARHAM:

1 Q. So they just stop further male development.
2 Correct?
3 ATTORNEY BLOCK: Same objections.
4 THE WITNESS: As kind of a Gestalt pithy
5 response, yes, they cause puberty for assigned females
6 at birth and assigned males at birth who are given these
7 medications.
8 BY ATTORNEY BARNHAM:
9 Q. When does puberty typically begin in biological
10 males?
11 ATTORNEY BLOCK: Same objections.
12 THE WITNESS: Those are very known data
13 that an endocrinologist could tell you.
14 BY ATTORNEY BARHAM:
15 Q. I'm sure, though, that as a psychiatrist you
16 have a general understanding of what ages puberty
17 typically begins in biological males?
18 ATTORNEY BLOCK: Same objections.
19 THE WITNESS: I do, however, I am
20 assessing individuals who come through my office. And
21 regardless of what the population says about when
22 puberty is typical, it's going to depend upon who that
23 individual child is and when they develop puberty.
24 BY ATTORNEY BARHAM:

1 Q. I understand, but my question isn't about an
2 individual. My question is when does it typically begin
3 in biological males.
4 ATTORNEY BLOCK: Same objections.
5 THE WITNESS: Again, this is a very
6 knowable fact-based answer in a population level. It's
7 not information I have in front of me.
8 BY ATTORNEY BARHAM:
9 Q. So you have no --- is it your testimony that you
10 have no information as to when puberty typically begins
11 in biological females?
12 ATTORNEY BLOCK: Can I just give a
13 standing objection to questions asking the witness about
14 the effects --- the endocrinology effects of blockers
15 and hormones, so I don't have to make an objection each
16 time?
17 ATTORNEY BARHAM: Yes.
18 THE WITNESS: My testimony is I don't
19 want to give an imprecise answer for a question that
20 there is a specific answer to.
21 BY ATTORNEY BARHAM:
22 Q. What is your understanding, as you sit here
23 today, as to when puberty typically begins in males?
24 A. The range for typical puberty in males tends to

1 be around the 12ish mark. But there is a broad
2 variability. And again, there is an answer that exists
3 for this question that I don't have in front of me.
4 Q. Are you familiar with Tanner stages of puberty?
5 A. I am.
6 Q. What are the different Tanner stages of puberty?
7 A. Tanner stages one through five are the different
8 Tanner stages.
9 Q. So what is Tanner stage one in biological males?
10 A. It depends upon if we're talking about genitalia
11 or chest development, but it's no pubertal changes,
12 so ---.
13 Q. And what is two?
14 A. Two is at the initial stages of pubertal changes
15 that you start to see. The specifics of the Tanner
16 staging is something that you need to be trained on. I
17 would not claim myself as an expert in being able to
18 accurately access the Tanner stage of a child.
19 Q. Do you know when --- at what ages Tanner Stage 2
20 typically initiates in biological males?
21 A. Again, it's going to be an individualized
22 experience and that's why we do assessments.
23 Q. Do you have a range, an age range as to when it
24 typically begins?

1 A. When we talk about the onset of puberty, we're
2 talking about Tanner stage two typically.
3 Q. And at what age do those typically arise?
4 A. For assigned males at birth or assigned females?
5 Q. For biological males.
6 ATTORNEY BLOCK: Objection to
7 terminology.
8 THE WITNESS: So for folks assigned male
9 at birth, again, we're going to see it in that 12-ish
10 range.
11 BY ATTORNEY BARHAM:
12 Q. And Tanner Stage 3, what is that?
13 A. Further development. There's tables and charts
14 you would have to look at. I'm not going to be able to
15 use language to describe it in an accurate way.
16 Q. And when --- approximately when, what age range
17 does Tanner Stage 3 begin in biological males?
18 A. That's not an answer that I can give you.
19 Q. And what is Tanner Stage 4?
20 A. The same answer is further progression of
21 pubertal changes.
22 Q. And do you know what age range that typically
23 begins in biological males?
24 A. Same answer as before. That's not an answer I

1 have here.
2 Q. And would the same answers hold true for Tanner
3 Stage 5? Is that a yes?
4 A. That's a yes. I forgot that nodding ---.
5 Q. Yes. You've been pretty good today. I've been
6 impressed.
7 Doesn't the position that allowing biological
8 males to play on a girls team if they blocked puberty
9 before it begins create pressure for parents and
10 children to make puberty blocking decision at a young
11 age?
12 ATTORNEY BLOCK: Objection to form.
13 BY ATTORNEY BARHAM:
14 Q. Sort of put them in a now or never situation?
15 A. Of those 500 patients that I have seen, that has
16 never come up as a concern.
17 Q. The athletic issue has never come up as a
18 concern?
19 A. It has not.
20 Q. Do you think it would --- as a practitioner in
21 the field do you think it would even be ethical for the
22 State of West Virginia to structure its law in a way
23 that puts now or never pressure on parents and children
24 who are dealing with gender dysphoria to decide at an

1 early age whether to stop the natural development of
2 puberty?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: As a child psychiatrist in
5 this field we're doing individual-based assessments with
6 the children and families that are in front of us. And
7 what that means in the context of this question is that
8 we are assessing all of their different activities,
9 interests and working with all the systems that we can
10 to ensure a safe and appropriate set of decisions that
11 are going to lead to the best outcomes for this
12 individual child and not a medical emphasis that is
13 outside of the scope that I can answer.
14 BY ATTORNEY BARHAM:
15 Q. But you're familiar with the ethical standards
16 of your field.
17 Is that correct?
18 A. I am, yes.
19 Q. Under those ethical standards would it be
20 ethical for the State to structure its law in a way that
21 puts this kind of now or never pressure on parents and
22 children?
23 ATTORNEY BLOCK: Objection to form. Also
24 the witness is in shadow. I can't really see him for

1 the camera.
2 THE WITNESS: Is that better?
3 ATTORNEY BLOCK: Yes.
4 THE WITNESS: Can you repeat the
5 question? I'm sorry.
6 BY ATTORNEY BARHAM:
7 Q. As someone familiar with the ethical standards
8 of psychiatry, do you think it would be ethical for the
9 State of West Virginia to structure its law in a way
10 that puts now or never pressure on parents and children
11 who are dealing with gender dysphoria to decide at an
12 early age whether to stop the natural development of
13 puberty?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: I mean that's a question
16 that has a testable hypothesis. Does X intervention
17 lead to this kind of pressure? That's not a study that
18 I've ever seen nor has it been my clinical experience
19 that it's been the case.
20 BY ATTORNEY BARHAM:
21 Q. Would it be ethical to put that kind of pressure
22 on someone under the ethical standards of the field of
23 psychiatry?
24 ATTORNEY BLOCK: Objection to form and

1 foundation?
2 THE WITNESS: It is a very theoretical
3 question that really doesn't enter into it when we are
4 one on one with these kids and their families.
5 BY ATTORNEY BARHAM:
6 Q. I'm not asking about one on one interactions
7 with kids and families. I'm asking in general in theory
8 is it ethical to put that kind of pressure on someone?
9 ATTORNEY BLOCK: Objection to form and
10 foundation.
11 THE WITNESS: I'm sorry I can't give a
12 better answer, but ensuring that a child is making a
13 decision without coercion is a part of the informed
14 consent process.
15 BY ATTORNEY BARHAM:
16 Q. Is it your opinion that it is unreasonable to
17 exclude from female teams biological males who begin
18 undergoing male puberty but are now on puberty blockers?
19 ATTORNEY BLOCK: Objection to form and
20 scope.
21 THE WITNESS: Can you repeat the
22 question?
23 BY ATTORNEY BARHAM:
24 Q. Is it your opinion that it is unreasonable to

1 exclude from female teams biological males who begin
2 undergoing male puberty but are now on puberty blockers?
3 A. Is it unethical is the question?
4 Q. Unreasonable.
5 A. Unreasonable. I would defer to kind of our
6 physiology and endocrinology experts and our medical
7 ethics experts in rendering an opinion on that
8 specifically.
9 Q. Is it your opinion that it is harmful to youth's
10 mental health to be excluded from female teams
11 biological males who begin undergoing male puberty but
12 are now on puberty blockers?
13 A. What I would say is that exclusion as well as
14 specific legal exclusion from activities of same-aged
15 peers is likely to be harmful for a kid's mental health.
16 Q. Now, the Act in question does not prevent a
17 biological male who has gender dysphoria from competing
18 on the boys team.
19 Is that correct?
20 ATTORNEY BLOCK: Objection to form and
21 scope.
22 THE WITNESS: I'd need to know specifics.
23 I don't know what you're referring to. I think lots of
24 people have different policies around how this actually

1 works.

2 BY ATTORNEY BARHAM:

3 Q. I'm asking your understanding of the statute

4 upon which you're opining.

5 A. Can you repeat the question, please?

6 Q. The Act in question does not prevent a

7 biological male who is experiencing gender dysphoria

8 from competing on the boys team.

9 Correct?

10 ATTORNEY BLOCK: Objection to form and

11 scope.

12 THE WITNESS: So one, I don't know what

13 biological male necessarily means.

14 BY ATTORNEY BARHAM:

15 Q. An individual with XY chromosomes, natal male?

16 A. So assigned male at birth can have a number of

17 reasons why they might not be able to play on the boys

18 team, including intensity of gender dysphoria.

19 Q. But the law does not prevent them from playing

20 on the boys team.

21 Correct?

22 A. From my read of the law it does not prevent them

23 from playing on the boys team. Again, from a mental

24 health perspective, their gender dysphoria may.

1 Q. So is it harmful to the mental health of a
2 biological male who is experiencing gender dysphoria to
3 be excluded from the women's team even if he is on
4 puberty blockers?
5 ATTORNEY BLOCK: Objection to form and
6 terminology.
7 THE WITNESS: Any potential exclusions
8 from a peer-appropriate activity has the potential to
9 have negative consequences on the mental health of that
10 girl. And again, that's going to be something that on
11 an individual basis we are assessing.
12 BY ATTORNEY BARHAM:
13 Q. And that would be irrespective of whether the
14 individual is on puberty blockers, begins to undergo
15 male puberty or not.
16 Correct?
17 A. An individual assessment is going to be
18 inherently tailored to wherever an individual is.
19 ATTORNEY BARHAM: Why don't we pause for
20 lunch?
21 ATTORNEY BLOCK: Let's go off the record.
22 VIDEOGRAPHER: Going off the record. The
23 current time reads 1:24 p.m.
24 OFF VIDEOTAPE

1 ---
2 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
3 ---
4 ON VIDEOTAPE
5 VIDEOGRAPHER: Back on the record. The
6 current time reads 1:53 p.m.
7 BY ATTORNEY BROOKS:
8 Q. What does puberty suppression or puberty
9 blockers do?
10 ATTORNEY BLOCK: Objection to form and
11 scope.
12 THE WITNESS: I think I answered that
13 question before. So they suppress the endogenous
14 release of testosterone and estrogen as well as some
15 other hormones.
16 BY ATTORNEY BARHAM:
17 Q. How does puberty suppression differ from cross
18 sex hormones?
19 ATTORNEY BLOCK: Same objection.
20 THE WITNESS: Totally different
21 medication. One suppress hormones and the other is a
22 direct hormone itself.
23 BY ATTORNEY BARHAM:
24 Q. So cross sex hormones are given with the

1 intention of causing development typical to the other
2 sex.
3 Correct?
4 A. It depends upon the context in which hormones
5 are used. And again, I would defer for my endocrinology
6 colleagues on the specifics.
7 Q. So if cross sex hormones are given to a natal
8 male as part of treatment for gender dysphoria, what is
9 the intention?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: As I understand it, if an
12 assigned male at birth is given cross sex hormones that
13 is estrogen in order to provide the effects of estrogen
14 on the body.
15 BY ATTORNEY BARHAM:
16 Q. And the effects of estrogen on the body are what
17 natal females would naturally experience as a result of
18 puberty.
19 Correct
20 A. I mean, that is correct, yes.
21 Q. And so if a natal female is given cross sex
22 hormones, she's being given testosterone to create the
23 effects that natal males would naturally experience
24 through puberty.

1 Correct?
2 A. Typically speaking, an assigned female at birth
3 is going to be receiving testosterone and will have the
4 subsequent effects as a result of having testosterone in
5 the bloodstream.
6 Q. Maybe I was confused, a natal male who is given
7 cross sex hormones?
8 A. You were right.
9 Q. I was right, okay. At what Tanner stage do you
10 recommend that a patient begin puberty blocker hormones?
11 A. Again, that's going to depend upon an
12 individualized assessment with the family, but never
13 before Tanner Stage 2 of puberty.
14 Q. And in what age does Tanner Stage 2 begin again?
15 ATTORNEY BLOCK: Asked and answered.
16 THE WITNESS: I think I answered that
17 question. It really depends upon the person.
18 BY ATTORNEY BARHAM:
19 Q. And typically ---.
20 A. And for an assigned male at birth we're talking
21 12-ish, but again I would refer to my endocrinology
22 colleagues on the specific dates.
23 Q. And through what Tanner stage do you recommend
24 that a patient remain on puberty blockers?

1 A. That's not a question I can speak to. That's a
2 question for the physician or provider who's prescribing
3 that specific medication.
4 Q. So after you recommend that a patient receive
5 puberty blocking hormones, what is your continuing
6 involvement in the puberty blocking process?
7 A. My continuing involvement really depends upon
8 the individual child and family for the sake of a mental
9 health assessment. For the initiation of puberty
10 suppression it's an assessment for the initiation of
11 puberty suppression. The involvement thereafter is
12 really dependent upon what the individual needs of that
13 child are.
14 Q. Do you play any role in continuing to advise
15 whether the patient can continue to receive puberty
16 blocking hormones or come off of them?
17 A. It really depends upon the context. If the
18 child is seeking to come off of puberty suppression
19 because of a shift in their understanding of their
20 identity, certainly that's a conversation that I would
21 be involved in. If they are coming off of puberty
22 suppression because they have a sufficient amount of
23 testosterone or estrogen in their system that they are
24 no longer requiring that from a medical purpose, that's

1 not a discussion that I'm privy to.
2 Q. When you are discussing puberty blockers with
3 patients and their parents do you describe them as
4 placing a pause on puberty?
5 A. That's not specific language that I use.
6 Q. Do you describe them as being reversible?
7 A. Again, that's not a language that I use. I'm
8 much more specific in my discussions.
9 Q. So on the issue of whether puberty blocking
10 hormones are reversible, what do you tell parents and
11 patients?
12 A. I would say, by and large, most of the effects
13 of puberty suppression are reversible.
14 Q. And when you say by and large what effects are
15 you referencing?
16 A. What I'm referencing is that the literature is
17 still an open book and we are constantly seeking and
18 learning new information. We want to understand what
19 those potential new data tell us about the efficacy,
20 safety, et cetera, of these interventions.
21 Q. So when you say they are by and large the
22 effects are reversible, which effects are you
23 referencing are the by and large?
24 A. When I say by and large, it's really a caveat to

1 allow for the things that we don't yet know.
2 Q. So which effects are reversible?
3 A. Virtually all of the effects that we're aware of
4 are reversible.
5 Q. When you're discussing puberty blockers with
6 patients and their parents do you describe them as safe?
7 A. Safe isn't a binary concept in my world. There
8 is no such thing as anything that is completely safe or
9 unsafe. So we talk about gradations of risk with any
10 intervention.
11 Q. So for puberty blockers what are the --- what's
12 the gradation of risk?
13 A. It is individualized to the specific needs of
14 the child and the family.
15 Q. In general, what is your understanding of the
16 gradations of risk across the board?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: I don't have a better
19 answer for you because that's the whole process of doing
20 an informed consent process, is understanding what are
21 the specific risks and benefits and alternatives for
22 that individual child.
23 BY ATTORNEY BARHAM:
24 Q. Are you aware of the literature regarding any

1 testing of puberty blocking hormones and the gradations
2 of risks presented in those tests?
3 A. I'm not sure what you mean by tests.
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: I'm not sure what you mean
6 by testing.
7 BY ATTORNEY BARHAM:
8 Q. Don't medications undergo testing before they
9 can be used?
10 A. There's a wide variety of processes by which
11 medications are approved or not approved for certain
12 indications.
13 ATTORNEY BARHAM: Let's go to Tab 5. I
14 believe that's Exhibit-2.
15 LAW CLERK WILKINSON: Exhibit-2.
16 BY ATTORNEY BARHAM:
17 Q. It's the Endocrine Society Guidelines from 2017.
18 THE WITNESS: Yes.
19 BY ATTORNEY BARHAM:
20 Q. On page 3880 the Endocrine Society states we
21 suggest that clinicians begin pubertal hormone
22 suppression therapy --- pubertal hormone suppression
23 after girls and boys first exhibit physical changes of
24 puberty, Tanner stages G-2/B-2. Is that consistent with

1 your practice?
2 ATTORNEY BLOCK: Objection to form.
3 THE WITNESS: This is --- the document,
4 as I read it, is a set of guidelines for the practice of
5 care that should be individually applied to each child
6 and family. My practice takes these recommendations and
7 individually applies them to the specific risks,
8 benefits and alternatives for the child sitting in front
9 of me.
10 BY ATTORNEY BARHAM:
11 Q. On the prior page in number 1.4 the Endocrine
12 Society recommends against puberty blocking and gender
13 affirming hormone treatment in prepubertal children. Do
14 you approve the use of puberty blockers before puberty?
15 A. I do not.
16 Q. You didn't recommend or prescribe any puberty
17 blockers for BPJ.
18 Is that correct?
19 A. I have not.
20 Q. You did not evaluate BPJ before he started
21 taking puberty blockers.
22 Is that correct?
23 A. I have not evaluated her or seen her, these
24 materials.

1 Q. Is it your opinion that no responsible clinics
2 begin puberty blocking before puberty begins?
3 ATTORNEY BLOCK: Objection to form and
4 scope.
5 THE WITNESS: There's no indication to
6 start puberty blocking agents until Tanner Stage 2.
7 BY ATTORNEY BARHAM:
8 Q. Isn't it true that there have been no Phase I
9 clinical trials to test the safety of GnRH inhibitors
10 for this age group?
11 A. That is my understanding, but I would have to
12 specifically review the literature with that question in
13 mind. I'm not familiar --- completely familiar with the
14 phased nomenclature in this context.
15 Q. Isn't it true that there have been no Phase I
16 clinical trials to test the safety of GnRH inhibitors
17 for this duration?
18 A. Again I would need to find a definition of what
19 you are referring to by Phase I specifically.
20 Q. Isn't it true there have been no clinical trials
21 per FDA rules for this use of puberty blockers?
22 A. I don't know what is meant by per FDA rules.
23 Q. Food and Drug Administration rules?
24 A. Yeah. I'm not familiar with what their rules

1 are. There have been clinical trials of these
2 medications for this purpose.
3 Q. Which clinical trials are you referencing?
4 A. There are clinical trials through the Dutch
5 clinic. There is also an ongoing clinical trial here in
6 the U.S., a multi-phase study.
7 Q. That study is still ongoing.
8 Correct.
9 A. That is correct.
10 Q. So there are no completed clinical trials in the
11 United States under FDA rules.
12 Correct?
13 A. I am not ---.
14 ATTORNEY BLOCK: Objection to the form.
15 THE WITNESS: I can't say that I'm
16 familiar with all clinical trials that have ever
17 happened, so that's not a statement I can answer.
18 BY ATTORNEY BARHAM:
19 Q. You're not aware of any, though?
20 A. I don't know what is meant by Phase I and what
21 specifically is registered with the FDA for their
22 purposes versus the copious numbers of clinical trials
23 that have happened.
24 Q. Are you aware of any clinical trials in the

1 United States that have been completed regarding the
2 safety of using puberty blockers for gender dysphoria?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: Yeah, I'm not sure how I
5 can answer that because I'm not aware of all of the
6 trials that have occurred.
7 ATTORNEY BLOCK: Counsel, can we have a
8 discussion about the scope of this deposition? I'm
9 happy to have it off the record. I don't want it to
10 influence the witness at all, but this is a rebuttal
11 witness addressing specific issues and it seems that,
12 you know, there are a lot of questions that are just
13 really far outside the scope. So I'd love to have a
14 discussion.
15 ATTORNEY BARHAM: I'm happy to go off the
16 record.
17 VIDEOGRAPHER: Going off the record. The
18 current time reads 2:07 p.m.
19 OFF VIDEOTAPE
20 ---
21 (WHEREUPON, AN OFF RECORD DISCUSSION WAS HELD.)
22 ---
23 ON VIDEOTAPE
24 VIDEOGRAPHER: Back on the record. The

1 current time reads 2:17 p.m.
2 BY ATTORNEY BARHAM:
3 Q. We were looking at Tab 5, which is Exhibit-2,
4 page 3874. About three-quarters down the first column
5 the Endocrine Society indicates, quote, in the future we
6 need more rigorous evaluations of the effectiveness and
7 safety of endocrine and surgical protocols and
8 specifically highlight the need to include a careful
9 assessment of the effect of prolonged delay of puberty
10 in adolescence on bone health, gonadal function and the
11 brain.
12 Do you see that?
13 A. I see that, yes.
14 Q. Do you agree that more rigorous evaluations of
15 the safety of endocrine and surgical protocols are
16 needed?
17 A. I would agree that that's an important goal for
18 all treatments, yes.
19 Q. Do you agree that because, as the Endocrine
20 Society indicated here, that these evaluations are
21 needed in the future, that this --- that they have not
22 been done yet?
23 A. Well, this is published in 2017. There are
24 ongoing trials that are happening now, and some that

1 have had at least preliminary data presented at various
2 meetings that have looked at some of these.
3 Q. So the issue here is the prolong delay of
4 puberty. You would agree that it's quite different from
5 treating individuals with precocious puberty.
6 Correct?
7 ATTORNEY BLOCK: Objection to form and
8 scope.
9 THE WITNESS: As a non-endocrinologist I
10 wouldn't hazard an opinion on that.
11 BY ATTORNEY BARHAM:
12 Q. Do you treat individuals for precocious puberty?
13 A. I do not.
14 Q. Do you agree with the Endocrine Society that
15 there have not yet been a study of how the prolonged
16 delay of puberty affects bone health?
17 ATTORNEY BLOCK: Objection to form and
18 scope.
19 THE WITNESS: I don't know if I can
20 answer that in the most accurate way. I know I've seen
21 preliminary data presented at various meetings about
22 impacts on bone health, but I'm not as familiar with the
23 endocrine literature as I am with the mental health
24 literature.

1 BY ATTORNEY BARHAM:
2 Q. Do you agree that there has not yet been a study
3 on the prolonged effect of --- the prolonged delay of
4 puberty affecting gonadal function?
5 ATTORNEY BLOCK: Objection to form and
6 scope.
7 THE WITNESS: Same answer as to the last
8 one.
9 BY ATTORNEY BARNHAM:
10 Q. And that is the same as fertility?
11 Correct?
12 A. There has been more study fertility in those
13 populations.
14 Q. Do you agree there has not yet been a study on
15 how the prolonged delay of puberty affects the brain?
16 A. There are ongoing studies.
17 Q. None complete yet?
18 A. None that have published thus far that I'm aware
19 of again.
20 Q. And when you say there are ongoing studies of
21 bone health, none have published so far that you're
22 aware of.
23 Correct?
24 A. I know I have seen data published at various

1 national and international meetings, so I could not
2 answer that question accurately. I think things have
3 been published on bone health, but I'm not familiar with
4 --- I'm not as familiar with the endocrinologic
5 literature as I am the mental health literature.
6 Q. Are you aware of any studies that have been
7 completed regarding the prolonged delay of puberty
8 affecting the cognitive, emotional, social and sexual
9 development?
10 A. Can you repeat the question?
11 Q. Are you aware of any studies that have been
12 completed regarding the prolonged delay --- of how the
13 prolonged delay of puberty affects the cognitive,
14 emotional, social and sexual development?
15 A. There have been a number of studies including
16 studies that we have referenced here that have looked at
17 long-term psychosocial outcomes for these kids. So
18 certainly some of those items have been looked at quite
19 extensively. Some have not yet or have studies that are
20 ongoing.
21 Q. If the Endocrine Society is indicating that all
22 of this is needed research, why are you --- what do you
23 tell parents about the relative safety of puberty
24 blocking hormones?

1 A. What I would say this was published in 2017, and
2 so we would want to update since then about any
3 literature since then on these potential risks. What I
4 want to do is make sure that the endocrinologist or the
5 adolescent medicine specialist, whoever it is that is
6 prescribing the specific treatment knows how to have
7 those discussions based on the psychiatric needs of the
8 patients that I'm seeing.
9 Q. Let's turn to 3872 in this document. The
10 Endocrine Society indicates that the task force followed
11 the approach recommended by the grading of
12 recommendations and assessments, development and
13 evaluation group. The international group with
14 expertise in the development and implementation of
15 evidence based guidelines. Do you see that in the
16 second column?
17 A. Yes.
18 Q. And in this document they indicate that the use
19 of the phrase we recommend and the number one are strong
20 recommendations --- use the phrase we recommend ---
21 recommendations use the phrase of we suggest in number
22 two.
23 Is that correct?
24 A. Correct.

1 Q. So the recommendations regarding the use of
2 puberty blockers are based on low quality evidence.
3 Correct?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: What I can state is how
6 this particular working group within the Endocrine
7 Society characterized it using the assessment tool and
8 using this assessment tool that is how it was graded for
9 the sake of this set of guidelines.
10 BY ATTORNEY BARHAM:
11 Q. Were you aware of this when you drafted your
12 report?
13 A. Yes.
14 Q. Do you agree or disagree with this assessment of
15 the quality of the evidence?
16 A. Based upon how they did it, I would agree. In
17 the world of child psychiatry this is very common.
18 There is very little that we have in terms of very
19 mainstream standard of care treatments that has anything
20 other than poor quality of evidence based upon using
21 these standards.
22 ATTORNEY BARHAM: I'm going to hand you
23 what we will mark as Exhibit 31, and that will be
24 Tab 76?

1 THE WITNESS: Thanks.
2 LAW CLERK WILKINSON: You're welcome.
3 ---
4 (Whereupon, Exhibit 31, Label of Lupron,
5 was marked for identification.)
6 ---
7 BY ATTORNEY BARHAM:
8 Q. This is the label of Lupron, pharmaceutical
9 label for Lupron. Right at the top of page one, this
10 label indicates that Lupron is approved for puberty
11 blocking or delay for precocious puberty.
12 Correct?
13 A. That is correct.
14 Q. And precocious puberty is a hormonal imbalance.
15 Correct?
16 A. I think there's a precise terminology for
17 precocious puberty that involves more than just a
18 hormonal imbalance.
19 Q. But it's a malfunction of hormonal controls in
20 the brain?
21 ATTORNEY BLOCK: Objection to the form.
22 THE WITNESS: My understanding as a
23 non-endocrinologist is that's initiation of puberty much
24 earlier than anticipated or expected based upon the

1 history of the family.
2 BY ATTORNEY BARHAM:
3 Q. So Lupron is inspected and approved by the FDA
4 for safety and efficacy for precocious puberty not for
5 all other possible uses.
6 Correct?
7 A. Correct.
8 Q. And Lupron was tested only for delaying puberty
9 up until the normal age of puberty.
10 Correct?
11 ATTORNEY BLOCK: Objection to form.
12 THE WITNESS: I'm not familiar with the
13 literature that was used for gaining the FDA approval
14 for this indication.
15 BY ATTORNEY BARHAM:
16 Q. If you turn to section 14.1, 14.1 you'll see
17 that it says that this --- Lupron was tested for monthly
18 administration on 6 males and 49 females.
19 Is that correct?
20 A. That is correct.
21 Q. And on the next page you'll see it was tested
22 for three months administration on 8 males and 76
23 females.
24 Is that correct?

1 A. I do not see where it says that.
2 Q. 14.2?
3 A. Yes.
4 Q. Do you know why the test was weighted towards
5 girls?
6 ATTORNEY BLOCK: Objection to form and
7 scope and foundation.
8 THE WITNESS: It would be a mere
9 supposition on my end.
10 BY ATTORNEY BARHAM:
11 Q. Is it because precocious puberty is more common
12 in girls?
13 A. I would defer to an endocrinologist on this
14 epidemiology of that.
15 Q. But the goal of using Lupron in this context is
16 to help steer the body into healthy and normal
17 development.
18 Correct?
19 ATTORNEY BLOCK: Objection to form,
20 scope.
21 THE WITNESS: Generally speaking I would
22 agree with that.
23 BY ATTORNEY BARHAM:
24 Q. Prescribing Lupron or other GnRH for gender

1 dysphoria disrupts hormones and developments at an early
2 stage.
3 Correct?
4 ATTORNEY BLOCK: Objection to the form
5 and scope.
6 THE WITNESS: Again, as a mental health
7 professional, this would be outside of my area of
8 expertise to comment on that.
9 BY ATTORNEY BARHAM:
10 Q. Would you agree that normal pubertal development
11 includes bone growth, such as height?
12 ATTORNEY BLOCK: Objection to form and
13 scope.
14 THE WITNESS: Yes, I would.
15 BY ATTORNEY BARHAM:
16 Q. Would you agree that normal pubertal development
17 can include bone strengthening?
18 ATTORNEY BLOCK: Objection to form and
19 scope.
20 THE WITNESS: Specifics of that question
21 are really outside of my scope of understanding in the
22 practice that I have.
23 BY ATTORNEY BARHAM:
24 Q. But in general, you would agree that bones get

1 stronger during puberty, especially for men?
2 ATTORNEY BLOCK: Objection to form and
3 scope.
4 THE WITNESS: My understanding is that
5 the process of bone health is a quite dynamic, not
6 static nor binary process, so it's more complicated than
7 I feel that I can answer that question to.
8 BY ATTORNEY BARHAM:
9 Q. But do bones generally get stronger as puberty
10 progresses?
11 ATTORNEY BLOCK: Objection to form and
12 scope.
13 THE WITNESS: Again, I think it's a more
14 complicated answer than a yes or a no but I'm not ---.
15 BY ATTORNEY BARHAM:
16 Q. Would you agree that normal pubertal development
17 includes brain development?
18 A. Yes.
19 Q. Each of these things have stopped or decreased
20 by the administration of puberty blockers.
21 Correct?
22 A. I don't think we can say that it's been stopped
23 or decreased. There's not a term decreasing brain
24 development that has been studied or referred to in the

1 literature as I'm aware of it.
2 Q. Slower brain development?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: Slower isn't a word that
5 I've used, seen in the literature either.
6 ATTORNEY TRYON: Travis, can you speak up
7 just a little bit more, please?
8 ATTORNEY BARHAM: Certainly.
9 BY ATTORNEY BARHAM:
10 Q. Would you agree that normal pubertal development
11 also includes psychosocial development of an adult
12 identity as a sexual being contemporaneous with ones
13 peers?
14 A. I would say I would agree with that as an
15 adolescent developmental process, not necessarily as a
16 pubertal developmental process.
17 Q. What's the --- what's your distinction between
18 an adolescent pubertal development --- excuse me, an
19 adolescent developmental process and a pubertal
20 developmental process?
21 A. As an example, folks who have delayed puberty,
22 so 16-year olds who I have seen that have yet to undergo
23 all stages of puberty nevertheless develop a sense of
24 identity independent of the fact that their puberty has

1 been delayed.
2 Q. But their development in that regard is not
3 contemporaneous with their peers.
4 Correct?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: In my specific hypothetical
7 some of their development is going to be contemporaneous
8 with their peers. Some of it will not be.
9 ATTORNEY BARHAM: I'm going to show you
10 what we will mark as Exhibit 32. This will be Tab 73.
11 ---
12 (Whereupon, Exhibit 32, Puberty Blockers
13 Document, marked for identification.)
14 ---
15 THE WITNESS: Can I ask a clarifying
16 question, it is 2:32 east coast time, not central.
17 ATTORNEY SWAMINATHAN: Yes.
18 LAW CLERK WILKINSON: Tab 73.
19 BY ATTORNEY BARHAM:
20 Q. This document is a hand out --- or it's from the
21 --- I'm going to butcher the name, Doernbecher
22 Children's Hospital at OHSU from their gender clinic and
23 about puberty blockers document. At the bottom of page
24 three, this document indicates that researchers have not

1 finished studying how safe puberty blockers are in the
2 long-term.
3 Do you agree with that?
4 A. Yeah, I would agree with that.
5 Q. On the next page this document says that because
6 puberty block --- because blocking puberty hormones can
7 weaken your bones, it is best to just take them for just
8 two or three years.
9 Do you agree or disagree?
10 A. That is outside of my scope of expertise.
11 Again, this is a public facing the most like
12 website. I can't be quite certain what the context of
13 this is, but the individualized discussions you're
14 having with patients and families is always going to be
15 more complex than one or two sentences.
16 Q. Do you expect to offer any opinion in this case
17 that puberty blockers administered according to your
18 guidelines are safe and reversible?
19 A. I don't --- I guess I don't understand the
20 question. I provided my expert testimony and my
21 testimony is focused on the mental health effects of
22 various interventions.
23 Q. Okay.
24 Do you anticipate saying anything about the

1 reversibility of puberty blockers?
2 A. Other than what I have already discussed, I
3 don't think so.
4 Q. Let's go to tab 5, I think that's Exhibit 2.
5 And on page 3874, again, about two-thirds down the first
6 column, the Endocrine Society says we still need to
7 study the effects of puberty blocking hormones on
8 gonadal function.
9 Correct?
10 A. Yes.
11 Q. That refers to hormone secretion.
12 Correct?
13 A. Hormone secretion?
14 Q. Uh-huh (yes).
15 A. I'm not sure what you mean by that.
16 Q. Gonadal function refers to the achievement of
17 the production by the gonads of fertile ova or sperm.
18 Correct?
19 ATTORNEY BLOCK: Objection to form and
20 scope.
21 THE WITNESS: I can't speak to the
22 author's intent for how they used that language. It's
23 broader in scope from my perspective than that.
24 BY ATTORNEY BARHAM:

1 Q. Does it include the achievement of production of
2 fertile ova or sperm?
3 A. That is a component, yes.
4 Q. What other components do you have in mind for
5 that term?
6 A. For gonadal development includes size, shape,
7 sexual functioning.
8 Q. On page 31, I want to go to --- have we done
9 Tab 6 yet?
10 ATTORNEY BARHAM: I want to introduce
11 what will be marked as Exhibit 33, this will be Tab 6.
12 These are Endocrine Society guidelines from 2009.
13 LAW CLERK WILKINSON: I don't think I
14 have that.
15 ATTORNEY BARHAM: Maybe we do.
16 LAW CLERK WILKINSON: Six?
17 ATTORNEY BARHAM: Uh-huh (yes).
18 LAW CLERK WILKINSON: Uh-uh (no).
19 BY ATTORNEY BARHAM:
20 Q. We will go back to Tab 5 then, Exhibit 2. Would
21 you agree that if the administration for puberty
22 blockers for gender dysphoria has irreversible effects
23 on brain development, that would be a serious safety
24 problem?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: All risks are graded risk
3 an benefits as well as alternatives for each individual
4 child.
5 BY ATTORNEY BARHAM:
6 Q. But if it had an irreversible affect on brain
7 development that would still be a serious concern,
8 regardless of the gradations that we would have to
9 consider and address it?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: There are a number of
12 interventions that lead to irreversible changes that are
13 beneficial and are not of concern to safety.
14 ATTORNEY BARHAM: All right.
15 Do we have Tab 32?
16 LAW CLERK WILKINSON: That one I have.
17 ATTORNEY BARHAM: This will be Exhibit
18 33, Tab 32 just to make it conducive.
19 ---
20 (Whereupon, Exhibit 33, Endocrine
21 Society's Guidelines, was marked for
22 identification.)
23 ---
24 BY ATTORNEY BARHAM:

1 Q. And if you look on --- at the end of the
2 document where it says for more information, it stated
3 this is a document from the National Institute of Mental
4 Health.
5 Correct?
6 ATTORNEY BLOCK: Objection to form,
7 foundation.
8 THE WITNESS: I have no idea of what the
9 context of this website is or what this is from.
10 BY ATTORNEY BARHAM:
11 Q. But it gives the National Institute of Mental
12 Health's website.
13 Is that correct?
14 A. It does.
15 Q. And it says for more information you can e-mail
16 the National Institute of Mental Health e-mail address.
17 Correct?
18 A. That is correct.
19 Q. And that's a part of the National Institute.
20 Right?
21 A. It is.
22 Q. And the citations it's drawing from articles in
23 1999 and 2000.
24 Correct?

1 A. That is correct.
2 Q. On page one in the middle column, the article
3 describes gray matter at the thinking part of the brain.
4 Do you agree with that description?
5 A. I would describe it as a gross
6 mischaracterization of the complexity of the brain.
7 Q. What is your understanding of the function of
8 the gray matter?
9 A. That is one element of it. I think it is a lot
10 of nuance, I guess is the word that I'm looking for.
11 It's not characterized by that much of a pithy phrase,
12 not of a neuropathologist.
13 Q. The article talks about a second wave of
14 production in gray matter that peaks around age 11 in
15 girls and 12 in boys. And the article refers to that as
16 just prior to puberty. In terms of Tanner stages that
17 would be around Tanner 2 for most boys and girls, would
18 it not?
19 A. That would be Tanner Stage 1.
20 Q. That would be Tanner Stage 1. But by 11 or 12
21 you have already --- by age 12-ish in boys, it's typical
22 for puberty blockers to have been administered.
23 Correct?
24 A. To use the language of this article, the

1 differences in Tanner stages is caused by the, quote,
2 surging sex hormones not the other way around. So it's
3 not about age, but it's the exposure to hormones that
4 causes the Tanner stages to develop.
5 Q. Have you made a study yourself about the timing
6 of brain gray matter development and the puberty
7 hormones in causing that development?
8 A. I have not.
9 Q. Do you have any reason to doubt the timing and
10 nature of development as set out in this National
11 Institute of Health publication?
12 ATTORNEY BLOCK: Objection to form and
13 foundation.
14 THE WITNESS: I only have the context of
15 this article that you've put in front of me for the
16 first time and in this article they describe the brain
17 changes just happening prior to puberty, which is prior
18 to when we would be initiating any interventions
19 medically.
20 BY ATTORNEY BARHAM:
21 Q. And it says though that it is possibly the
22 thickening peaks around 11 or 12, depending on girls and
23 boys and that's possibly related to the influence of
24 surging sex hormones.

1 Correct?
2 A. If that's what it says, yes.
3 Q. Do you know --- have you conducted any studies
4 to determine the effect of administering puberty
5 blockers during the ordinary years of puberty and how
6 that would impact the ordinary development of brain
7 matter in the brain of a child?
8 A. I have not, but it kind of sounds like that is
9 conflating this as a study, which is definitely not.
10 Q. No, I'm just asking if you had conducted any
11 such studies?
12 A. I have not.
13 Q. Are you aware of any such studies?
14 A. There are studies that are ongoing now.
15 Q. That are ongoing.
16 ATTORNEY BARHAM: Okay.
17 I'm going to show you what we marked as
18 Exhibit 34, this will be Tab 33.
19 ---
20 (Whereupon, Exhibit 34, Article by
21 Blakemore, et al., was marked for
22 identification.)
23 ---
24 BY ATTORNEY BARHAM:

1 Q. This is an article by Blakemore, et al.,
2 published in 2010, The Role of Puberty in the Developing
3 Adolescent Brain. On page 929, the article states the
4 ages at which these peaks in gray matter volume were
5 observed correspond to the sexually dimorphic ages
6 gonadarche, I'm mispronouncing that, onset which
7 suggests possible interactions between puberty hormones
8 and gray matter development.
9 Do you agree or disagree with that statement?
10 A. I'm not seeing where you're referring to this.
11 Q. On page 929, first column right above the role
12 of puberty in gray matter development?
13 A. As stated in this study, the changes were
14 observed to correspond to the ages which suggest
15 possible interactions. I have no objection to the idea
16 that there are possible interactions between puberty
17 hormones and gray matter development, but again, outside
18 the field of my expertise.
19 Q. Okay.
20 It also refers to other MRI studies showing a
21 gradual emergence of sexual dimorphisms across puberty.
22 Do you know what sexual dimorphism of the brain means?
23 A. I do.
24 Q. What does it mean?

1 A. Differences that are measurable between folks
2 assigned female and folks assigned male at birth is
3 typically how that is described.
4 Q. On the first page of this document it says
5 throughout adolescence there are changes in the
6 structure and function of the brain, sexual dimorphism
7 in many of these changes suggest possible relationships
8 to puberty.
9 This article is saying that the available
10 evidence suggests sex links puberty hormones to play a
11 role in stimulating brain development; do you agree?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: Certainly I agree that
14 exposure to sex hormone is a part of brain development
15 for all people. We know less about the developing brain
16 for transgender youth.
17 BY ATTORNEY BARHAM:
18 Q. Do you agree this includes a aspects of brain
19 development that differ between healthy males and
20 healthy females?
21 ATTORNEY BLOCK: Objection as to form.
22 THE WITNESS: I don't. I haven't seen
23 any literature that speaks to that specific question.
24 BY ATTORNEY BARHAM:

1 Q. Okay.
2 Let's go back to Exhibit 2, page 3882?
3 ATTORNEY BLOCK: What page was that,
4 Counsel?
5 ATTORNEY BARHAM: 3882.
6 BY ATTORNEY BARHAM:
7 Q. Under the heading side effects, the article
8 indicates that the primary risk of pubertal suppression
9 in GD, gender incongruent adolescents may include,
10 ellipses, unknown effects on brain development, do you
11 see that?
12 A. I see that.
13 Q. And in the first column of 3883 indicates that
14 animal data suggests there may be effects of GnRH
15 analogs on cognitive function.
16 Do you see that?
17 A. I see that.
18 Q. Cognitive function means the ability to think.
19 Correct?
20 A. That is one aspect of cognitive functioning.
21 Q. Do you tell parents and patients that the
22 Endocrine Society has indicated that there are unknown
23 effects on brain development related to the use of
24 puberty blocking hormones?

1 A. I typically use language that is more similar to
2 how they actually described it in this article which is
3 to say that it may have unknown effects on brain
4 development.
5 Q. Okay.
6 ATTORNEY BARHAM: Let's go to Tab 32,
7 which we have already looked at and that is Exhibit.
8 LAW CLERK WILKINSON: Exhibit 33.
9 BY ATTORNEY BARHAM:
10 Q. Exhibit 33?
11 ATTORNEY GREEN: Travis, this is Roberta
12 Green. I'm sorry to interrupt. I wondered if you
13 wouldn't mind keeping your voice up I'm just having
14 trouble hearing. No doubt it's me but it'd be great.
15 Thank you.
16 ATTORNEY BARHAM: It may also be where
17 I'm located in the room, but I'm getting it from enough
18 people, so I appreciate the reminder.
19 VIDEOGRAPHER: Counsel, did you say
20 Exhibit 33.
21 ATTORNEY BARHAM: Exhibit 33.
22 BY ATTORNEY BARHAM:
23 Q. Page two at the top refers to the gray matter
24 --- or the white matter and how research purports a wave

1 of white matter growth that begins at the front of the
2 brain in early childhood, moves to the side after
3 puberty, striking growth spurts can be seen from age 6
4 to 13 in areas connecting brain regions specialized for
5 language and understanding special relationships. Ages
6 11, 12 and 13 are sort of the heart and center of
7 puberty.
8 Correct?
9 ATTORNEY BLOCK: Objection to form.
10 THE WITNESS: It depends upon the child.
11 BY ATTORNEY BARHAM:
12 Q. In general?
13 ATTORNEY BLOCK: Same objection.
14 THE WITNESS: I don't want it to be like
15 I'm parsing this out, but it's really important. We
16 can't apply population based data onto an individual and
17 make conclusions about it.
18 BY ATTORNEY BARHAM:
19 Q. But we can assess population-based data as to
20 when puberty is generally occurring and generally it's
21 occurring around the ages of 11 to 13?
22 A. I would agree with the statement that puberty is
23 generally occurring within those age ranges, yes.
24 Q. And that is also approximately when puberty

1 blocking hormones are being prescribed.
2 Is that true?
3 A. It depends upon the individual.
4 Q. But generally around age 12 is what you
5 indicated earlier.
6 Correct?
7 A. It really depends upon the individual. To
8 clarify, it's based upon Tanner stage as one element,
9 age has one element, psychosocial functioning has
10 another, family choices. It's a calculus of the risks,
11 benefits and alternatives that guide when we decide to
12 intervene if we decide to intervene.
13 Q. So you would agree that a teenage brain and
14 cognitive development across puberty is a very
15 complicated area and one that's not easily understood.
16 Correct?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: Yes, adolescent brain
19 development is a complicated phenomenon for sure. I
20 have no objection to that.
21 BY ATTORNEY BARHAM:
22 Q. Is that an area of your professional research
23 and investigation?
24 A. Specifically on neuroscience with regard to

1 adolescent development, no, it is not.
2 ATTORNEY BARHAM: Let's go to Tab 8.
3 THE WITNESS: I need to take another
4 bathroom break.
5 ATTORNEY BARHAM: Let's just take a break
6 now. Let's go off the record.
7 VIDEOGRAPHER: Going off the record. The
8 current time reads 2:53 p.m.
9 OFF VIDEOTAPE
10 ---
11 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
12 ---
13 ON VIDEOTAPE
14 VIDEOGRAPHER: Back on the record. The
15 current time reads 3:00 p.m.
16 BY ATTORNEY BARHAM:
17 Q. Are you an expert on suicide and suicidality?
18 A. I guess I don't know exactly how to qualify that
19 response. I know more than most people about suicide
20 and suicidality, yes.
21 Q. Have you made any systematic study of suicide
22 among the thousands treated at the NYU Gender and
23 Sexuality Service?
24 A. I have not.

1 Q. Have you made any systematic studies of suicide
2 among the thousands treated at the Lurie Children's
3 Hospital here in Chicago?
4 A. I have a study ongoing.
5 Q. Has that study generated any preliminary results
6 yet?
7 A. It has not.
8 Q. Have you made any systemic studies of suicide
9 among the thousands you've treated at the Gender Variant
10 Youth and Family Network?
11 A. That is not a clinical service.
12 Q. Are you aware that suicide for any reason is
13 extremely rare among children younger than 15?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: I would disagree with that
16 as a statement. It's among one of the top causes of
17 death for children of ages 10 to 15.
18 BY ATTORNEY BARHAM:
19 Q. And what's your basis for saying that?
20 A. The CDC data.
21 Q. Did you cite that data in your report?
22 A. I did not.
23 Q. You're not offering an opinion that BPJ faced a
24 high suicide risk unless put on puberty blockers.

1 Correct?
2 A. I am not.
3 Q. Has any responsible health authority or
4 organization made a claim that the use of puberty
5 blockers relate to suicide?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: I mean, that's a big list.
8 I don't think any that I'm aware of have made the claim,
9 especially when it comes to causation.
10 BY ATTORNEY BARHAM:
11 Q. In paragraph 19 of your report you refer to
12 gender-affirming hormone therapy and you make similar
13 statements in paragraphs 39, 40, 41 and 42. What do you
14 mean by gender affirming hormone therapy?
15 A. Typically speaking when I'm referring to
16 gender-affirming hormone therapy, these are hormones
17 that are aligned with the gender identity.
18 Q. So that means the administration of cross sex
19 hormones.
20 Is that correct?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: Yeah. I mean, I think I
23 would call them gender-affirming hormones. That is how
24 typically they are referred to in the literature.

1 BY ATTORNEY BARHAM:
2 Q. So this means that you would administer
3 testosterone to natal females.
4 Correct?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: I personally would not,
7 but ---.
8 BY ATTORNEY BARHAM:
9 Q. Cross sex hormones or gender-affirming hormones
10 refers to the administration of testosterone to natal
11 females.
12 Correct?
13 A. Or assigned females at birth, yes, that's
14 correct.
15 Q. And it means the administration of testosterone
16 suppression of estrogen for natal males.
17 Correct?
18 ATTORNEY BLOCK: Objection to form.
19 THE WITNESS: Assigned male at birth,
20 yes.
21 BY ATTORNEY BARHAM:
22 Q. You mean assigned males at birth?
23 A. Yes. Is that what I not said? Sorry.
24 Q. What is your role in the administration of cross

1 sex hormones?
2 A. It depends on the child and the family, but my
3 role is most often as a mental health professional who
4 is either doing the assessment or providing care for the
5 co-occurring psychiatric disorders that are present in
6 that individual child.
7 Q. Cross sex hormones prevent rather than enable an
8 adolescent from becoming capable of reproducing
9 sexually.
10 Correct?
11 ATTORNEY BLOCK: Objection to the form.
12 THE WITNESS: That's not something that I
13 can answer. That's out of the scope of my expertise.
14 BY ATTORNEY BARHAM:
15 Q. You lack an understanding of the effects of
16 administering cross sex hormones?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: I would disagree with that
19 statement.
20 BY ATTORNEY BARHAM:
21 Q. So my question is what is the effect of
22 administering cross sex hormones on an adolescent's
23 ability to develop and become capable of reproducing
24 sexually?

1 A. It's a highly complicated question that depends
2 upon a lot of factors that are above the scope of my
3 testimony here. As an example, there are many adult
4 transgender men who become pregnant despite being on
5 testosterone for many years.
6 Q. And what studies are you referencing that
7 support that statement?
8 A. I'm not referencing any studies to this. I'm
9 referencing personal experiences.
10 Q. Okay.
11 Cross sex hormones cannot cause an adolescent
12 to develop the genitalia associated with his or her ---
13 his or her desired transgender identity.
14 Correct?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: That's correct.
17 BY ATTORNEY BARHAM:
18 Q. Cross sex hormones also cannot achieve male
19 height in a natal female.
20 Correct?
21 ATTORNEY BLOCK: Objection to form.
22 THE WITNESS: I would defer to my
23 endocrine colleagues on that answer.
24 BY ATTORNEY BARHAM:

1 Q. Can cross sex hormones change the hip and leg
2 configuration in a natal male to match that of a natal
3 female?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: I would defer to my
6 endocrine colleagues on that question.
7 ATTORNEY BARHAM: Let's go to Tab 77.
8 This is probably new.
9 LAW CLERK WILKINSON: Yes.
10 ATTORNEY BARHAM: This is an article by
11 Guss, et al. in 2015, entitled Transgender and Gender
12 Non-Conforming Adolescent Care. This will be
13 Exhibit 35.
14 ---
15 (Whereupon, Exhibit-35, Article by Guss,
16 et al., was marked for identification.)
17 ---
18 BY ATTORNEY BARHAM:
19 Q. Are you familiar with the authors?
20 LAW CLERK WILKINSON: I'm sorry. I gave
21 you the wrong one. Here is the right one.
22 THE WITNESS: I know Dr. Shumer. And we
23 read something by Katz-Wise earlier. I don't know Carly
24 Guss.

1 BY ATTORNEY BARHAM:
2 Q. Page four of this document indicates that if a
3 patient is on cross sex hormones it's important to
4 remind them that the side effects may be infertility.
5 Is that correct?
6 A. Where are you pointing to?
7 Q. The top of page four.
8 A. Yes.
9 Q. Do you agree with that statement?
10 A. I agree.
11 Q. Do you know of any long-term studies that will
12 change to what extent infertility caused by taking cross
13 sex hormones can be reversed later in life?
14 A. There are ongoing studies now, but I'm not aware
15 of any that have published anything.
16 Q. Have you studied the literature regarding mental
17 health problems in adults resulting from sterility?
18 ATTORNEY BLOCK: Objection to form.
19 THE WITNESS: I don't know what you mean
20 by studied. I don't think probably more than any
21 cursory manner.
22 BY ATTORNEY BARHAM:
23 Q. The use of cross sex hormones to affirm a
24 transgender identity is an off-label use.

1 Correct?
2 ATTORNEY BLOCK: Objection to
3 terminology.
4 THE WITNESS: If by off label you mean
5 off label for the FDA?
6 BY ATTORNEY BARHAM:
7 Q. Yes.
8 A. Yeah, as far as I know. Again, I'm not
9 prescribing these medications as a psychiatrist.
10 Q. Earlier you mentioned that some of your
11 patients, some trans --- some women --- natal females
12 who identify as male have been able to become pregnant.
13 Do you recall that testimony?
14 A. I did not say anything about my patients, I said
15 those were personal experiences.
16 Q. Personal experiences. I'm sorry. I assumed it
17 was patients, so thank you for that correction. I would
18 like to show you Tab 81. This is going to be an article
19 by Moseson, et al. in 2020, entitled Pregnancy
20 Intentions and Outcomes, tab 81 for those at home and
21 Exhibit 36 for the record.
22 --
23 (Whereupon, Exhibit-36, Article by
24 Moseson, et al., was marked for

1 identification.)
2 ---
3 BY ATTORNEY BARHAM:
4 Q. Are you familiar with this study?
5 A. Certainly not the details of it. This is the
6 first time I'm recalling looking at it.
7 Q. Are you aware of any other studies regarding the
8 ability of individuals taking cross sex hormones to
9 become pregnant?
10 A. There are a number of ongoing studies that are
11 looking into those questions, yes.
12 Q. If you look at Table 3 on page number 36, this
13 table indicates there were 79 pregnancies among the
14 respondents who have ever used testosterone.
15 Do you see that?
16 A. Yes.
17 Q. And there were 342 among those who have never
18 used testosterone.
19 Do you see that?
20 A. I see that.
21 Q. But only 15 of these pregnancies occurred after
22 initiating testosterone. Is that correct? And I'm
23 referencing page 33 when I say that, at the bottom of
24 page 33.

1 ATTORNEY BLOCK: Where is this on page
2 33?
3 ATTORNEY BARHAM: The very last line on
4 page 33 extending over onto page 35.
5 THE WITNESS: I see on Table 2 the number
6 of pregnancies after initiating testosterone was 15.
7 BY ATTORNEY BARHAM:
8 Q. So the other 337 of the pregnancies tell us
9 nothing about the impact of testosterone on female
10 fertility and the possible impact of birth defects.
11 Correct?
12 A. Well, the question about fertility certainly
13 doesn't speak to us being able to understand it more
14 based upon the data points. And without reading the
15 article I don't know if the author said anything about
16 birth defects.
17 Q. On page 35 it indicates that 2 of the 15 --- or
18 4 of the 15 pregnancies that started while taking
19 testosterone half of them ended in miscarriage.
20 Correct?
21 A. Yes.
22 Q. One ended in abortion and one was not reported.
23 Correct?
24 A. I don't see where that is.

1 Q. It's the same line. Two of these four
2 pregnancies ended in miscarriage, parentheses, one ended
3 in abortion in the outcome and testosterone duration for
4 the other four were not reported?
5 A. Yes.
6 Q. Okay.
7 And there is no data given on the other outcome
8 of the other 11 pregnancies. So this article does not
9 document a single live birth to a natal female at any
10 time after taking testosterone.
11 Correct?
12 ATTORNEY BLOCK: Objection to form. And
13 give him a chance to read, please.
14 THE WITNESS: I would really have to read
15 the article quite closely to agree with that. I'm not
16 seeing the text in this article to support that. In the
17 Pregnancy Intentions and Outcomes, as I'm reading it, it
18 discusses what the potential outcomes are, but it didn't
19 parse those into who had testosterone before or after,
20 so I'm not sure.
21 BY ATTORNEY BARHAM:
22 Q. Okay.
23 Let me shift gears and turn to paragraph 37 of
24 your report. There you indicate --- you state that

1 there is no evidence supporting Dr. Levine's speculation
2 that allowing prepubertal children to sexually
3 transition puts children on a conveyor belt to becoming
4 transgender adolescents and adults. And you say
5 evidence shows that prepubertal children who are likely
6 to have a stable transgender identity into adolescence
7 are the children who are most likely to articulate a
8 strong and consistent need to socially transition.
9 Do you see that?
10 A. I see that.
11 Q. And in footnote 11 you cite an article by
12 Steensma published in 2013.
13 Is that correct?
14 A. That's correct.
15 ATTORNEY BARHAM: I will show you what
16 we're going to mark as Exhibit 37, Tab 120, and I will
17 also show you Tab 121, which is Exhibit 38.
18 ---
19 (Whereupon, Exhibit-37, Article by
20 Steensma, was marked for
21 identification.)
22 (Whereupon, Exhibit-38, Analysis, was
23 marked for identification.)
24 ---

1 BY ATTORNEY BARHAM:

2 Q. Tab 120, Exhibit 37, is the Steensma article

3 that you cited in footnote 11 of your report.

4 Is that correct?

5 A. That is correct.

6 Q. Let's look at Table 1 on page 584. And it gives

7 --- in the first four columns it gives numbers on

8 persistence and desistance among the study subjects.

9 And about halfway down it delineates how many of the

10 persisting boys and girls and desisting boys and girls

11 had a childhood diagnosis of gender identity disorder.

12 Correct?

13 A. Correct.

14 Q. And it also breaks down how many were

15 subthreshold. I'm presuming that means for gender

16 identity disorder.

17 Correct?

18 A. That is correct.

19 Q. So according to Table 1, 91.3 of the 23

20 persisting boys had gender identity disorder.

21 Correct?

22 A. Correct.

23 Q. So that means about 21 of the 23 persisting boys

24 had that condition.

1 Correct.
2 A. Correct.
3 Q. And according to Table 1, 95.8 of the 24
4 persisting girls had the same diagnosis or 23 of the 24.
5 Correct?
6 A. That's correct.
7 Q. And according to the same Table, 39.3 of the 56
8 desisting boys had that diagnosis.
9 Correct?
10 A. That is correct.
11 Q. So that's 22 of the 56.
12 Correct?
13 A. I'll take your word for the math.
14 Q. Well, you can see it on Exhibit-121 (sic). On
15 Table 1, 58.3 of the 24 desisting girls had gender
16 identity disorder or 14 of the 24.
17 Correct?
18 A. Correct.
19 Q. Do you see any reason to dispute the figures set
20 forth on Exhibit --- on Tab 121, Exhibit 39 ---
21 Exhibit 38?
22 A. No, I have no reason to ---.
23 ATTORNEY SWAMINATHAN: I think he is
24 looking at the wrong document.

1 BY ATTORNEY BARHAM:
2 Q. I'm talking about this.
3 A. Got it. So this is a transposition from
4 Table 1?
5 Q. Correct.
6 A. I mean, I'm going to have ---.
7 ATTORNEY BLOCK: Just objection. I'm
8 sorry, can we put on the record what this document is?
9 Is it a reprint of what's in the Steensma or is it new
10 analysis that ---?
11 ATTORNEY BARHAM: Exhibit 38 is an
12 analysis of the Steensma 2013 article that is
13 Exhibit 37.
14 ATTORNEY BLOCK: Thank you. And is
15 there an author of the analysis?
16 ATTORNEY BARHAM: I'm sorry. Say that
17 again.
18 ATTORNEY BLOCK: Is there an author of
19 this analysis?
20 ATTORNEY BARHAM: Yes, it was me.
21 BY ATTORNEY BARHAM:
22 Q. So according to the figures that have been
23 calculated from table one of the Steensma article, 80
24 children --- of the 80 children who had gender identity

1 disorder, 44 persisted and 36 desisted.
2 Is that correct?
3 ATTORNEY BLOCK: Objection to give the
4 witness a chance to see it on his own what the figures
5 are.
6 THE WITNESS: I'm not sure I understand
7 what your question is.
8 BY ATTORNEY BARHAM:
9 Q. Of the children with the --- the 80 children who
10 had a diagnosis of gender identity disorder, 44
11 persisted and 36 desisted.
12 Is that correct?
13 A. I would have to do the math myself for me to say
14 yes to that, but it's about right.
15 Q. So according to Steensma figures, of the
16 children with the strongest transgender identity as
17 children 55 percent persisted and 45 percent desisted.
18 Correct?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: Again, I would have to run
21 those numbers myself in order to --- unless it's
22 referred to already in the article, but that sounds
23 about right.
24 BY ATTORNEY BARHAM:

1 Q. In footnote 12 of your report, paragraph 37, you
2 cite an article by Rae saying for the proposition that
3 socially transitioning before puberty did not increase
4 children's cross gender identification and deferring
5 transgender did not decrease cross gender
6 identification.
7 Is that correct?
8 A. That is correct.
9 ATTORNEY BARHAM: All right.
10 Let's turn to Tab 108. This will be
11 Exhibit 39, and it will be an article by Rae, et al.
12 published in 2019, Predicting Early Childhood Gender
13 Transitions.
14 ATTORNEY BLOCK: It's 2:22 central time.
15 So the witness has to take a break at 2:30?
16 THE WITNESS: I can do 2:45.
17 ---
18 (Whereupon, Exhibit 39, Article by Rae,
19 et al., marked for identification.)
20 ---
21 BY ATTORNEY BARHAM:
22 Q. Exhibit 39 is the article that you cited in
23 footnote 12 of your report.
24 Is that correct?

1 A. That's correct.
2 Q. On page 679 the author indicates that
3 replication of this affect is muted preferably from
4 longitudinal study comparing a single group of children
5 before and after transition.
6 Correct?
7 A. That's correct.
8 Q. And the authors also indicate that they tested a
9 sample skewed by race, class, parental that education
10 and political affiliation that may or may not affect the
11 children that are socially transitioning now or in the
12 future.
13 Correct?
14 A. That is correct.
15 Q. And they also indicate that follow-up occurred
16 only two years after testing and some of the children
17 who had not transitioned could transition in the future
18 and some who had transitioned could not revert in the
19 future.
20 Correct?
21 A. Correct.
22 Q. And they indicated that there sample is likely
23 an over estimate of how many gender conforming children
24 in the general population will socially transition.

1 Correct?
2 A. Where is that in the article?
3 Q. Second column of page 679.
4 A. Yes.
5 Q. Same column they also indicate that they relied
6 on a convenient sample of individuals recruited through
7 lists and events serving transgender children and gender
8 non-conforming children.
9 Correct?
10 A. That is correct.
11 Q. Let's go back to Tab 5, which is Exhibit 2.
12 Page 3879, the Endocrine Society indicates that if
13 children have completely socially transitioned they have
14 my greater difficulty returning to the original gender
15 on entering puberty.
16 Is that correct?
17 A. That's correct. It says it there, but that's
18 based on supposition.
19 Q. Footnote 40 --- reference number 40 supposition
20 --- reference number 40 is an article by Steensma, et
21 al., published in 2011.
22 Are you saying that that's a supposition?
23 ATTORNEY BLOCK: Objection to form.
24 THE WITNESS: No, I'm saying that the

1 part of that article that refers to the theoretical risk
2 is based not on any data that was collected by the
3 researchers in that study.
4 BY ATTORNEY BARHAM:
5 Q. The Endocrine Society also indicates that the
6 social transition has been found to contribute to the
7 likelihood of persistence.
8 Is that correct?
9 A. That is a misstating of Dr. Steensma.
10 Q. That is what the Endocrine Society has
11 concluded.
12 Correct?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: That is what they have
15 written here in the article you presented, yes.
16 ATTORNEY BARHAM: Let's go to Tab 97
17 number ---.
18 LAW CLERK WILKINSON: Exhibit 16.
19 BY ATTORNEY BARHAM:
20 Q. Exhibit Number 16, and we are going to be
21 looking at the sixth page of this document. And Dr.
22 D'Angelo, et al. article indicates that since almost all
23 the children treated with puberty blockers proceeded to
24 cross sex hormones concerns have been raised that

1 puberty blockers may consolidate gender dysphoria in
2 young people putting them on a lifelong path of
3 biomedical invention.
4 Is that correct?
5 ATTORNEY BLOCK: Object is to form.
6 THE WITNESS: Can you show me where that
7 is on this page?
8 BY ATTORNEY BARHAM:
9 Q. The first column on the second paragraph. The
10 second column.
11 ATTORNEY TRYON: Jake, can you scroll
12 down a bit?
13 THE WITNESS: I would not agree with how
14 you asked that question, I guess. Can you repeat it or
15 clarify?
16 BY ATTORNEY BARHAM:
17 Q. I just was reading what it said. They indicate
18 in this section additionally since almost all of the
19 children treated with puberty blockers proceed to cross
20 sex hormones citing de Vries 2014, concerns have been
21 raised at puberty blockers may consolidate gender
22 dysphoria in young people, putting them on a lifelong
23 path of biomedical interventions?
24 A. It's bit of a logical leap and also just

1 incorrect. The de Vries study specifically was looking
2 at the children in the Amsterdam clinic, which is not
3 broadly applicable to other gender clinics across the
4 rest of the world.
5 Q. But you relied upon de Vries 2014 article in
6 your report as well, didn't you?
7 A. I agree. Yeah.
8 Q. So there are professionals who have raised these
9 concerns and hold the concerns that social transitioning
10 cannot change the outcome for a child.
11 Is that correct?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: I think there's two
14 different questions. The first question is, do I agree
15 with this statement that almost all children treated
16 with puberty blockers proceed to cross sex hormones?
17 That is not data that we have nor does this article
18 point to data other than the Dutch clinic that has a
19 very specific protocol.
20 The question about whether social
21 transition changes a child's trajectory is a different
22 question. It is a question that the Dutch have raised
23 as a possibility, but has not, I have not seen any
24 literature that provides evidence for that.

1 BY ATTORNEY BARHAM:
2 Q. But you will recognize that there are some
3 researchers in the field who have raised these concerns
4 and do hold these concerns.
5 Correct?
6 A. There are researchers in the field who ask these
7 questions, yes.
8 ATTORNEY BARHAM: Let's go to Tab 38.
9 ATTORNEY TRYON: How late are we going in
10 this session; until 2:30 or 2:45?
11 ATTORNEY BARHAM: The witness has
12 indicated he can go to 2:45.
13 ATTORNEY TRYON: Okay.
14 ATTORNEY BARHAM: Exhibit 40 is an
15 article by Carmichael, et al. 2021, Short-term Outcomes
16 of Pubertal Suppression in a Selected Cohort of 12 to 15
17 year old Young People. If you'll turn to page 12.
18 ---
19 (Whereupon, Exhibit 40, Article by
20 Carmichael, et al., was marked for
21 identification.)
22 ---
23 BY ATTORNEY BARHAM:
24 Q. Are you familiar with this paper?

1 A. I have not read through this paper, yet.
2 Q. The lead authors are associated with the
3 Tavistock?
4 A. That is correct.
5 Q. And that's part of the National Health Services
6 of the UK.
7 Is that correct?
8 A. That is correct?
9 Q. And it's the leading and most respected clinic
10 in the UK.
11 Correct?
12 A. That I can't answer.
13 Q. If you'll look at page 12, the authors indicate
14 that one young person decided to stop GnRHa and did not
15 start cross sex hormones due to continued uncertainty
16 and concerns about the side effects of cross sex
17 hormones, the remaining 43 or 98 percent elected to
18 start cross sex hormones.
19 Is that correct?
20 A. Correct.
21 Q. So the vast majority of these children who
22 received puberty blockers went onto take cross sex
23 hormones.
24 Correct?

1 A. That is correct.
2 Q. Would you agree that the majority of children
3 who receive puberty blockers go on and take cross sex
4 hormones?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: That is not a question
7 that we have an answer to based upon the literature. A
8 majority of patients with gender dysphoria that are
9 prescribe puberty blockers are not involved in clinical
10 care at either the Tavistock clinic or the Amsterdam
11 clinic.
12 BY ATTORNEY BARHAM:
13 Q. Is it --- in your practice, do the majority of
14 children who receive puberty blockers for gender
15 dysphoria go on to take cross sex hormones?
16 A. Based upon the demographic of the patients that
17 I'm seeing, particularly in Chicago, yes, but I'm not
18 seeing the younger kids as much as I did in New York.
19 Q. So as a practical and ethical matter the
20 decision to put a child on puberty blockers must be
21 considered as equivalent of a decision to put the
22 children on cross sex hormones with all of the
23 considerations and full consent obligations listed in
24 that decision.

1 Correct?
2 ATTORNEY BLOCK: Objection to form.
3 THE WITNESS: No.
4 BY ATTORNEY BARHAM:
5 Q. Why do you say --- why do you disagree?
6 A. Inherent in the informed consent process is a
7 specific discussion of the risk benefits and
8 alternatives of a specific intervention. Hormones are
9 not puberty blockers, it's a separate discussion.
10 Q. Even though the vast majority according to the
11 research and according to your testimony go onto take
12 cross sex hormones?
13 ATTORNEY BLOCK: Objection to form and
14 mischaracterizes testimony.
15 THE WITNESS: A description of the
16 potential trajectories of development is a part of the
17 discussion in an informed consent process for the
18 engagement with puberty suppression agents. It's not
19 the same as informed consent process discussion around
20 the use of hormones at that time.
21 BY ATTORNEY BARHAM:
22 Q. So when you're having an informed consent
23 discussion surrounding the decision to start puberty
24 blockers, do you discuss with parents and patients the

1 dangers associated with cross sex hormones?
2 A. This is going to be very individualized
3 discussions that we have with families. It's a very
4 momentous decision to make this kind of treatment
5 choice. The potential trajectories are all discussed
6 and there's risk to everything. I don't think it is
7 useful to use the term dangers in the context of medical
8 care but it's about weighing risks of interventions but
9 also weighing the risks of non-intervening. And it's
10 appropriate to have those discussions about what those
11 potential outcomes may be with each individual kid.
12 Q. How do you get informed consent from a child?
13 A. You get assent from a child, but you get
14 informed consent from a parent.
15 Q. How do you get --- how can a child even begin to
16 understand the implications of starting puberty blockers
17 and then potentially going to cross sex hormones, the
18 effects that that may have on the fertility when the
19 child is 12-ish?
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: Well, I have a skewed
22 perspective here because of the work that I do, but
23 there are 12-year-olds who are often much more capable
24 of having that kind of informed decision than many

1 adults that I have encountered, which is to say it's an
2 individualized assessment based upon multiple things,
3 including the cognitive status of the child, their
4 capacity to engage back and forth and have an open
5 discussion and a realistic discussion about the
6 potential benefits, risks and alternatives in specific
7 intervention.
8 BY ATTORNEY BARHAM:
9 Q. Is it your position that most 12-year-olds have
10 a better understanding or a better capability of making
11 decisions about their long-term fertility than adults?
12 A. It is not my position and I will reflect that
13 that was a statement meant in jest, but it does reflect
14 some sense of reality in terms of the maturity level of
15 12-year-olds, not speaking to the maturity level of most
16 20-somethings in the world.
17 ATTORNEY BARHAM: I think this would be a
18 good time to pause for your appointment and give you a
19 few moments before that starts, so we'll go off the
20 record.
21 VIDEOGRAPHER: Going off the record. The
22 current time reads 3:37 p.m.
23 OFF VIDEOTAPE
24 ---

1 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
2 ---
3 ON VIDEOTAPE
4 VIDEOGRAPHER: Back on the record the
5 current time reads 4:31 p.m.
6 ATTORNEY BARHAM: All right. Let's go to
7 Tab 16, which will be Exhibit Number 41.
8 ---
9 (Whereupon Exhibit 41, Washington Post
10 Article, was marked for identification.)
11 ---
12 BY ATTORNEY BARHAM:
13 Q. This is will be a Washington Post article from
14 January 10, 2022. Are you aware of the 2021/2022 season
15 swimming events surrounding the University of
16 Pennsylvania's swimmer Lia Thomas?
17 ATTORNEY BLOCK: Objection to scope.
18 THE WITNESS: I have not been following
19 closely, but I've heard about it.
20 BY ATTORNEY BARHAM:
21 Q. Okay.
22 On page three of Exhibit 41, the article
23 references that Lia Thomas in her first year in the
24 Women's Division after more than a year of testosterone

1 suppression set the Women's Division record in two
2 events.
3 Do you see that?
4 A. I see that, yes.
5 Q. And Lia Thomas beat the best time of women's
6 Olympian Torri Huske in the 200 freestyle.
7 Do you see that?
8 A. I see that.
9 ATTORNEY BLOCK: I just want to note an
10 objection to foundation, that there's no URL. This
11 appears to be cut and pasted. So I'm just noting that
12 for the record.
13 ATTORNEY BARHAM: And I would note For
14 the record that there is an URL at the bottom of page
15 --- at the bottom of each page.
16 ATTORNEY BLOCK: Thanks. It's not
17 visible from what's on the screen.
18 ATTORNEY BARHAM: Okay.
19 Just trying to be clear.
20 BY ATTORNEY BARHAM:
21 Q. Is it your position that it is fair for Lia
22 Thomas to compete in the Women's Division of swimming?
23 ATTORNEY BLOCK: Objection to scope.
24 THE WITNESS: I don't have an opinion on

1 the fairness.
2 BY ATTORNEY BARHAM:
3 Q. Do you believe that it's beneficial to Lia
4 Thomas' mental health to compete in the Women's
5 Division?
6 A. I couldn't tell you that unless I had evaluated
7 Lia Thomas herself.
8 Q. But it's your opinion as expressed in
9 paragraph 52 of your report that no reasonable mental
10 health professional could conclude that the Act is
11 anything but harmful to the mental health of transgender
12 youth.
13 Is that correct?
14 A. I would say youth as a class, yes, that is
15 correct, but the specific details of that impact are not
16 going to be known and I wouldn't care to surmise on it
17 for a specific individual that is not under my care.
18 Q. Okay.
19 But it's your position that allowing a
20 transgender --- or allowing natal males to compete in
21 the Women's Division if they are gender dysphoric is
22 beneficial to their mental health, in general.
23 Correct?
24 ATTORNEY BLOCK: Objection to terminology

1 and form.
2 THE WITNESS: In my report, excluding
3 transgender youth can be harmful to their mental health.
4 BY ATTORNEY BARHAM:
5 Q. And when you say excluding them you mean
6 excluding them from competition consistent with their
7 gender identity.
8 Is that correct?
9 A. That is correct.
10 ATTORNEY BARHAM: All right.
11 I want to show you Tab 17 now. This will
12 be Exhibit-42.
13 ---
14 (Whereupon, Exhibit 42, Out Sports
15 Article, was marked for identification.)
16 ---
17 BY ATTORNEY BARHAM:
18 Q. Have you read about Iszac Henig before today?
19 A. I have not.
20 Q. This is an article from Out Sports published on
21 January 9th, 2022, by Karleigh Webb entitled Trans
22 swimmers Lia Thomas and Iszac Henig went head-to-head in
23 the pool, each getting wins. Are you aware that Iszac
24 Henig is a biological female who identifies as male?

1 A. I have not heard of Iszac Henig until today at
2 least by name.
3 Q. Do you see on the first page of this article the
4 article reads Henig, a trans man competing on the
5 women's swimming team at Yale?
6 A. I see that, yes.
7 Q. So in this event a biological male identifies as
8 female, Lia Thomas, competed against a biological female
9 who identifies as male, Iszac Henig, in the women's
10 competition?
11 ATTORNEY BLOCK: Objection can you give
12 him a chance to read the article. He's never seen or
13 heard of this before?
14 THE WITNESS: It seems that is what
15 stipulated in the article.
16 BY ATTORNEY BARHAM:
17 Q. Okay.
18 According to the terminology you prefer, do you
19 consider Henig to be anything other than a man?
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: I will typically ask the
22 individuals that I'm working with or engaging with how
23 they choose to define their own sense of labels. Not
24 knowing Iszac I can't speak for him.

1 BY ATTORNEY BARHAM:
2 Q. Okay.
3 But according to the terminology that you've
4 been using Iszac would be an individual assigned female
5 sex at birth and identifying as male.
6 Correct?
7 A. Again, I don't see ---
8 Q. Henig a trans man?
9 A. --- a description of his words to describe his
10 identity, so I can't say how he identifies himself, but
11 it appears through that that's how --- that is the
12 implication of the article at least.
13 Q. In the article it uses masculine pronouns to
14 refer to Henig.
15 Correct?
16 A. Yes.
17 Q. Do you think it'd beneficial to Henig's mental
18 health to compete on the women's team?
19 A. Again, I can't answer that unless I had
20 evaluated Henig myself.
21 Q. In general, if you have a transgender individual
22 who wants to compete on the team consistent his or her
23 biological sex, do you think it's beneficial to his or
24 her mental health to be allowed to do so?

1 ATTORNEY BLOCK: Objection to form.
2 THE WITNESS: Again, this is an
3 individualized discussion that you have with patients.
4 With the patients that I've had I have had patients who
5 would be harmed by having to compete with the cohort of
6 kids who were aligned with their sex assigned at birth.
7 BY ATTORNEY BARHAM:
8 Q. I understand your position about kids who are
9 forced to do something, what about kids who want to
10 compete with that same cohort, do you think it's
11 beneficial to allow them to compete as they see fit?
12 A. As a mental health professional working with
13 kids and families, it really is an individualized
14 discussion. There is not going to be a specific answer
15 that's universal for all kids.
16 Q. Do you believe that if Henig were prevented from
17 competing with the women's team as desired, that it
18 could be harmful to Henig's mental health ---
19 ATTORNEY BLOCK: Objection to form.
20 BY ATTORNEY BARHAM:
21 Q. --- possibly?
22 A. I can't speak to the specifics about a person
23 that I've never evaluated.
24 Q. If it is harmful to someone's mental health to

1 be prevented from participating in athletics on a team
2 consistent with their gender identity, could it be
3 harmful to their mental health to be prevented from
4 competing on a team consistent with their biological sex
5 if they so wanted to?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: I think there's a whole
8 host of hypotheticals that could potentially be
9 possible.
10 BY ATTORNEY BARHAM:
11 Q. And that is one of them?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: That's possible.
14 ATTORNEY BARHAM: Okay.
15 BY ATTORNEY BARHAM:
16 Q. In paragraph 34 of your report you write a
17 recent study found people who reported experiencing
18 those conversion efforts were more likely to report an
19 attempted suicide, especially those who reported
20 receiving such therapy in childhood.
21 Do you see that?
22 A. I see that.
23 Q. And there we are talking about conversion
24 therapy.

1 Is that correct?
2 A. We're talking specifically about the study
3 participants on perceptive perceptions of conversion
4 therapy.
5 Q. But that's what's meant by those conversion
6 efforts.
7 Correct?
8 A. Correct.
9 Q. In footnote six you cite an article by Turban
10 published in 2020.
11 Is that correct?
12 A. That is correct.
13 ATTORNEY BARHAM: All right.
14 I'm going to show you Tab 113, which will
15 be Exhibit 43.
16 ---
17 (Whereupon, Exhibit 43, Article by
18 Turban, et al., was marked for
19 identification.)
20 ---
21 BY ATTORNEY BARHAM:
22 Q. This is an article published by Turban, et al.
23 published in 2020, it's entitled Association Between
24 Recalled Exposure to Gender Identity Conversion Efforts

1 and Psychological Distress and Suicide Attempts Among
2 Transgender Adults. This is the article that you cited
3 in your report.
4 Is that correct?
5 A. That is correct.
6 Q. And this is the article cited in footnote six as
7 support for the proposition that studies that found that
8 people who reported conversion efforts are more likely
9 to have reported suicide.
10 Correct?
11 A. That's correct.
12 Q. On page two of this article the authors --- and
13 by this article I'm referring to Exhibit 43. The
14 authors note that they rely upon data from the National
15 Center for Transgender Quality and its 2015 transgender
16 survey.
17 Correct?
18 A. That is correct.
19 Q. On page eight of this document, the authors
20 admit that it is cross sectional study designed
21 precludes determination of causation.
22 Correct?
23 A. I don't have page numbers. Which one is that?
24 Q. It's the one with strengths and limitations at

1 the heading at the bottom.
2 A. Can you repeat the question?
3 Q. On page eight, the authors admit that the
4 studies cross-sectional study design precludes
5 determination of causation.
6 Correct?
7 A. That is correct.
8 Q. The authors also admit that those with worse
9 mental health or internalized transphobia may have been
10 more likely to seek out conversion therapy rather than
11 non GICE therapy suggesting conversion efforts itself
12 were not causative of these poor mental health outcomes.
13 Correct?
14 A. That is what is written, correct.
15 Q. Okay.
16 So this study does not establish a causal link
17 between conversion therapy and suicidality.
18 Correct?
19 A. That is correct.
20 Q. The authors also admit that they lack data
21 regarding the degree to which GICE occurred.
22 Correct?
23 A. That is correct.
24 Q. And they also admit that they lacked information

1 as to what specific modalities were used.
2 Correct?
3 A. That is correct.
4 Q. Turban et al., in 2020 also admits that
5 participants were not recruited via random sampling and
6 thus the sample may not be nationally representative.
7 Is that correct?
8 A. That is correct.
9 Q. In paragraph 37 you go on to say that
10 conclusions further supported by extensive evidence that
11 rejection of a young person's gender identity by family
12 and peers is the strongest predictor for adverse mental
13 health outcomes.
14 Is that correct?
15 A. That is correct.
16 Q. And you cite in that article --- you cite in
17 footnote seven an article by Ryan, et al. published in
18 2010.
19 Is that correct?
20 A. I'm not seeing that.
21 Q. In footnote seven?
22 A. Oh, in footnote seven, yes.
23 ATTORNEY BARHAM: I'm going to show you
24 what we will mark as Exhibit-44, which is Tab 114, an

1 article by Ryan, et al. published in 2010 entitled
2 Family Acceptance in Adolescence and the Health of LGBT
3 Young Adults.
4 ---
5 (Whereupon, Exhibit-44, Article by Ryan,
6 et al., was marked for identification.)
7 ---
8 BY ATTORNEY BARHAM:
9 Q. This is the article that you cited in footnote
10 seven of your report.
11 Correct?
12 A. That is correct.
13 Q. On page 206, in the second column, the authors
14 note that they relied on a sample of 245 people.
15 Is that correct?
16 A. That is correct.
17 Q. Of that sample, only nine percent identified as
18 transgender.
19 Correct? That's on page 208.
20 A. Correct.
21 Q. That means we're talking about nine people.
22 Correct? 245 times nine percent is 22.05.
23 A. I'll take your math.
24 Q. On page 210 the authors admit that they cannot

1 claim that this sample is representative of the general
2 population of LGBT individuals.
3 Is that correct?
4 A. That is correct.
5 Q. On page 210 to 211 the authors recognize that
6 this is a retrospective study, which, quote, allows for
7 the potential of recall bias in describing specific
8 family reactions to their LGBT identity.
9 Correct?
10 A. That is correct.
11 Q. And then in footnote seven of your report you
12 also cite an article by Klein and Golub published in
13 2016.
14 Correct?
15 A. That is correct.
16 Q. All right.
17 ATTORNEY BARHAM: I'm going to show you
18 what we will mark as Exhibit 45, which is Tab 15.
19 ---
20 (Whereupon, Exhibit-45, Article by Klein
21 and Golub, was marked for
22 identification.)
23 ---
24 BY ATTORNEY BARHAM:

1 Q. This is an article by Klein and Golub entitled
2 Family Rejection as a Predictor of Suicide Attempts.
3 This article simply says that family rejection is a
4 predictor of suicide attempts and substance abuse among
5 transgender and gender non-conforming adults.
6 Correct?
7 ATTORNEY BLOCK: Objection. Can you
8 point to where you are reading from?
9 ATTORNEY BARHAM: The title.
10 THE WITNESS: They identify as a
11 predictor, yes.
12 BY ATTORNEY BARHAM:
13 Q. In fact, the word strongest does not even appear
14 in this article.
15 Is that correct?
16 ATTORNEY BLOCK: Objection.
17 THE WITNESS: I would have to read the
18 whole article.
19 ATTORNEY BLOCK: Let him read it.
20 THE WITNESS: The authors note on
21 page 195 on a multi-variant model moderate levels of
22 family rejection were associated with almost twice the
23 odds of attempted suicide and high levels of family
24 rejection were associated with almost three and a half

1 times the odds of attempted suicide. While there is not
2 any use of the word stronger, I don't see any additional
3 risks that were highlighted in this specific study.
4 BY ATTORNEY BARHAM:
5 Q. Okay.
6 On page 197 stemming over on to 198 the authors
7 admit that they relied on data NTDS that use sampling
8 techniques that were not random and included a
9 homogenous study population that was largely white,
10 educated and employed.
11 Correct?
12 A. That is correct.
13 Q. Do you agree with them that this limits the
14 generalizability of the article's findings?
15 A. I do.
16 Q. The authors also admit that the cross sectional
17 nature of the data did not allow us to determine any
18 causal relationship between family rejection and the
19 negative health-related outcomes.
20 Correct?
21 A. Correct.
22 Q. The authors also indicate that they did not have
23 any information about the timeframe within which family
24 rejection occurred, including what precipitated the

1 event, the severity of the rejection or whether this
2 changed over time.
3 Correct?
4 A. Correct.
5 Q. Do you agree with them that these factors might
6 have influenced their results?
7 A. Sure.
8 Q. All right.
9 Let's go to Tab 97, which is Exhibit 16. This
10 article we discussed before, but this reviews the Turban
11 article that you cited in footnote seven of your report.
12 Is that correct?
13 A. That is correct.
14 Q. Or footnote six of your report. Okay.
15 And in your report you are using the Turban
16 2020 article to critique the use of what you describe as
17 conversion therapy.
18 Is that correct?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: I'm just pulling this up
21 where I have it. As I stated in my report, the Turban
22 article found that people who reported experiencing
23 those conversion efforts were more likely to have
24 reported attempting suicide.

1 BY ATTORNEY BARHAM:
2 Q. So you're using it to critique what you
3 described as conversion therapy.
4 Is that fair?
5 A. I think that's fair.
6 Q. On page two of Dr. D'Angelo's letter to the
7 editor he notes at the top of the first --- towards the
8 top of the first column that Turban's analysis used data
9 from the 2015 USTS survey of transgender identifying
10 individuals, this survey is convenient sampling
11 methodology which generates lower quality data.
12 Would you agree that convenient sampling
13 generates low quality data?
14 A. Convenient sampling generates lower quality
15 data. And then some other statistical method of study
16 design. One of the ways that you want to counteract
17 that potential for low quality of data is to have
18 increased number of participants. The difference of
19 27,000 participants in this particular survey analysis
20 versus say 100 in another, 40 in another does add a
21 little bit more context to the applicability of these
22 findings.
23 Q. Right below that Dr. D'Angelo, et al. notes that
24 the participants were recruited through transgender

1 advocacy organizations and subjects were asked to pledge
2 to promote survey among friends and family. This
3 recruiting method yielded a large but highly skewed
4 sample. Would you agree that the sample for this survey
5 was highly skewed?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: I think we'd have to
8 understand what specifically you mean by skewed and
9 skewed in what way. It's hard to know.
10 BY ATTORNEY BARHAM:
11 Q. The authors go on in Table 1 to demonstrate what
12 they mean by skewing of the data. Upon reviewing their
13 information, would you agree that the sample was skewed?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: Again, I'm not sure skewed
16 in comparative --- comparison to what?
17 BY ATTORNEY BARHAM:
18 Q. The authors continue on page two by saying that
19 a number of additional data irregularities in the USTS
20 raise further questions about the quality of the data
21 captured by the survey. They talk about how high number
22 of survey participants had not transitioned medically or
23 socially, significant number reported no intention to
24 transition in the future. The information about

1 treatments does not appear to be accurate as a number of
2 respondents reported the initiation of puberty blockers
3 after the age 18, which is highly improbable. Further,
4 the survey has developed special waiting due to
5 unexpected high proportion of respondents who reported
6 that they were exactly 18 years old. Do you agree that
7 these irregularities raise serious questions about the
8 reliability of the data?
9 A. I think these are all elements that you want to
10 take into context as you're establishing validity of the
11 data and the conclusions that could be drawn.
12 Q. The second column of page two, the authors note
13 that the emphasis on the survey's goals to highlight the
14 injustices suffered by transgender people during the
15 recruitment stage in the introduction of the survey
16 instrument itself made it eligible for reporting adverse
17 experiences due to demand bias.
18 Do you agree that this demand bias likely
19 skewed the responses?
20 A. I wouldn't agree that it likely, but that
21 implies that we have data that we don't have. It's a
22 possibility that these authors are raising.
23 Q. Now, the authors also note that the experience
24 of detransitioners and the sisters were not included, as

1 they were disqualified from completing the survey. They
2 note that this failure is a serious oversight.
3 Do you agree with them that that's a serious
4 oversight?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: I would need to look at the
7 specific survey instructions for the survey in question
8 to understand the validity of that. I don't see how in
9 the context of this that folks who detransitioned were
10 specifically excluded, but ---.
11 BY ATTORNEY BARHAM:
12 Q. Did you review ---?
13 A. Can you point to where that --- where in the
14 original article or the study that those folks are
15 excluded specifically. I may have missed it.
16 Q. I don't have the original survey on hand at the
17 moment. If it proved that they were excluded, would you
18 agree that that would be a serious oversight?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: It would really depend on
21 how that was done and what the language was used.
22 Without seeing it I can't make a comment otherwise.
23 BY ATTORNEY BARHAM:
24 Q. What if there was no language involved, it was

1 just those who indicated that they were either desisting
2 or detransitioning or not included in the data set?
3 A. I would need to see the context of it in order
4 to make a judgment on the validity of that structure.
5 Q. On page four of this document. The authors note
6 that Turban's hypothesis is further weakened by a
7 significant flaw in their data analysis failure to
8 control for individuals pre-GICE exposure mental health
9 exposure status, noting that this is a potential
10 compound and may mask reverse causation.
11 Do you have any scientific basis for disputing
12 that concern?
13 A. Let me review this part of the paper, please.
14 ATTORNEY BLOCK: Just objection. I don't
15 think he read the full the sentence.
16 THE WITNESS: I have not seen any
17 literature on specific risks or predictors for
18 individuals who would be exposed to gender identity
19 conversion efforts, and so the supposition inherent in
20 this paragraph that the authors are making that an
21 individual's underlying poor mental health led to their
22 experience of gender identity conversion efforts is not
23 supported by my understanding of the literature.
24 BY ATTORNEY BARHAM:

1 Q. Do you have any reason to dispute a potential
2 for a confound or the potential for masking reversed
3 causation that the authors identify here?
4 A. As I described, I haven't seen any literature
5 that speaks to this nor has that been my clinical
6 experience.
7 Q. On page two of this document the authors note
8 that Turban's conclusions rest on the assumption that
9 they have a valid way of determining whether or not the
10 respondent was exposed to the unethical practice of
11 conversion therapy. Do you agree that this lack of
12 context in detail renders the question incapable of
13 differentiating between ethical non-affirming ---
14 non-affirmative neutral and counters unethical
15 conversion therapy?
16 A. I do not.
17 ATTORNEY BLOCK: Sorry, objection to
18 form.
19 BY ATTORNEY BARHAM:
20 Q. Back on page four the authors note that the
21 failure to control for the subjects' baseline mental
22 health makes it impossible to determine whether the
23 mental health or suicidality of a subject person stayed
24 the same or potentially even improved after the

1 non-affirming encounter. Do you have any scientific
2 basis for disputing this observation?
3 ATTORNEY BLOCK: Objection to form.
4 THE WITNESS: Again, if we wanted to go
5 back to the Turban study itself and look more
6 specifically at their methodology and their description
7 that would be a more accurate way of getting a potential
8 ups and downs side of this study other than this letter
9 to the editor.
10 BY ATTORNEY BARHAM:
11 Q. But do you have any basis for -- any scientific
12 basis for disputing that observation?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: This question gets to a
15 very specific type of study designed methodology. That
16 is something that typically is done by a data scientist,
17 which is not where my level of expertise is. There are
18 nuances in it. What I would say is in a population as
19 large of a survey that having a denominator as high as
20 they had helps to reduce the chances of confounders like
21 the authors in this letter to the editor are describing
22 as problematic.
23 BY ATTORNEY BARHAM:
24 Q. A little bit later on page five the authors

1 highlight the cross sectional design of the USTS and
2 indicate that presenting a highly confounded association
3 of causation is a serious error.
4 Do you agree that presenting a confounded
5 association as causation is a serious error?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: I have not claimed nor do I
8 understand my reading of the Turban, et al. article to
9 claim causation when an association has been found, and
10 in fact, they specifically called out that it was not
11 causative or at least the analysis could not prove it
12 was causative with a cross-sectional design.
13 BY ATTORNEY BARHAM:
14 Q. So when you wrote paragraph 34 of your report
15 and said that a study found that people who reported
16 experiencing these conversion efforts were more likely
17 to have reported attempting suicide, especially those
18 who reported receiving such therapy in childhood, were
19 you suggesting that the conversion efforts caused the
20 suicide attempts?
21 A. I believe in my testimony I am saying that there
22 is a relationship between those who are exposed to
23 conversion efforts and those who have described
24 reporting attempting suicide.

1 Q. And how would you describe that relationship?
2 A. As an association.
3 Q. Is association a synonym for correlation?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: It depends on the context,
6 but generally in plain English association and
7 correlation are relative synonyms for one another.
8 BY ATTORNEY BARHAM:
9 Q. In this specific context of your report, when
10 you say that you are reporting an association, were you
11 using association in correlation to synonyms?
12 A. As far as I know I was, yeah.
13 Q. Have you had patients impacted by not being
14 allowed to play sports consistent with their gender
15 identity?
16 A. On occasion, yes.
17 Q. Approximately how many such patients?
18 A. On the order of less than two or three.
19 Q. What sports were those patients participating
20 in?
21 A. I do not recall the specific. These were ---
22 the two or three that I had were all in the order of
23 between five, six and seven-year-olds.
24 Q. What was your follow-up with each patient?

1 A. With those particular kids?
2 Q. Yes.
3 A. Without having their charts in front of me, it's
4 hard to expound. My typical process would be
5 understanding why it's happening, what they need and how
6 to coordinate with whatever program to help make sure
7 that the kid gets the support that is going to be most
8 beneficial to them.
9 Q. Are you offering an opinion that the State of
10 West Virginia does not have a strong interest in
11 ensuring safe competition for women?
12 ATTORNEY BLOCK: Objection to form.
13 THE WITNESS: My testimony is about the
14 mental health impacts. I don't have an opinion on the
15 state interests of West Virginia in this regard.
16 BY ATTORNEY BARHAM:
17 Q. Are you offering an opinion that the State of
18 West Virginia does not have a strong interest in
19 ensuring fair competition?
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: Same answer.
22 BY ATTORNEY BARHAM:
23 Q. Would you agree that ensuring fairness and
24 safety is an important state interest.

1 ATTORNEY BLOCK: Objection to form and
2 scope.
3 THE WITNESS: Same answer.
4 ATTORNEY BARHAM: All right. I believe
5 those are all my questions for today. I will turn the
6 floor over to Mr. Tryon.
7 ATTORNEY TYRON: Okay.
8 Here I am.
9 ---
10 EXAMINATION
11 ---
12 BY ATTORNEY TRYON:
13 Q. My name's David Tryon. I am with the West
14 Virginia Attorney General's Office and represent the
15 State of West Virginia. So we've got about an hour
16 left. Do you want to just keep on going and finish up
17 or would you like to take a break for five minutes
18 before we finish up?
19 A. I think let's keep going. If I have to take a
20 break, I'll let you know. I appreciate it.
21 Q. Okay.
22 You bet. Happy to help you out that way again.
23 I just want to follow up, first of all, on a couple of
24 questions about the Turban study, if I may, that we were

1 just discussing. And Exhibit 16 I believe was the
2 document that addressed that Turban study.
3 A. I see Exhibit 16 as the letter to the editor
4 from D'Angelo, et al.
5 Q. And that's the one that we were just looking at
6 addressing the Turban study.
7 Right?
8 A. Correct.
9 Q. So let me just ask you, you did cite the Turban
10 study in your report.
11 Right?
12 A. Yes.
13 Q. Yeah, and that was to support your opinion.
14 Right?
15 A. That is to support my opinion, yes.
16 Q. Now, before you used it did you do something to
17 cite check it to see if there were any articles that
18 either challenged it or critiqued it or criticized it?
19 A. I would say that a routine review of the
20 literature is a part of my day-to-day practice. This
21 particular article did not come up in that review.
22 Q. Okay.
23 Is there a way to specifically search for it to
24 see if --- to look at it and then do a search and see

1 what other articles are quoted or cited?
2 A. My guess is there probably is, I'm not aware of
3 it.
4 Q. But I think you said you were not aware of the
5 letter which is Exhibit 16 prior to issuing your expert
6 report.
7 Is that right?
8 A. That is correct.
9 Q. Would it have been helpful to have seen that
10 ahead of time?
11 A. I think it would have been helpful for me to
12 feel more prepared in this deposition. I don't think it
13 would have changed any of my report.
14 Q. If you had that, would you have investigated
15 those criticisms to see if they were failed criticisms?
16 A. The authors of the Turban study had raised most
17 of those criticisms themselves in the context of their
18 report.
19 Q. And did you independently look at it and
20 determine if they were --- if that caused you some
21 concerns?
22 A. Concerns wouldn't be the right word. It's about
23 weighing the evidence and making sure that we understand
24 context and applicability. There's nothing in this

1 letter to the editor that changes those demands from my
2 reading of the Turban article.
3 Q. So you are saying that this letter in the Turban
4 article --- I'm sorry, you're saying this letter to the
5 editor does not raise any new issues at all than what
6 the Turban study itself raised.
7 Is that right?
8 A. I would have to read through this in a more
9 detailed manner to say for certain that no single issue
10 has been addressed. None of which we discussed today
11 are elements that hadn't been addressed, either by
12 myself reading the Turban article or by the Turban, et
13 al. in the article itself.
14 Q. But you do not raise any of those concerns in
15 your report, do you?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: No. No, not specifically.
18 BY ATTORNEY TRYON:
19 Q. Okay. Fair enough.
20 If you can follow your report now, which I'm
21 forgetting which exhibit that is, Exhibit 1. Thank you.
22 So first of all, you said you were retained by
23 Counsel for the Plaintiffs as an expert. Can you tell
24 me when you were retained, please?

1 A. I would have to pull up my invoice to give you
2 the specific date, and I'm guessing Mr. Block might have
3 that information at the ready.
4 Q. Unfortunately, I can't depose him. I would love
5 to, but I don't think he would agree to that. So as
6 best you can recall --- first of all, was it this year
7 or last year?
8 A. It was this year to the best of my recollection.
9 Q. Okay.
10 Was it after the other expert reports came out
11 or before?
12 A. I believe I was hired or retained. I don't know
13 what the correct terminology is so forgive me, after the
14 development of the additional expert reports. It was
15 the rebuttal to those reports that led to my being
16 retained to my recollection.
17 Q. I'm sorry?
18 A. From my recollection. And I'm terrible with
19 dates, so I apologize for that.
20 Q. In paragraph four, you say --- you explain what
21 you viewed and you mention the reports of Dr. Safer.
22 Does that refer to Dr. Safer's original report that was
23 filed with the Court and his rebuttal report --- strike
24 that.

1 Does that --- so he filed something with the
2 Court originally. Did you review that one?
3 A. It was the original report that I had reviewed.
4 Q. Okay.
5 So let me just be clear. So he filed an
6 original report back in --- last year and then issued a
7 new report in February of this year and then issued a
8 rebuttal report. So a total of three. Did you see all
9 three of those?
10 A. I would have to see them ---.
11 ATTORNEY BLOCK: Object to form.
12 THE WITNESS: I would have to see them in
13 front of me to know if it was something that I had read.
14 I don't know the terminology well enough to know if I
15 was reading the original report or rebuttal report or
16 the third type.
17 BY ATTORNEY TRYON:
18 Q. So one of them was expert report which was
19 issued I believe in February of this year. I believe
20 you saw that one.
21 A. Again, I would have to see the report in front
22 of me to know if it was the one I saw.
23 Q. Okay.
24 There was another one which was labeled as

1 rebuttal. Do you remember if you saw that one?
2 A. I would have to go back through my notes. I
3 don't have it in front of me, so I apologize for not
4 recalling.
5 Q. Well, let me ask you this question. Do you
6 remember how many reports you saw from Dr. Safer?
7 A. All I can say is I remember seeing at least two.
8 Q. Very good. And Dr. Adkins, how many of her
9 reports did you see?
10 A. I can't be certain, but I think I also saw two
11 of hers.
12 Q. And I'll represent to you that each of them
13 issued a rebuttal report. And did you read their
14 rebuttal reports prior to preparing your rebuttal
15 report?
16 A. I don't have the documentation in front of me in
17 terms of when I was spending time on what piece of this
18 process. That's a part of my notes that are not here
19 today.
20 Q. Do you know why you were asked to issue a
21 rebuttal report if Dr. Safer and Dr. Adkins were both
22 issuing rebuttal reports?
23 ATTORNEY BLOCK: Objection. Just don't
24 discuss any of the contents of your communications with

1 the attorneys.
2 ATTORNEY TRYON: Correct.
3 THE WITNESS: My understanding was to
4 rebut the reports of Dr. Levine and Dr. Cantor.
5 BY ATTORNEY TRYON:
6 Q. Is your rebuttal different than the rebuttals of
7 Dr. Adkins and Dr. Safer?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: Yes.
10 BY ATTORNEY TRYON:
11 Q. Pardon me?
12 A. Yes.
13 Q. Does your rebuttal report have any opinions
14 which are different from Dr. Safer and Dr. Adkins'
15 reports?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: I think it's hard without
18 the specific reports in front of me. I know they were
19 long documents and I was specifically rebutting the
20 reports of Dr. Levine and Cantor.
21 BY ATTORNEY TRYON:
22 Q. Do you have any specific reports that are not
23 rebutting Dr. Levine and Dr. Cantor?
24 A. The process of developing this rebuttal report

1 was for that specific intent.
2 Q. So you don't believe you have any original
3 opinions to report; would that be a fair statement?
4 ATTORNEY BLOCK: Objection to form.
5 THE WITNESS: I'm not --- I guess I'm not
6 sure what you mean by original opinions.
7 BY ATTORNEY TRYON:
8 Q. So let's move on. Do you recall the Costa
9 study?
10 A. Yes, we had reviewed one Costa study earlier.
11 Can you remind me of the exhibit number?
12 Q. I believe it's Exhibit 27?
13 A. All right. Okay.
14 Q. I believe that during that discussion you
15 referred to the standards in there as being rough or
16 imprecise measure and --- let me get this right, and not
17 objective criteria.
18 Do you remember that?
19 A. I had described the CGAS, the Children's Global
20 Assessment Scale, as an imprecise measure of children's
21 functioning.
22 Q. And you said not having any objective criteria;
23 can you help with that?
24 A. Yes, it's a scale from zero to a hundred that is

1 very gestalt that the clinician uses to rate a child.
2 It's not an instrument that I find clinically useful.
3 Q. Is it not clinically useful because it doesn't
4 have objective criteria?
5 A. I wouldn't say it's fair to say that there are
6 no objective criteria, but there are at times
7 contradictory objective criteria within the CGAS. And
8 again I would he have to see the CGAS in front of me to
9 point out those specifics, but there are other
10 functions, or other ways of measuring outcomes than the
11 CGAS.
12 Q. What is an objective criteria? What does that
13 term mean in other words?
14 ATTORNEY BLOCK: Objection to form.
15 THE WITNESS: I guess what would say is
16 we would want a psychometrically valid approach for
17 answering a question, ideally that is of clinical
18 relevance.
19 BY ATTORNEY TRYON:
20 Q. Can you just repeat your answer for me? I
21 didn't quite understand it.
22 A. Probably not the same language. A
23 psychometrically valid tool that in an ideal world
24 provides some kind of clinical relevance.

1 Q. Okay.
2 You said psychometrically valid tool.
3 Did I get that right?
4 A. Psychometrically validated tool, yes.
5 Q. Validated?
6 A. Yes.
7 Q. What is that?
8 A. Essentially you want to understand that the
9 measure you're using is measuring what it says to
10 measure and is reliable across multiple domains. The
11 CGAS has been widely used in research, it's just not my
12 favorite tool because I don't find it to have that
13 second domain of having that clinical utility.
14 Q. Let me ask you to take a look at paragraph 19 of
15 your opinion?
16 A. I'm looking at it now.
17 Q. You say at one point it says contrary to the
18 portrayal. Do you see that sentence?
19 A. I see that, yes.
20 Q. Contrary to the portrayal in Dr. Levine and Dr.
21 Cantor's reports, gender-affirming treatment also
22 requires a careful and thorough assessment of a
23 patient's mental health, including co-occurring
24 conditions, history of trauma, and substance abuse among

1 many other factors. My question for you is with respect
2 to your language, a careful and thorough assessment, and
3 I'd like to then know are there psychometrically
4 validated tools used to do that?
5 A. There are on occasion, and particularly when
6 we're looking at research outcomes for transgender youth
7 there are a number of psychometrically validated
8 screenings or outcome measures that are used.
9 Q. What are those?
10 A. These include most importantly the Utrecht
11 Gender Dysphoria Scale, the Body Image Scale,
12 historically what's in the Dutch data, the Toronto data,
13 and the Costa data and The Tavistock Clinic, all of them
14 were participatory in kind of the informal research
15 group that agreed to collect the same measures, so these
16 included the Achenbach, CBCL, and they use self report.
17 Q. I'm sorry. What was the first one you said
18 before Body Image Scale?
19 A. Utrecht Gender Dysphoria Scale.
20 Q. Utrecht Gender Dysphoria Scale?
21 A. Correct.
22 Q. What is that?
23 A. It's a measure of the degree and intensity of
24 gender dysphoria.

1 Q. How is it --- what does it look like? Does it
2 have a series of scale one to ten on different issues or
3 what is it?
4 A. It's a series of questions that I'd have to have
5 in front of me to give a better job of describing, but
6 it provides a rating of --- I can't remember what the
7 range is, from zero to somewhere in the low dozens, that
8 correlates with the intensity of gender dysphoria.
9 Q. Is that something that you use in your practice
10 to diagnose gender dysphoria?
11 A. It is an element that I have used.
12 Q. Do you use that with every patient?
13 A. It is not something that I use with every
14 patient. The contents of the Utrecht Gender Dysphoria
15 Scale are generally pieces that I'm getting or gathering
16 from every clinical encounter without necessarily
17 utilizing the specific tool.
18 Q. This statement, a careful and thorough
19 assessment, does that have a --- is there a source for
20 that particular standard?
21 A. There are a number of sources for this
22 particular standard. The general practice of children's
23 mental health from my guild in child adolescence
24 psychiatry, there are years of training and

1 certification in order for you to have demonstrated a
2 careful and thorough assessment. In order to get Board
3 Certified I had to do a careful and thorough assessment
4 in front of a board of examiners, so this is inherent to
5 the practice of mental health.
6 Q. Is there --- but there is no requirement that
7 these various standardized tools that you mentioned to
8 me, these psychometrically valid tools have to be used,
9 is there?
10 A. There isn't, and there is not a clinical
11 verification that they be used in every instance. For
12 the sake of these kind of studies, it's important to
13 have these validated tools so we're all speaking the
14 same language and that outcomes can be tracked over
15 time, but not necessarily in every clinical event is it
16 going to be warranted.
17 Q. If you don't use them in every clinical event,
18 then how can how can you adequately track something
19 across patients if you wanted to do a study?
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: As an example there are a
22 number of psychometrically validated tools that cannot
23 be administered at every clinical encounter, otherwise
24 they would be rendered invalid. So there's a lot of

1 nuance in these specific tools and I think that level of
2 nuance is really a clinical judgment based upon
3 professional and prevailing standards.
4 BY ATTORNEY TRYON:
5 Q. Okay.
6 So there's no objective measure of someone
7 other than --- well, let me back up. So different
8 psychiatrists would come up with different conclusions.
9 Is that right?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: I don't think that's
12 related to what I was speaking about. I think different
13 psychiatrists would utilize different instruments to
14 provide an assessment, and that's going to change from
15 person to person. I can't speak to diagnostic
16 reliability for a psychiatrist that I haven't met or
17 trained.
18 BY ATTORNEY TRYON:
19 Q. Let me ask you how long you would normally spend
20 with a child before --- or adolescent before prescribing
21 puberty blockers?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: There is not going to be a
24 single answer to that question. It really is dependent

1 on the requirements of the assessment, as well as the
2 individual factors of that child and that family.
3 BY ATTORNEY TRYON:
4 Q. Could ten minutes be long enough?
5 A. Not in my opinion.
6 Q. What about 30 minutes?
7 A. Likely not.
8 Q. How about an hour?
9 A. It would be very atypical in my practice to
10 spend that little time prior to making a recommendation
11 for puberty suppression. I do a much more thorough
12 assessment than an hour.
13 Q. So how long would a thorough assessment normally
14 take?
15 ATTORNEY BLOCK: Objection to form.
16 BY ATTORNEY TRYON:
17 Q. You said more than an hour I think?
18 A. Correct. I would say more than an hour. I
19 think maybe there's a ceiling, but not a roof. What I
20 mean by that that is there are certain criteria required
21 in order to make a recommendation for a treatment for
22 gender dysphoria to be offered. Those include a
23 diagnosis of gender dysphoria, a recognition of any
24 co-occurring mental health issues and whether or not

1 they are adequately well controlled enough to be able to
2 proceed with care. And a clear understanding of the
3 risks, benefits and alternatives of that treatment.
4 There's no specific timeframe on that as an assessment.
5 Q. How many visits would you expect to be adequate
6 for a careful and thorough assessment?
7 ATTORNEY BLOCK: Objection to form.
8 THE WITNESS: And I apologize, it's ---
9 I'm not trying to be evasive. It really is going to
10 depend upon each individual child.
11 BY ATTORNEY TRYON:
12 Q. What about is one enough? Have you ever done it
13 --- given a recommendation for puberty blocker after
14 only one visit for an hour?
15 ATTORNEY BLOCK: Compound question.
16 THE WITNESS: I have never given a
17 recommendation for puberty suppression after a one hour
18 visit personally.
19 BY ATTORNEY TRYON:
20 Q. What's the minimum time that you think is
21 adequate?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: As I said, I don't think
24 it's based on time. It's based about the content.

1 There are circumstances in which patients have been
2 followed for several years by therapists, that can
3 provide a tremendous amount of collateral information
4 including information provided by parents, family
5 members, community providers, et cetera, that can allow
6 more abbreviated assessment for some people.
7 BY ATTORNEY TRYON:
8 Q. Is someone as consistently spending only an hour
9 with one patient, with each patient for recommending
10 puberty blockers, that would look kind of like a rubber
11 stamp recommendation wouldn't it?
12 ATTORNEY BLOCK: Objection.
13 BY ATTORNEY TRYON:
14 Q. Assuming that it's happening?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: I would have to see the
17 specifics in order to make any kind of comment.
18 BY ATTORNEY TRYON:
19 Q. Isn't it fair for Dr. Levine or Cantor to
20 express concern that in actual practice that may be
21 happening?
22 ATTORNEY BLOCK: Objection to form.
23 THE WITNESS: I have not seen anywhere in
24 Dr. Cantor or Dr. Levine's report or within the

1 literature that this is a pervasive thing that is
2 happening.
3 BY ATTORNEY TRYON:
4 Q. Well, it's not tracked at all so we wouldn't
5 know, would we, one way or the other?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: It is a question that could
8 be asked. I don't think it's for me to make
9 suppositions, nor do I think it is for Dr. Cantor and
10 Dr. Levine to make suppositions about the critical care
11 of transgender youth in this context.
12 BY ATTORNEY TRYON:
13 Q. Is there any --- is there any place where you
14 report any central location where you or your clinic
15 report how much time and effort and what your thorough
16 examination is so that it can be tracked?
17 A. The site where I'm at now is part of a four-site
18 NIH trial that has published on the specific assessment
19 processes that the kids who are involved in the study
20 engage in.
21 Q. How many kids are in that trial?
22 A. I'm not a specific participant in the
23 organization of that trial, so I don't have that
24 information in front of me.

1 Q. Does your clinic report to that trial?
2 A. My gender clinic, the gender clinic within the
3 hospital that I work in, there are many patients who are
4 enrolled in that trial, yes.
5 Q. But it's certainly not mandated, right?
6 A. No.
7 Q. When these careful and thorough assessments are
8 done, what type of documentation should be used for
9 that?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: That's a very contextual
12 question. We have prevailing standards in terms of what
13 should and shouldn't be documented through various
14 professional organizations, but that's going to change
15 from state to state, country to country.
16 BY ATTORNEY TRYON:
17 Q. And what about in the State of West Virginia?
18 A. I have no knowledge of documentation
19 requirements in the State of West Virginia.
20 Q. How about in the United States in general?
21 A. As far as I'm aware, there are no universal
22 recommendations in terms of specifics of how things are
23 documented.
24 Q. Are there any organizations like the WPATH or

1 any other organizations that do give recommendations on
2 what documentation to use in America?
3 A. WPATH has certainly provided some educational
4 events in terms of best practices in documenting, but
5 these aren't specific guidelines or recommendations. I
6 think it is notable to say that the Dutch clinic in
7 particular has been quite vigorous in their production
8 of research and is quite well respected in the world in
9 terms of how things are structured, and they actually
10 don't even have a letter that their clinicians write
11 and/or see initiation of puberty suppression for
12 gender-affirming hormones.
13 ATTORNEY TRYON: Jake, if you could bring
14 up the exhibit entitled Adolescent Medicine,
15 Confidential Patient Questionnaire, which has been
16 redacted?
17 VIDEOGRAPHER: Do you want that marked?
18 ATTORNEY TYRON: Yes, please, wherever we
19 are at in the next number.
20 VIDEOGRAPHER: I believe we're at 44.
21 LAW CLERK WILKINSON: 46.
22 ATTORNEY SWAMINATHAN: 46.
23 ---
24 (Whereupon, Exhibit-46, Form, was marked

1 for identification.)
2 ---
3 ATTORNEY TRYON: If you could bring that
4 up, Jake.
5 VIDEOGRAPHER: Yes. Give me one second.
6 I'm just marking that right now. We might have to mark
7 this one physically. The program won't mark it because
8 it's a redacted document.
9 ATTORNEY TRYON: Okay. Then we'll do
10 that to bring that up. And then, if you could, Jake,
11 just scroll down in this. I just have a couple
12 questions about this form.
13 THE WITNESS: Okay.
14 ATTORNEY TRYON: Go onto the next page
15 down.
16 BY ATTORNEY TRYON:
17 Q. Have you ever seen a form like this?
18 ATTORNEY BLOCK: Objection to form. No
19 pun intended.
20 THE WITNESS: Could you be a little more
21 specific? I mean, I've seen --- this is kind of very
22 typical for a lot of intake-type documents in mental
23 health clinics or in medical clinics.
24 BY ATTORNEY TRYON:

1 Q. So you would characterize this as a typical
2 intake form?
3 ATTORNEY BLOCK: Objection.
4 THE WITNESS: I wouldn't characterize it
5 in that way. I have seen typical intake forms that
6 resemble this in some ways.
7 BY ATTORNEY TRYON:
8 Q. Would this be something that you would consider
9 adequate to document a careful and thorough assessment?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: Again, without knowing the
12 context of the individual's practice, it's impossible
13 for me to say.
14 BY ATTORNEY TRYON:
15 Q. Is this a form that you would use for careful
16 and thorough assessment of a patient's mental health?
17 ATTORNEY BLOCK: Objection to form.
18 THE WITNESS: I don't use this form. I
19 can't say whether or not I was in the context this
20 provider was practicing that I wouldn't use this form as
21 part of my assessment.
22 BY ATTORNEY TRYON:
23 Q. Fair enough. Do you use it as a part of your
24 careful thought thorough assessment of the patient's

1 mental health, are there any other forms that you expect
2 to see in the caregiver's file about that patient's
3 mental health?
4 A. Not specifically.
5 Q. This would be adequate?
6 ATTORNEY BLOCK: Objection to form.
7 THE WITNESS: Again, I can't speak to
8 the adequacy of it without understanding the context of
9 the rest of the treatment.
10 BY ATTORNEY TRYON:
11 Q. Is there any certification that you think is
12 necessary or appropriate for someone to diagnose gender
13 dysphoria?
14 A. There is no universal certification process.
15 What we have are guidelines and recommendations for
16 ensuring that folks for the mental health prospective,
17 again, medical professionals are able to diagnose gender
18 dysphoria, but from the mental health prospective, it's
19 recommended that we are licensed clinical professionals
20 that have some, if not an expert level of understanding
21 of gender identity issues and having continuing
22 education in the field. These are ongoing
23 recommendations. I wouldn't say it was the expertise,
24 but knowledge about standard of care that's congruent

1 with how other disorders are also treated.
2 Q. Let me ask you about paragraph 16 of your
3 report.
4 Do you see the last sentence there?
5 A. Yes.
6 Q. It says HB-3293 does not affect elementary
7 students --- elementary school students who are
8 transgender boys?
9 A. Yes.
10 Q. So you previously testified that puberty is ---
11 starts on the average about age 12 for males.
12 Right?
13 ATTORNEY BLOCK: Objection to form.
14 THE WITNESS: Again, I would defer to our
15 --- that's an answerable question based upon national
16 data that I don't have in front of me, but 12-ish is,
17 yes.
18 BY ATTORNEY TRYON:
19 Q. And the range would be --- from what I read, the
20 range is generally between 8 and 14 years old.
21 Right?
22 A. Again, I would defer to my endocrine colleagues,
23 but yes, that's --- that's pretty typical.
24 Q. And you're aware that boys go into Middle School

1 as early as 11 years old or sometimes even earlier.
2 Right?
3 A. I can't say that I'm familiar with how each
4 state organizes their primary and secondary education
5 systems. I'm familiar with how it was in New York and
6 Illinois, and that was occasionally the case.
7 Q. So if an 11-year-old who has not gone through
8 puberty is in Middle School, then this would definitely
9 apply to some pre-pubescent children.
10 Right?
11 ATTORNEY BLOCK: Objection to form.
12 BY ATTORNEY TRYON:
13 Q. I'm sorry, I didn't make that clear. So if
14 there are prepubescent boys that are in middle school,
15 then HB-3293 would affect them.
16 Right?
17 A. I would have to put HB-3293 in front of me to
18 --- to know specifically. I'd have to refamiliarize
19 myself with it, the specifics of it.
20 Q. I'm sorry to interrupt you.
21 A. Yeah, I wouldn't want to comment on something I
22 don't have in front of me right now.
23 Q. Okay.
24 So just so you know I had to relocate from my

1 office to my home, and there's a poodle in here that you
2 may hear. So forgive if you hear the interruption.
3 ATTORNEY BLOCK: Objection to the
4 poodle.
5 ATTORNEY TRYON: Let me take one second.
6 I will be right back.
7 THE WITNESS: Maybe now is a good time
8 for bathroom break.
9 ATTORNEY BLOCK: Let's go off the record.
10 VIDEOGRAPHER: Going off the record the
11 time reads 5:46 p.m.
12 OFF VIDEO
13 ---
14 (WHEREUPON, A SHORT BREAK WAS TAKEN.)
15 ---
16 ON VIDEO
17 ATTORNEY TYRON: Okay let's go back on
18 the record.
19 VIDEOGRAPHER: Back on the record the
20 current time reads 5:50 p.m.
21 BY ATTORNEY TRYON:
22 Q. Let me direct you to paragraph 26 of your
23 report?
24 A. Yep.

1 Q. So there's the --- let's see, starting with the
2 word prepubertal children who he insists are children
3 with non-conforming gender expression who realize at the
4 onset of puberty that their gender identity is
5 consistent with their sex assigned at birth. Their
6 understanding of their gender identity changes at the
7 onset of puberty, but their gender identity does not.
8 So that's really a circular argument unless there's some
9 objective external way of proving what that child's
10 gender identity actually is, wouldn't you agree?
11 ATTORNEY BLOCK: Objection to form.
12 THE WITNESS: I think that the research
13 that we have on inherent gender identity is relatively
14 recent and needs a little bit more robust follow-up.
15 What we have are studies of cognition as well as some
16 very limited brain imaging studies that point to some
17 element of gender identity that has an objective
18 criteria to it. These are not studies that are
19 significant enough or have enough participants for us to
20 draw any kind of significant conclusions, but it does
21 speak when paired with clinical experiences of kids who
22 have desisted that the way that they describe their
23 identity is that it is not a fix or a change in their
24 sense of self but more about the expression of their

1 behaviors and their understanding of how they fit into
2 the world that has changed.
3 Q. So as you say it's too early to really know for
4 sure which of these things it is, right?
5 ATTORNEY BLOCK: Objection to form.
6 THE WITNESS: What I would say is it's a
7 preponderance of clinical experience and the studies
8 that we do have point to this being much more likely.
9 BY ATTORNEY TRYON:
10 Q. Much more likely, is that your testimony?
11 A. Based on my clinical experiences, yes.
12 Q. But there's no way that anyone outside of ---
13 there's no objective measurement to make that
14 determination, right?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: The way that I would
17 describe it is that gender dysphoria as a diagnosis
18 includes both identity-based criteria that are objective
19 and are measured through the course of the scales that
20 we talked about earlier, as well as measures of role and
21 behavior and congruence with your body. These are
22 things that are tracked over time in the studies that we
23 have, and when a child desists from that diagnosis of
24 gender dysphoria it is clear at that point that it was

1 primarily the gender role based behaviors that were
2 leading to this diagnosis as opposed to a change in
3 identity.
4 BY ATTORNEY TRYON:
5 Q. You were freezing up on me, so let me just see
6 if I can understand this by looking at the
7 transcription. If a child explains the reasons why he
8 or she has a different gender identity, that his or her
9 natal sex, the natal sex designation then later says the
10 opposite, there is really no way of telling whether or
11 not it's just the person's gender identity or the
12 understanding of the identity has changed based on that
13 child's or person's statements.
14 Right?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: I would say to complicate
17 matters even further, a number of the studies that are
18 used to describe this desistance phenomenon were first
19 carried out under the DSM-IV. On the DSM-IV the
20 diagnosis was gender disorder in childhood. And in that
21 nomenclature, an identity that is incongruent with sex
22 assigned at birth was not one of the required elements.
23 And so there are children who are described in the
24 common parlance as transgender because they met criteria

1 for what was then gender identity disorder, who
2 nevertheless discussed any identity incongruent with
3 their sex at birth. So that makes it hard to draw firm
4 conclusions about data captured under the DSM-IV.
5 BY ATTORNEY TRYON:
6 Q. And you are familiar with that diagnostic and
7 statistical manual of mental disorders.
8 Right?
9 A. I am.
10 Q. And you cited it in your reports.
11 Right?
12 A. Correct.
13 Q. That is a manual to assist in the diagnosis of
14 mental disorders.
15 Right?
16 A. That is correct.
17 Q. Is there a value of to classifying a condition
18 as a mental disorders?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: I don't know if I can offer
21 an expert opinion on that. I have a biased --- talk
22 about a selection bias as a psychiatrist and a mental
23 health professional. I think it's important for us to
24 destigmatize mental illness as much as possible, so

1 whatever is going to allow folks access to care, I'm
2 relatively neutral on placing a value on whether or not
3 something is a diagnosis or not.
4 BY ATTORNEY TRYON:
5 Q. A manual does not recommend any treatments, only
6 tools for diagnosis.
7 Is that right?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: The main goal of DSM for
10 classifying diagnoses and ensuring stability or
11 reliability of those diagnoses across practice
12 locations.
13 BY ATTORNEY TRYON:
14 Q. That does not recommend or even provide any
15 treatments.
16 Right?
17 A. The text of the DSM often recommends or
18 describes treatments.
19 Q. Does it describe treatments for gender
20 dysphoria?
21 A. The text was recently revised for gender
22 dysphoria, and so I really want to see the text in front
23 of me for me to talk about it.
24 Q. So in the DSM-V you don't know if it has any

1 recommendations for treatments in it for gender
2 dysphoria?
3 A. I don't know in the revised text how much was
4 changed without familiarizing myself with it. And I'm
5 happy to look at it. It's a quick read, but primarily
6 the DSM-V as it comes to gender dysphoria is a
7 description of the phenomenology not a recommendation
8 for treatments.
9 Q. And when was it revised?
10 A. It was just released about a week ago, maybe
11 two.
12 Q. Let me ask you to take a look at your report,
13 paragraph 51. You say to the contrary, as noted
14 previously, stigma and discrimination have been shown to
15 have a profoundly harmful impact on the mental health of
16 transgender people and other minority groups. Now, when
17 you say stigma and discrimination, you're not referring
18 specifically to not allowing, as using your term, a
19 transgender girl to participate on a girls sports team
20 to be that type of stigma or discrimination, are you?
21 ATTORNEY BLOCK: Objection to the form.
22 THE WITNESS: The reference that I
23 referred to in my report I would want to look at,
24 because they had an operational term for stigma and

1 discrimination. However, there has been literature, I
2 can't remember the names of the authors or the date of
3 the study, that look at specific laws that are enacted
4 to discriminate against LGBT people and impact on both
5 mental health and medical health, and so those kind of
6 discrimination laws certainly do have real felt impact
7 for transgender folks.
8 BY ATTORNEY TRYON:
9 Q. So are you saying that this sentence is
10 referring to a law such as HB-3293 or not?
11 A. I think, as I stated, for the sake of this
12 expert report, the Yhuto reference from 2015 is what I'm
13 using to craft that statement.
14 Q. I'm sorry, the what from 2015?
15 A. Footnote number 21.
16 Q. What are those profound impacts of mental health
17 that you are referring to?
18 A. Well, as I mentioned earlier in my report are
19 correlation between many exposures that transgender
20 individuals have and increased rates of suicide, self
21 harm, substance use, exposure to trauma that have
22 certainly profound negative impacts for the folks who
23 are experiencing them.
24 Q. And of those harms that you have just mentioned

1 are you aware of any of them caused by --- to a child or
2 person who was not --- who was a transgender female not
3 allowed to participate on a girls or woman's athletic
4 team?
5 A. As I had testified to earlier, I think I said
6 I've had two or three patients who are excluded from
7 sports teams, one of which was a child who was assigned
8 male at birth, who at age six was not allowed to
9 participate in the sport. I can't remember what support
10 it was. This was a child who was heckled and kicked out
11 of the group of friends that were participating in that
12 sport which led to negative mental health consequences
13 for that individual child.
14 Q. What specific --- I presume that's thoughts of
15 suicidality.
16 Right?
17 A. Thankfully at that age they were not.
18 Q. How did that child adapt to the situation?
19 A. Well, we worked with the child, the family and
20 the sports team, to understand what this child may need
21 and ended up --- I think it was T ball, I think ended up
22 joining the T ball team.
23 Q. So how much --- how much of a delay was there
24 between wanting to join the T ball team and being

1 allowed to join the T ball team?
2 A. This was years ago, so I don't recall the
3 specifics.
4 Q. Would it be your testimony that any delay at all
5 between the time of identifying for a natal male
6 identifying as a female and participating on a female
7 team would be profoundly harmful?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: I have not seen any studies
10 that have asked that question or could speak to the
11 duration of time between exclusion from an activity and
12 the mental health impacts.
13 BY ATTORNEY TRYON:
14 Q. Is it your position that as soon as the child or
15 person who is a natal male determines or identifies as a
16 female, that that person should be immediately allowed
17 to play on female teams?
18 ATTORNEY BLOCK: Objection to form and
19 scope.
20 THE WITNESS: I'm not able to answer that
21 question. I think that's out of the scope of my
22 expertise.
23 BY ATTORNEY TRYON:
24 Q. Let me ask it differently because I didn't ask

1 it quite as artfully as I could have. You indicated
2 profoundly harmful or have a profoundly harmful impact.
3 So if a child or adolescent or adult, adult meaning
4 anyone through collegiate age, were to be a natal male
5 and identify as a female and is not allowed to
6 immediately participate on female teams, would that be
7 profoundly harmful, would it have a profoundly harmful
8 impact on their mental health?
9 A. That would require an individualized assessment
10 of that child or young adult in order to understand the
11 potential impacts specific to that individual.
12 Q. What if they were required to wait a full year,
13 would that be profoundly --- have a profoundly harmful
14 impact on the mental health of that person?
15 ATTORNEY BLOCK: Objection to form.
16 THE WITNESS: Same answer.
17 BY BY ATTORNEY TRYON:
18 Q. Well as a general rule, do you have any opinion
19 as a general rule?
20 ATTORNEY BLOCK: Objection to form.
21 THE WITNESS: General rule of what? I'm
22 not understanding the question.
23 BY ATTORNEY TRYON:
24 Q. Let me try again. So is there --- do you have a

1 general --- I mean you made a generalized statement here
2 in the last sentence of paragraph 51. So my question
3 is, as it pertains to this generalized statement, is
4 there any delay that would not cause a profoundly
5 harmful impact on the mental health of transgender
6 people if they are denied the opportunity to immediately
7 participate in the sports team of their gender identity?
8 ATTORNEY BLOCK: Objection to form and
9 characterization.
10 THE WITNESS: It's a long sentence with a
11 lot of clauses. I'm trying to --- I'm trying to parse
12 them all out to make sure that I'm answering this
13 accurately. As I testified to in my report, there's
14 evidence of discrimination, stigma and bias leading to
15 individual harms. The specific manifestation of those
16 harms are highly individualized and require individual
17 assessment of each child and family in order to know.
18 Which is why you can't speak to the specific impacts for
19 each individual child, but what we know are
20 population-based data.
21 Q. Is it your view that if after a psychiatrist or
22 psychologist or appropriate healthcare individual
23 determines that there would be a profoundly harmful
24 impact that healthcare professional should be the one to

1 determine whether or not the child should be allowed to
2 participate on a girl's team?
3 A. I don't have a specific opinion about how sports
4 administration vary from state to state. I know it's
5 very different from state to state. What I would say is
6 from a mental health perspective my goal is to help our
7 kids access spaces that are going to be health promoting
8 and build resilience. I think it's important for health
9 professionals to be involved in the decisions that are
10 made, but I can't speak to the legislative process
11 within the scope of my expertise.
12 Q. Is the mental health of the cisgender females
13 who might be at a disadvantage of the participation of a
14 transgender female on the team, is their mental health
15 important?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: I would say first that the
18 mental health of cisgender children who have
19 participated in sports is certainly attestable
20 hypothesis to explore and it's not research that I have
21 seen, nor that I'm aware that it exists. Beyond that,
22 you know, my expertise does not extend to this
23 population as you have asked this question.
24 BY ATTORNEY TRYON:

1 Q. So then let me ask that specifically, have you
2 treated any cisgender females that have been upset about
3 transgender females participating on the girls team?
4 A. I have treated cisgender girls who have had
5 transgender teammates. I have not treated anybody who
6 has expressed any concern or harm from that.
7 Q. Do you acknowledge that there are those
8 cisgender girls who are suffering from psychological
9 harm from that?
10 ATTORNEY BLOCK: Objection to form.
11 THE WITNESS: I would not acknowledge
12 that. That is not data that I have seen nor has been my
13 personal experience with patients that I have seen or
14 other colleagues who have described this.
15 BY ATTORNEY TRYON:
16 Q. Are you aware that some of Lia Thomas' cisgender
17 teammates are very upset about Lia Thomas participating
18 on the female swimming team?
19 ATTORNEY BLOCK: Objection to form.
20 THE WITNESS: I haven't read much about
21 Lia Thomas or her teammates prior to today, so I'm not
22 aware of any specifics to that.
23 BY ATTORNEY TRYON:
24 Q. Have you read anything about that incident ---

1 excuse me, that situation?
2 A. Well, I've read something today.
3 Q. Prior to today?
4 A. Which did not mention about teammates being
5 upset. I've heard about it, but I have not read it.
6 Q. So you're aware of it?
7 A. I'm vaguely aware of it, yes. I've not done any
8 primary research into it.
9 ATTORNEY BLOCK: Could we get a time
10 check?
11 VIDEOGRAPHER: It looks like I got about
12 three minutes left.
13 ATTORNEY TRYON: I speak really fast.
14 BY ATTORNEY TRYON:
15 Q. Well, is there benefits in --- for example, you
16 said that HB --- you've read HB-3293 and you're aware
17 that it does require --- well, first of all, are you
18 aware that HB-3293 does not use the word transgender at
19 all or trans woman or trans girl at all?
20 A. I would want to look at it specifically to
21 double check that that's correct, but I would take your
22 word for it.
23 Q. And so in HB-3293, it does require that all
24 biological males must --- let me rephrase that, that

1 biological males may not compete on girls teams.
2 Do you understand that?
3 A. I don't, because biological male as a term is
4 certainly up for debate.
5 Q. Which word would you like to use?
6 A. I don't know if there's going to be an answer
7 for that in the context of this particular bill. I
8 think ---.
9 Q. How about natal male, does that work?
10 A. Sure. We can use that. I would typically use
11 assigned male at birth, but yes.
12 Q. Okay.
13 So natal males under this Bill are not allowed
14 to participate on girls sports teams.
15 Do you understand that?
16 ATTORNEY BLOCK: Objection to form.
17 THE WITNESS: Yeah. And I apologize I
18 really don't mean to be parsing, if the text of the Bill
19 is biological males, what that just means is that that
20 is a complex term that doesn't have a universal
21 acceptance. But I understand that the goal of the Bill
22 is for folks assigned male at birth, not to participate
23 in women's sports teams, yes.
24 BY ATTORNEY TRYON:

1 Q. If a --- to use your term, a person assigned
2 male at birth is told that that person may not
3 participate on girls sports, and as in so many other
4 things in life, you are told that's the rule and you
5 have to live with it, is there value in learning coping
6 skills to deal with rules that you don't agree with and
7 abide by them?
8 ATTORNEY BLOCK: Objection to form.
9 THE WITNESS: I guess the way I would
10 approach it is that if we look at the data, clinical
11 experiences and from the testimonies of transgender
12 individuals that they face enough on a daily basis
13 stigma discrimination exclusion, that they all would
14 benefit from a healthy development of coping skills.
15 Nowhere in the field of psychiatry is it recommended
16 that we expose people to traumatic events for them to
17 develop coping skills to manage through.
18 BY ATTORNEY TRYON:
19 Q. Well, not to intentionally do so, but there's
20 laws and rules that you made that said you have to live
21 with those rules then it's your position that the rules
22 need to be changed to comply with the wishes of that
23 person?
24 ATTORNEY BLOCK: Objection to form.

1 THE WITNESS: Again my expert testimony
2 is rebutting the testimony of Dr. Levine and Cantor. I
3 can't speak to the specific legislative processes in
4 terms of the best way for states to approach a complex
5 issue such as this.
6 ATTORNEY TRYON: I have no further
7 questions. Thank you for your time I appreciate it.
8 THE WITNESS: Thank you. What is your
9 poodle's name? Can I ask that off the record?
10 ATTORNEY BLOCK: We don't have any
11 Redirect questions. Dr. Janssen will review the
12 transcript.
13 ATTORNEY GREEN: This is Roberta Green on
14 behalf of WVSSAC. No questions.
15 ATTORNEY MORGAN: This is Kelly Morgan on
16 behalf of the West Virginia Board of Education and
17 Superintendant Burch. I don't have any questions.
18 Thank you.
19 ATTORNEY DENIKER: Dr. Janssen, thank you
20 for your time today, this is Susan Deniker. I have no
21 questions.
22 THE WITNESS: Thank you, guys.
23 VIDEOGRAPHER: Going off the record. The
24 current time reads 6:18 p.m.

1 * * * * * * * *
2 VIDEOTAPED DEPOSITION CONCLUDED AT 6:18 P.M.
3 * * * * * * * *
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

1 STATE OF WEST VIRGINIA)

2 CERTIFICATE

3 I, Nicole Montagano, a Notary Public in
4 and for the State of West Virginia, do hereby
5 certify:

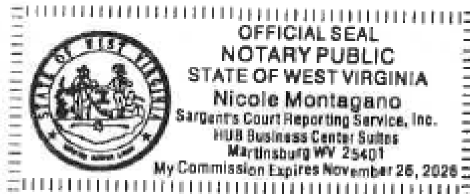
6 That the witness whose testimony appears
7 in the foregoing deposition, was duly sworn by me
8 on said date, and that the transcribed deposition
9 of said witness is a true record of the testimony
10 given by said witness;

11 That the proceeding is herein recorded
12 fully and accurately;

13 That I am neither attorney nor counsel
14 for, nor related to any of the parties to the
15 action in which these depositions were taken, and
16 further that I am not a relative of any attorney
17 or counsel employed by the parties hereto, or
18 financially interested in this action.

19 I certify that the attached transcript
20 meets the requirements set forth within article
21 twenty-seven, chapter forty-seven of the West
22 Virginia.

23



24 Nicole Montagano,

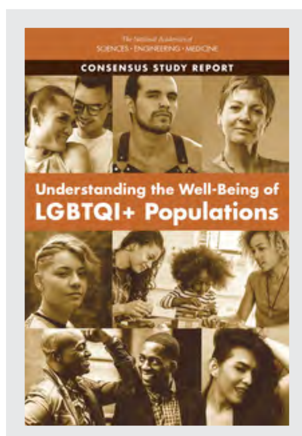
25 Court Reporter

Exhibit E

NATIONAL ACADEMIES Sciences Engineering Medicine

NATIONAL ACADEMIES PRESS Washington, DC

This PDF is available at http://nap.naptionalacademies.org/25877



Understanding the Well-Being of LGBTQI+ Populations (2020)

DETAILS

436 pages | 6 x 9 | PAPERBACK
ISBN 978-0-309-68081-3 | DOI 10.17226/25877

CONTRIBUTORS

Charlotte J. Patterson, Mart n-Jos Sep lveda, and Jordyn White, Editors; Committee on Understanding the Well-Being of Sexual and Gender Diverse Populations; Committee on Population; Division of Behavioral and Social Sciences and Education; National Academies of Sciences, Engineering, and Medicine

BUY THIS BOOK

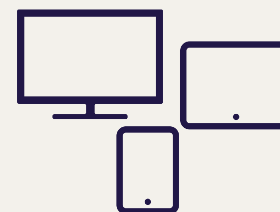
FIND RELATED TITLES

SUGGESTED CITATION

National Academies of Sciences, Engineering, and Medicine 2020. *Understanding the Well-Being of LGBTQI+ Populations*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25877.

Visit the National Academies Press at nap.edu and login or register to get:

- Access to free PDF downloads of thousands of publications
- 10% off the price of print publications
- Email or social media notifications of new titles related to your interests
- Special offers and discounts



All downloadable National Academies titles are free to be used for personal and/or non-commercial academic use. Users may also freely post links to our titles on this website; non-commercial academic users are encouraged to link to the version on this website rather than distribute a downloaded PDF to ensure that all users are accessing the latest authoritative version of the work. All other uses require written permission. (Request Permission)

This PDF is protected by copyright and owned by the National Academy of Sciences; unless otherwise indicated, the National Academy of Sciences retains copyright to all materials in this PDF with all rights reserved.

se 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 3 of 438 PageID #: 22

Understanding the Well-Being of LGBTQI+ Populations

Committee on Understanding the Well-Being of Sexual and Gender Diverse Populations

Charlotte J. Patterson, Martín-José Sepúlveda, and Jordyn White, *Editors*

Committee on Population

Division of Behavioral and Social Sciences and Education

A Consensus Study Report of

The National Academies of
SCIENCES · ENGINEERING · MEDICINE

THE NATIONAL ACADEMIES PRESS
Washington, DC
www.nap.edu

Copyright National Academy of Sciences. All rights reserved.

THE NATIONAL ACADEMIES PRESS 500 Fifth Street, NW Washington, DC 20001

This activity was supported by contracts between the National Academy of Sciences and Gilead Sciences (award no. 05352), the Sexual and Gender Minority Research Office of the National Institutes of Health (award no. 75N98019F00850), the Robert Wood Johnson Foundation (award no. 75874), the TAWANI Foundation (unnumbered), and the Tegan and Sara Foundation (unnumbered). Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project.

International Standard Book Number-13: 978-0-309-68081-3
International Standard Book Number-10: 0-309-68081-6
Digital Object Identifier: https://doi.org/10.17226/25877
Library of Congress Control Number: 2020949996

Additional copies of this publication are available from the National Academies Press, 500 Fifth Street, NW, Keck 360, Washington, DC 20001; (800) 624-6242 or (202) 334-3313; http://www.nap.edu.

Copyright 2020 by the National Academy of Sciences. All rights reserved.

Printed in the United States of America

Suggested citation: National Academies of Sciences, Engineering, and Medicine. (2020). *Understanding the Well-Being of LGBTQI+ Populations*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25877.

Copyright National Academy of Sciences. All rights reserved.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, nongovernmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The **National Academy of Engineering** was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. John L. Anderson is president.

The **National Academy of Medicine** (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the **National Academies of Sciences, Engineering, and Medicine** to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The National Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the **National Academies of Sciences, Engineering, and Medicine** at **www.nationalacademies.org**.

Copyright National Academy of Sciences. All rights reserved.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Consensus Study Reports published by the National Academies of Sciences, Engineering, and Medicine document the evidence-based consensus on the study's statement of task by an authoring committee of experts. Reports typically include findings, conclusions, and recommendations based on information gathered by the committee and the committee's deliberations. Each report has been subjected to a rigorous and independent peer-review process and it represents the position of the National Academies on the statement of task.

Proceedings published by the National Academies of Sciences, Engineering, and Medicine chronicle the presentations and discussions at a workshop, symposium, or other event convened by the National Academies. The statements and opinions contained in proceedings are those of the participants and are not endorsed by other participants, the planning committee, or the National Academies.

For information about other products and activities of the National Academies, please visit www.nationalacademies.org/about/whatwedo.

Copyright National Academy of Sciences. All rights reserved.

COMMITTEE ON UNDERSTANDING THE STATUS AND WELL-BEING OF SEXUAL AND GENDER DIVERSE POPULATIONS

CHARLOTTE J. PATTERSON (*Cochair*), Department of Psychology, University of Virginia
MARTÍN-JOSÉ SEPÚLVEDA (*Cochair*), Health Systems and Policy Research, IBM Corporation (*retired*); CLARALUZ Consulting LLC
M.V. LEE BADGETT, Department of Economics, University of Massachusetts Amherst
MARLON M. BAILEY, Department of Women and Gender Studies, School of Social Transformation, Arizona State University
KATHARINE B. DALKE, Department of Psychiatry and Behavioral Health and Humanities, Pennsylvania State University College of Medicine
ANDREW R. FLORES, Department of Government, School of Public Affairs, American University
GARY J. GATES, *retired*
ANGELIQUE C. HARRIS, Department of Medicine, Boston University Medical Campus, Boston University
MARK L. HATZENBUEHLER, Department of Psychology, Harvard University
NAN D. HUNTER, Georgetown University Law Center
TONIA C. POTEAT, Department of Social Medicine, University of North Carolina Chapel Hill
SARI L. REISNER, Brigham and Women's Hospital, Harvard Medical School, Harvard T.H. Chan School of Public Health, and Fenway Health
STEPHEN T. RUSSELL, Department of Human Development and Family Sciences, University of Texas at Austin
DEBRA J. UMBERSON, Population Research Center, University of Texas at Austin

JORDYN WHITE, *Study Director*
KELLAN BAKER, *Consultant*, *Bloomberg School of Public Health, Johns Hopkins University*
KENNE DIBNER, *Senior Program Officer*
TARA BECKER, *Program Officer*
MARY GHITELMAN, *Senior Program Assistant*
MALAY K. MAJMUNDAR, *Director, Committee on Population*

Copyright National Academy of Sciences. All rights reserved.

COMMITTEE ON POPULATION

KATHLEEN MULLAN HARRIS (*Chair*), Department of Sociology, Carolina Population Center, and National Longitudinal Study of Adolescent to Adult Health, University of North Carolina at Chapel Hill
DEBORAH BALK, Marxe School of Public and International Affairs, and CUNY Institute for Demographic Research, Baruch College of the City University of New York
NANCY BIRDSALL, Center for Global Development, Washington, DC
ANN K. BLANC, Population Council, New York, NY
COURTNEY C. COILE, Department of Economics, Wellesley College
VICKI A. FREEDMAN, Institute for Social Research, University of Michigan
DANA A. GLEI, Georgetown University
ROBERT A. HUMMER, Department of Sociology, and Carolina Population Center, University of North Carolina at Chapel Hill
HEDWIG (HEDY) LEE, Department of Sociology, Washington University in St. Louis
JENNIFER J. MANLY, Taub Institute for Research on Alzheimer's Disease and the Aging Brain, Department of Neurology, Columbia University
EMILIO A. PARRADO, Department of Sociology and Population Studies Center, University of Pennsylvania
ANNE R. PEBLEY, Department of Community Health Sciences, Department of Sociology, California Center for Population Research, Bixby Center on Population and Reproductive Health, University of California, Los Angeles
ISABEL V. SAWHILL, The Brookings Institution, Washington, DC
REBECA WONG, University of Texas Medical Branch at Galveston

MALAY K. MAJMUNDAR, *Director*

Copyright National Academy of Sciences. All rights reserved.

se 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 9 of 438 PageID #: 22

Acknowledgments

In 2011 the Institute of Medicine of the U.S. National Academies of Sciences, Engineering, and Medicine (National Academies) published *The Health of Lesbian, Gay, Bisexual, and Transgender People*, a landmark report about the health of this population. The report discussed the existing body of research about the health of lesbian, gay, bisexual, and transgender (LGBT) people, identified opportunities for further research, and made recommendations for actions to improve the health of LGBT people. By mid-2020 the report had been downloaded more than 15,000 times, and it had been used by researchers, educators, attorneys, health care professionals, government workers, journalists, community groups, and many others. It has influenced the work of the National Institutes of Health, the Centers for Disease Control and Prevention, and other governmental and nongovernmental organizations.

Since 2011 much has changed. Some of the challenges identified in the 2011 volume have been met, but others certainly remain. Research on LGBT health has burgeoned, but there is still much to learn. In 2019, the National Academies convened a committee to assess the current state of knowledge about the status and well-being of sexual and gender diverse people to identify important gaps in knowledge and to recommend research and research infrastructure actions to help fill these gaps. The committee's work was supported by the Robert Wood Johnson Foundation, the Gilead Foundation, the Sexual and Gender Minority Research Office at the National Institutes of Health, the TAWANI Foundation, and the Tegan and Sara Foundation.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 10 of 438 PageID #: 22

The task set for the committee was broader than the one addressed by the 2011 report. The committee was charged with reviewing data on people with differences of sex development (sometimes called "intersex"), as well as those who could, by virtue of their identities, behaviors, or attractions, either identify or be seen as LGBT. In undertaking its work, the committee was asked to address not only the mental and physical health of these populations, but also additional aspects of well-being in their lives as lived in families, communities, and in the context of cultural, legal, educational, economic, and religious institutions. The committee undertook to provide an overview of both existing evidence and of future research needs in these areas.

Thus, this report presents a considerable body of information across a wide array of topics and disciplines. The report was made possible by a year of discussion, information gathering, review, and deliberation among committee members, aided by a dedicated staff. We thank all of the committee members for their dedication and spirit as well as for their invaluable expertise.

In addition to the invited guests, reviewers, and members of the public who contributed to this report, and on behalf of the entire committee, we want to thank the National Academies staff members who made this report possible. In particular, we extend our sincere thanks to Jordyn White, study director; Kenne Dibner, senior program officer; Tara Becker, program officer; Kellan Baker, project consultant; Mary Ghitelman, senior program assistant; and Malay K. Majmundar, director of the Committee on Population. We would also like to thank Daniel Desautels for his contribution during his time at the National Academies as a Christine Mirzayan Science and Technology Policy Graduate Fellow. Without the constant support and guidance from these individuals, the report could not have been completed.

This Consensus Study Report was reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise. The purpose of this independent review is to provide candid and critical comments that will assist the National Academies of Sciences, Engineering, and Medicine in making each published report as sound as possible and to ensure that it meets the institutional standards for quality, objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process.

We thank the following individuals for their review of this report: Walter O. Bockting, Program for the Study of LGBT Health, Columbia University Irving Medical Center; Christopher (Kitt) S. Carpenter, Vanderbilt LGBT Policy Lab, Vanderbilt University; Laura E. Durso, executive director and chief learning officer, Whitman-Walker Institute; Heath Fogg Davis, Gender, Sexuality and Women's Studies, Political Science, Temple University; Donald Haider-Markel, Kentucky University; Jennifer S. Hirsch,

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 11 of 438 PageID #: 22

Department of Sociomedical Sciences, Mailman School of Public Health, Columbia University; Trevon D. Logan, Department of Economics, Ohio State University; Christy Mallory, School of Law, University of California, Los Angeles; Wendy D. Manning, Department of Sociology, Bowling Green State University; Jae M. Sevelius, Department of Medicine, Division of Prevention Science, University of California, San Francisco; and Russell Toomey, Family Studies and Human Development, University of Arizona.

Although the reviewers listed above provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations of this report, nor did they see the final draft before its release. The review of this report was overseen by Marshall H. Chin, Department of Medicine, University of Chicago, and Sara Rosenbaum, Department of Health Policy and Management, Milken Institute School of Public Health, George Washington University. They were responsible for making certain that an independent examination of this report was carried out in accordance with the standards of the National Academies and that all review comments were carefully considered. Responsibility for the final content rests entirely with the authoring committee and the National Academies.

Charlotte J. Patterson and Martín-José Sepúlveda, *Cochairs*
Committee on Understanding the Status and Well-Being of
Sexual and Gender Diverse Populations

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

Contents

Summary **1**

PART I BACKGROUND AND CONTEXT

Prologue **17**
References, 18

1 Introduction **19**
Background, 19
Charge to the Committee, 21
Key Terms and Definitions, 22
Addressing the Charge, 26
Committee's Approach to the Study, 29
Methods and Approach to the Evaluation of Evidence, 30
References, 33

2 Health and Well-Being in Diverse Populations: Frameworks and Concepts **35**
Social Ecology, 37
Social Constructionism, 38
Stigma, 39
Intersectionality, 41
Identity Affirmation, 42
Life Course, 44
Summary, 46
References, 47

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 14 of 438 PageID #: 22

PART II UNDERSTANDING SEXUAL AND GENDER DIVERSE POPULATIONS

3 Demography and Public Attitudes of Sexual and Gender Diverse Populations **53**
Prevalence, 54
The Role of Public Attitudes, 57
Geographic Variation, 61
Gender and Sexual Orientation, 63
Age, 64
Race and Ethnicity, 65
Child Rearing, 66
Summary and Conclusions, 67
References, 68

4 Current State of Data Collection **73**
Types of Data Collection, 74
Metrics and Measurement, 82
Summary and Conclusions, 87
References, 88

PART III DOMAINS OF WELL-BEING

5 Law and Legal Systems **95**
The New Baseline, 96
Continuing Gaps in Legal Protection, 97
Areas of Law That Lack Protections Against Discrimination, 108
Religious Liberty Exceptions to Anti-Discrimination Laws, 112
Summary and Conclusions, 114
References, 116

6 Public Policy and Structural Stigma **121**
Public Policy, Social Movements, and Public Opinion, 121
Structural Stigma, 131
Summary and Conclusions, 153
References, 155

7 Community and Civic Engagement **165**
The Nature of Sexual and Gender Diverse Communities, 165
The Importance of Space to Sexual and Gender Diverse Communities, 168
Civic and Political Involvement, 185
Summary and Conclusions, 188
References, 189

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 15 of 438 PageID #: 22

8 **Families and Social Relationships** 197
Social and Family Relationships in Childhood
and Adolescence, 198
Parenting and Other Family Relationships, 203
Close Relationships in Adulthood, 208
Summary and Conclusions, 217
References, 219

9 **Educational Environments** 231
Discriminatory Experiences at School, 233
Educational Attainment, 234
Education Laws and School Policies, 236
School Climate, 237
Sexual and Gender Diverse Parents and Their Children, 242
Summary and Conclusions, 243
References, 245

10 **Economic Well-Being** 253
Socioeconomic Status, 254
Workforce Issues, 265
Housing, 270
Summary and Conclusions, 274
References, 277

11 **Physical and Mental Health** 287
Physical Health, 289
Sexual and Reproductive Health, 298
Violence and Victimization, 305
Mental and Behavioral Health, 308
Summary and Conclusions, 316
References, 319

12 **Coverage, Access, and Utilization of Evidence-Based Health Care** 349
Coverage, Access, and Utilization, 350
Gender-Affirming Care for Transgender People, 360
Conversion Therapy, 368
Intersex Genital Surgery, 370
Summary and Conclusions, 379
References, 381

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 16 of 438 PageID #: 22

PART IV RESEARCH NEEDS

13 Recommendations **397**
Population Data, 400
Measurement Challenges, 402
Critical Data Gaps, 403
Data Use, 404
Evidence-Based Programming and Interventions, 405
Conclusion, 406
Reference, 406

Appendixes

A Summary of Prior Related National Academies Reports and Activities 407
B Agenda: Public Seminar on Amplifying Visibility and Increasing Capacity for Sexual and Gender Diverse Populations 411
C Biographical Sketches of Committee Members and Staff 415

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 17 of 438 PageID #: 22

Summary

At more than 11 million, the number of self-identified lesbian, gay, bisexual, and transgender (LGBT) individuals living in the United States is roughly equivalent to the population of Ohio. The LGBT population has increased substantially over the past decade, with much of this growth driven by younger generations, women, bisexual people, and racial and ethnic minorities. In a shift from prior years, a majority of Americans now approve of same-sex relationships and support legal protections to ensure fundamental civil liberties on the basis of sexual orientation and gender identity.

The laws, too, have changed: in 2015 the U.S. Supreme Court ruling in *Obergefell v. Hodges* (576 U.S. 644) extended marriage equality for same-sex couples nationwide. In 2020, the Supreme Court ruled in *Bostock v. Clayton County* (140 S. Ct. 1731) that the prohibition of sex discrimination in Title VII of the Civil Rights Act protects individuals from discrimination based on sexual orientation or gender identity in employment. Many states, municipalities, and private corporations have expanded nondiscrimination protections in workplaces, health care settings, and schools to include sexual orientation and gender identity. The demographic shifts observed in LGBT populations challenge researchers and policy makers to collect more and better data and to consider the degree to which research questions, media discussions, and policy decisions reflect the most pressing needs of these populations and the contemporary challenges they face (Conclusions 3-1, 3-2).

As the population evolves, so do the terms used to describe individuals who identify as or exhibit attractions to people outside of the traditional

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 18 of 438 PageID #: 22

male-female gender binary. The acronym LGBTQ is often used in place of LGBT, in which the "Q" may refer to queer or questioning. In some contexts, the acronym is expanded further to include "I" for intersex, "A" for asexual or ally, or "+" as an acknowledgment of the diversity of non-binary and gender-nonconforming individuals.

Throughout this report, the phrase "sexual and gender diverse" is used to describe individuals who identify as lesbian, gay, bisexual, transgender, queer, intersex, non-binary, or who exhibit attractions and behaviors that do not align with heterosexual or traditional gender norms. The committee acknowledges that no term is perfect or completely inclusive, and our intention is not to promote the phrase or its acronym, SGD, for widespread use. Instead, the goal is to highlight the variety of identities and communities within SGD populations and the need for greater understanding of the differences that exist within and between them.

A GROWING NEED FOR ENHANCED DATA COLLECTION

Despite the population trends, many current national surveys and other data collection instruments lack measures of sexual orientation, gender identity, and sexual behavior and attraction, which makes it difficult to accurately report the size and other characteristics of SGD populations. Questions about sexual orientation and gender identity that do appear in data collection instruments are presented inconsistently with differing terms and are often separated from other demographic measures (Conclusion 4-1). Gaps in gender identity data collection preclude insights into trends in transgender population size over time, and population-level data about people with intersex traits are not available at all. In addition, little research has been conducted on sexual attraction and behaviors, and almost no population-level data exist for people with intersex traits (Conclusion 4-2).

To address the lack of broad and consistent data, the National Academies of Sciences, Engineering, and Medicine convened a committee of experts to review the available evidence and identify future research needs related to the well-being of sexual and gender diverse populations across the life course. The committee focused on eight domains of well-being: the effects of various laws and the legal system on SGD populations; the effects of various public policies and structural stigma; community and civic engagement; families and social relationships; education, including school climate and level of attainment; economic experiences (e.g., employment, compensation, and housing); physical and mental health; and health care access and gender-affirming interventions. The well-being of an individual can be thought of as an outcome of experiences with family and personal relationships, as well as interactions with many societal sectors and such systems as education, employment, and government.

Copyright National Academy of Sciences. All rights reserved.

CHANGES TO THE LEGAL LANDSCAPE

SGD populations come into contact with the law in a variety of contexts, including employment, health care, housing, public accommodations, interactions with the criminal justice system, and government-administered systems, such as foster care, adoption, and immigration. In some of these realms, there have been important reforms that have enhanced the quality of life for SGD people; in others, mistreatment and discrimination remain frequent occurrences, especially for marginalized groups within SGD populations. In the face of changing public attitudes as well as evolving law, the effect of the legal system on the well-being of these groups is uneven and, at times, contradictory (Conclusion 5-1). Approximately 50 percent of the U.S. population lives where there is a state law that explicitly protects SGD people from at least one form of discrimination. The laws pertaining to such issues as gender markers on essential documents, family proceedings, and religious exemptions from anti-discrimination laws vary greatly in scope between levels of government and across states (Conclusion 5-2).

Mistreatment during interactions with the police and the prison system is a common experience for SGD people (Conclusion 5-3). The criminalization of HIV exposure and the criminalization of sex work disproportionately affect homeless youth and transgender women, especially transgender women of color. Data suggest that sexual orientation and gender identity bias and hate crimes have increased since 2013, and although they account for a small share of all hate crimes, they tend to be more violent and result in severe bodily injury.

EFFECTS OF PUBLIC POLICY AND STIGMA

Policies seldom change without outside social forces organizing to create that change. Policy advocates and social movements can activate public opinion by drawing attention to social problems. Recently, the attitudes of adults in the United States have undergone a massive shift in accepting SGD populations and on numerous policies that would further the well-being of SGD people. However, the pursuit of policies likely to garner public favorability can potentially stigmatize or erase certain SGD groups, such as bisexual and transgender people (Conclusion 6-1). The attitudes of the general public affect public policies both directly and indirectly. In general, the emergence of more inclusive laws and policies is often perceived as a signal that society has changed to be less stigmatizing of SGD populations (Conclusion 6-2).

The well-being of SGD populations is affected by stigma, which can occur at individual, interpersonal, and structural levels. The concept of stigma helps explain how dominant cultural beliefs and differences in

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 20 of 438 PageID #: 22

access to power can lead to labeling, stereotyping, separation, status loss, and discrimination for those who do not align with societal norms. Structural stigma—which includes institutional policies and practices, as well as public attitudes—is an important mechanism that contributes to inequalities for SGD populations across numerous domains that are essential for living healthy, productive, and fulfilling lives, including socioeconomic well-being, physical and mental health, and physical safety (Conclusion 6-3).

There is now a growing body of evidence that structural stigma affects the health and well-being of people of diverse sexualities and genders, but there has been little research on the ways in which structural stigma develops and evolves over the life course. Furthermore, most structural stigma research has focused on gay men and lesbian women and has not considered intersectional characteristics such as race, ethnicity, gender identity, geography, and socioeconomic status (Conclusion 6-4).

COMMUNITY AND CIVIC ENGAGEMENT

SGD communities represent a variety of racial, ethnic, and cultural identities and experiences. Over the past several years, spaces for public convening and engagement in social, cultural, and personal activities have diminished substantially for SGD people. Online SGD communities often arise out of the need for information, connection, and support. Because access to space is linked to participation in public culture, which is also influenced by the intersections of race, gender, sexuality, and social class, less visible and marginalized SGD groups, as well as SGD people of color, do not always have access to the same spaces as do SGD people of other races and classes (Conclusion 7-1).

The past several years have seen the insurgence of LGBTQ+-affirming churches, denominations, and non-institutional spiritual practices, as well as gay-straight alliances on school, college, and university campuses. Community connectedness has been shown to help SGD people address health disparities by connecting them to important resources (Conclusion 7-2).

In civic affairs, lesbian, gay, and bisexual adults tend to be more civically and politically engaged than heterosexual adults (Conclusion 7-3). In addition, transgender people are registered to vote at higher rates than the cisgender population. Connectedness to other SGD people is a strong predictor of sociopolitical involvement.

FAMILIES AND SOCIAL RELATIONSHIPS

Close, supportive, and stable relationships foster health and well-being, and relationships early in life have implications for the quality and stability

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 21 of 438 PageID #: 22

of social ties in adolescence and adulthood. SGD youth are at higher risk of depressive symptoms, anxiety, and suicidality than other similarly situated youth. Parental acceptance of their SGD youth is associated with positive adjustment; conversely, parental rejection is associated with a range of emotional and behavioral health problems. Supportive teachers are among the most important nonfamily adults in the lives of contemporary SGD youth. Maintaining friendships throughout and following the coming out process supports positive adjustment for SGD youth.

Romantic relationships in youth are also supportive in many cases, although the risk of intimate partner violence is higher for SGD youth than for other youth (Conclusion 8-1). Throughout adulthood, people who are more socially connected have better mental and physical health and lower mortality than those who are more socially isolated. Friends and chosen family members may also play an important role in SGD communities.

The legal status of romantic unions is associated with the health and well-being of SGD populations, as well as other markers of advantage and disadvantage—particularly socioeconomic status (Conclusion 8-2). Those of higher socioeconomic status are more likely to marry, and marriage itself may also provide economic benefits. As with different-sex couples, legally recognized same-sex relationships are less likely than others to dissolve over time.

Lesbian, gay, and intersex individuals are less likely than heterosexual individuals to become parents. Less is known about the prevalence of parenthood among bisexual and transgender people. Both children and adolescents have been found to enjoy supportive relationships with lesbian and gay parents, and children of lesbian and gay parents have shown the typical development of other children (Conclusion 8-3). Additional research is needed on relationship development in adolescence, adult family formation among SGD (especially bisexual, transgender, and intersex) people, as well as family processes and couple dynamics among older SGD individuals and families.

EDUCATIONAL ENVIRONMENTS

Experiences that SGD students have in school are important not only because negative experiences undermine personal well-being, but also because school experiences set the groundwork for educational attainment, future occupational achievement, and socioeconomic status (Conclusion 9-1). Although most research has focused on secondary schools, similar patterns of discriminatory behavior, bullying, and victimization have been documented for sexual minority and transgender students in higher education. Because SGD youth are coming out at younger ages than in previous years, research on school experiences that extends to elementary schools

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 22 of 438 PageID #: 22

and continues through higher education could help researchers gain a clearer understanding of the way these experiences affect students over their life course.

Although no federal law explicitly prohibits discrimination in education based on sexual orientation, gender identity or expression, or intersex characteristics, federal courts and agencies have found that such discrimination may be covered under the federal ban on sex discrimination. State and local K–12 education policies with clear language regarding protection of SGD students from bullying and discrimination (including sexual orientation and gender identity) are associated with positive school climates and with student well-being and success (Conclusion 9-2). In schools with such policies, teachers are also seen as being more supportive of LGBT students and are more likely to intervene in bullying.

Several small studies of same-sex couple families have shown that they may experience homophobia expressed by teachers and that teachers may exclude those parents from activities or events (Conclusion 9-4). Schools can adopt such strategies as professional education and training for teachers, administrators, and other personnel (e.g., bus drivers, cafeteria workers) to improve school experiences and promote a positive school climate for all students (Conclusion 9-3). Students with access to LGBTQ-related resources are more likely to believe that adults care about them and that teachers are fair.

ECONOMIC STABILITY

Evidence suggests that transgender people—and possibly bisexual people—have lower incomes and higher poverty than lesbian, gay, and cisgender heterosexual people (Conclusion 10-1). Research on individual earnings suggests that, after controlling for differences in income-related characteristics, gay and bisexual men earn less than heterosexual men, while lesbian and bisexual women earn less than heterosexual men but more than heterosexual women. Lesbian women and gay men may have mitigated some of the effects of discrimination on earnings and household income through adaptive strategies in education, occupations, and family decisions, but they still face discrimination in the labor force.

Poverty and economic insecurity are more common among LGBT people than among cisgender heterosexual people. Among self-identified single and coupled LGBT people, bisexual and transgender people are more at risk of poverty than lesbian and gay people are at equal risk of poverty compared to self-identified heterosexual cisgender people of the same sex. Some groups within the LGBT population are at greater risk of poverty or low-income status: unmarried people, people with children, Black people, people living in rural areas, and people over age 50.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 23 of 438 PageID #: 22

Studies based on self-report data show that many LGBT people believe that they have been treated unequally in the workforce (Conclusion 10-2). Many individual employers have created their own nondiscrimination policies, but these are voluntary. SGD populations have also experienced compensation and benefit discrimination in the workplace. In 2020, the Supreme Court held in *Bostock v. Clayton County* that discrimination based on sexual orientation or gender identity is prohibited by Title VII, the federal law that is part of the 1964 Civil Rights Act. The efficacy of this nationwide anti-discrimination protection will depend on how well federal and state agencies and courts carry out its mandate.

There is a greater risk of homelessness among LGBTQ youth than other youth, with elevated risk for LGBTQ youth of color. Adult homelessness may be particularly acute among transgender and gender-nonconforming populations. There are four main factors associated with LGBTQ homelessness: stigma, discrimination, and exclusion; mental health issues and substance use; sexual risks and vulnerability; and a lack of access to interventions and supports.

Some research finds that LGBT populations have lower homeownership rates than cisgender heterosexual people, which may point to discrimination in mortgage lending practices (Conclusion 10-3). SGD populations may also face barriers in the markets for credit and rental housing. Nearly a quarter of respondents to the 2015 U.S. Transgender Survey said they had experienced housing discrimination in the past year. There is also evidence of differential and discriminatory treatment among men in same-sex couples compared with women in same-sex couples.

More research is needed to assess the economic well-being of transgender people, non-binary people, and people with intersex traits. There is also much more to be understood about how certain economic conditions affect SGD populations—particularly for groups identified as having bigger economic challenges, such as people in rural areas, older SGD people, and SGD people of color.

PHYSICAL AND MENTAL HEALTH

The physical and mental health of SGD populations is substantially affected by external influences that include discrimination, stigma, prejudice, and other social, political, and economic determinants of health. In addition to health disparities related to sexual orientation, gender identity, and intersex status, many SGD people also experience health disparities related to intersecting aspects of identity that include but are not limited to race and ethnicity (Conclusion 11-1).

Lesbian and bisexual women have higher odds of risk factors for cardiovascular disease, such as hypertension and diabetes, and they also have more

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 24 of 438 PageID #: 22

risk factors for breast cancer than heterosexual women. Transgender adults may have more elevated rates of cardiovascular disease and myocardial infarction than their cisgender counterparts. LGBT people and people with intersex traits are at risk of violence from family members, peers, intimate partners, and strangers as a result of their sexual orientation, gender identity, or intersex status. Some of the highest risks of violence affect bisexual women and transgender people, particularly transgender women of color. Black transgender women are also disproportionately affected by HIV, as are cisgender gay and bisexual men and other men who have sex with men.

Mental health disparities in SGD populations include heightened anxiety and depressive symptoms and greater suicidality among LGBT people in comparison with heterosexual or cisgender individuals. Substance use and behavioral health disparities include greater use of tobacco, alcohol, and other drugs among LGBT people than among heterosexual or cisgender individuals. Sexual minority individuals are also less likely than their heterosexual counterparts to report healthy sleep, and similar disparities may exist for transgender people.

Because both clinical and population research studies rarely include measures of sexual orientation, gender identity, and intersex status, the full scope and magnitude of physical and mental health disparities and their differential effects across and within SGD populations is not known (Conclusion 11-2). There is a particular lack of longitudinal research, as well as a relative dearth of data on intersections with other aspects of identity such as race, ethnicity, age, and disability.

The disparities affecting SGD populations are driven by experiences of minority stress, which include both structural and interpersonal stigma, prejudice, discrimination, violence, and trauma (Conclusion 11-3). Another important concept in relation to minority stress is resilience, which is the ability to maintain normal physical and psychological functioning when stress and trauma occur. More research is needed to elucidate the origins, pathways, and health consequences of minority stress and factors that support resilience among SGD populations.

Evidence-based interventions are needed to prevent and address health inequities (Conclusion 11-4). These interventions need to address the root causes and multilevel factors driving SGD health disparities. Leveraging resilience, including building on strategies SGD people have used to resist societal oppression, is an important part of optimizing SGD health and well-being.

COVERAGE, ACCESS, AND UTILIZATION OF HEALTH CARE

Access to comprehensive, affirming, and high-quality health care services is a human right for all people. Laws that guarantee access to health

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 25 of 438 PageID #: 22

care services, health insurance coverage, and public health programs for all, regardless of sexual orientation, gender identity, and intersex status, are critical to the health and well-being of SGD people. Similarly, laws and policies that provide affordable, comprehensive health insurance coverage could combat health risks, such as uninsurance and poverty, among SGD populations.

It is important to provide culturally responsive and clinically appropriate care for SGD populations. Health services and procedures that are particularly important for the health and well-being of SGD populations include but are not limited to pre- and post-exposure prophylaxis for HIV; HIV treatment and care; abortion, fertility, and other reproductive health services; affirming mental and behavioral health care services; and gender-affirming care for transgender people. SGD people also need access to timely and anatomically appropriate preventive screenings (Conclusion 12-1).

Gender-affirming care for transgender, non-binary, and other gender diverse people is an essential intervention to improve health and well-being (Conclusion 12-2). Provision of this care needs to be individualized and conducted in partnership between patients and their providers. Insurance coverage of gender-affirming services and procedures by public and private payers is necessary to facilitate access to these services and to avoid discrimination on the basis of sex and gender identity.

Conversion therapy to change sexual orientation or gender identity can cause significant trauma (Conclusion 12-3). Elective genital surgeries on children with intersex traits who cannot participate in consent can be similarly detrimental to health and well-being.

RESEARCH RECOMMENDATIONS

Though trends in SGD population data collection have shifted, the data that exist and the research methodologies behind current study measures are not sufficient to capture and convey the richness of SGD communities or to underscore the varied effects that unique and intersecting identities have on health and well-being outcomes for SGD people. The 2011 report of the Institute of Medicine on the health of LGBT populations noted that these populations are often considered a single monolithic group, which obscures important differences among individuals and communities. This committee emphasizes an urgent need for robust scientific evidence that includes not just lesbian, gay, bisexual, and transgender people, but also intersex people, people with same-sex or same-gender attractions or behaviors, and people who identify as asexual, Two Spirit, queer, or other terms under the SGD umbrella.

In the wake of social change and ongoing legal developments regarding protections for SGD people in employment, health care, military service,

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 26 of 438 PageID #: 22

family formation, and other key areas of life, it is increasingly important to understand how the provision or the denial of access to opportunities and resources affects SGD people over the entire life course. A varied, comprehensive, and inclusive research infrastructure for SGD populations is essential in understanding the unique and shared challenges these individuals and communities face and for guiding actions to improve their well-being across domains, including social justice and legal equality, health and health care, employment, education, and housing.

Effectively addressing disparities related to sexual orientation, gender identity, and intersex status will require collaborative and coordinated efforts among federal, state, and private stakeholders. In addition, it will be important to involve SGD communities themselves, including SGD people of color, in all aspects of the research process. Meaningful community participation is a critical way that SGD population research can retain accountability and accurately reflect the lives and experiences of the communities that are under study. In all research activities, SGD communities should be treated as partners rather than solely as research subjects, and all data should be collected and analyzed in ways that ensure respondent privacy and confidentiality and provide robust protections from discrimination.

The committee's recommendations aim to identify opportunities to advance understanding of how individuals experience sexuality and gender and how sexual orientation, gender identity, and intersex status affect SGD people over the life course. Our recommendations are in five categories: (1) population data; (2) measurement challenges related to understanding SGD populations; (3) critical data gaps; (4) improvement of the research community's ability to use these data; and (5) application of data to the development of high-quality, evidence-based interventions and programs. In each category, the committee makes efforts to identify specific actors that are best positioned to respond to particular aspects of the research landscape. The committee has concluded that investing in research infrastructure and in a robust and comprehensive program of research in the ways described below will support the development of stronger, evidence-based policies and practices in the areas addressed in this report.

POPULATION DATA

In order to make valid claims about the status of SGD populations in the United States, researchers, policy makers, and practitioners need accurate, consistent, and representative population-level data that describe SGD populations in all their complexity.

> **RECOMMENDATION 1: Entities throughout the federal statistical system; other federal agencies; state, local, and tribal departments and**

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 27 of 438 PageID #: 22

agencies; private entities; and other relevant stakeholders should consider adding measures of sexual orientation, gender identity, and intersex status to all data collection efforts and instruments, such as population-based surveys, administrative records, clinical records, and forms used to collect demographic data.

In response to Recommendation 1, the Office of Management and Budget should reconvene the Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys and charge it with developing government-wide standards for the collection of data on sexual orientation, gender identity, and intersex status. The establishment of measurement standards could bolster high-priority data collection activities throughout the relevant entities.

MEASUREMENT CHALLENGES

Because of the complicated ways that race, class, sex, gender identity, sexual orientation, and other factors interact to create people's experiences, current measures do not always sufficiently reflect the lived experiences of these populations.

RECOMMENDATION 2: Federal statistical agencies; state, local, and tribal departments and agencies; private entities; and other relevant stakeholders should fund and conduct methodological research to develop, improve, and expand measures that capture the full range of sexual and gender diversity in the population—including but not limited to intersex status and emerging sexual and gender identities, sexual behaviors, and intersecting identities—as well as determinants of well-being for sexual and gender diverse populations.

The routine inclusion of sexual orientation, gender identity, and intersex status questions on federally supported surveys and in other research can also advance the generation and use of measures that help researchers understand how factors such as stigma and disclosure affect the health and well-being of SGD populations across the life course.

CRITICAL DATA GAPS

When focusing on underrepresented groups, it is sometimes necessary to employ alternative methods that capture adequate samples of the population in question for effective study. Some data gaps could be addressed through observational studies of specific populations, while others might

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 28 of 438 PageID #: 22

require experimental studies, qualitative explorations of specific topics, or other methods.

> **RECOMMENDATION 3: Public and private funders should support, and researchers should conduct, studies using a variety of methods and sampling techniques—driven by the questions under study—in order to examine family and other social relationships, community, health, education, economic, and legal issues that will enhance understanding of sexual and gender diverse populations.**

Data needs of this kind are particularly important for the study of small groups, such as transgender women of color, Native American Two Spirit people, and people with intersex traits.

DATA USE

Once comprehensive, accurate data are collected, it is critical that researchers have the ability to access these data to address emerging research questions. By improving the research community's ability to access, link, and use existing data, stakeholders could substantially advance the relevance and impact of research.

> **RECOMMENDATION 4: The U.S. Office of Management and Budget should convene federal, state, and private funders, as well as other relevant stakeholders, to address significant problems in linking data from different datasets to facilitate research on the health status and well-being of sexual and gender diverse people. These stakeholders will differ by content area but could include researchers, legal advocacy groups, research institutions and centers, think tanks, policy-tracking groups, health, and surveillance organizations.**

The goal of this recommendation is to allow data that have been housed within specific agencies or industries to be linked in ways that provide the research community a more complete picture of the prevalence, distribution, and lived experiences of SGD populations.

EVIDENCE-BASED PROGRAMMING AND INTERVENTIONS

The ultimate goal of collecting more accurate and relevant data should be to enhance understanding of the mediating factors that can highlight the positive differences and close the disparities that exist between SGD and heterosexual or cisgender populations. Comprehensive and accurate population-level data can play a critical role in the development, implemen-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 29 of 438 PageID #: 22

tation, and evaluation of programs, services, and interventions that support the health and well-being of SGD populations. The data deficits described throughout this report have led to a relative dearth of programming to address the specific needs of these populations, as well as an absence of evidence-based processes to evaluate programs.

RECOMMENDATION 5: Public and private research funders, together with federal statistical agencies, should prioritize research into the development, implementation, and evaluation of evidence-based services, programs, and interventions that promote the well-being of SGD populations.

Placing scientific evidence at the forefront of program planning will allow researchers, policy makers, and public and private stakeholders to develop services and interventions that will directly benefit SGD communities.

CONCLUSION

The increase in prevalence and visibility of SGD populations illuminates the need for greater understanding of the ways in which current laws, systems, and programs affect their well-being. Individuals who identify as lesbian, gay, bisexual, asexual, transgender, non-binary, queer, or intersex, as well as those who express same-sex or -gender attractions or behaviors, will have experiences across their life course that differ from those of cisgender and heterosexual individuals. Characteristics such as age, race and ethnicity, and geographic location intersect to play a distinct role in the challenges and opportunities SGD people face. This report underscores the need for researchers to seek to understand disparities and advance equity both within and across SGD populations.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 31 of 438 PageID #: 22

PART I

BACKGROUND AND CONTEXT

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 33 of 438 PageID #: 22

Prologue

As this report was nearing completion, the enormous impact of the COVID-19 pandemic battering the United States was becoming clear, transforming lives and affecting every sector of society. At the time of this writing, more than 5 million Americans have been diagnosed with the infection, and more than 200,000 have died. Tens of millions of people have lost their jobs, and aspects of health, economic status, and social life have changed drastically for families and communities across the country. Black, Hispanic/Latinx, Native American, and other disadvantaged populations have been disproportionately affected by the COVID-19 pandemic, due largely to inequities in social determinants of health, such as poverty and health care access.[1]

There are many reasons to believe that lesbian, gay, bisexual, transgender, queer, intersex, and non-binary people (LGBTQI+) might also be at high risk for COVID-19. There are LGBTQI+ groups that have higher rates of cardiovascular disease, respiratory disease, and HIV; that have higher poverty rates; and that lack adequate health insurance coverage (Alzahani et al., 2019; Caceres et al., 2017; Williams Institute, 2019). Little is known about COVID-19 rates of transmission, morbidity, or mortality among individuals who identify as LGBTQI+: currently, only California, Pennsylvania, Nevada, and the District of Columbia collect sexual orientation and gender identity data in context of the coronavirus pandemic, and even these states have not yet reported those data. Because LGBTQI+ identities are

[1]See https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 34 of 438 PageID #: 22

seldom recorded in public health surveillance and medical records, sexual and gender diverse people often remain essentially invisible in context of the COVID-19 pandemic.

In May 2020, deep into the pandemic, an unarmed Black man named George Floyd was taken into police custody on the streets of Minneapolis and suffocated by a white police officer who knelt on his neck for more than eight minutes, until he was dead. The grief and outrage that followed led to an international outpouring of protest and activism and underscored the ways in which racial, ethnic, and other identities can have a dramatic effect on health and well-being in the United States (NASEM, 2016). Then in June 2020, which is commonly regarded as LGBTQI+ pride month, at least five transgender people of color—Dominique "Rem'mie" Fells, Merci Mack, Riah Milton, Brian "Egypt" Powers, and Brayla Stone—were brutally murdered.[2] These events highlight the ways in which violence has historically been and continues to be used as a tool of suppression towards LGBTQI+ populations and populations of color within the United States.

These two sets of events—the COVID-19 pandemic and the demonstrations of violent racism—point to the need for heightened awareness of the social and structural inequities that exist for LGBTQI+ people and for people of color and, especially, for sexual and gender diverse people of color. Too often, inequities cannot be identified because of failures to collect and measure sexual orientation and gender identity information. The systematic application of standardized measures of sexual and gender diverse status in governmental and health care delivery data systems would be a critical step towards promoting much-needed research on the health and well-being of LGBTQI+ populations.

REFERENCES

Alzahani, T., Nguyen, T., Ryan, A., Dwairy, A., McCaffrey, J., Yunus, R., Forgione, J., Krepp, J., Nagy, C., Mazhari, R., and Reiner, J. (2019). Cardiovascular disease risk factors and myocardial infarction in the transgender population. *Circulation: Cardiovascular Quality and Outcomes,* 4.

Caceres, B.A., Brody, A.A., Luscombe, R.E., Primiano, J.E., Marusca, P., Sitts, E.M., and Chyun, D. (2017). A systematic review of cardiovascular disease in sexual minorities. *American Journal of Public Health*, *107*(4), e13–e21.

National Academies of Sciences, Engineering, and Medicine. (2016). *Framing the Dialogue on Race and Ethnicity to Advance Health Equity: Proceedings of a Workshop*. Washington, DC: The National Academies Press. doi: 10.17226/23576.

Williams Institute. (2019). *LGBT Poverty in the United States*. UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/National-LGBT-Poverty-Oct-2019.pdf.

[2]For information on the individual events, see https://www.hrc.org/resources/violence-against-the-trans-and-gender-non-conforming-community-in-2020.

Copyright National Academy of Sciences. All rights reserved.

1

Introduction

BACKGROUND

More than 11 million lesbian, gay, bisexual, and transgender (LGBT) individuals live in the United States according to 2019 estimates. The past decade has brought remarkable changes in the social, political, and legal status of these individuals. A majority of Americans approve of same-sex relationships and support legal protections to ensure fundamental civil liberties on the basis of sexual orientation and gender identity, representing a dramatic shift from prior years (Gallup, 2018; Pew Research Center, 2017).[1]

In addition to shifts in public opinion, the laws have changed. The 2015 ruling of the U.S. Supreme Court in *Obergefell v. Hodges* (576 U.S. 644) extended marriage equality for same-sex couples nationwide. In 2020, the Supreme Court ruled that the prohibition of sex discrimination in Title VII of the Civil Rights Act protects individuals from discrimination based on sexual orientation or gender identity in employment (*Bostock v. Clayton County,* 140 S. Ct. 171). The logic of the ruling would apply to other federal anti-discrimination laws as well, in such fields as housing, education, and credit. Similarly, many states and municipalities, as well as numerous private corporations, have expanded nondiscrimination protections in workplaces, health care settings, and schools to

[1]Information retrieved from data analyses of the General Social Survey by Gary Gates in 2018, using the Survey Documentation and Analysis online tool maintained by the Institute for Scientific Analysis, San Francisco, CA, under a licensing agreement with the University of California. Tool is available at https://sda.berkeley.edu/sdaweb/analysis/?dataset=gss18.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 36 of 438 PageID #: 22

include sexual orientation and gender identity. With regard to intersex individuals, a federal court of appeals decision in 2020 ordered the State Department to reconsider its refusal to provide a non-binary gender code for the passport of an intersex individual (*Zzyym v. Pompeo*, No. 18-1453, 10th Cir. 2020).

Despite increased visibility and social acceptance of sexual and gender diverse (SGD) populations, discriminatory policies and practices remain. Many people who are members of SGD populations—particularly those who are also members of other marginalized populations, such as racial and ethnic minorities—continue to experience stigma, discrimination, and violence where they live, work, play, and pray. In fact, recent evidence among lesbian, gay, and bisexual youth shows more reports of discriminatory experiences in adolescence than for earlier cohorts (Toomey and Russell, 2013), as well as disparities that are growing rather than narrowing for several key health indicators (Fish et al., 2017).

In 2016, the National Institutes of Health (NIH) formally designated sexual and gender minorities as a health disparity population. Researchers have recently begun to explore the relationship between the health disparities affecting the lesbian, gay, and bisexual (LGB) population and specific state- and local-level policy changes using a range of methods, including observational studies, quasi-experimental study designs, field experiments, and laboratory studies (Hatzenbuehler, 2016).

While research on LGBT populations has burgeoned in recent years, much remains to be learned about the status and well-being of these individuals and the ways in which their experiences may differ from those of the general population across many areas, such as physical and mental health, education, relationships, the workforce, and civic participation. Though an increasing number of nationwide surveys include questions about sexual orientation, gender identity, and same-sex partnerships, the extent to which empirical data accurately reflect the communities in question hinges on individuals' willingness to participate in and disclose their sexual orientation or gender identity on such surveys.

In a major report that described the status of health research on LGBT populations, the Institute of Medicine (2011) identified several challenges to describing and studying the population in question. These challenges included the multifaceted nature of sexual orientation and gender identity, the complexities of defining and operationalizing those constructs, and the resources required for obtaining probability samples of small populations whose members might be reluctant to answer questions about their sexual orientation or gender identity due to concerns about discrimination and victimization. In addition to the lack of standardized, inclusive methods to capture and measure this diverse population, the definitions and analysis of demographic processes, such as fertility and family formation,

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 37 of 438 PageID #: 22

are predicated on presumed relationships between cisgender, heterosexual individuals. Finally, identifying intersex people in population surveys can be difficult because individuals with differences of sex development may not refer to themselves as "intersex" or see intersex as a social identity (GenIUSS Group, 2014).[2]

This work highlights the need to understand more fully how current U.S. legal, social, and cultural shifts are affecting LGB people, their families, and their communities. There is a dearth of research on how transgender, non-binary, and intersex individuals are affected by changes to state and local policies.

In response to these challenges, the National Academies of Sciences, Engineering, and Medicine convened an ad hoc committee to explore what is currently known about lesbian, gay, bisexual, transgender, queer, and intersex populations—in families and in environments such as school, work, and civic groups; at the ballot box; and in legal and health care systems—and to identify the gaps in knowledge around their experiences and consider how their well-being might be enhanced with improved research across several different domains. This report is designed to describe the opportunities and challenges facing these populations and to offer recommendations about future research.

CHARGE TO THE COMMITTEE

The Committee on Understanding the Status and Well-Being of Sexual and Gender Diverse Populations, convened in 2019, was composed of expert professionals from many disciplines, including human development, psychology, sociology, demography, economics, law, medicine, public health, and gender and sexuality studies. They were asked to prepare a report examining the available data on and significant research needs relevant to persons of diverse sexualities and genders and persons with differences in sex development across multiple dimensions over the life course; see Box 1-1 for the complete statement of task.

Considered as a whole, the findings of this report are intended to describe the current status of sexual and gender diverse populations and to offer recommendations about ways in which research can be improved to advance the health and well-being of those populations. It builds not only on the 2011 report of the Institute of Medicine but also on previous studies and activities related to these populations; see Appendix A.

---

[2] Intersex people are individuals born with any of several variations in sex characteristics, including chromosomes, gonads, sex hormones, or genitals; see below for more information on why intersex individuals are included in this report.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 38 of 438 PageID #: 22

BOX 1-1
Statement of Task

The Committee on Population (CPOP) of the National Academies of Sciences, Engineering, and Medicine will undertake a consensus study that will review the available data and future research needs on persons of diverse sexualities and genders (e.g., LGBTQ+ and MSM), as well as persons with differences in sex development (sometimes known as intersex), along multiple intersecting dimensions across the life course. Areas of focus will include, but are not limited to, the following:

- Families and social relationships
- Patterns of stigma, violence, and victimization
- Role of community, cultural, educational, healthcare, and religious organizations and institutions
- Civic engagement, political participation, and military service
- Socioeconomic status/stratification, housing, and workforce issues
- Justice and legal systems
- Social change and geographic variations in public attitudes and public policies
- Population health and well-being

KEY TERMS AND DEFINITIONS

This report uses numerous terms to describe sexual and gender diverse groups of people, some which might be unfamiliar to some readers or which may have varying colloquial or contextual meanings. This section describes how the committee understands these terms and how they are used in this report.

Many studies we reference in this report refer to LGBT individuals. The first three terms—*lesbian*, *gay*, and *bisexual*—refer to sexual orientation, which is understood by researchers to have three distinct components: sexual attraction, sexual behavior, and self-identification. Sexual attraction refers to the gender(s) of the people to whom someone feels physically or romantically attracted. The delineation between sexual orientation and sexual attraction is often particularly important for people who may not be sexually active. Sexual behavior refers to the gender(s) of one's sexual partners. Self-identification refers to how people describe their own sexual orientation.

Lesbian and *gay* are commonly used to refer to people whose attraction, behavior, and identities are oriented toward people of the same gender. *Bisexual* refers to people whose attraction, behavior, or both is toward people of both the same and different genders. Other terms that describe

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 39 of 438 PageID #: 22

sexual orientation include *heterosexual* or *straight*, which refer to people whose attraction and behavior are oriented toward people of a different gender; *men who have sex with men* (often referred to as MSM), which refers to men who may or may not identify as gay or bisexual but who have male sexual partners; and *asexual*, which refers to people who do not experience sexual attraction. People who are not heterosexual or straight may also identify using terms that reflect specific cultural or age groups. For example, *same-gender-loving* is often used in Black communities to describe non-heterosexual relationships, *queer* is more common among younger people as a description of non-binary or non-heterosexual identity, and *Two Spirit* is used in many Native American communities to denote the fluidity of gender.[3]

The term *transgender* refers to gender identity, which is distinct from sexual orientation. *Transgender* is a broad term that describes people who identify as a sex or gender different from the sex they were assigned at birth. For example, a transgender woman is a woman who was assigned male at birth, and a transgender man is a man who was assigned female at birth. Other terms, such as *non-binary, agender, bigender, genderqueer*, *gender fluid*, and *gender-nonconforming*, refer to people who identify outside the categories of male or female. People who embrace these identities may or may not identify as transgender. Some people also use the terms *Two Spirit* and *queer* to describe gender identity as well as sexual orientation. People who are not transgender are *cisgender*. Like cisgender people, transgender people can be of any sexual orientation.

Concepts and terminology related to sexual orientation and gender identity are constantly in flux. For instance, many community members and researchers now prefer to replace the acronym LGBT with LGBTQ, in which the Q may refer to *queer* or *questioning*, which is a particularly important concept for those on the path to developing or exploring an LGBTQ-related identity, especially in adolescence. In some contexts, the acronym is expanded further to include "I" for *intersex*, "A" for *asexual* or *ally*, or "+" as an acknowledgment of the diversity of non-binary and gender-nonconforming individuals. Other newer terms related to sexual orientation include *monosexual*, which means people who are attracted to only one gender, such as straight, gay, and lesbian people; *non-monosexual*, which describes people attracted to more than one gender (including bisexual people), and *pansexual*, which refers to people attracted to several genders.

Intersex and *differences of sex development* are terms that describe people born with primary or secondary sex characteristics that do not

[3] Two Spirit is also used in some Native American cultures to describe people who fulfill a traditional third-gender ceremonial role in their communities.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 40 of 438 PageID #: 22

fit binary medical definitions of male or female reproductive or sexual anatomy. Intersex traits are widely heterogeneous and include variations in number of sex chromosomes, structure or function of gonadal tissue, synthesis or action of sex hormones, appearance of external genitalia, and patterns of secondary sex traits. The prevalence of intersex traits ranges depending on the specific definition used. For instance, as few as 1 in 2,000–4,500 people are born with external genitals that lie somewhere between binary male or female genitalia, but as many as 17 in 1,000 people are born with any variation in their physical reproductive or sexual characteristics.

The language used to describe these traits, and the people born with them, is complex and shifting. For example, in recognition of leaps in understanding of the physiology of intersex traits, a consensus group of researchers and providers in 2006 developed the phrase "*disorders of sex development*" to replace what had been an inconsistent, confusing, and stigmatizing array of terms. Although some clinicians have suggested that use of the term "disorders" helps underscore serious health concerns that may accompany an intersex trait, others argue that "disorders" is stigmatizing and pathologizing. Increasingly, clinicians, researchers, and advocates have adopted the term *differences of sex development* (DSD). DSD is frequently used in medical literature, and some individuals find that this language offers the opportunity to identify as having, rather than being, a medical condition. Others, including most advocacy groups, prefer the less medical term, *intersex* or *intersex traits*.

In one clinical survey, *intersex* and *differences of sex development* were about equally preferable. Some advocates and providers are increasingly using the term *endosex* to describe people whose reproductive or secondary sex characteristics align with medical binaries, just as the term *cisgender* is used in parallel with the term *transgender*. Since people who describe themselves as LGBT or intersex are numerically minority populations in the United States, researchers thus sometimes describe these populations as *sexual and gender minorities*. The Sexual and Gender Minority Research Office at the National Institutes of Health defines sexual and gender minority populations as including, but not being limited to, "individuals who identify as lesbian, gay, bisexual, asexual, transgender, Two Spirit, queer, and/or intersex. Individuals with same-sex or -gender attractions or behaviors and those with a difference in sex development are also included."[4] While in a research context the word "minority" points to the prevalence of a group within a population, in nonclinical contexts the word can carry a connotation of "lesser than" and can denote "a part of a population differing from others in some characteristics

[4] See https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-149.html.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 41 of 438 PageID #: 22

and often subjected to differential treatment."[5] As the community grows and becomes more diverse, the language that is used to refer to it will undoubtedly shift.

These and other terms will continue to evolve and take on different forms and meanings across different cultures and age groups, and it is important for researchers and other stakeholders working with these populations to be aware of and open to changing trends in terminology.

Just as there are different ways to think of sexual and gender diverse people, there are also different ways of describing the positions they occupy in society and the unique difficulties they may face because of their identity. Sociologist Erving Goffman (1963) defined *stigma* as an attribute, behavior, or reputation that is socially discrediting in a particular way. Societies generally apply value to certain normalized traits while devaluing others, such as sexual and gender diversity, and thereby assigning those people to an inferior social status. *Sexual prejudice* is another term to describe the negative view of sexual and gender diverse people held by individuals who have internalized the aforementioned social stigma.

Discrimination describes the negative treatment of sexual and gender diverse people compared to their heterosexual or cisgender counterparts. Discrimination can be interpersonal, such as denial of services based on sexual orientation or gender identity, and it can also be structural, such as laws or policies that systematically disadvantage sexual or gender diverse individuals in such areas as employment and education.

Even in the absence of active discrimination or recognizable social stigma, there are occasions in which sexual and gender diverse people do not have the same access to opportunities and achievement of outcomes as others. *Inclusion*, in this context, defines an individual's access to opportunity and ability to fully participate in social institutions, such as the labor force, the health care system, and civic and political processes. *Exclusion* refers to situations in which sexual and gender diverse people do not have the same opportunities or access. Sometimes exclusion happens as a result of the way sexual and gender diverse people are relegated to less important positions in society or made to feel powerless against the mainstream—a phenomenon called *marginalization*.

Finally, the terms *homophobia*, *biphobia*, and *transphobia* refer to societal bias and internalized fear of LGBT people; they can denote the presence of stigma, prejudice, discrimination, or violence toward LGBT people, as well as a denial of access to opportunity.

[5] See https://www.merriam-webster.com/dictionary/minority.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 42 of 438 PageID #: 22

ADDRESSING THE CHARGE

Sexual and Gender Diverse Populations

As discussed above, contemporary understandings of sexual orientation and gender identity continue to evolve, as does the terminology used to describe individuals who do not align with the male-female dichotomy or who exhibit attractions to people of the same sex or outside of the traditional gender binary—a factor that complicates scholarly attempts to identify these populations for effective study. In this report, when discussing these populations at large, the phrase *sexual and gender diverse* (SGD) is used to acknowledge the broad spectrum of natural human variation in sexual orientation, gender identity, and sex development. Other designations or terms encompassing multiple population groups of SGD people—such as LGB, LGBT, LGBTQ, and others—are used when discussing data and evidence based on those specific designations.

The committee acknowledges that no term is perfect or completely inclusive; the beauty of individuality is that self-expression, as well as personal and romantic choices, can manifest in a multitude of ways. Furthermore, the intention is not to promote the phrase *sexual and gender diverse* (or SGD) as terminology for widespread use. Instead, the committee's goal is to draw the attention of researchers, practitioners, policy makers, and society to the diversity of these groups and the need for greater understanding of differences that exist within and between them.

Inclusion of Intersex People

Little is known about the population health or well-being of people with intersex traits. The vast majority of research exploring the health of people with intersex traits is conducted in clinical samples. Intersex status is almost never queried in population surveys, and the stigma associated with having intersex traits may inhibit people from self-identifying. Moreover, because medical providers until recently did not routinely educate intersex patients about their traits, many people have limited awareness of their own medical history in this area. Fortunately, researchers and advocates have identified questions that can be used to assess intersex status in population surveys.

The medical impact of these traits varies widely and usually with the specific trait: for instance, people with congenital adrenal hyperplasia may require lifelong hormonal treatment for cortisol deficiency. Similarly, individuals with gonadal dysgenesis, who are born with gonads that do not produce hormones, are at markedly elevated risk of gonadal cancer and

Copyright National Academy of Sciences. All rights reserved.

may benefit from removal of gonadal tissue in early adolescence.[6] As discussed in detail later in the report, however, there is an emerging body of knowledge documenting significant adverse consequences from irreversible interventions performed in early childhood primarily to align sex characteristics with gender assignment.

Understanding intersex as a medical problem might suggest that intersex populations should not be included in a report on the health and well-being of SGD populations, which are more commonly understood to be defined by non-normative identities. Indeed, not all people with intersex traits or DSD will identify as intersex; instead, they may identify as having a medical condition. Many people with intersex traits have cisgender experiences and identify as heterosexual. Moreover, some adults or parents of children with intersex traits may explicitly wish to distance themselves from SGD communities and any words that imply atypical gender or sexuality. There is also concern that simply adding "I" to the LGBTQ acronym may imply that intersex is monolithic, thereby obscuring the diversity of intersex-related health care needs and concerns of this population (Callens et al., 2012).

However, the committee found that there is sufficient overlap with other SGD populations to justify the inclusion of intersex in this report. First, many people with intersex traits do identify as non-heterosexual or non-cisgender, with evidence that the rates of non-heterosexuality and non-cisgender experiences are significantly higher than among endosex populations (Almasri et al., 2018). People with intersex traits/DSD were identified as a health disparity population by NIH, as well as by the American Association of Medical Colleges; both of these groups noted that intersex people may experience difficulties in accessing expert medical and psychosocial care similar to those encountered by SGD people.

Intersex health disparities appear to be driven in large part by the medical approach to intersex traits, which has been informed by the same stigmas experienced by SGD populations. Starting in the 1950s, infants born with intersex traits were exposed to medical and surgical interventions to align their anatomy with male or female (endosex) anatomy, with the explicit goal of rearing a cisgender, heterosexual child. Surgical decision making was often driven by the priority of creating genitals capable of penovaginal intercourse. Fearful that children might otherwise question their gender or sexuality, diagnostic information was routinely withheld from children and often even from their families. This model of care has reinforced cultural stigmas around sex and gender atypicality in an attempt to ensure sex and gender normalization (Dreger, 1998).

[6] A full account of the medical and surgical support of specific intersex traits is far beyond the scope of this report; Chapter 12 provides additional information.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 44 of 438 PageID #: 22

Still today, a desire to avoid the stigma of a non-normative sexual body is a stated goal of genital surgery for intersex children (see discussion in Chapter 12). Accordingly, intersex advocates have drawn parallels between normalizing genital surgery and sexuality and gender identity conversion therapy. However, little research has explored the effects of stigma within intersex populations.

Finally, while the committee recognizes the risk of obfuscating the unique individualities of intersex bodies, it also acknowledges that recent SGD research has illuminated the diversity of those populations. Just as research on the health of men who have sex with men validates and reinforces the difference between sexual identity and behavior, transgender health research has illuminated the spectrum of affirming medical and surgical procedures. It well may be that disparities in health and well-being among the intersex population are wholly distinct from those of other SGD populations, but given the intersections with SGD experiences and the absence of robust intersex population health research, it is difficult to justify the exclusion of intersex populations from our study.

Understanding Well-Being

The concept of well-being embodies both how people feel and how they function. The way a person feels is informed by the person's physical health, mental health, and emotions (e.g., happiness, contentment, anger), as well as personal judgments about one's life (e.g., purpose and satisfaction); the way a person functions, on both personal and social levels, incorporates such elements as sense of competency, agency and ability to act autonomously, and sense of being connected to others (New Economics Foundation, 2012). As health is a key component to well-being, so is well-being to health; the two concepts are closely related regarding states of human existence. The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 1948). The concepts of well-being and health will be explored in this report with respect to sexual and gender diverse populations.

The determinants of health and well-being for every sexual and gender diverse individual vary over the course of a lifetime (life course) and include factors related to each person, people (social spheres of influence), and the environment (social systems). Person-level factors include contributors to identity such as age, race, ethnicity, military status, disability, socioeconomic position, and involvement in the criminal justice system. People-level factors are a person's social spheres of influence, meaning peers, family, social networks, and community. Environmental-level determinants of health and well-being are related to the structures, processes, and behaviors of societal systems, sectors, and institutions (or agents) toward sexual and

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 45 of 438 PageID #: 22

gender diverse people. Together, these determinants interact with one another in ways that can intensify or ameliorate barriers to good health and a positive sense of well-being. For example, an SGD youth who experiences bullying and physical violence from classmates in a school system that lacks policies, training, and practices to prevent and address these behaviors may later struggle with depression, anxiety, self-injury, suicide attempts, and other physical and mental health conditions, but avoid seeking health care because of prior experiences with stigma and discrimination in the health care delivery system. These three elements—personal identities, social spheres of influence, and interacting societal systems—and other core frameworks are further developed in Chapter 2.

In this report the committee focuses on eight domains of well-being: the effects of various laws and the legal system on SGD populations; the effects of various public policies and structural stigma; community and civic engagement; families and social relationships; education, including school climate and level of attainment; economic experiences (e.g., employment, compensation, and housing); physical and mental health; and health care access and gender-affirming interventions.

People with different sexual orientations and gender identities have different experiences in each of these domains over the course of their lives. For example, one study found that in the labor market, gay men face a large negative wage gap, lesbian women earn higher wages than similarly situated heterosexual women, and bisexual men and women appear to be the most economically disadvantaged (Mize, 2016). Other studies show that transgender people face higher rates of discrimination and poverty than LGB people. Furthermore, when considering the opportunities and disadvantages for SGD individuals in each domain, one must also acknowledge intersectionality of identities—conditions that, when combined, can create unique outcomes for individuals. Those intersections include race and ethnicity, age, military status, incarceration, disability, and the ways in which the person is perceived by others. Frameworks such as these can yield important variations both within and across SGD groups (Goldberg and Conron, 2018).[7]

COMMITTEE'S APPROACH TO THE STUDY

The committee took a multipronged approach toward gathering and analyzing the necessary evidence for its work. In addition to reviewing published literature, the committee also heard testimony from relevant experts in a variety of topic areas and held a number of open-session conversations to engage in person with stakeholders and community leaders.

[7]Intersectionality and other frameworks are discussed further in Chapter 2.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 46 of 438 PageID #: 22

At the first meeting, the committee heard from the report's sponsors in order to get a clear sense of the goals of this project: David Adler of the Robert Wood Johnson Foundation; Karen Parker of the Sexual and Gender Minority Research Office at the National Institutes of Health; Darwin Thompson of Gilead Foundation; and Kika Chatterjee, Szena Dayo, and Faiza Riaz of the Tegan and Sara Foundation all shared with the committee their organizations' priorities for this work. At that same meeting, the committee also heard from Cecilia Chung of the Transgender Law Center, Ellen Kahn of the Human Rights Campaign, and Sandy James of FreeState Justice[8] in an attempt to better understand the potential value and utility of this report for the communities to whom it pertains. Additionally, committee members Angelique Harris and Stephen Russell briefed attendees on the content and findings of two meetings held in 2018 and 2019 at the National Academies of Sciences, Engineering, and Medicine that helped to lay the foundation for this consensus study (see Appendix A).

At the second in-person committee meeting, the committee organized a large public seminar in order to engage this project's relevant constituent communities. The committee held panels on culture, representation, and community frameworks; intersex individuals and families; non-binary and plurisexual[9] identities; sexual and gender diversity law and policy; and civic engagement. See the agenda for this seminar in Appendix B. In its closed meetings, the committee reviewed multiple sources of evidence, evaluated the methodologies of research studies, and discussed possible interpretations. Throughout these deliberative processes, committee members were asked to apply their expertise in their respective fields. In addition to its four in-person meetings, the committee held two online meetings to ensure sufficient discussion and to advance progress on the study.

METHODS AND APPROACH TO THE EVALUATION OF EVIDENCE

This report draws on evidence from a number of sources of empirical research on SGD populations. One important dimension of these sources is the crossing of disciplinary boundaries. Because of the broad focus of its charge, the committee reviewed the relevant bodies of knowledge from a number of academic disciplines—public health, medicine, psychology, economics, sociology, gender studies, history, law, demography, and political science—along with interdisciplinary fields, such as African American studies, each of which has different standards of evidence. Over the last few decades, research on SGD populations has expanded in each of these disciplines and fields, pro-

[8] James is now working at the U.S. Department of Health and Human Services.

[9] The term "plurisexual" is used to describe individuals who are attracted to more than one gender.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 47 of 438 PageID #: 22

viding a basis for understanding more about the lives of people of diverse sexualities, genders, and with differences in sex development.

The committee sought out research published in peer-reviewed academic publications (journals and books) and supplemented that with research from other sources, such as government agencies, nongovernmental organizations, and think tanks. The committee also took care to ensure that for each area of focus, the work engaged with the lived experience of individuals representing SGD populations: because of the deeply personal nature of this work, the committee centered the expert testimony of members of the communities affected by the results of this work. In all cases, the committee evaluated how effectively the research adhered to broadly accepted research norms, such as whether a study included an adequate reporting of data, methods, and analysis to allow assessment of the quality and accuracy of the conclusions drawn by the authors. Those foundations provided a basis for judgments and conclusions about what is known about SGD populations.

In terms of the published literature, the committee believes it is critical to draw particular attention to three general methodological considerations that affect the conclusions that can be drawn from existing research: the nature of the data and samples used; the research designs used; and the use of sources other than survey or experimental data for the study of some areas. Much of the research reviewed for this report has been made possible by the inclusion of questions about sexual orientation and gender identity in surveys of probability samples of the U.S. population (see Chapter 4 for a list of those surveys). Data generated by probability-based sampling methods are likely to be representative of the populations and subgroups in question, allowing generalizations to be made from those samples. That representativeness is essential for making comparisons across diverse sexual and gender populations in order to, e.g., compare rates of a particular health condition among lesbian, gay, and bisexual people to that of heterosexual people or to compare transgender people to cisgender people.

However, the fact that the SGD populations studied in this report, such as lesbian, gay, bisexual, transgender, and intersex people, are relatively small means that only large samples of the whole population will include sizable numbers of people in sexual and gender diverse groups as usually defined. This situation has a number of consequences for researchers, such as limiting the ability to use probability samples for comparisons of detailed racial, ethnic, age, or geographic groups of LGBT people, for example, or to study in detail rare health or economic outcomes. In addition, the underlying surveys are not likely to have questions that relate to important aspects of SGD people's lives, even when the surveys capture sexual and gender diversity for respondents, unless the questions also happen to be relevant for the lives of the population at large.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 48 of 438 PageID #: 22

Partly because of such limitations, studies using non-probability-based sampling methods, such as community recruitment or snowball sampling, are common in many disciplines and can provide important insights. In this report, the committee exercised care in interpreting the relevance of findings from such samples to apply to the broader SGD population. For example, clinical studies might involve samples of individuals with poorer health who are not representative of the larger population. Convenience sampling techniques might result in biases toward certain groups, such as those with higher-than-average levels of income or education. Administrative datasets, such as health insurance claims or discrimination charge filings, reduce concerns about sampling bias but still require an assessment of who had access to the services that resulted in the creation of the administrative records.

The second important consideration is research design. The committee acknowledges that all research designs have strengths and weaknesses for answering the questions defined in its statement of task. Many studies reviewed for this report are observational studies—that is, those studies made comparisons based on observed differences in sexual orientation or gender identity in a sample, usually holding other observed characteristics constant. This general approach is appropriate for assessing whether there is a statistical association between being a member of a sexual or gender diverse group and a specific health, economic, or other social outcome. However, drawing a causal conclusion about whether and how having an SGD status or identity affects a research outcome is difficult because of the ways in which unobserved characteristics could vary by groups or by individuals and therefore affect outcomes. For example, the wage gap between lesbian and heterosexual women could be a byproduct of lesbian women having more labor market experience, but there is a lack of data on that particular issue.

Another issue for many studies is that they are cross-sectional, focusing on data collected on individuals at only one point in time. Thus, it may not be possible to know when a variable of interest—such as an experience of stigma—occurred in relation to the outcome being studied. Longitudinal surveys that collect data on the same people over time can help with both issues, allowing researchers to assess the role of personal characteristics and to examine whether changes in important variables are associated with changes in outcomes. Though they have increased in recent years, such datasets are still rare in research on SGD populations.

Experimental research methods are designed to allow more conclusive assessments of causal connections, since an exposure or intervention is varied randomly across groups and researchers then test for differences in outcomes by group. However, there are limitations in the application of those methods to the issues of interest in this report. In particular, it is

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 49 of 438 PageID #: 22

obviously not possible to randomly assign a particular sexual orientation or gender identity to individual people, or to randomly assign an experience of stigma, and then to compare outcomes across groups. Some studies have used experimental and quasi-experimental methods to answer other questions about the effects of policies, interventions, or other possible experiences of SGD populations. Since those policies or other conditions are different across time and place, researchers can study whether particular effects are present or are stronger in those places that are "treated" by a particular policy than in those places without the "treatment."

The third issue concerns research that is rooted in methods other than surveys or experiments, as referenced particularly in the chapters on communities, law, and public policy. Some of the research on development of communities draws on ethnographic and historical research methods. Such studies may involve archival research, observations, interviews, or the analysis of cultural phenomena (e.g., art, literature, and film). The chapters on law and public policy include some studies using quantitative methods, but they also include the review of case law, statutes, and legal institutions, as well as legal scholarship.

Given the above considerations and the varying sources of the findings discussed in this report, wherever possible the committee sought findings that are consistent across different datasets and research methods—an established procedure for assessing validity (Campbell and Fiske, 1959). The committee also notes strengths and weaknesses of various research methods described in this report.

Lastly, when reviewing many studies, including those that demonstrate an adherence to scientific rigor, the committee was frequently reminded that the heteronormativity of common research designs (collecting data on males, females, and heterosexual relationships; not accounting for alternate identities and romantic relationships) may not enable data collection that provides detail on less prominent SGD groups or characteristics. When pertinent data do not exist or are not presented in ways that advance the understanding of SGD populations, the committee makes recommendations on how to collect new data or to analyze existing data in ways that could advance that understanding.

REFERENCES

Almasri, J., Zaiem, F., Rodriguez-Gutierrez, R., Tamhane, S.U., Iqbal, A.M., Prokop, L., Speiser, P.W., Baskin, L.S., Bancos, I., and Murad, M.H. (2018). Genital reconstructive surgery in females with congenital adrenal hyperplasia: A systematic review and meta-analysis. *Journal of Clinical Endocrinology and Metabolism, 103*(11), 4089–4096. doi: 10.1210/jc.2018-01863.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 50 of 438 PageID #: 22

Callens, N., van der Zwan, Y.G., Drop, S.L.S., Cools, M., Beerendonk, C.M., Wolffenbuttel, K.P., and Dessens, A.B. (2012). Do surgical interventions influence psychosexual and cosmetic outcomes in women with disorders of sex development? *ISRN Endocrinology, 2012*, 1–8. doi: 10.5402/2012/276742.

Campbell, D.T., and Fiske, D.W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin, 56,* 81–105.

Dreger, A.D. (1998). A history of intersexuality: From the age of gonads to the age of consent. *Journal of Clinical Ethics*, *9*(4), 345–355.

Fish, J.N., Watson, R.J., Porta, C.M., Russell, S.T., and Saewyc, E.M. (2017). Are alcohol-related disparities between sexual minority and heterosexual youth decreasing? *Addiction*, *112*(11), 1931–1941. doi: 10.1111/add.13896.

Gallup. (2018). *Gay and Lesbian Rights*. Available: http://news.gallup.com/poll/1651/gay-lesbian-rights.aspx.

GenIUSS Group. (2014). Executive summary. In J.L. Herman (Ed.), *Best Practices for Asking Questions to Identify Transgender and Other Gender Minority Respondents on Population-Based Surveys*. Los Angeles, CA: Williams Institute.

Goffman, E. (1963). *Stigma*. Alexandria, VA: Alexander Street Press.

Goldberg, S.K. and Conron, K.J. (2018). Demographic characteristics of lesbian, gay, bisexual, and transgender adults in the United States: Evidence from the 2015–2017 Gallup Daily Tracking survey. In W. Swan, (Ed.), *The Routledge Handbook of L.G.B.T.Q. Administration and Policy.* New York: Routledge.

Hatzenbuehler, M.L. (2016). Structural stigma: Research evidence and implications for psychological science. *American Psychologist, 71,* 742–751.

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

Mize, T.D. (2016). Sexual orientation in the labor market. *American Sociological Review*, *81*(6), 1132–1160.

New Economics Foundation. (2012). *Measuring Well-being: A Guide for Practitioners*. London: Centre for Well-Being, New Economics Foundation. Available: https://b.3cdn.net/nefoundation/8d92cf44e70b3d16e6_rgm6bpd3i.pdf.

Pew Research Center. (2017). Changing Attitudes on Gay Marriage. Available: http://www.pewforum.org/fact-sheet/changing-attitudes-on-gay-marriage.

Toomey, R.B., and Russell, S.T. (2013). The role of sexual orientation in school-based victimization: A meta-analysis. *Youth and Society*, *48*(2), 176–201.

World Health Organization. (1946). Preamble to the Constitution of the World Health Organization. *Official Records of the World Health Organization*. Available: https://www.who.int/governance/eb/who_constitution_en.pdf.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 51 of 438 PageID #: 22

2

Health and Well-Being in Diverse Populations: Frameworks and Concepts

Sexual and gender diverse (SGD) people experience the world in different ways than their heterosexual, monosexual, endosexual, or cisgender counterparts. They also have varied experiences both across and within sexual orientation, gender identity, and intersex groups. It cannot be assumed that lesbian and bisexual women face the same environmental and societal challenges, nor can it be assumed that two gay men of different ethnicities and social statuses have similar experiences simply because they share a sexual orientation. An individual's health and well-being over the life course are determined by a combination of experiences, opportunities, and decisions that are influenced by their social relationships as well as their interactions with institutions and social structures, such as education, health care, government, public safety, housing, immigration, criminal justice, the military, and employment.

The identities and lived experiences of SGD individuals are complex, multidimensional systems. By applying a complex systems perspective in our work, the committee acknowledges the dynamic nature of human development, individuals' immediate environments, and the broader contexts in which they live their lives. In a complex system, each element interacts with and provides feedback to others and to the individual, potentially leading to changes in behaviors, roles, and functions that may result in nonlinearity or disproportionality (small effects in one area and large effects in another), novelty (yielding unexpected outcomes or responses), or time discordance (having delayed effects): see Figure 2-1.

This report reflects the committee's awareness that multiple systems simultaneously affect opportunities and outcomes for SGD communities. The

Copyright National Academy of Sciences. All rights reserved.

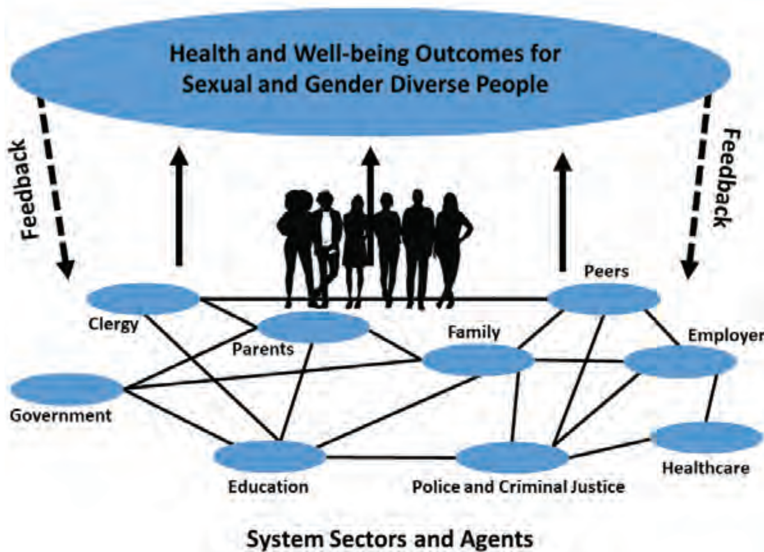


FIGURE 2-1 Complex systems illustration.

committee used the following frameworks to organize its thinking around these systems and their complex interactions:

- social ecology—how individuals are embedded in families, communities, societies, and the environment;
- social constructionism—how individuals experience their own lives and identities and the meaning they and others give to experiences and events;
- identity affirmation—how people become aware of, express, and affirm their sexual orientation, gender identity, and other aspects of identity;
- stigma—how dominant cultural beliefs and differences in access to power can lead to labeling, stereotyping, separation, status loss, and discrimination for those who do not align with societal norms;
- life course—how experiences from early to late in life accumulate and affect health and well-being at different ages and stages of development; and
- intersectionality—how multiple forms of structural inequality and discrimination, such as racism, sexism, and classism, combine to produce complex, cumulative systems of disadvantage for people who live at the intersections of multiple marginalized groups.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 53 of 438 PageID #: 22

The frameworks are intended to provide readers with a depth of understanding of the influences and dynamics of multiple systems on the health and well-being of sexual and gender diverse people. They are not tools by which to evaluate an individual's or group's experiences and identity; rather, the frameworks act as lenses through which one can see how these systems combine to produce novel and nonlinear outcomes that can affect an individual's well-being. Though all the frameworks and concepts are not equally pertinent to the content of this report, understanding this scholarly landscape allows the committee to situate the specific issues addressed throughout this report in broader theoretical contexts.

SOCIAL ECOLOGY

The social ecological approach enhances understanding of how human well-being is shaped by multiple interacting levels of influence between individuals, their immediate environment, and larger contexts (Bronfenbrenner, 1979; Bronfenbrenner and Ceci, 1994). These levels are interconnected, reciprocal, and complex, and they include

- individual-level factors, such as age, race, ethnicity, sex, gender identity, intersex status, and genetics;
- interpersonal-level factors such as relationships with partners, family members, friends, and peers;
- community-level factors such as schools, workplaces, community spaces, and religious institutions;
- societal-level factors such as laws, policies, and cultural and social norms; and
- environmental-level factors such as the natural environment and large-scale historical trends.

In this approach, people are embedded in families, communities, societies, and broader environments, and the interplay across and between these factors influences the health and well-being of individuals and populations (Institute of Medicine, 2011; Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020 [hereafter, Secretary's Advisory Committee], 2010). At each level, SGD populations experience unique stressors and sources of resilience related to sexual orientation, gender identity, and intersex status. This constellation of stressors and resources shapes their well-being across all domains, such as education, economics, relationships, and health. The social ecology model also recognizes that the experiences of SGD populations at each level vary as a function of gender, race, ethnicity, and other intersecting aspects of identity.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 54 of 438 PageID #: 22

The social ecology approach is important in understanding patterns and etiology of risk and resilience, and it also offers a framework for developing strategies at multiple levels to support the well-being of SGD populations. There is substantial evidence that multilevel interventions have more potential for success than those that concentrate only on a single level (Sallis, Owen, and Fisher, 2008; Secretary's Advisory Committee, 2010). The Secretary's Advisory Committee 2010 report for *Healthy People 2020* states, "Motivating people to change health-related behaviors when social and physical environments are not supportive often leads to weak, temporary change" (p. 29). Thus, if SGD populations are at greater risk for a behavior such as substance use, policies or interventions to address this disparity are more likely to be successful if they address not only individual behavior but also factors at interpersonal (e.g., family rejection), community (e.g., bullying in schools), and societal (e.g., employment discrimination based on sexual orientation and gender identity) levels. The social ecology approach is also useful for synthesizing diverse sources of data and research methods to understand how multiple levels of influence shape the well-being of SGD populations across different domains.

SOCIAL CONSTRUCTIONISM

Social forces influence people's shared understandings of reality. The theoretical framework called social constructionism examines the ways in which individuals, groups, cultures, and societies perceive social issues and problems. Social constructionism is often used to explore the influences of culture, society, and history on the ways in which individuals experience their own lives and the meanings that they give to these experiences. This perspective also suggests that facts and knowledge must be understood in the context of the particular culture or society that generated them, and it maintains that knowledge is influenced by and made tangible through social interactions.

A key tenet of social constructionism is the effect that socially constructed concepts and ideas have on individuals and the role that those in power have in constructing ideas, concepts, and even realities. For example, instead of focusing solely on the effect of a disease on people's bodies, social constructionism emphasizes the meaning that the illness has for the affected individuals and for those around them and how that shapes their experiences (Lupton, 2000). Likewise, it emphasizes the role that those in power have to construct how society, as a whole, understands diseases and illnesses and the context that is applied to certain groups. As such, social constructionism is frequently used as a framework to explain why some health issues, such as HIV/AIDS, obesity, and cancer, are stigmatized, and to examine societal responses to those stigmatized health issues. Beyond

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 55 of 438 PageID #: 22

the objective condition of a disease state, social understandings, reactions, and beliefs about a disease shape how a person understands or experiences the disease.

Symbols and shared group meanings also play a central role in conceptualizations of individual identity and social and group interactions. The meanings behind the power and privileges given to traits, behaviors, and identities attributed to particular groups are constructed aspects of culture that can be questioned. For example, understanding concepts such as "race"; racial categories; and privileges associated with skin complexion, hair color, facial features, and nation of origin as culturally constructed illuminates the ways that race is not a biological category but rather a social construct. Similarly, feminist scholars have questioned the meanings and privileges associated with gender roles in different cultures around the world and throughout history.

The approach of social constructionism highlights social and cultural forces that affect how gender and sexuality are perceived by different individuals, groups, and societies. This perspective may illuminate the effect that social issues and problems have on specific groups, particularly those most marginalized. For example, research on health and wellness among gay and bisexual men often describes them using the term "men who have sex with men." A social constructionist approach reveals that the emphasis on their behavior, which is typically described as "risky," erases the sexualities and identities of these men. Similarly, social constructionism is an important lens for understanding limits to the universal applicability of specific terms used to define and categorize sexual and gender diversity, which can vary within and between communities, societies, geographies, and time periods; it can help people better understand the power, privileges, and resources to which these groups have access.

STIGMA

Since Goffman's pioneering book, *Stigma: Notes on the Management of Spoiled Identity* (1963), social scientists have sought to identify the causes and consequences of stigma. Many definitions of stigma have been offered, which has led to some confusion about the meaning of this term. In part to address this confusion, Link and Phelan (2001, p. 367) advanced a highly influential conceptualization of stigma, which defines stigma as follows:

> In our conceptualization, stigma exists when the following interrelated components converge. In the first component, people distinguish and label human differences. In the second, dominant cultural beliefs link labeled persons to undesirable characteristics—to negative stereotypes. In the

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 56 of 438 PageID #: 22

> third, labeled persons are placed in distinct categories so as to accomplish some degree of separation of "us" from "them." In the fourth, labeled persons experience status loss and discrimination that lead to unequal outcomes. Stigmatization is entirely contingent on access to social, economic and political power that allows the identification of differentness, the construction of stereotypes, the separation of labeled persons into distinct categories and the full execution of disapproval, rejection, exclusion and discrimination. Thus, we apply the term stigma when elements of labeling, stereotyping, separation, status loss and discrimination co-occur in a power situation that allows them to unfold.

There are several important aspects to the conceptualization of stigma. First, it is important to distinguish between the related, though distinct, concepts of stigma and discrimination. While discrimination is a constitutive feature of stigma—in fact, the term stigma "cannot hold the meaning we commonly assign to it" when discrimination is left out (Link and Phelan, 2001, p. 370)—stigma is broader because it incorporates several other elements in addition to discrimination, such as labeling and stereotyping (Phelan, Link, and Dovidio, 2008). Moreover, stigma produces negative consequences even in the absence of discrimination and even without another person present in the immediate situation (Link and Phelan, 2001; Major and O'Brien, 2005). Thus, the concept of stigma captures numerous pathways that produce disadvantage outside of discriminatory action.

Second, stigma is dependent on power. Link and Phelan's (2001) definition illuminates the idea that power is present whenever stigmatization occurs. Power is necessary for people who stigmatize others (i.e., "stigmatizers") to achieve the ends they desire. As summarized by Phelan and colleagues (2008), the ends that are attained by stigmatization include "keeping people down" (exploitation/dominance), "keeping people in" (norm enforcement), and "keeping people away" (disease avoidance). In each instance, the dominant group gets something they want by stigmatizing others—that is, there are motives or interests that underlie and perpetuate stigmatization (Link and Phelan, 2001).

Stigma-driven motives are exercised through individual, interpersonal, and structural mechanisms, each of which contributes to negative outcomes for the stigmatized (Hatzenbuehler, 2016; Link and Phelan, 2001). *Individual forms of stigma* refer to the cognitive, affective, and behavioral processes in which individuals engage in response to stigma, such as (1) identity concealment, or hiding aspects of one's stigmatized status/condition/identity to avoid rejection and discrimination (e.g., Pachankis, 2007); (2) self-stigmatization, or the internalization of negative societal views about one's own group (Corrigan, Sokol, and Rüsch, 2013); and (3) rejection sensitivity, or the tendency to anxiously expect, and readily

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 57 of 438 PageID #: 22

perceive, rejection based on one's stigmatized status/identity/condition (e.g., Mendoza-Denton et al., 2003).

In contrast, *interpersonal stigma* refers to interactional processes that occur between stigmatized and non-stigmatized people. These interpersonal processes include both intentional, overt actions (e.g., bias-based hate crimes; Herek, 2009), as well as unintentional, covert actions (e.g., micro-aggressions; Sue et al., 2007). *Structural stigma*, which refers to processes that occur above the individual and interpersonal levels, is defined as "societal-level conditions, cultural norms, and institutional policies that constrain the opportunities, resources, and well-being of the stigmatized" (Hatzenbuehler and Link, 2014, p. 2). Examples include laws and policies that disadvantage specific groups, such as marriage bans for same-sex couples or differential sentencing for crack as opposed to powdered cocaine for racial and ethnic minorities.

INTERSECTIONALITY

Intersectionality is a term that describes how categories such as race, class, gender, and sexuality create and maintain forms of structural inequality and discrimination. Kimberlé Williams Crenshaw coined the term intersectionality (Crenshaw, 1989) to describe the experience of living under interlocking systems of oppression—particularly around race, gender, and class—about which she and other Black feminists had theorized. An intersectional lens frames systemic influences in a broad context, emphasizing the complexity and variety of individual experiences in an effort to understand the workings of privilege and power (Tomlinson and Baruch, 2013). Other categories of social identity and vectors of power often examined through an intersectional lens are ethnicity, nationality/migration, ability/disability, and HIV disease status (Crenshaw, 2017).

While many early Black feminist thinkers advanced intersectional analyses of the social location and conditions of Black women, some especially important work was done by the Black lesbian feminists of the Combahee River Collective (CRC) beginning in the 1970s. The CRC used the idea of intersectionality to illustrate how multiple oppressions reinforce each other to create new categories of human suffering (May, 2015; Taylor, 2017). The CRC made it clear that race, class, gender, and sexuality are vectors of power as well as social identity categories. They argued that social categories are not independent and unidirectional; rather, they are co-constitutive and interdependent. The CRC and other scholars also argued that individual social categories reflect larger structural forms of inequality, such as racism, patriarchy, homophobia, and class oppression (Bowleg, 2013).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 58 of 438 PageID #: 22

In her research on intersectionality, feminist Evelyn Nakano Glenn (2002) emphasized how categories of identity are often constructed using opposites and dichotomies rather than integrated and relational terms. She argued that this requires suppressing variability within categories so that dominant characteristics, such as whiteness, maleness, and heterosexuality, are normalized. In other words, white appears raceless, man appears genderless, and heterosexuality appears to be void of sexualization (Glenn, 2002). In this way, the powerful or dominant elements in society are not questioned.

The concept of intersectionality has influenced how scholars, activists, advocates, artists, and policy makers conceptualize individual and group identities, how they craft and sustain political alliances, and how they analyze and address systems that produce and maintain social inequities (May, 2015). It suggests an analytic framework that assists in examining the nature and workings of forms of interlocking structural stigma, inequality, and discrimination. It functions as a heuristic that reveals and highlights specific dynamics that privilege binary distinctions and single-axis thinking (May, 2015). Intersectionality is an approach to inquiry and a way to organize knowledge. For example, Berger and colleagues (2001) suggest that "intersectional stigma" is a complex process by which, in their study, women of color—who are already experiencing race, class, and gender oppression—are also labeled, judged, and given inferior treatment because of their status as drug users, sex workers, or HIV-positive women. For women who are lesbian, bisexual, transgender, intersex, or otherwise members of SGD communities, discrimination and disadvantage based on sexual orientation, gender identity, or intersex status may add additional layers of oppression. Writing from an intersectional perspective attends to the complex nature of power and how its intersectional qualities inform the experiences of SGD communities.

IDENTITY AFFIRMATION

The processes by which members of SGD communities come to explore, understand, declare, and affirm aspects of their identities related to sexual orientation, gender identity, or intersex status are complex. Each aspect of one's identity has distinct characteristics and follows different developmental pathways; at the same time, however, they are deeply intertwined (Doreleijers and Cohen-Kettenis, 2007). Processes of "coming out" and affirming one's identity vary widely by factors such as stage of life, family circumstances, and socioeconomic and political influences. There has been a long-standing predominant research focus on adolescence because of the well-documented vulnerabilities of lesbian, gay, bisexual, transgender, and questioning youth (Russell and Fish, 2016) and because individual knowledge and awareness of one's own sexual orientation, gender identity,

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 59 of 438 PageID #: 22

or intersex status often emerges with the biopsychosocial changes associated with puberty (Herdt and McClintock, 2000). Yet many young people are aware of differences in their thoughts and feelings associated with sexuality earlier in childhood, and for many transgender and other gender diverse youth, transgender identity awareness emerges in very early childhood (Levitt and Ippolito, 2014). Both psychosocial and biological factors influence gender identity development, yet most research approaches these areas of influence in isolation, so little is known about the complex dynamics among psychosocial and biological influences (Steensma et al., 2013). In addition, there are diverse expressions of differences in sexual development, which raise a range of developmental questions for how people with intersex characteristics come to understand and express various aspects of their identities (Roen, 2019).

Gender affirmation has been broadly defined as an interpersonal and shared process through which a person's identity is socially recognized (Sevelius, 2013). More specifically, it refers to the process by which people are affirmed or recognized in their gender identity (Reisner, Radix, and Deutsch, 2016). Gender affirmation can be conceptualized as having four core facets: psychological, social, medical, and legal (Reisner et al., 2016):

1. psychological gender affirmation, such as self-actualization and validation;
2. social gender affirmation, such as gender roles and use of appropriate names and pronouns that correspond with the person's gender identity;
3. medical gender affirmation, such as use of puberty suppression, hormone therapy, and gender-affirming surgeries; and
4. legal gender affirmation, such as nondiscrimination protections and accessibility of legal processes to change names and gender markers on identity documents.

Gender affirmation sometimes, but not always, conforms to binary categories of being female or male. Gender affirmation does not require following a discrete or linear series of "transition" events; on the contrary, it can be conceptualized as an evolving process throughout a person's life course.

There is no single path to gender affirmation—no one pathway that describes how or when people affirm their gender. For many transgender people, awareness and expression of one's own gender identity is further complicated by having to affirm that identity in both personal and social contexts. Gender affirmation has thus emerged as an important framework for understanding transgender health.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 60 of 438 PageID #: 22

Increasing evidence suggests that gender affirmation is a key determinant of health and well-being for transgender people. Some transgender individuals do not seek any medical interventions; others use hormones and do not seek surgery, and some undergo surgical interventions. Medical gender affirmation therapies (e.g., hormones and surgical interventions) have been found to improve psychological functioning and quality of life for transgender people (Murad et al., 2010; Nguyen et al., 2018; Rowniak, Bolt, and Sharifi, 2019; Wernick et al., 2019; White Hughto and Reisner, 2016). Social, psychological, and medical gender affirmation were found to be associated with lower levels of depression and higher self-esteem in a community sample of transgender women (Glynn et al., 2016). There is also evidence supporting gender affirmation as a target of intervention to improve viral suppression for transgender women of color living with HIV (Sevelius et al., 2019). Among Black transgender women with and without HIV infection, gender affirmation has further been associated with increased personal competence and acceptance of self and life (resiliency) and decreased perceived stress, anxiety, depression, and suicidal ideation (Crosby, Salazar, and Hill, 2016). In Black transgender youth, gender affirmation was shown to moderate the association between anticipated stigma and health care avoidance: anticipated stigma around health care treatment and subsequent avoidance decreased for youth who had undergone gender affirmation (Goldenberg et al., 2019). The gender affirmation matrix and its psychological, social, medical, and legal contexts and implications have been useful tools to advance understandings of the health and well-being of sexual and gender diverse people, but additional research utilizing this framework is needed.

LIFE COURSE

A life course perspective offers a framework for understanding how experiences accumulate over the life course, from early through late life, to shape advantage and disadvantage in health and well-being across diverse populations. Some population groups experience more disadvantage than others due to their identities, social locations, or sociohistorical contexts. Social patterns accumulate over time (Elder, Johnson, and Crosnoe, 2003) and can be affected by variation in stressors and resources across groups. The life course experiences of SGD populations further vary in relation to such factors as race, ethnicity, and socioeconomic status (Kim and Fredriksen-Goldsen, 2016). There is more research on some SGD populations than on others; for example, more studies have focused on gay and lesbian populations than on bisexual, transgender, and intersex populations (Reczek, 2020).

Time and place are central to a life course perspective. Life course experiences and individual development are shaped by historical and geographic

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 61 of 438 PageID #: 22

contexts (Hammack et al., 2018). Because sexual and gender diversity is now more openly portrayed in popular culture than in previous eras, and because public attitudes around LGBTQ+ individuals and relationships have shifted, SGD youth may be more likely to come out during adolescence (Floyd and Bakeman, 2006). In the case of intersex people, there have been significant shifts in recent decades in cultural awareness and understanding of differences of sex development, as well as advances in patient-centered medical approaches to supporting the health and well-being of people with intersex traits (Roen, 2019). Individual development and life course experiences also vary geographically—both in terms of rural or urban areas and across states or localities. For example, prior to the nationwide expansion of marriage equality in 2015, lesbian, gay, and bisexual individuals who lived in states that enacted more supportive policies for SGD populations (e.g., civil union legislation) experienced higher levels of psychological well-being and lower rates of hazardous drinking than those in states with more restrictive policies (Everett, Hatzenbuehler, and Hughes, 2016).

Across the life course, members of SGD populations face many unique stressors in their social environments that are directly attributable to their sexual orientation, gender identity, or intersex status—a phenomenon called "minority stress" (Brooks, 1981; Meyer, 2003). For many years, few people learned they were intersex or came out as lesbian, gay, bisexual, or transgender before adulthood. In recent years, however, many young people have begun to come out in adolescence. Those who self-identify as LGBTQI+ at a younger age may experience more minority stressors related to their sexual orientation, gender identity, or intersex status, such as conflict within their families or hostile school environments (Russell and Fish, 2016). In addition, adults who are members of SGD communities may face stigma and discrimination in their social networks, workplaces, and health care settings. Exposure to increased stress can activate biological processes (e.g., cardiovascular arousal), psychosocial processes (e.g., anxiety, depression, sleep problems), and behavioral processes (e.g., substance use, isolation) that take a toll on one's health and well-being.

Protective or resilience factors over the life course can buffer the effects of stress, reduce stress exposure, and, on their own, contribute to cumulative advantage in well-being. A key concept here is that of "linked lives," which refers to social connections, particularly close and supportive social relationships. In childhood, parents and families of origin can offer highly salient and important resources that promote well-being. For example, parental rejection is particularly undermining for the well-being of lesbian, gay, bisexual, and transgender youth (Ryan et al., 2009), while parental support can mitigate stress for children and adolescents at high risk of discrimination based on sexual orientation and gender identity (Thomeer, Paine, and Bryant, 2018). Peer and school ties can be an important resource

Copyright National Academy of Sciences. All rights reserved.

through adolescence (Martin-Storey et al., 2015; Watson, Grossman, and Russell, 2019), and intimate partner and other chosen family ties are important throughout the life course (Donnelly, Robinson, and Umberson, 2019).

In contrast to stressors that undermine health and well-being, protective factors can activate biopsychosocial processes that contribute to cumulative advantage in health and well-being over the life course. A life course approach emphasizes the power of social contexts to influence individual development and well-being, but it also emphasizes individual agency in the choices individuals make to shape their life experiences and affect their social contexts.

A life course perspective attends to developmental processes across the entire life course, as well as to variation in development across historical and geographic contexts. Life course experiences spill over from one life stage to the next—a process that results in cumulative advantage or disadvantage over a person's life (Umberson and Thomeer, 2020). Early life course exposure to discrimination and stigma based on sexual orientation, gender identity, or intersex status can thus have lifelong consequences. For example, substantial empirical research shows that exposure to high levels of stress and adversity in childhood sets in motion distinct developmental changes that can undermine health and well-being years and even decades later (Shonkoff et al., 2012). First, childhood adversity associated with discrimination and stigma may be the beginning of a long process of repeated insults to health and well-being that take place over a period of years. Second, childhood may be a sensitive period in the life course, during which significant stress exposure triggers patterns of heightened psychological and physiological reactivity to stress (e.g., hypervigilance, anxiety, cardiovascular arousal) that are detrimental to health. Thus, early life course experiences can set trajectories of health and well-being into motion that may be exacerbated by subsequent exposures to discrimination or interrupted by subsequent exposures to protective factors.

Little research has been conducted on how outcomes for aging SGD populations differ from those experienced by cisgender and heterosexual populations. Because marriage is associated with improved economic status and better health outcomes (see Chapter 8), it could become increasingly important to health and well-being as aging spouses experience declining health. There is a dearth of research on illness, caregiving, and end-of-life issues among SGD populations. Further study is needed to determine the effects of various experiences on the life course of aging populations and what types of social and economic support would improve outcomes for this population.

SUMMARY

In a complex system, elements interact with and provide feedback to other elements and to the individual at the center of the system, potentially

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 63 of 438 PageID #: 22

leading to changes in behaviors, roles, and functions that yield unique effects. By applying a complex systems perspective in this report, the committee acknowledges that an individual's health and well-being emerge from dynamic interactions involving many subsystems or sectors in society.

Three key components of a complex social system are social ecology (how an individual's social spheres influence health and well-being), social constructionism (how culture, society, and history influence the ways in which individuals experience life and the meanings they derive from these experiences), and stigma (how dominant cultural beliefs and the distribution of power can lead to labeling, stereotyping, separation, status loss, and discrimination). Additional concepts that are particularly relevant to understanding sexual and gender diverse communities are intersectionality (how categories such as race, ethnicity, gender, sexuality, socioeconomic class, and HIV/disease status create and maintain forms of structural inequality and discrimination); identity affirmation (how people affirm their sexual orientation, gender identity, and other aspects of identity); and life course (how experiences over an entire lifetime accumulate and affect health and well-being at different ages and stages of development).

These theories and concepts can serve as lenses through which multidisciplinary forms of research evidence can be interpreted: they are included in this report to provide readers with depth of understanding of these influences and dynamics on the health and well-being of sexual and gender diverse people. In the following chapters, the committee uses these ideas where applicable to inform analyses of various domains of well-being.

REFERENCES

Berger B.E., Ferrans, C.E., and Lashley, F.R. (2001). Measuring stigma in people with HIV: Psychometric assessment of the HIV stigma scale. *Research in Nursing and Health*, *24*, 518–529.

Bowleg, L. (2013). "Once you've blended the cake, you can't take the parts back to the main ingredients": Black gay and bisexual men's descriptions and experiences of intersectionality. *Sex Roles, 68*(11-12), 754–767.

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U., and Ceci, S.J. (1994). Nature-nurture reconceptualized: A bioecological model. *Psychological Review, 101*, 568–586.

Brooks, V.R. (1981). *Minority Stress and Lesbian Women*. Lexington, MA: Lexington Books.

Corrigan P.W., Sokol, K.A., and Rüsch, N. (2013). The impact of self-stigma and mutual help programs on the quality of life of people with serious mental illnesses. *Community Mental Health Journal, 49*(1), 1–6.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum,* 1989(1), Article 8. Available: http://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8.

Crenshaw, K. (2017). *On Intersectionality: Essential Writings*. New York: The New Press.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 64 of 438 PageID #: 22

Crosby, R.A., Salazar, L.F., and Hill, B.J. (2016). Gender affirmation and resiliency among Black transgender women with and without HIV infection. *Transgender Health, 1*(1), 86–93. Available: https://www.ncbi.nlm.nih.gov/pubmed/29159300.

Donnelly, R., Robinson, B.A., and Umberson, D. (2019). Can spouses buffer the impact of discrimination on depressive symptoms?: An examination of same-sex and different-sex marriages. *Society and Mental Health, 9*(2), 192–210. doi: 10.1177/2156869318800157.

Doreleijers, T.A., and Cohen-Kettenis, P.T. (2007). Disorders of sex development and gender identity outcome in adolescence and adulthood: Understanding gender identity development and its clinical implications. *Pediatric Endocrinology Reviews, 4*(4), 343–351.

Elder, G.H., Jr., Johnson, M.K., and Crosnoe, R. (2003). The emergence and development of life course theory. In J.T. Mortimer and M.J. Shanahan (Eds.), *Handbook of the Life Course* (pp. 3–19). New York: Kluwer Academic/Plenum Publishers.

Everett, B.G., Hatzenbuehler, M.L., and Hughes, T.L. (2016). The impact of civil union legislation on minority stress, depression, and hazardous drinking in a diverse sample of sexual-minority women: A quasi-natural experiment. *Social Science & Medicine*, *169*, 180–190. doi: 10.1016/j.socscimed.2016.09.036.

Floyd, F.J., and Bakeman, R. (2006). Coming-out across the life course: Implications of age and historical context. *Archives of Sexual Behavior*, *35*(3), 287–296.

Glenn, E.N. (2002). *Unequal Freedom: How Race and Gender Shaped American Citizenship and Labor*. Cambridge, MA: Harvard University Press.

Glynn, T.R., Gamarel, K.E., Kahler, C.W., Iwamoto, M., Operario, D., and Nemoto, T. (2016). The role of gender affirmation in psychological well-being among transgender women. *Psychology of Sexual Orientation and Gender Diversity, 3*(3), 336–344. Available: https://www.ncbi.nlm.nih.gov/pubmed/27747257.

Goffman, E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. Englewood Cliffs, NJ: Prentice Hall.

Goldenberg, T., Jadwin-Cakmak, L., Popoff, E., Reisner, S.L., Campbell, B.A., and Harper, G.W. (2019). Stigma, gender affirmation, and primary healthcare use among Black transgender youth. *The Journal of Adolescent Health, 65*(4), 483–490. Available: https://www.ncbi.nlm.nih.gov/pubmed/31303554.

Hammack, P.L., Frost, D.M., Meyer, I.H., and Pletta, D.R. (2018). Gay men's health and identity: Social change and the life course. *Archives of Sexual Behavior, 47*(1), 59–74.

Hatzenbuehler, M.L. (2016). Structural stigma: Research evidence and implications for psychological science. *American Psychologist*, *71*(8), 742–751. doi: 10.1037/amp0000068.

Hatzenbuehler, M.L., and Link, B.G. (2014). Introduction to the special issue on structural stigma and health. *Social Science and Medicine, 103*, 1–6.

Herdt, G., and McClintock, M. (2000). The magical age of 10. *Archives of Sexual Behavior*, *29*(6), 587–606.

Herek, G.M. (2009). Hate crimes and stigma-related experiences among sexual minority adults in the United States: Prevalence estimates from a national probability sample. *Journal of Interpersonal Violence, 24*(1), 54–74.

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

Kim, H.-J., and Fredriksen-Goldsen, K.I. (2016). Disparities in mental health quality of life between Hispanic and non-Hispanic white LGB midlife and older adults and the influence of lifetime discrimination, social connectedness, socioeconomic status, and perceived stress. *Research on Aging, 39*(9), 991–1012. doi: 10.1177/0164027516650003.

Levitt, H.M., and Ippolito, M.R. (2014). Being transgender: The experience of transgender identity development. *Journal of Homosexuality*, *61*(12), 1727–1758.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 65 of 438 PageID #: 22

Link, B.G., and Phelan, J.C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, *27*(1), 363–385.

Lupton, D. (2000). The social construction of medicine and the body. In G. Albrecht, R. Fitzpatrick, and S. Scrimshaw (Eds.), *Handbook of Social Studies in Health and Medicine* (pp. 50–63). Thousand Oaks, CA: SAGE Publishing. doi: 10.4135/9781848608412.

Major, B., and O'Brien, L.T. (2005). The social psychology of stigma. *Annual Review of Psychology, 56*, 393–421. doi: 10.1146/annurev.psych.56.091103.070137.

Martin-Storey, A., Cheadle, J.E., Skalamera, J., and Crosnoe, R. (2015). Exploring the social integration of sexual minority youth across high school contexts. *Child Development*, *86*(3), 965–975.

May, V. (2015). *Pursuing Intersectionality, Unsettling Dominant Imaginaries*. New York: Routledge. doi: 10.4324/9780203141991.

Mendoza-Denton, R., Downey, G., Purdie, V.J., Davis, A., and Pietrzak, J. (2003). Sensitivity to status-based rejection: Implications for African American students' college experience. *Journal of Personality and Social Psychology, 83*(4), 896–918.

Meyer, I.H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697.

Murad, M.H., Elamin, M.B., Garcia, M.Z., Mullan, R.J., Murad, A., Erwin, P.J., and Montori, V.M. (2010). Hormonal therapy and sex reassignment: A systematic review and meta-analysis of quality of life and psychosocial outcomes. *Clinical Endocrinology, 72*(2), 214–231. Available: https://www.ncbi.nlm.nih.gov/pubmed/19473181.

Nguyen, H.B., Chavez, A.M., Lipner, E., Hantsoo, L., Kornfield, S.L., Davies, R.D., and Epperson, C.N. (2018). Gender-affirming hormone use in transgender individuals: Impact on behavioral health and cognition. *Current Psychiatry Reports, 20*(12), 110. Available: https://www.ncbi.nlm.nih.gov/pubmed/30306351.

Pachankis, J.E. (2007). The psychological implications of concealing a stigma: A cognitive–affective–behavioral model. *Psychological Bulletin, 133*(2), 328–345.

Phelan, J., Link, B., and Dovidio, J.F. (2008). Stigma and prejudice: One animal or two? *Social Science and Medicine, 67*, 358–367.

Reczek, C. (2020). A decade of research on gender and sexual minority families. *Journal of Marriage and Family, 82*(1).

Reisner, S.L., Radix, A., and Deutsch, M.B. (2016). Integrated and gender-affirming transgender clinical care and research. *Journal of Acquired Immune Deficiency Syndrome, 72*(Suppl 3), S235–S242. Available: https://www.ncbi.nlm.nih.gov/pubmed/27429189.

Roen, K. (2019). Intersex or diverse sex development: Critical review of psychosocial health care research and indications for practice. *Journal of Sex Research*, *56*(4-5), 511–528.

Rowniak, S., Bolt, L., and Sharifi, C. (2019). Effect of cross-sex hormones on the quality of life, depression and anxiety of transgender individuals: A quantitative systematic review. *JBI Database of Systematic Reviews and Implementation Reports, 17*(9), 1826–1854. Available: https://www.ncbi.nlm.nih.gov/pubmed/31021971.

Russell, S.T., and Fish, J. (2016). Mental health in LGBT youth. *Annual Review of Clinical Psychology, 12,* 465–487. doi: 10.1146/annurev-clinpsy-021815-093153.

Ryan, C., Huebner, D., Diaz, R.M., and Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in white and Latino lesbian, gay, and bisexual young adults. *Pediatrics*, *123*(1), 346–352.

Sallis, J.F., Owen, N., and Fisher, E.B. (2008). Ecological models of health behavior. In K. Glanz, B.K. Rimer, and K. Viswanath (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice*, *4* (pp. 465–486). San Francisco, CA: John Wiley & Sons, Inc.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 66 of 438 PageID #: 22

Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. (2010). *Healthy People 2020: An Opportunity to Address Societal Determinants of Health in the U.S.* Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Available: https://www.healthypeople.gov/sites/default/files/SocietalDeterminantsHealth.pdf.

Sevelius, J.M. (2013). Gender affirmation: A framework for conceptualizing risk behavior among transgender women of color. *Sex Roles, 68*(11–12), 675–689. Available: https://www.ncbi.nlm.nih.gov/pubmed/23729971.

Sevelius, J., Chakravarty, D., Neilands, T.B., Keatley, J., Shade, S.B., Johnson, M.O., Rebchook, G., and HRSA SPNS Transgender Women of Color Study Group. (2019). Evidence for the model of gender affirmation: The role of gender affirmation and healthcare empowerment in viral suppression among transgender women of color living with HIV. *AIDS and Behavior.* Available: https://www.ncbi.nlm.nih.gov/pubmed/31144131.

Shonkoff, J.P., Garner, A.S., Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, Section on Developmental and Behavioral Pediatrics, Siegel, B.S., Dobbins, M.I., Earls, M.F., Garner, A.S., McGuinn, L., Pascoe, J., and Wood, D.L. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, *129*(1), e232–e246. doi: 10.1542/peds.2011-2663.

Steensma, T.D., Kreukels, B.P., de Vries, A.L., and Cohen-Kettenis, P.T. (2013). Gender identity development in adolescence. *Hormones and Behavior*, *64*(2), 288–297.

Sue, D.W., Capodilupo, C.M., Torino, G.C., Bucceri, J.M., Holder, A.M.B., Nadal, K.L., and Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist, 62*(4), 271.

Taylor, K.-Y. (2017). *How We Get Free: Black Feminism and the Combahee River Collective*. Chicago: Haymarket Books.

Thomeer, M.B., Paine, E.A., and Bryant, C. (2018). Lesbian, gay, bisexual, and transgender families and health. *Sociology Compass*, *12*, e12552. doi: 10.1111/soc4.12552.

Tomlinson, Y., and Baruch, M. (2013). *Framing Questions on Intersectionality*. U.S. Human Rights Network. Available: https://ushrnetwork.org/uploads/Resources/framing_questions_on_intersectionality_1.pdf.

Umberson, D., and Thomeer, M.B. (2020). Family matters: Research on family ties and health, 2010 to 2020. *Journal of Marriage and Family, 82*(1). doi: 10.1111/jomf.12640.

Watson, R.J., Grossman, A.H., and Russell, S.T. (2019). Sources of social support and mental health among LGB youth. *Youth and Society*, *51*(1), 30–48.

Wernick, J.A., Busa, S., Matouk, K., Nicholson, J., and Janssen, A. (2019). A systematic review of the psychological benefits of gender-affirming surgery. *The Urologic Clinics of North America, 46*(4), 475–486. Available: https://www.ncbi.nlm.nih.gov/pubmed/31582022.

White Hughto, J.M., and Reisner, S.L. (2016). A systematic review of the effects of hormone therapy on psychological functioning and quality of life in transgender individuals. *Transgender Health, 1*(1), 21–31. Available: https://www.ncbi.nlm.nih.gov/pubmed/27595141.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 67 of 438 PageID #: 22

PART II

UNDERSTANDING SEXUAL AND GENDER DIVERSE POPULATIONS

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 68 of 438 PageID #: 22

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 69 of 438 PageID #: 22

3

Demography and Public Attitudes of Sexual and Gender Diverse Populations

This chapter reviews demographic patterns and trends among sexual and gender diverse (SGD) populations. In any assessment of the demographic characteristics of these groups, visibility and the coming out process are critical considerations in interpretations of findings, particularly those focused on historical trends. Nearly all research in this area has focused on sexual orientation or same-sex sexual behavior or relationships. More recently and to a lesser extent there has been demographic research on transgender populations. There are still almost no demographic data on people with differences of sex development (DSD) in the general population or on people who might identify as intersex. This is a significant gap in terms of identifying and understanding the well-being of intersex populations.

This chapter focuses on overall prevalence estimates of sexual and gender diverse populations and provides some detail on geographic variation, age, race and ethnicity, and child-rearing practices of these populations. This does not represent an exhaustive list of important demographic traits. Information relating to economic status, immigration status, disability, and religion are discussed in greater detail in other chapters in this report.

The decision to disclose one's sexual orientation, gender identity, or intersex status in any data collection setting can be affected by factors that include a sense of social acceptance, the presence of nondiscrimination protections, and perceptions of confidentiality and privacy. In the absence of affirming and protective environments, policies, and practices, some who consider themselves to be lesbian, gay, bisexual, or transgender (LGBT), who have intersex traits/DSD, or who otherwise identify as not cisgender or

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 70 of 438 PageID #: 22

heterosexual may decide not to disclose details of their sexual orientation, gender identity, or intersex status. Those decisions introduce a potentially inherent bias into assessments of SGD communities. Thus, it is important to understand that knowledge of the demographic characteristics of SGD populations is largely limited to information about those willing to disclose aspects of identity, behavior, or medical history that have been or still are stigmatized as non-normative.

PREVALENCE

Findings from both the General Social Survey (GSS) and Gallup show substantial increases in LGBT identification over the last decade. In combined GSS data for 2008–2012, 3.0 percent of adults identified as lesbian, gay, or bisexual. That figure increased by 60 percent, to 4.8 percent, in combined data for 2014–2018. In 2012, Gallup reported that 3.5 percent of U.S. adults identified as LGBT. That figure increased by almost 30 percent, to 4.5 percent, in the 2017 Gallup data. The GSS and Gallup figures imply that an estimated 11.4–12.2 million U.S. adults identify as LGBT: see Figure 3-1.[1] This number is roughly equivalent to the population of Ohio. Analyses of Gallup data suggest that virtually all of the change in LGBT identification is among younger age cohorts.[2]

Findings from 10 states using population-based data from the state-level Youth Risk Behavior Surveillance System show increases in adolescents aged 14–18 identifying as non-heterosexual, from 7.3 percent in 2009 to 14.3 percent in 2017. These data also show increases in same-sex sexual contact, from 7.7 percent in 2009 to 13.1 percent in 2017 (Raifman et al., 2020).

A lack of historical data on the transgender population limits the ability to consider changes to population estimates over time. In studies that rely on clinical records, primarily from Europe, estimates of the transgender population size range between 1 and 30 people per 100,000 (0.001 to 0.03 percent) (Goodman et al., 2019). Studies that focus instead on self-report among nonclinical populations find estimates that range between 0.1 and 2.0 percent (Goodman et al., 2019). A 2016 nationwide estimate using population data from the Behavioral Risk Factor Surveillance System (BRFSS) estimated that 0.6 percent of U.S. adults identify as transgender (Flores et al., 2016), along with 0.7 percent of adolescents aged 13–17 (Herman et

[1] These numbers are based on a calculation by Gary J. Gates using Census Bureau estimates that there are nearly 254,000,000 adults aged 18 and older in the United States (see https://www.census.gov/data/tables/time-series/demo/popest/2010s-national-detail.html), of whom 4.5–4.8 percent are LGBT.

[2] See https://news.gallup.com/poll/201731/lgbt-identification-rises.aspx.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 71 of 438 PageID #: 22

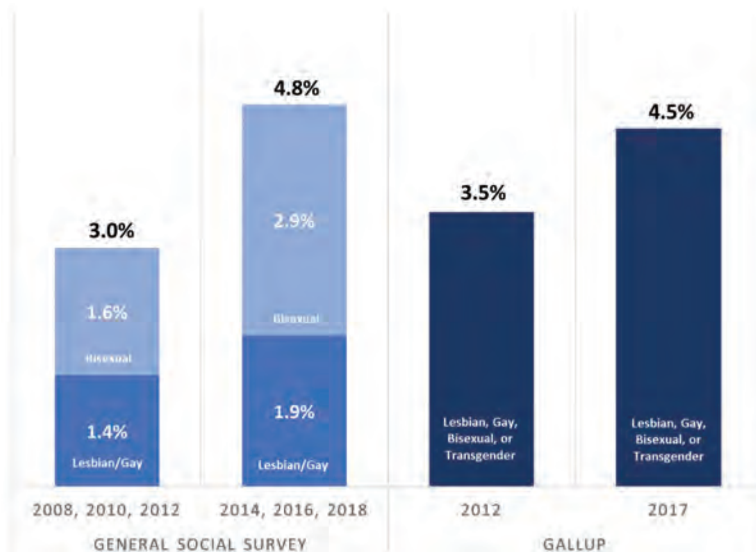


FIGURE 3-1 Lesbian, gay, bisexual, and transgender identification.
SOURCE: Data from the General Social Survey and Gallup Poll, 2008–2017.

al., 2017). This estimate implies that approximately 1.4 million adults[3] and 150,000 adolescents aged 13–17 identify as transgender in the United States (Herman et al., 2017). A meta-analysis of multiple data sources from 2007 to 2015 found a similar estimate of approximately 1 million transgender people (0.39 percent of the U.S. population), with higher proportions among younger age groups (Meerwijk and Sevelius, 2017). In California, findings from a population-based sample of high school students found that 1.1 percent identified as transgender (Perez-Brumer et al., 2017). Of note, many surveys that ask about gender identity simply add a "transgender" option to an existing binary (male/female) sex question, which has been shown to result in substantial undercounts of transgender individuals in comparison with a two-step question design that asks about both current gender identity and sex assigned at birth (Tate, Ledbetter, and Youssef, 2013; Tordoff et al., 2019).

Increases have also been found in reported same-sex sexual behavior, though more so among women. In the 2002 National Survey of Family

[3]This figure is based on a calculation by Gary J. Gates using Census Bureau estimates that there are nearly 254,000,000 adults age 18 and older in the United States (see https://www.census.gov/data/tables/time-series/demo/popest/2010s-national-detail.html), of whom 0.6 percent are transgender.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 72 of 438 PageID #: 22

Growth (NSFG), 11.2 percent of women aged 15–44 reported having had same-sex sexual contact (Mosher, Chandra, and Jones, 2005); in the 2011–2015 NSFG, that figure had increased to 17.6 percent.[4] That pattern does not hold for men. Among men aged 15–44, 6.0 percent reported any same-sex anal or oral sexual activity in the 2002 NSFG (Mosher, Chandra, and Jones, 2005), compared with 5.1 percent in 2011–2015.[5] Findings from the GSS show increases across birth cohorts in the proportion of adults who have had sex with both men and women since age 18: among those born prior to 1965, less than 5 percent of both men and women report such sexual activity; among those born between 1984 and 2000, the figure is more than 20 percent for women and 12 percent for men (Mishel et al., 2020).

The NSFG has also reported increases in same-sex sexual attraction. Among women aged 18–44 in the 2006–2010 data, 4.4 percent report being equally attracted to both men and women or mostly or exclusively attracted to women. In the 2011–2015 data, that figure was 5.5 percent. Women who said they were mostly rather than exclusively attracted to men also increased, from 12.1 percent to 12.7 percent. Among men aged 18–44, those who reported equal attraction to men and women or mostly or exclusively attracted to men increased in the two surveys from 2.7 percent to 3.1 percent. The proportion of men who said they were mostly rather than exclusively attracted to women increased from 3.5 percent to 4.0 percent.[6]

Recent estimates from the Current Population Survey (CPS) suggest that there are 1,012,000 same-sex couples in the United States, of whom 543,000 (54%) are married (U.S. Census Bureau, 2019). In comparison, estimates from the 2010 census found approximately 650,000 same-sex couples (O'Connell and Feliz, 2011).[7] Estimates based on Gallup data from June 2016 to June 2017 suggest that 23.3 percent of all LGBT-identified adults are married, with 10.2 percent married to a same-sex spouse and 13.1 percent married to a different-sex spouse. An additional 10.8 percent are cohabiting with a partner: 6.6 percent are cohabiting with a same-sex partner and 4.2 percent with a different-sex partner (Jones, 2017). It is important to note that many bisexuals, who account for more than half of adults who identify as LGBT, report cohabitation with different-sex partners and spouses, likely accounting for many of the LGBT adults who report living with different-sex partners or spouses.

[4] See https://www.cdc.gov/nchs/nsfg/key_statistics/s.htm#sexualfemales.

[5] See https://www.cdc.gov/nchs/nsfg/key_statistics/s.htm#oralanal.

[6] Key Statistics from the National Survey of Family Growth: see https://www.cdc.gov/nchs/nsfg/key_statistics/s.htm#sexualattraction.

[7] Of note, there are methodological differences in how the CPS and the 2010 census identify same-sex couples. Also, the 2010 figure is adjusted from original census tabulations to account for measurement error due to potential sex miscoding among different-sex couples.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 73 of 438 PageID #: 22

Increases in LGBT identification are likely a result of more people in SGD populations being willing and able to self-identify and be visible. Analyses of several population-based data sources, however, show that these increases are not uniform by sexual orientation identity, age, race, or ethnicity. In particular, the evidence suggests that increases in LGBT identification are more prominent among bisexual people, women, younger adults, and racial and ethnic minorities.[8] Unfortunately, research explaining why particular groups have become more willing to disclose their LGBT identification remains sparse.

THE ROLE OF PUBLIC ATTITUDES

Historic trends in national LGBT prevalence estimates offer evidence of a link between social acceptance and LGBT identification. In 1972 the GSS reported that 73 percent of American adults believed that homosexuality was always wrong, while 11 percent believed that homosexuality was not wrong at all. In 2008, only a small majority, 52 percent, said such relationships were always wrong, while 38 percent said that same-sex sexual relationships are not wrong at all. By 2018, only 32 percent said homosexuality was always wrong, and 58 percent said it was not wrong at all (Gates, 2017): see Figure 3-2.

Gallup analyses show similar trends. In 2008, 55 percent of U.S. adults thought that gay and lesbian relationships between consenting adults should be legal. By 2019, that figure had risen to 73 percent (Gallup, 2019). There

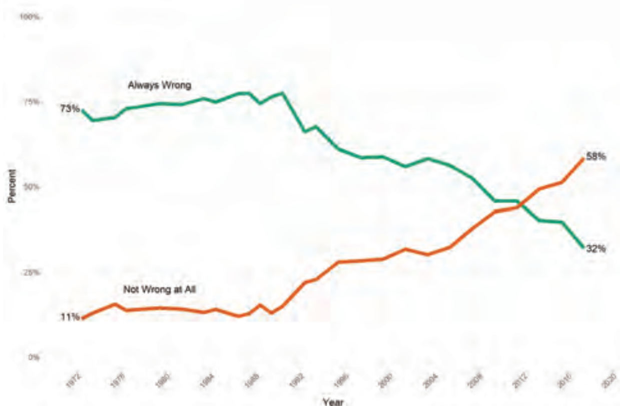


FIGURE 3-2 Approval of homosexuality, 1972–2018.
SOURCE: Data from the General Social Survey cumulative data file, 1972–2018.

[8] See https://news.gallup.com/poll/201731/lgbt-identification-rises.aspx.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 74 of 438 PageID #: 22

are insufficient longitudinal data to draw conclusions about historical trends in public attitudes about transgender people, but the growing visibility of transgender people in the media and in public life over the past 10 years may indicate a social climate of growing acceptance. For example, Jones and colleagues (2019b) found that, from 2017 to 2019, people favorable attitudes toward transgender rights markedly increased. Almost half (49%) of U.S. adults across all age groups and partisan affiliations in a 2020 poll from the Kaiser Family Foundation (KFF) believed U.S. society had not gone far enough in accepting people who are transgender, compared with only 15 percent who said society has gone too far (Kirzinger et al., 2020). The percentage who say society has not gone far enough has increased by 10 points since a similar poll conducted in 2017 (Horowitz, Parker, and Stepler, 2017).[9]

In a 2019 poll, 63 percent of all respondents said that lesbian, gay, and bisexual people experience "a great deal" or "a fair amount" of discrimination in the United States today, and 69 percent said the same about transgender.[10] In a recent poll, large majorities of the American public said that there is at least some discrimination against lesbian, gay, and bisexual people (74%) and transgender people (79%) in the United States today, which is comparable to the proportion who believe discrimination exists against Black (84%) and Hispanic people (77%) (Kirzinger et al., 2020). In the KFF poll, the proportion of respondents who said there is "a lot" of discrimination against transgender people in the United States today was comparable to those who said the same about Black people (45% and 53%, respectively) (Kirzinger et al., 2020).

In tandem with awareness of ongoing discrimination against SGD people, there is also widespread support for policies that address discrimination. A recent study found that 71 percent of U.S. adults supported nondiscrimination protections for LGBT people in employment, public accommodations, and housing (Jones et al., 2019a). Although support varied by partisan and individual demographic characteristics, it is rare to find less than a majority of any demographic group supporting nondiscrimination protections. For example, 56 percent of Republicans, 70 percent of Mormons, 60 percent of Muslims, 54 percent of white evangelical Protestants, and 65 percent of Southerners supported broad nondiscrimination protections (Jones et al., 2019a). In a 2016 poll on education, 86 percent said they believed laws should be in place to protect transgender children from bullying (Taylor et al., 2018). Public attitudes about transgender people

[9] See https://www.pewresearch.org/fact-tank/2017/11/08/transgender-issues-divide-republicans-and-democrats/.
[10] See https://d25d2506sfb94s.cloudfront.net/cumulus_uploads/document/x3neaunoh2/econTabReport.pdf.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 75 of 438 PageID #: 22

serving openly in the military tend to also be broadly supportive: a 2016 survey found 68 percent of adults favored allowing transgender people to serve openly (Taylor et al., 2018; see also Lewis et al., 2017). Among active-duty military personnel, 66 percent supported transgender military service (Dunlap et al., 2020). In health care, a 2020 poll found that large majorities said it should be illegal for doctors and other health care providers to refuse to treat people because they are lesbian, gay, or bisexual (89 percent) or transgender (88%) (Kirzinger et al., 2020). Eighty-five percent of respondents agreed that health insurance companies should not be able to discriminate against transgender people in health insurance coverage (Kirzinger et al., 2020).

The public appears more divided on other policies, such as including gender identity protections in public accommodations (e.g., public restrooms), and whether businesses and others should be allowed to deny services to LGBT people on the grounds of a sincerely held religious belief (Taylor et al., 2018). In a recent poll, however, majorities of the public opposed allowing a range of entities to invoke religious exemptions to avoid serving gay and lesbian people, including small business owners (5%), licensed professionals (67%), adoption agencies (60 percent), and companies providing wedding services (55%) (Jones et al., 2019b). In a 2015 poll, two-thirds of respondents agreed that government officials should be obligated to serve everyone the same regardless of their religious beliefs.[11] Adults were ambivalent about permitting transgender people to participate in sex-segregated sports according to their current gender identity: a 2015 survey found that about one-third approved of transgender people playing sports in accordance with their gender identity, about one-third disapproved, and about one-third did not approve or disapprove (Flores et al., 2020).

Acceptance has not grown uniformly among American adults. A variety of studies have shown that five demographic characteristics and personal experiences lead people to be more accepting than others (Baunach, 2011, 2012). One factor that contributes to an individual's accepting attitudes about SGD people and their rights is demographic characteristics (lesbian women and gay men: Baunach, 2011, 2012; Becker, 2012; Becker and Scheufele, 2011; transgender people: Flores, 2015; Norton and Herek, 2013; Taylor et al., 2018). A second factor is values, such as egalitarianism, traditionalism, and authoritarianism (lesbian women and gay men: Brewer, 2003a, 2003b, 2007; Gaines and Garand, 2010; transgender people: Miller et al., 2017; Taylor et al., 2018). A third factor is religion (lesbian women

[11] See https://theharrispoll.com/as-kentuckys-rowan-county-clerk-kim-davis-may-now-realize-most-americans-believe-that-government-officials-should-not-allow-their-religious-beliefs-to-stand-in-the-way-of-issuing-marriage-li/.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 76 of 438 PageID #: 22

and gay men: Olson, Cadge, and Harrison, 2006; transgender people: Taylor et al., 2018). A fourth factor is emotional predispositions (lesbian women and gay men: Gadarian and van der Vort, 2018; Harrison and Michelson, 2017; transgender people: Michelson and Harrison, 2020; Miller et al., 2017). The fifth factor is personal experiences, such as knowing individual SGD people (lesbian women and gay men: Herek and Capitanio, 1996; Lewis, 2011; transgender people: Jones et al., 2018; Tadlock et al., 2017). Table 3-1 presents a summary of these patterns. It is worth noting that adults in the United States tend to more often report they personally know at least one LGB person (82%; MTV, 2017) than they know at least one transgender person (36%; Kirzinger et al., 2020).

TABLE 3-1 Characteristics that Relate to Attitudes toward Sexual and Gender Diverse Populations

Trait	Less Support	More Support	Citation
		Demographic Characteristics	
Sexual Orientation	Heterosexuals	Lesbians, Gay Men, and Bisexuals	Haider-Markel and Miller (2017)
Gender Identity	Cisgender	Transgender	Flores et al. (2020)
Age	Older individuals	Younger Individuals	Garretson (2015)
Gender	Males	Females	Herek (2002)
Educational Attainment	High School or less	College degree or more	Flores (2015)
Race	Indeterminate	Indeterminate	Abrajano (2010); Lewis et al. (2017)
Ethnicity	Indeterminate	Indeterminate	Abrajano (2010); Lewis et al. (2017)
		Values	
Moral Traditionalism	More traditionalist	Less traditionalist	Flores et al. (2020); Gaines and Garand (2010)
Authoritarianism	More authoritarian	Less authoritarian	Flores et al. (2020); Miller et al. (2017)
Religion	Evangelical Christians	Agnostics and Atheists	Olson, Cadge, and Harrison (2006); Taylor et al. (2018)
Religiosity	Strong adherents	Weak adherents	Olson, Cadge, and Harrison (2006)
		Emotion	
Disgust	More sensitive	Less sensitive	Gadarian and van der Vort (2018); Miller et al. (2017)
		Context	
Region	Residing in the South	Residing not in the South	Lewis and Galope (2014)
LGB Population Density	Fewer LGB People	More LGB People	Flores (2014)

Copyright National Academy of Sciences. All rights reserved.

GEOGRAPHIC VARIATION

Assessments of geographic differences in LGBT identification also offer evidence of the associations among social acceptance, legal protections, and willingness to disclose. Even with changing public attitudes about SGD populations, there remain regional differences in levels of acceptance. Rural locations, locations with smaller SGD populations, and locations with larger socially conservative religious communities all show higher levels of stigma and less acceptance (Eldridge, Mack, and Swank, 2006; Flores, 2014; Snively et al., 2004; Taylor, Lewis, and Haider-Markel, 2018; Taylor et al., 2018). A Williams Institute analysis of 2017 data from Gallup showed that LGBT identification was higher in the Northeast and along the West coast, which are areas that tend to have higher levels of social acceptance and legal protections for SGD populations: see Figure 3-3.

Although there may be some differences in the mobility patterns of LGBT individuals—for example, some LGBT people with the ability and resources to relocate may disproportionately move to places with greater social acceptance and legal protections—evidence from the GSS suggests that this likely does not account for most of the geographic differences observed in the Gallup data. Analysis of combined GSS data from 2014, 2016, and 2018 suggests that 37 percent of respondents who identified as

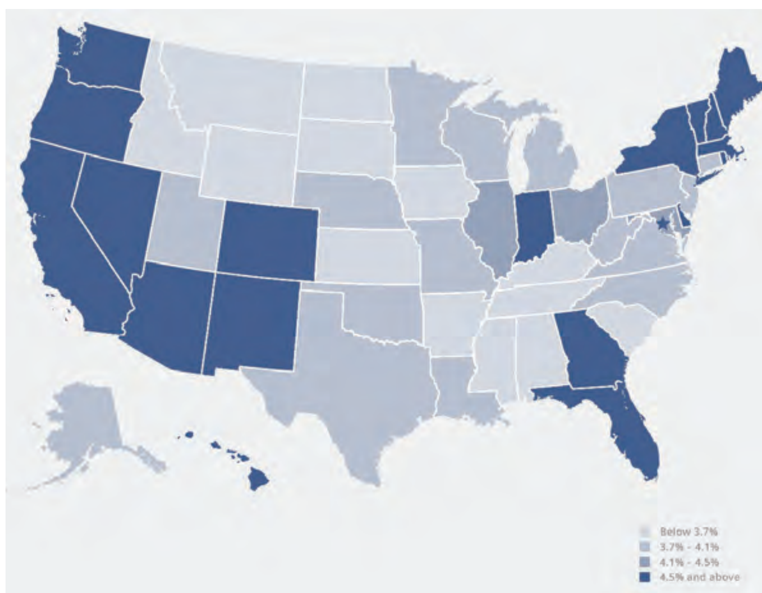


FIGURE 3-3 Proportion of adults age 18 and older identifying as LGBT, by state.
SOURCE: Williams Institute. (2019). *LGBT Demographic Data Interactive*. UCLA School of Law.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 78 of 438 PageID #: 22

lesbian, gay, or bisexual say that they live in a state that differs from the state where they lived when they were 16 years old, which is not statistically different from the 35 percent of heterosexual respondents with the same response.[12] Even if the mobility patterns of lesbian, gay, and bisexual people differ from those of heterosexuals, the similarity between the two groups in the probability of moving likely means that there is not enough mobility among the former group to explain substantial state-level variation in LGBT population sizes. It is more likely that higher levels of social acceptance and legal protections are associated with increased willingness among LGBT people to identify as such on surveys.

In a statewide estimate of support for legal marriage recognition for same-sex couples, Flores and Barclay (2015) found that each state increased in level of support between 1992 and 2014, though some states are far more accepting than others: see Figure 3-4. In 2014 the District of Columbia was notably the most favorable at 86 percent, while southern states such as Alabama remained less approving at 35 percent. Thus, regional differences in

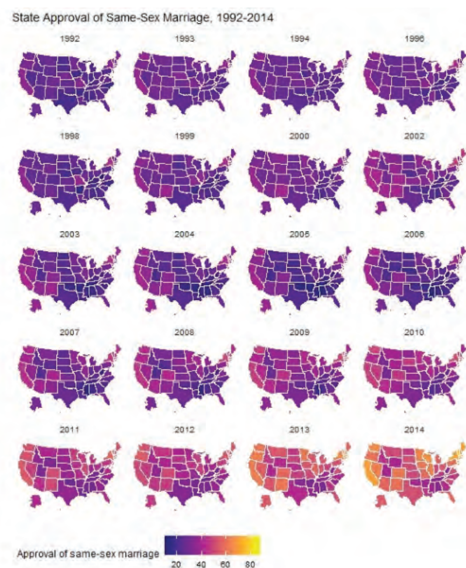


FIGURE 3-4 State approval of same-sex marriage, 1992–2014.
SOURCE: Created by committee with data from Flores and Barclay (2015).

[12] Information retrieved from analyses of General Social Survey data by Gary Gates in 2018, using the Survey Documentation and Analysis online tool maintained by the Institute for Scientific Analysis, San Francisco, CA, under a licensing agreement with the University of California. Tool is available at https://sda.berkeley.edu/sdaweb/analysis/?dataset=gss18.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 79 of 438 PageID #: 22

societal stigma and acceptance both at the state and local levels characterize the variety of contexts in which SGD populations live. In 2019, however, the majority of residents in every state supported sexual orientation and gender identity nondiscrimination protections in employment, accommodations, and housing (Jones et al., 2019a).

GENDER AND SEXUAL ORIENTATION

Analyses of data from the GSS and the National Health Interview Study (NHIS) show a consistent pattern in which increases in lesbian, gay, and bisexual identification have been more pronounced among women and bisexual people: see Figure 3-5. In the 2008–2012 GSS, women comprised 59 percent of the sample of such self-identified adults, with 37 percent of the LGB sample identifying as bisexual women. In the 2014–2018 data, the share of women increased to 66 percent, with 46 percent of the LGB adult sample identifying as bisexual women. The pattern is similar in the NHIS, although the changes are somewhat more modest. In 2013, 53 percent of self-identified lesbian, gay, and bisexual adults on the NHIS were female; by 2018, that proportion had increased to 56 percent. The proportion of NHIS respondents identifying as bisexual also increased over the 5-year

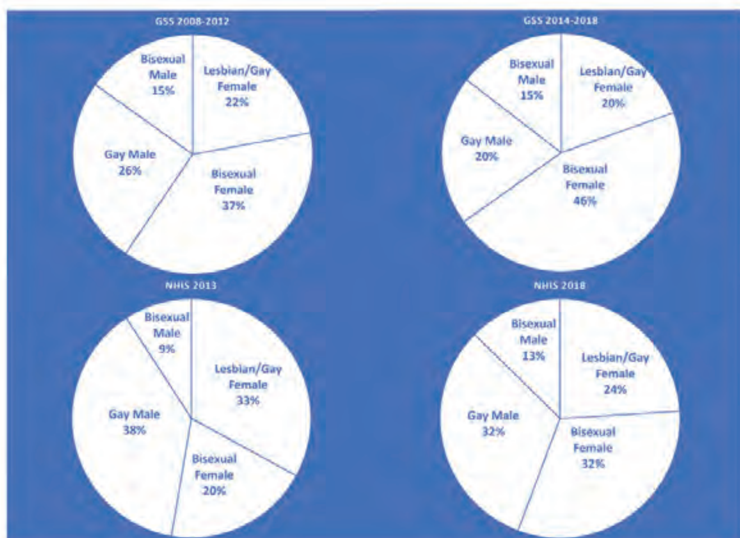


FIGURE 3-5 Sexual orientation identity and gender among lesbian, gay, and bisexual adults age 18 and older.
NOTES: GSS, General Social Survey; NHIS, National Health Interview Survey.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 80 of 438 PageID #: 22

period, from 20 percent to 32 percent among women and from 9 percent to 13 percent among men. Women also represent a majority of same-sex couples. Analyses of Census Bureau data show that 54 percent of cohabiting same-sex couples are female (Williams Institute, 2019).

Among transgender people, 46 percent of all transgender respondents on the 2015–2016 California Health Interview Study (CHIS) reported that they were assigned female at birth, and 54 percent were assigned male. Among all transgender respondents, 7 percent identified their current gender as male, 32 percent as female, 46 percent as transgender, and 15 percent indicated that they identified as a gender not listed (Herman, Wilson, and Becker, 2017). Analyses of multiyear pooled BRFSS data from the jurisdictions that fielded the sexual orientation and gender identity module between 2014 and 2016 indicate that approximately half (48%) of transgender BRFSS respondents identified as transgender women, almost one-third (31%) identified as transgender men, and one-fifth (20 percent) identified as gender nonconforming (Downing and Przedworski, 2018).

In the BRFSS sample, 74.6 percent of transgender women identified as heterosexual, compared with 69.8 percent of transgender men and 52.3 percent of gender-nonconforming respondents. The group with the highest proportion of bisexual respondents was gender-nonconforming people (22.9%) compared with 11.5 percent of transgender women and 10.2 percent of transgender men. Among transgender women, 4 percent identified as lesbian or gay, compared with 11.1 percent of transgender men and 2.0 percent of gender-nonconforming respondents.

In the 2015 U.S. Transgender Survey (USTS), a nationwide purposive sample of almost 28,000 transgender and non-binary adults, 57 percent of respondents said they were assigned female at birth, and 43 percent were assigned male at birth (James et al., 2016). Gender identity was assessed differently on the CHIS, the BRFSS, and the USTS, but in the USTS, 29 percent of respondents identified as transgender men, 33 percent as transgender women, 35 percent as non-binary, and 3 percent as crossdressers. Among USTS respondents, 21 percent identified their sexual orientation as queer; 18 percent as pansexual; 16 percent as gay, lesbian, or same-gender-loving; 15 percent as straight; 14 percent as bisexual; and 10 percent as asexual.

AGE

Increases in LGBT identification are more pronounced in younger age cohorts. Gallup analyses show that virtually all the growth in the proportion of the U.S. population identifying as LGBT between 2012 and 2017 can be attributed to increases among those born between 1980 and 1999, often called the millennial generation. The proportion of that group identifying as LGBT was 5.8 percent in 2012 and 8.2 percent in 2017. Other age cohorts were

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 81 of 438 PageID #: 22

virtually unchanged (Newport, 2018). In the 2013 NHIS, 1.9 percent of those aged 18–44 identified as lesbian or gay, and 1.1 percent identified as bisexual. In the 2018 NHIS, those figures were 1.8 percent and 2.2 percent, respectively. Among those aged 45–64, there was virtually no change: in 2013, 1.8 percent identified as lesbian or gay and 0.4 percent identified as bisexual; in 2018 the percentages were 1.8 percent and 0.6 percent, respectively.[13]

Analyses of the GSS data show similar patterns. Among those born between 1980 and 1999, 1.7 percent identified as lesbian or gay, and 2.8 percent identified as bisexual in combined data from 2008, 2010, and 2012. In the 2014, 2016, and 2018 combined data, those figures rose to 2.8 percent and 5.4 percent, respectively. Among all other respondents, the proportions went from 1.4 percent lesbian or gay and 1.2 percent bisexual in the earlier data to 1.5 percent lesbian or gay and 1.5 percent bisexual in the later data, a much more modest increase.

The prevalence of transgender identity is also slightly higher in younger populations, although age differences are less pronounced than for sexual orientation. Estimates from the BRFSS show that 0.7 percent of both 13- to 17-year-olds and 18- to 24-year-olds identify as transgender, compared with 0.6 percent of those aged 25–64 and 0.5 percent of those aged 65 and older (Flores et al., 2017).

RACE AND ETHNICITY

In general, the racial and ethnic characteristics of the LGBT population are similar to those of the general population, and changes over the last decade have mirrored changes in the general population. Data from the 2010 census showed that 36.3 percent of individuals in same-sex couples identified their race or ethnicity as something other than non-Hispanic white (Humes, Jones, and Ramirez, 2011). That figure had increased to 39.6 percent in 2018 (U.S. Census Bureau, 2018). In the 2012 Gallup data, 33 percent of LGBT-identified respondents indicated they were something other than non-Hispanic white. That figure increased to 42 percent in the 2017 Gallup data.[14] In the GSS, the proportion changed from 34 percent to 38 percent between the combined 2008–2012 data and the 2014–2018 data. In the NHIS data, the numbers were 31 percent in 2013 and 34 percent in 2018 (Gates, 2018).[15] By comparison, Census Bureau statistics from

[13] See https://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm.

[14] See https://news.gallup.com/poll/201731/lgbt-identification-rises.aspx.

[15] Information retrieved from data analyses of the General Social Survey by Gary Gates in 2018, using the Survey Documentation and Analysis online tool maintained by the Institute for Scientific Analysis, San Francisco, CA, under a licensing agreement with the University of California. Tool is available at https://sda.berkeley.edu/sdaweb/analysis/?dataset=gss18.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 82 of 438 PageID #: 22

2019 show that 39.6 percent of the U.S. population identifies as something other than non-Hispanic white.[16]

In general, data providing detail on the race and ethnicity of sexual and gender diverse populations remain rare, often due to small sample sizes. One exception is Gallup data, which in 2016 showed higher rates of LGBT identification among non-Hispanic Black (4.6%), Hispanic (5.4%), non-Hispanic Asian (4.9%), and non-Hispanic individuals of other races (6.3%), than among non-Hispanic whites (3.6%).[17]

Analyses of the 2014 BRFSS data suggest that transgender adults in the United States are more likely to be nonwhite than the general population: 55 percent of transgender adults identified as white, compared with 66 percent in the general adult population. On a more detailed level, 16 percent of transgender adults identified as African American or Black, 21 percent as Hispanic or Latino, and 8 percent as another race or ethnicity. In the general population, the corresponding numbers are 12 percent, 15 percent, and 8 percent, respectively (Flores, Brown, and Herman, 2016).

CHILD REARING

Based on analyses of 2014–2018 GSS data, an estimated 37 percent of lesbian, gay, and bisexual individuals report having ever had a child. By comparison, 74 percent of heterosexual adults in those data report the same, making heterosexuals twice as likely to report having a child (Gates, 2018).[18] This dynamic is discussed further in Chapter 8.

Estimates from 2017 Gallup data suggest that 29 percent of LGBT adults aged 25 and older are currently living with a child under age 18 (Williams Institute, 2019). Among same-sex couples, 2010 Census Bureau data suggest that 19 percent are raising a child under age 18 (Gates, 2013). The comparable figure for different-sex couples was 41 percent.[19] LGBT-identified women and women in same-sex couples in Gallup and U.S. Census Bureau data, respectively, are much more likely than their male counterparts to be raising children (Gates, 2013). A review of 51 studies focused on transgender parenting suggests that between a quarter and a half of transgender individuals report parenthood. This compares with 65 percent of adult males and 74 percent of adult females in the U.S. general

[16] See https://www.census.gov/quickfacts/fact/table/US/PST045219.

[17] See https://news.gallup.com/poll/201731/lgbt-identification-rises.aspx.

[18] Information retrieved from data analyses of the General Social Survey by Gary Gates in 2018, using the Survey Documentation and Analysis online tool maintained by the Institute for Scientific Analysis, San Francisco, CA, under a licensing agreement with the University of California. Tool is available at https://sda.berkeley.edu/sdaweb/analysis/?dataset=gss18.

[19] See https://www2.census.gov/programs-surveys/demo/tables/same-sex/time-series/ssc-house-characteristics/ssex-tables-2011.xls.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 83 of 438 PageID #: 22

population (Stotzer, Herman, and Hasenbush, 2014). There are no statistics available on parenting among the intersex population.

SUMMARY AND CONCLUSIONS

The available data on sexual and gender diverse populations show a picture of dynamic and rapidly evolving populations. SGD populations are becoming younger, more female, and more racially and ethnically diverse, and they include an increasing proportion of bisexual individuals. Many lesbian, gay, and bisexual people also have children. It seems possible that similar trends are occurring among transgender and other gender diverse populations, though data to track population-wide trends among these groups are not yet available. Population-based data on intersex populations are generally not available at all.

One challenge in assessing SGD population demographics is that many currently used demographic data collection instruments do not measure sexual orientation, gender identity, or intersex status at all. Instruments that do measure sexual orientation tend to assess only sexual orientation identity; they do not cover other important aspects of sexual diversity, most notably sexual attraction and sexual behavior. Moreover, instruments that measure gender identity tend to use a single-item approach that may result in undercounts of transgender respondents.

Social acceptance of sexual and gender diversity has been increasing. A majority of Americans approve of same-sex relationships and support federal discrimination protections for LGBT people. Taken together, the available evidence suggests that changes in LGBT populations may be a product of factors that include growing societal awareness and acceptance of diverse sexual and gender identities; expansion of laws, policies, and practices that protect and support communities and individuals regardless of sexual orientation or gender identity; and an increasing willingness and ability among LGBT and other SGD populations to self-identify or disclose their transgender identity or same-sex attraction, behavior, identity, or relationship.

CONCLUSION 3-1: Demographic analyses of sexual and gender diverse populations are complicated by the fact that visibility among these groups is rapidly changing, with a generally improving but fluctuating social climate.

Although the possibility that the underlying distribution of SGD people has changed or is changing cannot be ruled out, it is clear that the evolving societal and political context has created new possibilities for diverse sexual and gender identities to be understood and claimed by growing

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 84 of 438 PageID #: 22

numbers of people. The demographic shifts observed in SGD populations challenge researchers and policy makers to collect more and better data and to consider the degree to which research questions, media discussions, and policy proposals reflect the most pressing needs of these populations and the contemporary challenges they face.

CONCLUSION 3-2: Understanding the changing demography of sexual and gender diverse populations is important for guiding policy efforts and the allocation of often limited resources to address health, economic status, and other disparities that affect these populations.

REFERENCES

Abrajano, M. (2010). Are Blacks and Latinos responsible for the passage of Proposition 8? Analyzing voter attitudes on California's proposal to ban same-sex marriage in 2008. *Political Research Quarterly, 63*(4), 922–932. doi: 10.1177/2F1065912910373555.

Baunach, D.M. (2011). Decomposing trends in attitudes toward gay marriage, 1988-2006. *Social Science Quarterly, 92*(2), 346–363. doi: 10.1111/j.1540-6237.2011.00772.x.

Baunach, D.M. (2012). Changing same-sex marriage attitudes in American from 1988 through 2010. *Public Opinion Quarterly, 76*(2), 364–378. doi: 10.1093/poq/nfs022.

Becker, A.B. (2012). What's marriage (and family) got to do with it? Support for same-sex marriage, legal unions, and gay and lesbian couples raising children. *Social Science Quarterly, 93*(4), 1007–1029. doi: 10.1111/j.1540-6237.2012.00844.x.

Becker, A.B., and Scheufele, D.A. (2011). New voter, new outlook? Predispositions, social networks, and the changing politics of gay civil rights. *Social Science Quarterly, 92*(2), 324–345. doi: 10.1111/j.1540-6237.2011.00771.x.

Brewer, P.R. (2003a). The shifting foundations of public opinion about gay rights. *Journal of Politics, 65*(4), 1208–1220. doi: 10.1111/1468-2508.t01-1-00133.

Brewer, P.R. (2003b). Values, political knowledge, and public opinion about gay rights: A framing-based account. *Public Opinion Quarterly, 67*(2), 173–201. doi: 10.1086/374397.

Brewer, P.R. (2007). *Value War: Public Opinion and the Politics of Gay Rights*. Lanham, MD: Rowman & Littlefield Publishers, Inc.

Downing, J.M., and Przedworski, J.M. (2018). Health of transgender adults in the U.S., 2014–2016. *American Journal of Preventive Medicine*, *55*(3), 336–344. doi: 10.1016/j.amepre.2018.04.045.

Dunlap, S.L., Holloway, I.W., Pickering, C.E., Tzen, M., Goldbach, J.T., and Castro, C.A. (2020). Support for transgender military service from active duty United States military personnel. *Sexuality Research and Social Policy*. doi: 10.1007/s13178-020-00437-x.

Eldridge, V.L., Mack, L., and Swank, E. (2006). Explaining comfort with homosexuality in rural America. *Journal of Homosexuality, 51*(2), 39–56.

Flores, A.R. (2014). Reexamining context and same-sex marriage: The effect of demography on public support for same-sex relationship recognition. *International Journal of Public Opinion Research, 26*(3), 283–300.

Flores, A.R. (2015). Attitudes toward transgender rights: Perceived knowledge and secondary interpersonal contact. *Politics, Groups, and Identities, 3*(3), 398–416. doi: 10.1080/21565503.2015.1050414.

Flores, A.R., and Barclay, S. (2015). *Trends in Public Support for Marriage for Same-Sex Couples by State*. Williams Institute, UCLA School of Law. Available: https://escholarship.org/content/qt7d66v2mt/qt7d66v2mt.pdf.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 85 of 438 PageID #: 22

Flores, A.R., Brown, T.N.T., and Herman, J.L. (2016). Race and ethnicity of adults who identify as transgender in the United States. Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Race-and-Ethnicity-of-Transgender-Identified-Adults-in-the-US.pdf.

Flores, A.R., Herman, J.L., Brown, T.N.T., Wilson, B.D.M., and Conron, K.J. (2017). *Age of Individuals Who Identify as Transgender in the United States*. Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/TransAgeReport.pdf.

Flores, A.R., Herman, J.L., Gates, G.J., and Brown, T.N.T. (2016). How many adults identify as transgender in the United States? Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf.

Flores, A.R., Haider-Markel, D.P., Lewis, D.C., Miller, P.R., Tadlock, B.L., and Taylor, J.T. (2020). Public attitudes about transgender participation in sports: The roles of gender, gender identity conformity, and sports fandom. *Sex Roles, 83*, 382–398. doi: 10.1007/s11199-019-01114-z.

Gadarian, S.K., and van der Vort, E. (2018). The gag reflex: Disgust rhetoric and gay rights in American politics. *Political Behavior, 40*(2), 521–543. doi: 10.1007/s11109-017-9412-x.

Gaines, N.S., and Garand, J.C. (2010). Morality, equality, or locality: Analyzing the determinants of support for same-sex marriage. *Political Research Quarterly, 63*(3), 553–567. doi: 10.1177%2F1065912909333132.

Gallup. (2019). *Gay and Lesbian Rights*. Available: https://news.gallup.com/poll/1651/gay-lesbian-rights.aspx.

Garretson, J.J. (2015). Exposure to the lives of lesbians and gays and the origin of young people's greater support for gay rights. *International Journal of Public Opinion Research, 27*(2), 277–288. doi: 10.1093/ijpor/edu026.

Gates, G.J. (2013). *LGBT Parenting in the United States*. Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/LGBT-Parenting-US-Feb-2013.pdf.

Gates, G.J. (2017). *In U.S., More Adults Identifying as LGBT.* Gallup. Available: https://news.gallup.com/poll/201731/lgbt-identification-rises.aspx.

Goodman, M., Adams, N., Corneil, T., Kreukels, B., Motmans, J., and Coleman, E. (2019). Size and distribution of transgender and gender nonconforming populations. *Endocrinology and Metabolism Clinics of North America, 48,* 303–321.

Haider-Markel, D.P., and Miller, P.R. (2017). Equality of transformation? LGBT political attitudes and priorities and the implications for the movement. In M. Brettschneider, S. Burgess, and C. Keating (Eds.), *LGBTQ Politics: A Critical Reader* (pp. 270–294). New York: NYU Press.

Harrison, B.F., and Michelson, M.R. (2017). What's love got to do with it?: Emotion, rationality, and framing LGBT rights. *New Political Science, 39*(2), 177–197. doi: 10.1080/07393148.2017.1301311.

Herek, G.M. (2002). Gender gaps in public opinion about lesbians and gay men. *Public Opinion Quarterly, 66*(1), 40–66. doi: 10.1086/338409.

Herek, G.M., and Capitanio, J.P. (1996). "Some of my best friends": Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin, 22*(4), 412–424. doi: 10.1177/0146167296224007.

Herman, J.L., Wilson, B.D.M., and Becker, T. (2017). Demographic and health characteristics of transgender adults in California: Findings from the 2015–2016 California health interview survey. Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/CHIS-Transgender-Adults-Oct-2017.pdf.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 86 of 438 PageID #: 22

Horowitz, J.M., Parker, K., and Stepler, R., 2017. Wide Partisan Gaps in U.S. Over How Far the Country Has Come on Gender Equality. Available: https://www.pewsocialtrends.org/2017/10/18/wide-partisan-gaps-in-u-s-over-how-far-the-country-has-come-on-gender-equality/

Humes, K.R., Jones, N.A., and Ramirez, R.R. (2011). Overview of race and Hispanic origin: 2010. *2010 Census Briefs*. U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration. Available: https://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf.

James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L., and Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality. Available: https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-Dec17.pdf.

Jones, J.M. (2017). *In U.S., 10.2% of LGBT Adults Now Married to Same-Sex Spouse*. Gallup. Available: https://news.gallup.com/poll/212702/lgbt-adults-married-sex-spouse.aspx.

Jones, P.E., Brewer, P.R., Young, D.G., Lambe, J.L., and Hoffman, L.H. (2018). Explaining public opinion toward transgender people, rights, and candidates. *Public Opinion Quarterly, 82*(2), 252–278. doi: 10.1093/poq/nfy009.

Jones, R.P., Najle, M., Bola, O., and Greenberg, D. (2019a). *After Stonewall, Widespread Support for LGBT Issues: Findings from the 2018 American Values Atlas*. Washington, DC: Public Religion Research Institute. Available: https://www.prri.org/wp-content/uploads/2019/03/PRRI-Mar-2019-American-Values-Atlas.pdf.

Jones, R.P., Jackson, N., Najle, M., Bola, O., and Greenberg, D. (2019b). *America's Growing Support for Transgender Rights*. Public Religion Research Institute. Available: https://www.prri.org/research/americas-growing-support-for-transgender-rights.

Kirzinger, A., Kates, J., Dawson, L., Muñana, C., and Brodie, M. (2020). *Majorities Support Policies Banning Discrimination Against LGBTQ Individuals' Health Care Access*. Kaiser Family Foundation. Available: https://www.kff.org/other/poll-finding/majorities-support-policies-banning-discrimination-against-lgbtq-individuals-health-care-access.

Lewis, D.C., Flores, A.R., Haider-Markel, D.P., Miller, P.R., Tadlock, B.L., and Taylor, J.K. (2017). Degrees of acceptance: Variation in public attitudes toward segments of the LGBT community. *Political Research Quarterly, 70*(4), 861–875.

Lewis, G.B. (2011). The friends and family plan: Contact with gays and support for gay rights. *Policy Studies Journal, 39*(2), 217–238. doi: 10.1111/j.1541-0072.2011.00405.x.

Lewis, G.B., and Galope, R.V. (2014). Support for lesbian and gay rights: How and why the South differs from the rest of the country. *American Review of Politics, 34*, 271–297. doi: 10.15763/issn.2374-779X.2014.34.0.271-297.

Meerwijk, E.L., and Sevelius, J.M. (2017). Transgender population size in the United States: A meta-regression of population-based probability samples. *American Journal of Public Health, 107*(2), e1–e8. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5227946.

Michelson, M.R., and Harrison, B.F. (2020). *Transforming Prejudice: Identity, Fear, and Transgender Rights*. New York: Oxford University Press.

Miller, P.R., Flores, A.R., Haider-Markel, D.P., Lewis, D.C., Tadlock, B.L., and Taylor, J.K. (2017). Transgender politics as body politics: Effects of disgust sensitivity and authoritarianism on transgender rights attitudes. *Politics, Groups, and Identities, 5*(1), 4–24. doi: 10.1080/21565503.2016.1260482.

Mishel, E., England, P., Ford, J., and Caudillo, M.L. (2020). Cohort increases in sex with same-sex partners: Do trends vary by gender, race, and class? *Gender and Society*, *34*(2), 178–209. doi: 10.1177/0891243219897062.

Copyright National Academy of Sciences. All rights reserved.

Mosher, W., Chandra, A., and Jones, J. (2005). Sexual behavior and selected health measures: Men and women 15–44 years of age, United States, 2002. *Advance Data from Health and Vital Statistics, No. 362*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Available: https://www.cdc.gov/nchs/data/ad/ad362.pdf.

MTV. (2017). MTV Poll: July 2017 (Version 2) [Dataset]. Ithaca, NY: Cornell University, Roper Center for Public Opinion Research.

Newport, F. (2018). *In U.S., Estimate of LGBT Population Rises to 4.5%*. Gallup. Available: https://news.gallup.com/poll/234863/estimate-lgbt-population-rises.aspx.

Norton, A.T., and Herek, G.M. (2013). Heterosexuals' attitudes toward transgender people: Findings form a national probability sample of U.S. adults. *Sex Roles, 68*(11–12), 738–753. doi: 10.1007/s11199-011-0110-6.

O'Connell, M., and Feliz, S. (2011). *Same Sex Couple Household Statistics from the 2010 Census. Working Paper Number 2011-26*. Social, Economic and Housing Statistics Division, U.S. Bureau of the Census. Available: https://www.census.gov/library/working-papers/2011/demo/SEHSD-WP2011-26.html.

Olson, L.R., Cadge, W., and Harrison, J.T. (2006). Religion and public opinion about same-sex marriage. *Social Science Quarterly, 87*(2), 340–360. doi: 10.1111/j.1540-6237.2006.00384.x.

Perez-Brumer, A., Day, J.K., Russell, S.T., and Hatzenbuehler, M.L. (2017). Prevalence and correlates of suicidal ideation among transgender youth in California: Findings from a representative, population-based sample of high school students. *Journal of the American Academy of Child and Adolescent Psychiatry, 56*(9), 739–746.

Raifman, J., Charlton, B.M., Arrington-Sanders, R., Chan, P.A., Rusley, J., Mayer, K.H., Stein, M.D., Austin, S.B., and McConnell, M. (2020). Sexual orientation and suicide attempt disparities among U.S. adolescents: 2009–2017. *Pediatrics 145*(3), e20191658. doi: 10.1542/peds.2019-1658.

Snively, C.A., Kreuger, L., Stretch, J.J., Watt, J.W., and Chadha, J. (2004). Understanding homophobia: Preparing for practice realities in urban and rural settings. *Journal of Gay and Lesbian Social Services, 17*(1), 59–81.

Stotzer, R.L., Herman, J.L., and Hasenbush, A. (2014). *Transgender Parenting: A Review of Existing Research*. Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/transgender-parenting-oct-2014.pdf.

Tadlock, B.L., Flores, A.R., Haider-Markel, D.P., Lewis, D.C., Miller, P.R., and Taylor, J.K. (2017). Testing contact theory and attitudes on transgender rights. *Public Opinion Quarterly, 81*(4), 956–972. doi: 10.1093/poq/nfx021.

Tate, C.C., Ledbetter, J.N., and Youssef, C.P. (2013). A two-question method for assessing gender categories in the social and medical sciences. *Journal of Sex Research*, *50*(8), 767–776. doi: 10.1080/00224499.2012.690110.

Taylor, J.K., Lewis, D.C., and Haider-Markel, D.P. (2018). *The Remarkable Rise of Transgender Rights*. Ann Arbor: University of Michigan Press.

Taylor, J.K., Lewis, D.C., Haider-Markel, D.P., Flores, A.R., Miller, P.R., and Tadlock, B.L. (2018). The factors underlying public opinion of transgender rights. In J.K. Taylor, D.C. Lewis, and D.P. Haider-Markel (Eds.), *The Remarkable Rise of Transgender Rights* (pp. 61–86). Ann Arbor: University of Michigan Press.

Tordoff, D.M., Morgan, J., Dombrowski, J.C., Golden, M.R., and Barbee, L.A. (2019). Increased ascertainment of transgender and non-binary patients using a 2-step versus 1-step gender identity intake question in an STD clinic setting. *Sexually Transmitted Diseases*, *46*(4), 254–259. doi: 10.1097/OLQ.0000000000000952.

U.S. Census Bureau. (2018). *Quick Facts, United States*. U.S. Census Bureau, U.S. Department of Commerce. Available: https://www.census.gov/quickfacts/fact/table/US/IPE120218.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 88 of 438 PageID #: 22

U.S. Census Bureau. (2019). U.S. Census Bureau releases CPS estimates of same-sex households. *Release Number CB19-TPS.51*. U.S. Census Bureau, Department of Commerce. Available: https://www.census.gov/newsroom/press-releases/2019/same-sex-households.html.

Williams Institute. (2019). *LGBT Demographic Data Interactive*. UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/visualization/lgbt-stats/?topic=LGBT#density.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 89 of 438 PageID #: 22

4

Current State of Data Collection

Data collection on such demographic characteristics as sexual orientation, gender identity, and intersex status is a critical component of improving the well-being of sexual and gender diverse (SGD) populations across all domains of life. Recognizing the central role of consistent, high-quality data in understanding and addressing disparities, the Institute of Medicine (2011) report on LGBT health recommended the routine collection of data on sexual orientation and gender identity in federally funded surveys and electronic medical records (EMRs), as well as the development and standardization of measures of sexual orientation and gender identity. Since that report, there has been significant progress in the development, standardization, and deployment of relevant metrics. These efforts parallel the evolution of measures to assess other aspects of identity that are equally important in understanding disparities affecting SGD populations, such as race, ethnicity, primary language, and disability.[1]

Most of the existing research on the demography of SGD populations has focused on sexual orientation identity (e.g., self-identification as gay, lesbian, bisexual, heterosexual, or another sexual orientation) and same-sex sexual behavior and attraction. Another important dimension is measurement of same-sex partnered and marital relationships. More recently, demographic research has also begun to include such measures of gender identity as current gender identity, sex assigned at birth, gender expression, and transgender status. There are no large-scale demographic data available on people who have intersex traits (differences of sex development [DSD])

[1] See https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=53.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 90 of 438 PageID #: 22

or others who might identify as intersex, which is a significant barrier to understanding and improving the well-being of intersex populations.

TYPES OF DATA COLLECTION

In 2015 the U.S. Office of Management and Budget convened the Federal Interagency Working Group Improving Measurement of Sexual Orientation and Gender Identity to consider topics related to sexual orientation and gender identity data collection throughout the federal statistical system. According to a 2016 report from this working group (Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys [hereafter, Federal Interagency Working Group], 2016a), as well as the report from an expert meeting on methods and measurement in SGD populations convened by the Sexual and Gender Minority Research Office (SGMRO) (2018b) at the National Institutes of Health (NIH), data elements that are particularly relevant to SGD population research include but are not limited to

- sexual orientation identity
- sexual behavior
- sexual attraction
- gender composition of partnered and marital relationships
- gender identity
- sex assigned at birth
- gender expression
- transgender status
- intersex status

Although these data elements are often assumed to be associated solely with LGBT, intersex, and other SGD populations, it is important to note that these elements apply equally to all people. Every person has a sexual orientation, a gender identity, and physical sex characteristics, and partnered and marital relationships are a fundamental part of life for many people. Thus, these data elements are relevant for any data collection instrument, system, or activity that includes demographic characteristics.

Similarly, concerns about respondents' experiences of discrimination as a result of disclosing personal demographic information are not unique to sexual orientation, gender identity, or intersex status. It is essential to ensure that all data collection efforts advance in tandem with laws, policies, and practices that ensure respondent privacy and confidentiality, do not require disclosure of personal demographic information to access programs or services, and provide robust protections from discrimination. It is also important to remember that collecting data about the experiences of people

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 91 of 438 PageID #: 22

who may be targeted for discrimination on the basis of such personal characteristics as sexual orientation, gender identity, or intersex status is a crucial component of establishing and enforcing effective nondiscrimination protections.

There are at least three broad domains in which it is important to collect sexual orientation, gender identity, and intersex status data:

1. survey research, including population surveys, needs assessments, and other survey efforts fielded or supported by private entities or any level of government;
2. nonsurvey research, such as clinical trials, biomedical research, program evaluations, and paired testing to assess discrimination in employment, housing, and other areas; and
3. administrative and program data systems, including intake forms, applications for programs, such as Medicaid and Temporary Assistance for Needy Families, and data generated during enforcement processes related to civil rights or criminal justice.

In the health context, these data should also be collected in EMRs and other forms of clinical recordkeeping (Institute of Medicine, 2013). Federal interoperability standards for health information technology have required certified EMR systems to have the capacity to record, change, and access structured data on sexual orientation and gender identity since 2018, and it is incumbent on health care organizations and providers to ensure these fields are active in their EMRs, to seek training on collecting these data in a culturally competent manner, and to incorporate the collection and use of these data in routine clinical workflows[2] (Cahill et al., 2016). These federal criteria do not require data collection about intersex status, which stymies efforts to assess and improve the health of people with intersex traits.

Data on sexual orientation, gender identity, and intersex status are becoming more available as federally supported surveys and other systems begin to collect them. Table 4-1, although not exhaustive, identifies several large and widely used surveys and other data sources that include some or all of these measures. There are many examples of publicly and privately sponsored data collection activities, however, in which these data are not yet collected. The well-being of SGD populations across the United States could be improved by the addition of sexual orientation, gender identity, and intersex status measures to a wide variety of data collection instruments, including but not limited to those listed in Table 4-1. More detailed descriptions of the types of questions referenced in this table are discussed below.

[2] See https://www.healthit.gov/isa/section/sex-birth-sexual-orientation-and-gender-identity.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 92 of 438 PageID #: 22

TABLE 4-1 State of Data Collection on Sexual Orientation, Gender Identity, and Intersex Status in Federally Supported Surveys and Other Data Systems

Instrument	Lead Sponsor Agency or Organization	Most Recent Year with Relevant Data[a]
All of Us Research Program	National Institutes of Health (HHS)[*]	Present
American Community Survey (ACS)	Census Bureau (DOC)	N/A
American National Election Studies (ANES)	Stanford University and University of Michigan	2016
American Time Use Survey (ATUS)	Bureau of Labor Statistics (DOL)	N/A
Behavioral Risk Factor Surveillance System (BRFSS)	National Center for Health Statistics (CDC, HHS)	Present
Common Clinical Data Set (CCDS)	Office of the National Coordinator for Health Information Technology (HHS)	N/A
Consumer Assessment of Healthcare Providers and Systems (CAHPS)	Agency for Healthcare Research and Quality and Centers for Medicare & Medicaid Services (HHS)	N/A
Current Population Survey (CPS)	Bureau of Labor Statistics (HHS)	N/A
Daily Tracking Survey	Gallup	Present
Decennial Census	Census Bureau (DOC)	N/A
Early Career Doctorates Survey (ECDS)	National Center for Science and Engineering Statistics (NSF)	N/A
General Social Survey (GSS)	National Opinion Research Center (NORC) at the University of Chicago	Present
Government Performance and Results Act (GPRA) Plans and Metrics	U.S. Executive Branch agencies	Varies
Growing Up Today Study (GUTS)	Harvard University	Varies
The Health and Retirement Survey (HRS)	University of Michigan	Present
Health Center Patient Survey[d] (HCPS)	Health Resources and Services Administration (HHS)	2014

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 93 of 438 PageID #: 22

Relevant Data		
Sexual Orientation	Gender Identity	Intersex Status
Identity	Sex assigned at birth; gender question includes transgender options	Sex assigned at birth includes intersex option
No	No	No
Identity	No	No
No	No	No
Identity[b]	Transgender status[b]	No
No	No	No
No	No	No
No	No	No
Identity	Transgender combined with lesbian, gay, and bisexual	No
No	No	No
No	No	No
Identity, behavior	No	No
Rare	Rare	No
Identity and attraction combined, behavior	Gender question includes transgender options, gender expression	No
Identity	No	No
Identity	Modified two-step	No

continued

Copyright National Academy of Sciences. All rights reserved.

TABLE 4-1 Continued

Instrument	Lead Sponsor Agency or Organization	Most Recent Year with Relevant Data[a]
High School Longitudinal Study of 2009 (HSLS:09)	National Center for Education Statistics (ED)	2018
Interoperability Standards Advisory for Health Information Technology	Office of the National Coordinator for Health Information Technology (HHS)	Present
Medical Expenditure Panel Survey (MEPS)	Agency for Healthcare Research and Quality (HHS)	N/A
Medicare Current Beneficiary Survey (MCBS)	Centers for Medicare & Medicaid Services (HHS)	N/A
National Alcohol and Tobacco Survey (NATS)	National Center for Health Statistics (CDC, HHS)	2014
National Crime Victimization Survey (NCVS)	Bureau of Justice Statistics (DOJ)	Present
National Epidemiologic Survey of Alcohol and Related Conditions (NESARC)	National Institutes of Health (HHS)	2013
National Health Interview Survey (NHIS)	National Center for Health Statistics (CDC, HHS)	Present
National Health and Nutrition Examination Survey (NHANES)	National Center for Health Statistics (CDC, HHS)	Present
National HIV Behavioral Surveillance System (NHBS)	Division of HIV/AIDS Prevention (CDC, HHS)	Present
National Inmate Survey (NIS)	Bureau of Justice Statistics (DOJ)	2012
National Intimate Partner and Sexual Violence Survey (NISVS)	National Center for Injury Prevention and Control (CDC, HHS)	2010
National Longitudinal Study of Adolescent to Adult Health (Add Health)	University of North Carolina	2019
National Longitudinal Surveys (e.g., NLSY97)	Bureau of Labor Statistics (DOL)	N/A
National Social Life, Health, and Aging Project (NSHAP)	NORC at the University of Chicago	2016
National Survey of College Graduates (NSCG)	National Center for Science and Engineering Statistics (NSF)	N/A
National Survey of Drug Use and Health (NSDUH)	Substance Abuse and Mental Health Services Administration (HHS)	Present

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 95 of 438 PageID #: 22

Relevant Data		
Sexual Orientation	Gender Identity	Intersex Status
Identity	Gender question includes transgender options	No
Identity, attraction	Gender identity, sex assigned at birth	No
No	No	No
No	No	No
Identity	Modified two-step	No
Identity	Two-step	No
Identity, attraction, behavior	No	No
Identity	No	No
Identity, behavior	No	No
Identity, behavior	Two-step[f]	Sex assigned at birth includes intersex option
Identity, behavior	Gender question includes transgender option	No
Identity	No	No
Identity, attraction, behavior	Two-step, gender expression	No
No	No	No
Identity, behavior	No	No
No	No	No
Identity, attraction	No	No

continued

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 96 of 438 PageID #: 22

TABLE 4-1 Continued

Instrument	Lead Sponsor Agency or Organization	Most Recent Year with Relevant Data[a]
National Survey of Family Growth (NSFG)	National Center for Health Statistics (CDC, HHS)	Present
National Survey of Older Americans Act Participants (NSOAAP)	Administration for Community Living (HHS)	Present
National Survey of Veterans (NSV)	National Center for Veterans Analysis and Statistics, U.S. Department of Veterans Affairs	N/A
National Violent Death Reporting System (NVDRS)	National Center for Injury Prevention and Control (CDC, HHS)	Present[c]
Nurses' Health Studies (NHS, NHS II)	Harvard University	N/A
Panel Study of Income Dynamics (PSID)	University of Michigan	N/A
Population Assessment of Tobacco and Health (PATH)	Food and Drug Administration and National Institutes of Health (HHS)	Present
School Survey on Crime and Safety (SSCS)	National Center for Education Statistics (ED)	Present
Survey of Doctorate Recipients (SDR)	National Center for Science and Engineering Statistics (NSF)	N/A
Survey of Earned Doctorates (SED)	National Center for Science and Engineering Statistics (NSF)	N/A
Survey of Income and Program Participation (SIPP)	Census Bureau (DOC)	N/A
Uniform Crime Reporting System (UCR)	Federal Bureau of Investigation (DOJ)	Present
Uniform Data System (UDS)	Health Resources and Services Administration (HHS)	Present
Youth Risk Behavior Surveillance System (YRBS)	Division of Adolescent and School Health (CDC, HHS)	Present

NOTES: CDC, Centers for Disease Control and Prevention; DOC, U.S. Department of Commerce; DOJ, U.S. Department of Justice; DOL, U.S. Department of Labor; ED, U.S. Department of Education; HHS, U.S. Department of Health and Human Services; NSF, National Science Foundation; VA, U.S. Department of Veterans Affairs.

[a]Data on sexual orientation, gender identity, or intersex status.

[b]This topic is not part of the national survey core measures, but 37 jurisdictions have used a CDC-sponsored question module to gather data about sexual orientation and gender identity; several other states assess sexual orientation or gender identity using their own question designs.

[c]More detailed sexual orientation and gender identity fields are available in a form that scene investigators may use when reporting a violent death (see https://www.lgbtmortality.com/resources).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 97 of 438 PageID #: 22

Relevant Data		
Sexual Orientation	Gender Identity	Intersex Status
Identity, attraction, behavior	No	No
Identity	No	No
No	No	No
Identity	Transgender status	No
No	No	No
No	No	No
Identity, attraction	Transgender status	No
Hate crime victimization on basis of sexual orientation	Hate crime victimization on basis of gender identity	No
No	No	No
No	No	No
No	No	No
Identity	Gender question includes transgender options	No
Identity	Gender question includes transgender options	No
Identity, behavior	Transgender status[e]	No

[d]As of August 2020, not being fielded.
[e]A gender identity measure was piloted by 19 jurisdictions (10 states and 9 school districts) on the 2017 survey.
[f]The NHBS-Trans was conducted in 2019–2020 among transgender women in seven states.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 98 of 438 PageID #: 22

METRICS AND MEASUREMENT

General Methodological Considerations

Over the last two decades, numerous studies have assessed the construct validity of sexual orientation and gender identity measures and investigated their performance in the field. Several validated questions, which are described in more detail below, exist and can be readily used to assess sexual orientation and gender identity (Sexual Minority Assessment Research Team [SMART], 2009; Gender Identity in US Surveillance [GenIUSS] Group, 2014; Federal Interagency Working Group, 2016a, 2016b). Aspects of performance that have been evaluated include respondent comprehension, survey breakoff, language considerations, mode effects, and proxy reporting.

Cognitive testing shows that concepts related to sexual orientation and gender identity are broadly comprehensible for the general U.S. population, though it is important to ensure that translations into languages other than English are accurate and culturally appropriate (Clark, Armstrong, and Bonacore, 2005; Ingraham, Pratt, and Gorton, 2015; Ridolfo, Miller, and Maitland, 2012; Stern et al., 2016; NORC at the University of Chicago, 2016). Incidents of survey breakoff (premature termination of the survey by the respondent) in relation to sexual orientation and gender identity questions are infrequent, and item nonresponse is low, ranging from less than 1 percent to just over 6 percent (Case et al., 2006; Conron, Mimiaga, and Landers, 2010; Dahlhamer et al., 2014; Grant and Jans, n.d.; Grant et al., 2015; Ortman et al., 2017; Ridolfo, Miller, and Maitland, 2012; VanKim et al., 2010). This is significantly better than the nonresponse rates for some common demographic questions: for instance, income can have a nonresponse rate of more than 20 percent (Atrostic and Kalenkoski, 2002). Research on mode (e.g., computer-assisted personal interview compared with audio computer-assisted self-interview) has found no main effects of mode on item nonresponse (Dahlhamer, Galinsky, and Joestl, 2019).

In 2016, researchers from the Bureau of Labor Statistics and the Census Bureau conducted cognitive interviews and exploratory focus groups to consider the inclusion of sexual orientation and gender identity questions on the Current Population Survey (CPS), which uses proxy reporting. Most participants did not consider sexual orientation or gender identity questions to be particularly difficult or sensitive either for themselves or for others in their households, and few objected to answering such questions on the survey. The researchers did find that some LGBT individuals, particularly transgender participants, expressed concern that the range of answer options was too narrow (Ellis et al., 2018). This project, however, demonstrated the feasibility of asking sexual orientation and gender iden-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 99 of 438 PageID #: 22

tity questions on surveys that use proxy reporting. Of note, the United Kingdom has included sexual orientation measures in one of its large household surveys using proxy responses since 2014 (U.K. Office of National Statistics, 2020).

Other important considerations in research around sexual orientation and gender identity include the potential fluidity of identity, particularly from the perspective of developmental stages and the life course; probability versus nonprobability sampling; and recruiting techniques, particularly methods for recruiting samples large enough to permit robust analyses of SGD populations by intersecting demographic characteristics, such as race or disability status (Federal Interagency Working Group, 2016c; SGMRO, 2018b).

Another major question is how to balance the need for sufficiently comprehensive response options with the need to work within survey space constraints and to maintain adequate statistical power for analyses. This question relates to the evolving nature of terminology in SGD populations, such as the growing popularity of identities such as "queer" among young people in particular (Federal Interagency Working Group, 2016c; Goldberg et al., 2020); it also reflects the need for response options that can identify groups within SGD populations that are small but may be at high risk of experiencing disparities, such as asexual people (Borgogna et al., 2019), and response options that are culturally specific, such as Two Spirit in Native American communities and same-gender-loving among African Americans (Battle et al., 2002; Bauer et al., 2017). There is also a serious lack of methodological research into how to measure intersex status.

All these methodological questions require exploration in order to optimize the process of collecting, analyzing, and using data on sexual orientation, gender identity, and intersex status to improve the well-being of SGD populations. The need for continued methodological research, however, does not mean that these data should not be collected using tools that are currently available: continuous improvement and refinement of sampling techniques and question designs is a normal and necessary iterative process in any type of demographic data collection (Hughes et al., 2016).

Sexual Orientation

Reliable and validated measures of sexual orientation identity, same-sex attraction, and same-sex sexual behavior are readily available. The 1992 National Health and Social Life Survey, which was conducted by the independent National Opinion Research Center (NORC) at the University of Chicago with support from a variety of private foundations, was one of the earliest U.S. population-based surveys to measure all these traits (Laumann et al., 2008). The National Survey of Family Growth, overseen by

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 100 of 438 PageID #: 2

the National Center for Health Statistics (NCHS) at the U.S. Department of Health and Human Services, has also included all these measures since 2002 (Mosher, Chandra, and Jones, 2005). In 2009, Williams Institute at the School of Law of the University of California at Los Angeles (UCLA) convened an expert panel of scholars that produced a consensus report on best practices for measuring sexual orientation in population-based surveys (SMART, 2009).

Following calls for data on sexual orientation and other disparities in Healthy People 2020, the Affordable Care Act, and the 2011 Institute of Medicine report, NCHS conducted extensive testing to develop a sexual orientation question for the National Health Interview Survey (NHIS).[3] Successful completion of that testing resulted in inclusion of a sexual orientation identity question on the annual NHIS survey beginning in 2013 (National Center for Health Statistics, 2014). This question format is also used on the National Crime Victimization Survey under the auspices of the U.S. Department of Justice (Truman et al., 2019). Questions relating to sexual attraction and behavior have also become increasingly standardized. The NIH Sexual and Gender Minority Research Office and the Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity have both collected and made available examples of questions that can be used to measure sexual orientation identity, attraction, and behavior (as well as gender identity, which is discussed below) (Federal Interagency Working Group, 2016b; SGMRO, 2018a). Of note, it has been recommended that NIH expand its "planned enrollment" policy to include the requirement that NIH-funded research proposals outline how sexual orientation and gender identity data will be measured in the study population or explain why these variables are omitted (Sell, 2017). Such a requirement from NIH and other major research funders would significantly advance the degree to which SGD demographic data are collected in major longitudinal surveys and other types of research.

Gender Identity

In 2014 Williams Institute convened a panel of scholars that produced consensus recommendations for measuring gender identity in population-based surveys (GenIUSS Group, 2014). This report served as a guide for researchers at the UCLA Center for Health Policy Research in conducting extensive testing in order to measure gender identity on the California Health Interview Survey (CHIS), which is a large probability sample of California residents (Grant et al., 2015). The CHIS measure assesses both sex assigned at birth (i.e., on a respondent's original birth certificate) and

[3] See https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=57.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 101 of 438 PageID #: 2

current gender identity as male, female, or some other gender. This "two-step" question was developed based on community-driven research in Philadelphia in the 1990s and has since been adopted by such users as the Centers for Disease Control and Prevention (CDC) on its HIV/AIDS adult case report form.

The two-step question is considered better than a single-question design that merely adds transgender response options to an existing binary question about sex or gender (e.g., a single question that asks respondents to indicate whether their gender is male, female, or transgender). In fact, research indicates that the two-step question can result in almost five times more identifications of transgender people than this single-item design (Tordoff et al., 2019). The two-step question allows for transgender people to be identified in either of two ways. First, individuals may indicate that they currently describe their gender identity as "transgender." Alternatively, individuals may endorse an assigned sex that is different from their current gender identity. The two-step question captures people who identify as a gender different than the one that they were assigned at birth but who may not use the term "transgender" to describe themselves.

The two-step question is also often preferred to a single-item "transgender status" question (e.g., "are you transgender?" with yes/no/not sure response options), though a transgender status question may be more appropriate in contexts where sex assigned at birth is not an important variable. In administrative contexts, limited research has looked at tracking changes to recorded gender over time, for example, in Social Security records (Cerf, 2015). This is not a reliable means of ascertaining self-identification, however, and directly asking the two-step question or a single-item "transgender status" question are the preferred means of incorporating gender identity data in administrative records.

Very little evidence on ordering effects for the two-step question is available. It is important to note, however, that the respondent's answer to the current gender identity component is of primary importance and is what should inform how fields such as name, gendered honorific, pronoun, and sex are populated. The sex assigned at birth component should be used only to aid in identification of transgender respondents who identify simply as male or female. In clinical settings, sex assigned at birth may also underpin such decision support algorithms as preventive screening indications, but anatomical inventories may be used instead of assigned sex data to inform clinical decision support (Deutsch et al., 2013).

Some studies have also begun to explore measures of gender expression, meaning perceptions of the masculinity or femininity of a person's appearance, behavior, and mannerisms. Gender expression is an external manifestation of gender identity that has aspects of both self-perception and the perceptions of others (Wylie et al., 2010). In this sense, it draws from

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 102 of 438 PageID #: 2

work done by Camara Jones and others around self- and social perceptions of individuals' race and ethnicity (Jones et al., 2008). Gender expression measures are most often used in the context of research with youth, reflecting the importance of assessing sexual orientation and gender identity at various development stages (Roberts et al., 2013). A measure of socially assigned gender nonconformity has been validated among 18- to 30-year-olds for health research purposes (Wylie et al., 2010).

Intersex Status

Measures to assess intersex status in large-scale demographic studies have been proposed but not yet consistently validated. The 2014 GenIUSS Group report recognized three challenges facing researchers in assessing intersex status: some people with intersex traits do not identify as being intersex; some people who identify as intersex do not have intersex traits; and "intersex" is not a legal assigned sex in the United States. The report therefore recommended that intersex not be included as an option for assigned sex at birth. It also proposed two possible questions that could be the subject of future research:

1. "Have you ever been diagnosed by a medical doctor with an intersex condition or a difference of sex development, or were you born with (or developed naturally in puberty) genitals, reproductive organs, or chromosomal patterns that do not fit standard definitions of male or female?"
2. "Some people are assigned male or female at birth, but are born with sexual anatomy, reproductive organs, or chromosome patterns that do not fit the typical definition of male or female. This physical condition is known as intersex. Are you intersex?"

A community-based group of researchers qualitatively assessed the first question in an online survey of 111 intersex adults (Tamar-Mattis et al., 2018). Overall, 72 percent of participants responded that the question was accessible and important to include in surveys; some responded that the language was too medicalizing and may exclude people who have not had access to care. Further research is needed to assess the validity of population-based measures for intersex status.

Relationship Status

Relationship status is another important component of demographic data collection about SGD populations. Although identifying the gender composition of couples provides a sample of a subset of SGD populations,

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 103 of 438 PageID #: 2

it is important to note that this does not actually provide direct information about either sexual orientation or gender identity. The 1990 decennial census was the first U.S. census to include "unmarried partner" as a possible relationship status for individuals in a household. Combining information about relationship and gender of the partner made it possible for the first time to identify same-sex unmarried couples. In general, same-sex couples are identified when the householder (the reference person who fills out the census form) identifies another person in the household as a spouse or unmarried partner and that person is the same sex as the householder. Census Bureau procedures have varied, however, for tabulating responses from same-sex couples in decennial censuses and in the annual American Community Survey (ACS), which replaced the long-form census in 2005. For example, in the 2000 census, the Bureau also included same-sex couples who indicated that they were spouses in counts of same-sex unmarried couples (at that time, marriages of same-sex couples were not legal in the United States). A wide range of federal surveys use this method to identify interhousehold relationships, introducing even further variation in measurement approaches. Some of this variation has unfortunately exacerbated problems with measurement and comparability over time and across surveys related to how same- and different-sex couples are enumerated.

In addition to measurement issues raised by how the Census Bureau classifies household composition, small errors in the sex responses of different-sex couples resulted in a large proportion of reported same-sex couples (mostly those who identified as spouses) likely being mis-identified as different-sex couples. Census Bureau analyses suggest that 28 percent of reported same-sex couples in the 2010 census were likely miscoded different-sex couples. The estimated error was even higher in the 2000 census data (O'Connell and Feliz, 2011). Following extensive analyses and testing, the Census Bureau altered possible responses to the relationship to householder question in the 2017 CPS, the 2019 ACS, and the 2020 census to allow respondents to separately identify different- (the surveys use the term "opposite-sex") and same-sex spouses and unmarried partners. These changes are designed to substantially improve accuracy in measurement of same-sex married and unmarried couples (Kreider, Bates, and Lofquist, 2016).

SUMMARY AND CONCLUSIONS

SGD demographic data collection efforts to date have focused largely on sexual orientation identity. There are a few national surveys that also include measurements of sexual behavior (e.g., the General Social Survey) or both sexual behavior and attraction (e.g., the National Survey of Family Growth). However, even among surveys that include measurement of

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 104 of 438 PageID #: 2

sexual attraction and behavior, survey questions largely remain dependent on binary assessments of gender. Research gaps remain in how best to include gender fluidity in the measurement of sexual orientation identity, behavior, and attraction.

CONCLUSION 4-1: Sexual orientation and gender identity questions are presented inconsistently across data collection tools, are often separated from other demographic measures, and frequently use binary assessments of gender, which do not effectively capture gender diversity.

Surveys measuring gender identity have increasingly adopted a two-step approach that measures both gender identity and sex assigned at birth, but population-based data on gender diversity remain rare. There are currently no national population-based data that allow for assessment of the demographics of intersex populations. Measurement of SGD populations on longitudinal surveys also remains scarce. These data gaps limit the ability to understand how sexual orientation and gender identity develop over the life course and the roles that these aspects of identity, along with intersex status, play in affecting the well-being of SGD people.

CONCLUSION 4-2: Point-in-time and longitudinal demographic data on sexual orientation, gender identity, and intersex status are needed to drive research agendas, monitor population trends, guide the equitable distribution of funding and other resources, and inform policies to advance equity by effectively addressing disparities affecting sexual and gender diverse populations.

The standardization of measures at the federal level would promote the well-being of SGD populations by advancing the collection of these data both throughout the federal statistical system and in other public and private data collection activities.

REFERENCES

Atrostic, B., and Kalenkoski, C. (2002). *Item Response Rates: One Indicator of How Well We Measure Income*. Washington, DC: National Center for Education Statistics. Available: https://nces.ed.gov/FCSM/pdf/IHSNG_ASA02_finalrad9A6D5.pdf.

Battle, J., Cohen, C., Warren, D., Fergerson, G., and Audam, S. (2002). *Say It Loud: I'm Black and I'm Proud: Black Pride Survey 2000*. New York: The Policy Institute of the National Gay and Lesbian Task Force.

Bauer, G.R., Braimoh, J., Scheim, A.I., and Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLoS ONE*, *12*(5). doi: 10.1371/journal.pone.0178043.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 105 of 438 PageID #: 2

Borgogna, N.C., McDermott, R.C., Aita, S.L., and Kridel, M.M. (2019). Anxiety and depression across gender and sexual minorities: Implications for transgender, gender nonconforming, pansexual, demisexual, asexual, queer, and questioning individuals. *Psychology of Sexual Orientation and Gender Diversity*, *6*(1), 54–63. doi: 10.1037/sgd0000306.

Cahill, S.R., Baker, K., Deutsch, M.B., Keatley, J., and Makadon, H.J. (2016). Inclusion of sexual orientation and gender identity in Stage 3 Meaningful Use guidelines: A huge step forward for LGBT health. *LGBT Health*, *3*(2), 100–102. doi: 10.1089/lgbt.2015.0136.

Case, P., Austin, B., Hunter, D., Willett, W., Malspeis, S., Manson, J., and Spiegelman, D. (2006). Disclosure of sexual orientation and behavior in the Nurses' Health Study II. *Journal of Homosexuality*, 51(1), 13–31. doi: 10.1300/j082v51n01_02.

Cerf, B. (2015). *Likely Transgender Individuals in U.S. Federal Administrative Records and the 2010 Census* [Preprint]. SocArXiv. doi: 10.31235/osf.io/fj8y8.

Clark, M., Armstrong, G., and Bonacore, L. (2005). Measuring sexual orientation and gender expression among middle-aged and older women in a cancer screening study. *Journal of Cancer Education*, *20*(2), 108–112.

Conron, K.J., Mimiaga, M.J., and Landers, S.J. (2010). A population-based study of sexual orientation identity and gender differences in adult health. *American Journal of Public Health*, *100*(10), 1953–1960. doi: 10.2105/AJPH.2009.174169.

Dahlhamer, J., Galinsky, A., Joestl, S., and Ward, B. (2014). Sexual orientation in the 2013 National Health Interview Survey: A quality assessment. *Vital and Health Statistics: Series 2, Data Evaluation and Methods Research, 169*, 1–32.

Dahlhamer, J.M., Galinsky, A.M., and Joestl, S.S. (2019). Asking about sexual identity on the National Health Interview Survey: Does mode matter? *Journal of Official Statistics*, *35*(4), 807–833. doi: 10.2478/jos-2019-0034.

Deutsch, M.B., Green, J., Keatley, J., Mayer, G., Hastings, J., Hall, A.M., Deutsch, M.B., Keatley, J., Green, J., Allison, R., Blumer, O., Brown, S., Cody, M.K., Fennie, K., Hall, A.M., Hastings, J., Mayer, G.S., Moscoe, G., St Claire, R., Stone, M.R., Wilson, A., and Wolf-Gould, C. (2013). Electronic medical records and the transgender patient: Recommendations from the World Professional Association for Transgender Health EMR Working Group. *Journal of the American Medical Informatics Association*, *20*(4), 700–703. doi: 10.1136/amiajnl-2012-001472.

Ellis, R., Virgile, M., Holzberg, J.L., Nelson, D.V., Edgar, J., Phipps, P., and Kaplan, R. (2018). Assessing the feasibility of asking about sexual orientation and gender identity in the Current Population Survey: Results from cognitive interviews. *Research Report Series: Survey Methodology #2018-06*. Center for Survey Measurement, Research and Methodology Directorate, U.S. Census Bureau. Available: https://www.census.gov/content/dam/Census/library/working-papers/2018/adrm/rsm2018-06.pdf.

Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys. (2016a). *Current Measures of Sexual Orientation and Gender Identity in Federal Surveys*. Washington, DC: National Center for Education Statistics. Available: https://nces.ed.gov/FCSM/pdf/current_measures_20160812.pdf.

———. (2016b). *Evaluations of Sexual Orientation and Gender Identity Survey Measures: What Have We Learned?* Washington, DC: National Center for Education Statistics. Available: https://nces.ed.gov/FCSM/pdf/Evaluations_of_SOGI_Questions_20160923.pdf.

———. (2016c). *Toward a Research Agenda for Measuring Sexual Orientation and Gender Identity in Federal Surveys: Findings, Recommendations, and Next Steps*. Washington, DC: National Center for Education Statistics. Available: https://nces.ed.gov/FCSM/pdf/SOGI_Research_Agenda_Final_Report_20161020.pdf.

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 106 of 438 PageID #: 2

GenIUSS Group (Gender Identity in U.S. Surveillance Group). (2014). *Best Practices for Asking Questions to Identify Transgender and Other Gender Minority Respondents on Population-Based Surveys*. J.L. Herman (Ed.). Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://escholarship.org/uc/item/3qk7s1g6.

Goldberg, S.K., Rothblum, E.D., Russell, S.T., and Meyer, I.H. (2020). Exploring the Q in LGBTQ: Demographic characteristic and sexuality of queer people in a U.S. representative sample of sexual minorities. *Psychology of Sexual Orientation and Gender Diversity*, *7*(1), 101–112. doi: 10.1037/sgd0000359.

Grant, D., and Jans, M. (n.d.). *Assessing Sexual Identity and Behavior in California's Diverse Population*. Los Angeles, CA: UCLA Center for Health Policy Research.

Grant, D., Jans, M., Park, R., Ponce, N., Kil, J., Gates, G., Wilson, B.D.M., and Herman, J.L. (2015). Putting the "T" in LGBT: A pilot test of questions to identify transgender people in the California Health Interview Survey. *Proceedings of the American Association for Public Opinion Research*. American Statistical Association. Available: http://www.asasrms.org/Proceedings/y2015/files/234234.pdf.

Hughes, J.L., Camden, A.A., Yangchen, T., and College, A.S. (2016). Rethinking and updating demographic questions: Guidance to improve descriptions of research samples. *Psi Chi Journal of Psychological Research*, *21*(3).

Ingraham, N., Pratt, V., and Gorton N. (2015). Counting trans patients: A community health center case study. *Transgender Studies Quarterly*, *2*(1), 136–147.

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

———. (2013). *Collecting Sexual Orientation and Gender Identity Data in Electronic Health Records: Workshop Summary*. Washington. DC: The National Academies Press. doi: 10.17226/18260.

Jones, C.P., Truman, B.I., Elam-Evans, L.D., Jones, C.A., Jones, C.Y., Jiles, R., Rumisha, S.F., and Perry, G.S. (2008). Using "socially assigned race" to probe white advantages in health status. *Ethnicity & Disease*, *18*(4), 496–504. Available: https://www.ncbi.nlm.nih.gov/pubmed/19157256.

Kreider, R.M., Bates, N.A., and Lofquist, D. (2016). *Improving Measurement of Same-Sex Couple Households in Census Bureau Surveys: Presentation at AAPOR, May 2016*. U.S. Census Bureau. Available: https://www.census.gov/library/working-papers/2016/demo/AAPOR_Kreideretal.html.

Laumann, E.O., Gagnon, J.H., Michael, R.T., and Michaels, S. (2008). *National Health and Social Life Survey, 1992*. Inter-university Consortium for Political and Social Research. doi: 10.3886/ICPSR06647.v2.

Mosher, W.D., Chandra, A., and Jones, J. (2005). Sexual behavior and selected health measures: Men and women 15–44 years of age, United States, 2002. *Advance Data from Health and Vital Statistics, No. 362*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Available: https://www.cdc.gov/nchs/data/ad/ad362.pdf.

National Center for Health Statistics. (2014). *2013 National Health Interview Survey, Public Use Data Release: A Brief Quality Assessment of the NHIS Sexual Orientation Data*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Interview Statistics. Available: https://www.cdc.gov/nchs/data/nhis/qualityso2013508.pdf.

NORC at the University of Chicago. (2016). *Testing Alternative Response Options for Spanish Translations of Sexual Identity Items for National Surveys*. Available: https://wwwn.cdc.gov/qbank/report/Milesi_2017_NORC_NHIS.pdf.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 107 of 438 PageID #: 2

O'Connell, M., and Feliz, S. (2011). *Same-Sex Couple Household Statistics from the 2010 Census: Working Paper Number SEHSD-WP2011-26*. U.S. Census Bureau. Available: https://www.census.gov/library/working-papers/2011/demo/SEHSD-WP2011-26.html.

Ortman, J.M., Bates, N., Brown, A., and Sawyer, R.C. (2017). *Optimizing Self and Proxy Response to Survey Questions on Sexual Orientation and Gender Identity*. Paper presented at the Annual Conference of the Population Association of America, Chicago, IL. Available: https://paa.confex.com/paa/2017/mediafile/ExtendedAbstract/Paper13962/Ortman%20Bates%20Brown%20Sawyer%20PAA%202017.pdf.

Ridolfo, H., Miller, K., and Maitland, A. (2012). Measuring sexual identity using survey questionnaires: How valid are our measures? *Sexuality Research and Social Policy: A Journal of the NSRC, 9*(2), 113–124. doi: 10.1007/s13178-011-0074-x.

Roberts, A.L., Rosario, M., Slopen, N., Calzo, J.P., and Austin, S.B. (2013). Childhood gender nonconformity, bullying victimization, and depressive symptoms across adolescence and early adulthood: An 11-year longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *52*(2), 143–152. doi: 10.1016/j.jaac.2012.11.006x.

Sell, R. (2017). LGBTQ health surveillance: Data = power. *American Journal of Public Health 107*, 843–844. doi: 10.2105/AJPH.2017.303798.

SGMRO (Sexual and Gender Minority Research Office). (2018a). *Examples of Sexual Orientation and Gender Identity (SOGI) Questions*. National Institutes of Health. Available: https://dpcpsi.nih.gov/sgmro/measurement/questions.

———. (2018b). *Methods and Measurement in Sexual and Gender Minority Research*. National Institutes of Health. Available: https://dpcpsi.nih.gov/sites/default/files/MethodsMeasures_Paper_508_FV.pdf.

SMART (Sexual Minority Assessment Research Team). (2009). *Best Practices for Asking Sexual Orientation and Gender Identity on Surveys*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/SMART-FINAL-Nov-2009.pdf.

Stern, M.J., Michaels, S., Milesi, C., Viox, M.H., and Morrison, H. (2016). *Task 1.32.a: Develop and Test Sexual and Gender Minority Status (LGBT) Items Final Summary Report*. Available: https://www.cms.gov/About-CMS/Agency-Information/OMH/Downloads/Research-Report-sexual-gender-minority-status-items.pdf.

Tamar-Mattis, S., Gamarel, K.E., Kantor, A., Baratz, A., Tamar-Mattis, A., and Operario, D. (2018). Identifying and counting individuals with differences of sex development conditions in population health research. *LGBT Health*, *5*(5), 320–324. doi: 10.1089/lgbt.2017.0180.

Tordoff, D.M., Morgan, J., Dombrowski, J.C., Golden, M.R., and Barbee, L.A. (2019). Increased ascertainment of transgender and non-binary patients using a 2-step versus 1-step gender identity intake question in an STD clinic setting. *Sexually Transmitted Diseases*, *46*(4), 254–259. doi: 10.1097/OLQ.0000000000000952.

Truman, J.L., Morgan, R.E., Gilbert, T., and Vaghela, P. (2019). Measuring sexual orientation and gender identity in the National Crime Victimization Survey. *Journal of Official Statistics*, *35*(4), 835–858. doi: 10.2478/jos-2019-0035.

U.K. Office of National Statistics. (2020). *Sexual Orientation Quality and Methodology Information*. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/methodologies/sexualidentityukqmi.

VanKim, N., Padilla, J., Joseph, L., and Goldstein, A. (2010). Adding sexual orientation questions to statewide public health surveillance: New Mexico's experience. *American Journal of Public Health*, *100*(12), 2392–2396.

Wylie, S.A., Corliss, H.L., Boulanger, V., Prokop, L.A., and Austin, S.B. (2010). Socially assigned gender nonconformity: A brief measure for use in surveillance and investigation of health disparities. *Sex Roles*, *63*(3-4), 264–276. doi: 10.1007/s11199-010-9798-y.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

PART III

DOMAINS OF WELL-BEING

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 111 of 438 PageID #: 2

5

Law and Legal Systems

Law can enhance or impede people's economic security, physical safety, and capacity to participate in almost all dimensions of life; for these reasons, it is an important social determinant of health and well-being (Burris et al., 2010). For many years, the legal system functioned largely in ways that undermined the health and well-being of sexual and gender diverse (SGD) populations. Criminal laws were used to harass, imprison, and ruin the lives of those who were considered sexual or gender deviants. Immigration laws forbade them from entering the country. They were subject to being fired from their jobs, evicted from their homes, and less than honorably discharged from military service without legal redress. Their family relationships were not recognized as legitimate, much less protected from interference. SGD people were forced to live in a world of ubiquitous state-enforced hostility.

The legal landscape has now changed dramatically, even if not completely. In an extraordinarily successful example of the American civil rights narrative, LGBT rights advocates have secured protection from most of the past forms of negative treatment.

However, as one can see from the examples of women and people of color, the achievement of broad formal equality under law does not automatically stop the kinds of mistreatment that can diminish a person's capacity for well-being. For SGD people, legal equality is still new and somewhat precarious. Many U.S. institutions and individuals continue to undermine new norms of fairness. Enforcement of legal protections can be uneven. Multiple chapters in this report document recent and continuing forms of

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 112 of 438 PageID #: 2

negative treatment, some of which may now be the product more of custom than of law but which nonetheless can be devastating to the people affected.

In addition, the policies and practices that continue to harm SGD people have a disproportionate effect on those within the community who also face income insecurity, racial bias, and transphobia. A transgender Latinx woman or a Black lesbian couple raising children have to contend with additional marginalization that results from intersecting axes of disadvantage and stigma. As a result, they face radically different life circumstances than cisgender white people.

In the realm of law, the primary site for compounded stigma is criminal law. The punitive aspects of the criminal justice system—such as the criminalization of certain behaviors, the likelihood of arrest and detention, and hostile treatment within institutions such as prisons—produce burdens experienced overwhelmingly by SGD people of color, transgender women, and those who lack regular or sufficient incomes (Goldberg et al., 2019; Meyer et al., 2017).

This chapter summarizes the changes that have occurred in recent years, describes continuing challenges posed by the legal system to the well-being of SGD people, and provides basic legal information related to the particular domains of life that are analyzed in greater detail throughout this book. The chapter concludes with a description of what is likely to be an increasingly important question: the extent to which businesses and individuals can secure an exemption from anti-discrimination laws on the basis of their religious beliefs. Because current legal change in this field has been substantial and rapid, the reader should keep in mind that this summary can offer only a snapshot of the legal status of SGD populations as this report goes to press.

THE NEW BASELINE

In June 2020 the Supreme Court ruled in *Bostock v. Clayton County* (140 S. Ct. 1731) that workplace discrimination based on either sexual orientation or gender identity constitutes a form of sex discrimination. The decision means that the federal law which prohibits discrimination in the workplace based on sex—Title VII of the 1964 Civil Rights Act—also prohibits job discrimination based on sexual orientation or gender identity. With this decision, the Court put into place the final component of what has become the new baseline for the law's treatment of SGD people: nationwide protection for LGBT people with respect to employment, marriage, intimate sexual conduct in a domestic setting, and, partially, military service (this is explained in further detail below). Twenty years ago, none of these federal protections existed (Eskridge, Hunter, and Joslin, 2018). The ripple effects from each of these examples of progress illustrate how

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 113 of 438 PageID #: 2

important the legal system is to everyday quality of life for members of minority groups.

For example, in 2003 the Supreme Court ruled that states could not criminalize private consensual sexual acts between two people of the same sex in *Lawrence v. Texas* (539 U.S. 558). One of the most consequential results of this decision was the elimination of secondary aspects of criminalization, meaning the use of such laws to categorize LGB people as presumptive criminals in the context of child custody and visitation rights disputes; eligibility for certain jobs, especially in law enforcement; and for some occupational licenses (Eskridge, Hunter, and Joslin, 2018).

In 2010 Congress ended the “Don’t ask, don’t tell” policy regarding LGB Americans in military service. Since that time, LGB people have served openly in all branches of the armed forces. Aside from the dignity that comes from not being considered unfit for military service, the experience has opened up job training and other professional opportunities for countless people who formerly would have been excluded. However, a ban on enlistment by transgender people remains in place.

In 2015, the Supreme Court ruled in *Obergefell v. Hodges* (135 S. Ct. 2584) that all states are required to allow same-sex couples to marry. Because marital status is determinative of more than 1,000 rights and obligations under federal law alone, securing access to marriage allowed couples to change their legal status for purposes of Social Security and insurance benefits, taxation, parental relationships, and eligibility for “family” status in a variety of public and private programs and services.

In the most recent example, noted above, the sex discrimination ruling in *Bostock v. Clayton County* is especially important because it will apply to all federal statutes that prohibit sex discrimination. Such laws cover education (Title IX), housing (Title VIII), credit (the Equal Credit Opportunity Act), and access to health care and health insurance coverage (the Affordable Care Act). In all these arenas, SGD people now have federal protections against discrimination.

These developments represent the achievements of reform efforts on behalf of LGBT rights, and they are remarkable. However, they do not constitute the entire story. The following section describes the legal problems still remaining.

CONTINUING GAPS IN LEGAL PROTECTION

There are many reasons that SGD people continue to experience adverse treatment in the legal system. In some areas of law, there are no or very few anti-discrimination laws as such. Criminal law, family law, policies regarding identity documents, and the rules governing military service are

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 114 of 438 PageID #: 2

examples. In areas of law where anti-discrimination laws do apply, federal coverage is limited by the size or type of the entity subject to it. State laws may fill in the missing protections, but only about half the states have explicit coverage for sexual orientation and gender identity, and the scope of sex discrimination under most state laws has not been determined. Even in situations in which there are now protective laws, the degree of enforcement varies.

The following summaries of existing law are intended to give the reader context for the discussions of the different domains of health and well-being in the remainder of this report. They describe the background framework for understanding the research into discrimination that has been published in particular fields. More details are provided in the chapters that address a particular context, such as education (Chapter 9), employment (Chapter 10), and health care (Chapters 11 and 12).

The rest of this section addresses legal topics in two major areas: laws that apply to those situations in which an individual's physical liberty is at stake, and anti-discrimination laws of various kinds. The following two major sections of this chapter address areas of law in which explicit protections against discrimination usually do not exist and the increasingly important question of whether religious liberty can form the basis for an exception to anti-discrimination law.

The Possible Loss of Physical Liberty

Individuals who are brought within the jurisdiction of the criminal law system, including juvenile detention, and those who are caught up in the immigration system face potential loss of liberty in the literal sense that they may be incarcerated.

Criminalization

The Supreme Court decriminalized most private consensual adult sexual conduct in its 2003 decision in *Lawrence v. Texas* (539 U.S. 558). However, SGD people continue to be subject to heightened surveillance and engagement with police for a variety of other criminalized behaviors because of intersecting factors, such as gender-nonconforming appearance and the high rate of homelessness among LGBT youth (Goldberg et al., 2019). In addition, the ruling in *Lawrence v. Texas* did not extend to two types of criminalized conduct that disproportionately affect SGD people: sex involving payment and behavior that may cause exposure to HIV.

Every state continues to criminalize sex for which one party pays another (with the exception of some counties in Nevada). High rates of unemployment and homelessness contribute to a high rate of sex work among

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 115 of 438 PageID #: 2

transgender women, especially transgender women of color, and homeless youth (Forge and Ream, 2014; Nadal, 2014; Ream, Barnhart, and Lotz, 2012; Van Leeuwen et al., 2006). One in five respondents to the 2015 U.S. Transgender Survey (USTS) reported working in the underground economy, defined to include sex work (James et al., 2016). A local study in New York found that transgender people of color were twice as likely to be arrested for sex work as white transgender people (Goldberg et al., 2019). Mistreatment during interactions with the police is also a common experience for sex workers (Platt et al., 2018). Thus, although these laws are neutral on their face, in practice they have a disproportionate impact on some of the most vulnerable SGD groups.

In a systematic literature review of studies about the associations between the legal system and the health of people who engage in sex work, researchers found that harsh enforcement policies, such as violent or abusive behavior by police, are associated with increased risk of HIV infection or sexually transmitted disease and the risk of violence by other actors (Platt et al., 2018). The pathways linking police practices and health risks include the disruption of sex workers' own harm reduction activities, such as negotiating with clients, carrying condoms (which are sometimes used as evidence against them), and avoidance of isolated locations (Platt et al., 2018). Secondary risks of arrest include increased possibility of eviction, loss of other work, and barriers to access to health and other services (Hanssens et al., 2014; Platt et al., 2018).

The second category of criminalized conduct of special interest to SGD people consists of laws that criminalize behavior that may cause exposure to HIV. All but seven states and the District of Columbia have such a law (including laws allowing sentence enhancement for violations of other crimes if the defendant is HIV positive). Some applicable laws are HIV specific; others also cover other transmissible infections. In most states, no proof of actual transmission or intent to transmit is required. People of color are disproportionately arrested and prosecuted for these offenses (Center for HIV Law and Policy, 2019).

Both the Centers for Disease Control and Prevention (CDC) and the U.S. Department of Justice (DOJ) have recommended that states reexamine the basis for these laws and modify their statutes to align punishment with risk (Centers for Disease Control and Prevention, 2014; Lehman et al., 2014). Four states—Iowa, California, Michigan, and North Carolina—have done so (Sears, Goldberg, and Mallory, 2020). Currently, laws in 23 states criminalize behavior that carries no risk or "effectively no risk" of transmitting HIV (as determined by the CDC). In 33 states, the crimes are classified as felonies; in eight states, they are misdemeanors; and in three states, prosecutions may invoke a sentence enhancement law. In some states, the law carries greater penalties for exposure to HIV than for exposure to diseases

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 116 of 438 PageID #: 2

for which there is a much greater risk of transmission (Center for HIV Law and Policy, 2019). A study of enforcement in Missouri from 1990 to 2019 found that the state spent at least $10.2 million during that period for costs of incarcerating people convicted of HIV-related crimes, not counting the expenses related to arrest, prosecution, probation, and parole (Sears, Goldberg, and Mallory, 2020). This is the first study that has measured the costs of these laws.

There is a strong association between the criminalization of HIV exposure and the criminalization of sex work. Hundreds, perhaps thousands, of people are arrested each year for HIV exposure-related crimes, a large number of whom are also arrested for sex work (Hasenbush et al., 2017). A study of HIV-related arrests in California found that approximately 95 percent occurred in the context of solicitation for sex (Goldberg et al., 2019). This enforcement pattern disproportionately affects transgender women, gay and bisexual men, and people of color (Baskin, Ahmed, and Forbes, 2016; Sears, Goldberg, and Mallory, 2020). There is widespread agreement among public health professionals that decriminalization of sex work would contribute significantly to the effort to combat the spread of HIV (Das and Horton, 2015).

Treatment in the Criminal Law System

Studies have repeatedly found routine mistreatment of SGD people by police officers and prison staff (Goldberg et al., 2019). While incarcerated, sexual minorities are more likely than heterosexual inmates to encounter sexual assault. (Meyer et al., 2017; Wilson et al., 2017). In the 2015 USTS, 58 percent of respondents who interacted with police officers reported experiencing verbal harassment, physical or sexual assault, or other forms of mistreatment. Meyer and colleagues (2017) found that sexual minority inmates encountered administrative segregation more frequently than others—in part because consensual sexual contact was punished, but also because sexual minority inmates have higher rates of psychological distress than heterosexual inmates.

For women, rates of incarceration are higher than for non-SGD women. In both adult and juvenile facilities, lesbian and bisexual women and girls are overrepresented (Meyer et al., 2017; Wilson et al., 2017). In one study of women in jails, 35.7 percent were sexual minorities, while the comparable rate for sexual minority men in jail was 6.2 percent; similarly, for women in prison, 42.1 percent were sexual minorities, compared with 9.3 percent of men in prison (Meyer et al., 2017).

The federal Prison Rape Elimination Act (PREA) requires DOJ to collect data, develop standards, and disseminate information in an effort to deter sexual violence in prisons. Regulations issued pursuant to PREA

Copyright National Academy of Sciences. All rights reserved.

provide national standards applicable to state and federal prisons, including a model screening process for assessing the likelihood of victimization of inmates and an individualized risk assessment that includes provision of safe housing for SGD inmates (28 C.F.R. 115.41–115.43). In a guidance document issued in 2018, the Bureau of Prisons changed the standards, including by directing that the initial facility assignment will be based on the inmate's "biological sex," changing the prior policy in which housing was based on the person's self-identified gender identity. The 2018 rules stated that placement based on "the inmate's identified gender would be appropriate only in rare cases."[1]

The enforcement status of PREA, including the new regulations, is unclear. The law requires audits of the institutions to which it applies, but it lacks a mechanism for effective independent oversight of prison conditions (Deitch, 2010). Independent external oversight is considered an essential tool for preventing violence in prison, especially for vulnerable populations, such as inmates who are susceptible to sexual assault (Deitch, 2010). In a conference of the Commission on Safety and Abuse in America's Prisons (2006), more than 100 correctional experts from inside and outside the United States endorsed the need for such oversight.[2]

Immigration

Prior to 1990, immigration law was used to exclude people classified as "sexual deviants," which included SGD people (Eskridge, Hunter, and Joslin, 2018). Currently, the most urgent immigration issue for SGD populations is the treatment of detainees. The Associated Press has reported that approximately 300 individuals who identify as transgender entered Immigration and Customs Enforcement (ICE) custody between 2003 and 2019 (Bryan, 2019). Widespread abuse and mistreatment of SGD detainees and poor medical care in ICE facilities has been well documented; in 2018–2019, two transgender women died in ICE custody (Evans, 2020; Gruberg, 2018; Hanssens et al., 2014; Oztaskin, 2019).

Because PREA covers all federal and state prisons, jails, and detention facilities, it also applies to immigration detention facilities run by the U.S. Department of Homeland Security (DHS). DHS has the responsibility to develop and implement procedures to prevent sexual violence in its detention facilities. In January 2020, after continuing reports of abuse and a congres-

[1] *Bureau of Prisons Change Order: Transgender Offender Manual.* May 11, 2018. Available: https://www.documentcloud.org/documents/4459297-BOP-Change-Order-Transgender-Offender-Manual-5.html.

[2] See https://www.vera.org/projects/commission-on-safety-and-abuse-in-americas-prisons/learn-more.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 118 of 438 PageID #: 2

sional letter demanding release of transgender people in ICE custody, ICE closed one facility for transgender women and transferred them to other units housing transgender people (Evans, 2020). It is unclear whether ICE places transgender detainees only in facilities that meet health and safety standards for that population (Evans, 2020).

Anti-Discrimination Laws

Federal, state, and local laws prohibit some forms of discrimination based on sexual orientation or gender identity, but coverage can be inconsistent depending on the scope of each law. A typical anti-discrimination statute enumerates the protected characteristics (such as race or sex) and the arenas in which the laws apply (such as employment or housing). Most anti-discrimination laws apply to both public- and private-sector entities; if the alleged discriminator is a public agency, then the provisions of the Constitution also apply.

States' anti-discrimination laws can differ from federal law in various ways. In general, federal laws provide stronger remedies than state and local laws. With regard to coverage, however, state laws tend to include smaller employers and more types of public accommodations than do federal laws. Approximately 50 percent of the U.S. population lives where there is a state law explicitly protecting SGD people from at least one form of discrimination (Conron and Goldberg, 2019). Several hundred municipalities also have such laws.

Employment

Federal, state, and local laws provide protection against employment discrimination, as do the internal policies of many employers. By far the most important source of protection is the federal statute, Title VII of the Civil Rights Act of 1964, which applies to all workplaces with 15 or more employees. Although federal courts and agencies had begun to apply Title VII to LGBT cases several years prior to the 2020 Supreme Court's decision in *Bostock v. Clayton County* (140 S. Ct. 1731), coverage was not certain until the Court definitively interpreted the scope of "discrimination because of sex" to include sexual orientation and gender identity. "Discrimination" includes issues of hiring, firing, promotion, pay, and harassment; however, the Court left undecided the question of how employees' access to bathrooms or locker rooms will be analyzed under the rubric of sex discrimination. That issue may return to the Supreme Court if there is disagreement about it in future cases in the lower courts.

With the question as to inclusion under Title VII resolved, the primary utility of state laws will be for cases involving employers with fewer than 15

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 119 of 438 PageID #: 2

employees, many of which are covered by state anti-discrimination law (the threshold for coverage varies from state to state). In 22 states and the District Columbia, statutes explicitly prohibit discrimination in employment on the basis of sexual orientation or gender identity. One state—Wisconsin—specifies only sexual orientation. The remaining state laws, like Title VII, prohibit sex discrimination in employment. Several states have issued regulatory guidance that interprets the prohibition of sex discrimination in state law to include sexual orientation and gender identity (Movement Advancement Project, 2020b). For the remaining states, it will be up to state courts to decide whether to interpret state anti-discrimination laws such that "sex" encompasses sexual orientation and gender identity. As a result, for SGD people who work at small employers in roughly half of the United States, there is no certainty of legal protection against job discrimination.

Public Accommodations

The phrase "public accommodations" refers to entities that provide goods and services to the public: it can include everything from retail stores to concerts to the YMCA. This is the arena in which there is the greatest difference between federal and state anti-discrimination laws. The federal law, also enacted as part of the 1964 Civil Rights Act, was drafted narrowly to address the most outrageous examples of discrimination suffered by people of color traveling in the United States. It prohibits discrimination based on race and religion, but it does not prohibit discrimination based on sex. Thus, there is no basis under the *Bostock* decision to incorporate protection for SGD people in public accommodations under the umbrella of sex discrimination. The federal law is also narrow in its definition of "public accommodations": it primarily covers hotels, restaurants, and theaters.

This gap in federal law makes the issue of public accommodations most important in the context of state-level anti-discrimination protection. Most state public accommodations laws include sex as a protected characteristic, and they also often cover more goods and services than does the federal law, largely because they tend to have been enacted or amended more recently than 1964. In 21 states and the District of Columbia, public accommodations statutes explicitly cover both sexual orientation and gender identity. As with employment, one state law covers only sexual orientation, and two other states have interpreted their own laws against sex discrimination to also include these two characteristics (Movement Advancement Project, 2020b).

The scope of public accommodations coverage is the context for many concerns regarding use of public restrooms, locker rooms, and changing rooms by transgender people (Flores and Herman, 2020; Hart, 2014; Hasenbush, Flores, and Herman, 2019; Taylor et al., 2018). There are no laws that

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 120 of 438 PageID #: 2

prohibit transgender people from using the bathroom of the sex with which they identify, but the issue remains active in public debate, so the absence of anti-discrimination protection is significant. Opponents of such coverage argue that including gender identity as a protected characteristic would permit predators claiming to be transgender to access opposite-sex bathrooms (Westbrook and Schilt, 2014), but an empirical assessment of such claims has not identified any changes in victimization rates due to the implementation of inclusive policies (Hasenbush, Flores, and Herman, 2019).

Data from the 2015 USTS suggest that transgender people experience significant anxiety regarding these issues: for example, 59 percent of respondents reported sometimes or always avoiding using a public restroom in the past year out of safety concerns or other problems they may encounter, and 26 percent reported being denied access to, having their presence questioned in, or being harassed or assaulted in public restrooms. The survey also found that 31 percent of transgender people who visited a place of public accommodation in the previous year reported being mistreated if employees knew or believed that they were transgender (James et al., 2016).

Education

In 1972, Congress enacted Title IX of the Education Amendments to the Civil Rights Act, which barred sex-based discrimination in educational programs and activities (at all levels) that receive federal funding.[3] Here again, the logic of the Supreme Court's 2020 ruling in *Bostock v. Clayton County* is expected to apply, so that discrimination based on sexual orientation or gender identity will be included within the scope of the prohibition of discrimination based on sex. Although, as noted above, the Court in *Bostock* did not address issues related to bathroom access, two federal appeals courts have ruled that denying students access to bathrooms consistent with their gender identity violates the Title IX prohibition against sex discrimination (*Whitaker v. Kenosha Unified School District*, 838 F.3d 1034 (7th Cir. 2017); *Adams v. School Board of St. Johns County*, WL 4561817 (11th Cir. 2020).

Another undecided issue concerns participation in athletics by transgender students. Most sports have traditionally been sex segregated, and Title IX permits sex-segregated athletic teams, which has produced policies that have been implemented through sex testing and verification (Ha et al., 2014). Arguments concerning transgender students' participation in athletics often bring up fairness concerns driven by the average physiological differences between those whose assigned sex at birth was male and

[3] See https://www.justice.gov/crt/title-ix-education-amendments-1972.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 121 of 438 PageID #: 2

those whose assigned sex was female (Carroll, 2014; Davis, 2017; Jones et al., 2017). It is not yet clear how federal Title IX protections will address gender diverse students in athletics. The National Collegiate Athletic Association implemented gender eligibility requirements in 2011 that focus primarily on the use or administration of hormone treatments (Taylor et al., 2018). Some states, sporting leagues, and school districts have adopted guidelines to address these questions (Flores et al., 2020; Taylor et al., 2018). No consensus as to best practices has emerged, however, and litigation on this issue is likely to continue.

In addition to Title IX, there are also some state laws that address issues affecting SGD students in K–12 educational systems. In 17 states and the District of Columbia, laws explicitly prohibit sexual orientation and gender identity discrimination (Movement Advancement Project, 2020a). In 24 states and the District of Columbia, laws or regulations prohibit bullying motivated by a person's sexual orientation or gender identity. Remarkably, however, two states (Missouri and South Dakota) prohibit the inclusion of sexual orientation or gender identity in their schools' anti-bullying and nondiscrimination policies (Movement Advancement Project, 2020b).

There are also conflicting state laws with respect to curriculum and activity restrictions. Alabama, Louisiana, Mississippi, Oklahoma, South Carolina, and Texas prohibit discussion of same-sex relationships in sex education (Movement Advancement Project, 2020b), although a federal trial court recently ruled that the South Carolina statute is unconstitutional (*Gender and Sexuality Alliance v. Spearman*, WL 1227345, 2020). In at least three states, by contrast, policies require inclusion of LGBT history in curricular materials.[4]

Access to Health Care and Health Insurance Coverage

Most omnibus anti-discrimination laws, such as the 1964 Civil Rights Act, do not include health care or health insurance as covered fields; those contexts are addressed in a mix of federal and state laws specific to the health sector. The three most important federal laws (or sets of laws) in the health care field are the Affordable Care Act (ACA); the Social Security Act Amendments of 1965, which created Medicare and Medicaid; and the Americans with Disabilities Act of 1990 (ADA).

Section 1557 of the ACA created the first comprehensive anti-discrimination provision applicable to the delivery of health care and access to health insurance throughout the United States. It prohibits health

[4]See https://www.usnews.com/news/best-states/articles/2019-08-14/states-that-require-schools-to-teach-lgbt-history.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 122 of 438 PageID #: 2

programs or facilities that receive federal funds from discriminating based on sex and other characteristics. An individual cannot be excluded from participation in, denied the benefits of, or subjected to discrimination on these bases by any health program or activity of which any part receives federal financial assistance. Shortly before the Supreme Court's June 2020 ruling in *Bostock v. Clayton County*, the U.S. Department of Health and Human Services (HHS) issued a regulation that excluded gender identity and sex stereotyping from the sex anti-discrimination protections of Section 1557 (HHS, 2016). As this report goes to press, litigation challenging the validity of this regulation is pending. As in the case of anti-discrimination protections in education under Title IX, however, courts are likely to interpret the scope of sex discrimination in Section 1557 to ban discrimination on the basis of sexual orientation and gender identity.

Of note while the question of federal protections continues to evolve, the scope of public accommodations protections in state law has sometimes been interpreted to include medical services. SGD plaintiffs have successfully used a California law to challenge the denial of alternative reproductive technology and of a hysterectomy by health care facilities (*North Coast Women's Care Medical Group v. Superior Court*, 189 P.3d 959 (2008); *Minton v. Dignity Health*, 252 Cal. Rptr. 3d 616 (Ct. App., 1st Dist. 2019)).

The Medicare program provides federal health insurance coverage to all Americans aged 65 and older, as well as to individuals with certain disabling conditions. Medicaid is a joint federal–state health insurance program offered primarily to low-income people. Both Medicare and Medicaid are covered by ACA Section 1557, and HHS has also promulgated a variety of regulations under the ACA and other federal statutes to prohibit discrimination on the basis of sexual orientation and gender identity (see Chapter 12). The 2020 regulations reinterpreting Section 1557 sought to eliminate these provisions as part of what were called "conforming amendments,"[5] but this action also appears to be in conflict with *Bostock*.

The ADA prohibits discrimination against people who are qualified to perform a job or participate in an activity but who have a physical or mental impairment that substantially limits a major life activity. Two of its provisions—one positive, one negative—are of particular relevance to SGD people. First, the ADA includes HIV infection as a covered impairment, meaning that individuals with HIV are protected from discrimination. Second, in Section 12211(b) of the law, Congress stated that "'disability' shall not include transvestism, transsexualism . . . [or] gender identity disorders not resulting from physical impairments." Whether the ADA may

[5] See https://www.federalregister.gov/documents/2019/06/14/2019-11512/nondiscrimination-in-health-and-health-education-programs-or-activities.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 123 of 438 PageID #: 2

nonetheless cover gender dysphoria is a question that has been answered affirmatively by at least two federal judges, but the issue has not yet been considered by a federal court of appeals.

State law also provides some protection against discrimination in access to health insurance: 14 states, Puerto Rico, and the District of Columbia prohibit health insurance discrimination based on sexual orientation and gender identity, and 7 states prohibit gender identity-based discrimination (Movement Advancement Project, 2020a). In 24 states and the District of Columbia, exclusion of gender-affirming care by private health insurance plans is prohibited. Many states also prohibit transgender exclusions in their Medicaid programs, but 10 states still explicitly exclude coverage for gender-affirming care under Medicaid, despite the fact that the anti-discrimination requirements of ACA Section 1557 apply to state Medicaid programs (Movement Advancement Project, 2020b; Taylor et al., 2018). See Chapter 12 for more details about insurance coverage of gender-affirming care for transgender people.

In addition to the general coverage questions that arise under the ACA, Medicare, Medicaid, and the ADA, there are particular treatment issues that affect SGD people. The most controversial use of "treatment" for sexual orientation and gender identity is conversion therapy, in which a medical provider attempts to change a person's sexual orientation or gender identity (see Chapter 12). Presently, 19 states and the District of Columbia prohibit conversion therapy for minors, and one state bans public funds for conversion therapy services but does not prohibit licensed medical providers from engaging in conversion therapy (Movement Advancement Project, 2020b).

Another controversial example of medical care arises in the context of children born with differences in sex development (intersex traits) (see Chapter 12). Surgery on newborns raises serious questions of informed consent (Tamar-Mattis, 2006). Although no anti-discrimination statutes explicitly include intersex people as a protected class, it is possible that laws that prohibit discrimination based on sex and the ADA could be applied to such surgery.

Housing and Credit

In light of the reasoning of *Bostock v. Clayton County*, the prohibitions of sex discrimination in the Fair Housing Act and the Equal Credit Opportunity Act can now be interpreted to include sexual orientation and gender identity (Fair Housing and Equal Opportunity, 2019). State-level protections specific to sexual orientation and gender identity also exist for housing (22 states) and credit (15 states) (Movement Advancement Project, 2020b).

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 124 of 438 PageID #: 2

AREAS OF LAW THAT LACK PROTECTIONS AGAINST DISCRIMINATION

Military Service

As this report was being completed, the 2019 ban on enlistment for military service by transgender people remained in effect but had been challenged in federal court (*Trump v. Karnoski*, 139 S. Ct. 950, 2019; *Trump v. Stockman*, 139 S. Ct. 946, 2019). Social science research has found no medical or force readiness bases for the exclusion (Elders and Steinman, 2014; Schaefer et al., 2016). The authority for the ban is a Department of Defense policy, which could be changed by a new executive branch policy, congressional action, or a judicial finding that it is unconstitutional.

Documentation of Identity

Proper identity documents are necessary for a broad range of life activities: access to important public goods, services, shelters, or other facilities; acquiring benefits; travel; financial transactions; registering to vote; and securing employment. Some identity documents (e.g., birth certificates) are prerequisites to the acquisition of other identity documents (e.g., passports).

Identity documents present urgent issues for SGD people because the sex markers or names recorded on essential documents often differ from their gender identity or expression (Taylor et al., 2018). Only 11 percent of the transgender respondents in the USTS had updated all their identity documents to reflect their current gender identity or expression, and 68 percent had updated none of their identity documents (James et al., 2016). Not having identity documents that align with a person's gender identity or expression can result in mistreatment by state officials and others (Taylor et al., 2018), and 32 percent of the respondents in the USTS whose documents did not match their gender identity or expression reported having experienced verbal harassment, denial of services or benefits, or assault (James et al., 2016). These patterns are more pronounced for gender diverse people of color (James et al., 2016). The financial costs associated with updating identity documents based on the USTS data can range from nothing to more than $2,000, with more than half of respondents reporting costs of at least $100 (James et al., 2016).

Passports, which are issued by the U.S. Department of State, require a sex designation of either male or female based on a person's birth certificate, which is required in an application for a passport. Changing the gender marker on a passport requires that a physician certify that the individual has received medically appropriate treatment (Taylor et al., 2018). There is no non-binary gender marker option for passports, but the U.S. Court

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 125 of 438 PageID #: 2

of Appeals for the Tenth Circuit has ruled that the State Department must reconsider its policy (*Zzyym v. Pompeo*, 958 F.3d 1014 (10th Cir. 2020).

Almost all children born in the United States receive a Social Security number at birth through a Social Security Administration (SSA) program that allows parents to request a birth certificate and Social Security number at the same time. Because the SSA requires a record of birth that contains a gender marker of either male or female before issuing a Social Security number, the parents of an intersex infant who do not wish to immediately designate a gender for their child are effectively barred from obtaining a Social Security number. To later secure a change in the gender marker associated with a Social Security number requires submission of a corrected birth certificate, a court order showing the new gender, or a medical certification of the change in a person's gender (Taylor et al., 2018). The Selective Service System and U.S. Citizenship and Immigration Services require similar documentation to change a gender marker (Taylor et al., 2018).

For birth certificates, the requirements to change gender markers vary significantly by state (Taylor et al., 2018). In 17 states, there are surgical requirements in order to change birth certificates. In 22 states, the District of Columbia, and New York City, gender markers can be updated without surgery or a court order. Two states, Ohio and Tennessee, do not permit birth certificates to be amended. In all but 10 states, birth certificates must contain either male or female as a gender marker; there is no third option for intersex or other gender diverse people (Movement Advancement Project, 2020b).

For updating driver's licenses, the requirements to change gender markers tend to be less cumbersome than for birth certificates, although the laws also vary from state to state (Taylor et al., 2018). Applicants trying to change their driver's license gender marker may be required to submit a single form (18 states and the District of Columbia); a form plus certification from among a range of licensed professionals (10 states); a form plus certification from a narrower range of licensed professionals (3 states); or certification specifically from a licensed medical or mental health provider (6 states). Nine states require proof of surgery, a court order, or an amended birth certificate. In several states, the process is unclear. In seven states and the District of Columbia, individuals can also choose a third gender marker, such as an "X" (Movement Advancement Project, 2020b).

Name changes are obtained at the state level, almost always by court order (Movement Advancement Project, 2020b; Taylor et al., 2018). Federal agencies will change a person's name on receipt of a legal document, such as the court order issued in a proceeding for a name change or from divorce or marriage records (Taylor et al., 2018).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 126 of 438 PageID #: 2

Family Law

Family law issues related to equal treatment are dealt with almost entirely at the state level and are usually addressed in subject-specific statutes or in case law. Several issues raise particular concerns for SGD populations: youth in foster care; the child welfare system; child custody and adoption; and recognition of birth parents.

SGD youth are overrepresented in the foster care system: Fish and colleagues (2019) found that lesbian, gay, bisexual, and same-sex-attracted youth were about 2.5 times more likely than heterosexual youth to be in the foster care system. Several studies have documented disparities in the well-being of SGD youth in the child welfare system compared with cisgender, heterosexual youth (Baams, Wilson, and Russell, 2019; Choi and Wilson, 2018; Fish et al., 2019; Wilson and Kastanis, 2015).

There are a range of protections or lack of protections across the states: 30 states and the District of Columbia have policies or regulations that prohibit sexual orientation and gender identity discrimination against youth in the child welfare system; 7 other states have policies or regulations that prohibit sexual orientation discrimination; and 12 states have explicit guidelines for placing transgender youth who are in the child welfare system in sex-segregated housing assignments based on their gender identity, and they also require that child welfare staff or foster parents receive cultural competency training on SGD youth (Movement Advancement Project, 2020b).

Parental involvement in the child welfare system arises in several ways. Same-sex couples may become parents through adoption (by a parent or parents of a nonbiological child or by a nonbirth parent of the partner's biological child) or through the use of alternative reproductive technologies. When one partner gives birth and the person's spouse seeks recognition on a birth certificate as the other parent, the Supreme Court has ruled that the state must permit it (*Pavan v. Smith*, 137 S. Ct. 2075, 2017). An individual married to a child's birth parent (including in same-sex couples) can petition for adoption of a child in every state. In 15 states and the District of Columbia, second-parent adoptions can be obtained regardless of marital status. In 24 states and the District of Columbia, adoption agencies cannot discriminate against people seeking to adopt on the basis of sexual orientation and gender identity, and 4 other states cover only sexual orientation. In the remaining states, discriminatory actions may be prohibited by laws banning sex discrimination. Eleven states permit child welfare agencies to decline to serve SGD people and same-sex couples based on religious belief (Movement Advancement Project, 2020a). (See below for more discussion of religious liberty defenses.)

For LGBT birth parents, there may be increased risk that their children will be removed from their custody and placed in foster care. In one study

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 127 of 438 PageID #: 2

of low-income Black mothers, the 21 percent who identified as lesbian or bisexual were four times more likely than those who identified as heterosexual to have lost their children to the state in child welfare proceedings. The mothers whose children had been placed in state custody (and were eligible for foster care and, potentially, adoption) were three times more likely to identify as lesbian or bisexual than the mothers who were still raising their children (Harp and Oser, 2016). These findings suggest that more attention is needed to protect SGD birth parents from child removal proceedings, in addition to the equal treatment concerns of SGD people who seek to adopt.

In the event of parental divorce, courts apply a "best interests of the child" standard in deciding issues of custody and visitation. Although it used to be common for courts to assume that SGD parents were unfit or less fit than non-SGD parents to parent their children, that presumption has given way to a rule that there must be evidence that a parent's sexual orientation or gender identity would negatively affect the child in order for it to be considered (Eskridge, Hunter, and Joslin, 2018). The vagueness of the "best interests" standard renders it susceptible to claims that harm could result from prejudice against the children of SGD parents, but fewer such cases have arisen in recent years than previously. Family courts have increasingly relied on scientific experts in their adjudication of cases in which one or both parents are SGD, which has increased fairness in the adjudication process by providing a broad overview of what social science research suggests about SGD parents (George, 2016).

Protection Against Violence

The federal Matthew Shepard and James Byrd Jr. Hate Crimes Prevention Act (2009) criminalizes willfully causing or attempting to cause bodily injury with a deadly weapon because of the actual or perceived gender, sexual orientation, or gender identity of the victim if the crime is linked to interstate or foreign commerce (e.g., the victim or defendant was in transit or a weapon was used that had moved in interstate commerce). In addition, 35 states and the District of Columbia have laws that punish hate crimes committed because of sexual orientation or gender identity (Movement Advancement Project, 2020b).

In 2017 there were 1,303 reported sexual orientation victimizations and 131 gender identity victimizations according to the Uniform Crime Reports (UCR). From 2013 to 2017, 17.7 percent of hate crimes in the UCR and 25.7 percent of hate crimes in the National Crime Victimization Survey (NCVS) were related to sexual orientation bias.[6] Gender identity hate crimes have increased in recent years, with victims more likely to

[6] See https://www.bjs.gov/content/pub/pdf/hcs1317pp.pdf.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 128 of 438 PageID #: 2

be transgender people of color than white transgender people (Taylor et al., 2018). The National Coalition of Anti-Violence Programs (NCAVP) documented 1,036 incidents of violence or harassment against LGBTQ people in 2016, 41 percent of which were reported to the police.[7] Of the 28 homicides documented in the 2016 NCAVP report, 19 of the victims were transgender or gender-nonconforming people, and all the victims except one were people of color.

The CDC found that bisexual women encounter intimate partner violence at higher rates than other SGD populations; 46.1 percent reported being raped in their lifetime, and 74.9 percent reported being victims of sexual violence other than rape (Walters, Chen, and Breiding, 2013). In the 2015 USTS, more than half of respondents reported having experienced intimate partner violence; 47 percent reported lifetime sexual assault; and 10 percent reported having been sexually assaulted in the past year. In many cases, victimization rates were greater for transgender respondents of color than for white transgender people (James et al., 2016).

The inclusion of sexual orientation and gender identity questions in federally sponsored surveys, such as the NCVS, represents progress toward expanding data collection efforts. In addition, the U.S. Office of Management and Budget in 2016 convened the Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys to review existing federal data collection efforts, identify best practices, and articulate a research agenda for conceptual and methodological topics around collecting sexual orientation and gender identity data on federal surveys (see Chapter 4).

RELIGIOUS LIBERTY EXCEPTIONS TO ANTI-DISCRIMINATION LAWS

An increasingly important question involving civil rights law is whether and under what circumstances individuals, organizations, and businesses can assert religious beliefs as a legitimate basis for noncompliance with anti-discrimination laws or reproductive rights protections. This area of law presents complex questions that the Supreme Court is likely to continue to address in future cases (Eskridge, Hunter, and Joslin, 2018). This section focuses on the two contexts in which SGD people are most likely to encounter religious liberty issues: employment and public accommodations, the latter either as customers in the marketplace or as clients of social service agencies.

[7] See http://avp.org/wp-content/uploads/2017/06/NCAVP_2016HateViolence_REPORT.pdf.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 129 of 438 PageID #: 2

Employment

The Supreme Court has interpreted the Constitution to give religious organizations an absolute exemption from all anti-discrimination laws in matters that involve the employment of clergy or other people whose job involves religious instruction or conducting of services or ceremonies (*Our Lady of Guadalupe School v. Morrissey-Berru*, WL 3808420, 2020). In addition, under the provisions of Title VII, religious organizations are allowed to give preference in hiring to people of the same faith as the organization, including for jobs that do not involve duties related to the faith (*Corporation of Presiding Bishop v. Amos*, 483 U.S. 327, 1987).

Applying the federal Religious Freedom Restoration Act (RFRA),[8] the Supreme Court ruled that a for-profit business that is closely held (i.e., owned by a small number of people) could assert the religious beliefs of its owners as a defense against enforcement of the requirement that workplace health insurance plans include coverage for contraceptives (*Burwell v. Hobby Lobby*, 573 U.S. 682, 2014). The Court found that Hobby Lobby satisfied the two-part RFRA test: that requiring the business to comply with the contraceptive law would substantially burden the owners' ability to exercise their religion and that, although the government's interest in providing employees with access to birth control through their workplace health insurance was compelling, mandating all businesses to comply was not the least restrictive way to satisfy that interest.

Under the RFRA standard, courts must assess in each case whether a neutral and generally applicable federal statute, such as Title VII, imposes a substantial burden that is necessary to satisfy a compelling government interest. No case has yet come before the Supreme Court in which a small business has sought to use the religious beliefs of its owners to justify adverse employment decisions against SGD people with respect to issues such as hiring, firing, recognition of a marriage, or coverage of particular medical services, such as transition-related care in a workplace health insurance plan.

It is likely that a state anti-discrimination law would be at issue in an employment case only if Title VII is inapplicable, usually because the business had fewer than 15 employees. For the analysis that would apply in that situation, see the following section on public accommodations laws.

Public Accommodations

As noted above, there is no federal law that bans discrimination in public accommodations based on sex, sexual orientation, or gender identity, so

[8] See https://www.congress.gov/bill/103rd-congress/house-bill/1308.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 130 of 438 PageID #: 2

religious liberty defenses regarding access to goods and services arise only when there is an applicable state or local civil rights law. In some states, such laws exist but religiously affiliated providers are exempt from compliance (Mallory and Sears, 2020). For commercial providers or in the absence of such an exemption, in 21 states there is a state religious freedom law that directs courts to apply the same case-by-case test as for federal law. In addition, the defendant in such a case could argue that compelling it to provide the services in question would violate the free exercise clause of the First Amendment. The most common contexts for such lawsuits have been either weddings or child adoptions.

Wedding-related goods and services tend to involve for-profit businesses, such as bakers, photographers, florists, or printers. In *Masterpiece Cakeshop, Ltd. v. Colorado Civil Rights Commission* (138 S. Ct. 1719, 2014), the Supreme Court stopped short of ruling whether a First Amendment defense could bar an anti-discrimination claim, because the Court found that the evaluation by the Colorado Civil Rights Commission of the business owner's reasons for declining to make a wedding cake for a same-sex couple was colored by an anti-religious bias. A number of other similar cases are pending in which the Court may reach the merits of a religious liberty defense. State courts that have addressed this question have ruled that commercial businesses must comply with an anti-discrimination law (Mallory and Sears, 2020).

Adoption services are usually provided by state-licensed agencies, often affiliated with a religious faith group. In 11 states, the law includes an explicit exemption for child welfare agencies that permits them to refuse service to LGBT individuals or same-sex couples if doing so would conflict with their religious beliefs (Mallory and Sears, 2020; Movement Advancement Project 2020). In *Fulton v. City of Philadelphia* (922 F.3d 140 (3d Cir. 2019)), the Supreme Court will decide whether the First Amendment bars the city from terminating its contract with Catholic Social Services (CSS) for foster care placement services because CSS refused to consider applications from same-sex couples to become foster parents. The Court is expected to announce its decision by June 2021. The ruling in *Fulton* is likely to determine or at least influence similar cases pending in the lower courts.

SUMMARY AND CONCLUSIONS

SGD people come into contact with the law in a wide range of life contexts, including employment; health insurance and health care; housing; public accommodations; interactions with police and other parts of the criminal justice system; and access to and participation in government programs and government-administered systems, such as foster care, adop-

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 131 of 438 PageID #: 2

tion, and immigration. In several of these realms, there have been important reforms that have enhanced quality of life for SGD people. But in others, mistreatment and discrimination remain frequent occurrences, especially for marginalized groups within the SGD population. In the face of changing public attitudes as well as evolving law, the effect of the legal system on the well-being of these groups is uneven and, at times, contradictory.

CONCLUSION 5-1: Overall, the treatment of sexual and gender diverse people in the legal system has improved during the last 20 years, but equality and fairness across all domains remains incomplete. Moreover, the remaining gaps in the law tend to disproportionately harm people of color, low-income people, and transgender people.

Federal law now protects against discrimination based on sexual orientation and gender identity in employment, a principle that is likely to be extended to education, housing, credit, and access to health care and health insurance. However, in some realms, such as public accommodations, federal law does not offer such protections. In addition, the question of whether denial of access to bathrooms or school athletics programs based on one's gender identity counts as discrimination has not been definitively resolved.

In situations in which federal law does not provide relief, approximately 50 percent of the U.S. population lives where there is a state law that explicitly protects SGD people from at least one form of discrimination. These laws vary greatly in their scope.

The laws regulating modifications of the gender marker on essential documents also vary widely among federal and state authorities. Identity documents present urgent issues for gender diverse people because the sex markers or names recorded on essential documents often differ from their gender identity or expression, subjecting those individuals to adverse treatment.

Family law issues are almost entirely dependent on state rather than federal or local laws and vary widely, which results in unevenness and lack of uniformity. SGD youth are overrepresented in the foster care system and are especially vulnerable to its shortcomings. The treatment of LGBT birth parents in child removal proceedings and of LGBT people who seek to adopt merits more study and monitoring.

Laws related to religious exemptions from anti-discrimination laws are uneven and likely to change further as the Supreme Court and legislatures continue to consider the issue. In higher education, Title IX is likely to be interpreted to ban sexual orientation and gender identity discrimination, but it is not yet clear how Title IX protections will affect questions related to gender diverse students in athletics.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 132 of 438 PageID #: 2

CONCLUSION 5-2: The U.S. legal system does not require uniformly equal treatment of sexual and gender diverse people. Different sources of legal authority—federal, state, and local—result in discrimination being both prohibited and permitted, depending on the context and location.

Mistreatment during interactions with the police is a common experience for SGD people. The criminalization of HIV exposure and criminalization of sex work disproportionately affect homeless youth and transgender women, especially transgender women of color. There is widespread agreement among public health professionals that decriminalization of sex work would contribute significantly to the effort to combat the spread of HIV. Both CDC and DOJ have recommended that states reexamine the basis for laws that criminalize exposure to HIV and modify their statutes to align punishment with risk.

The enforcement status of the national standards for prevention of sexual violence in prison is unclear. Federal law does not provide a mechanism for effective independent oversight of prison conditions. Independent external oversight is considered to be an essential tool for preventing violence in prison, especially for vulnerable populations, including inmates who are susceptible to sexual assault.

CONCLUSION 5-3: Sexual and gender diverse people suffer greater levels of violence than other groups in their interactions with police and prison officials. Bias crimes related to sexual orientation and gender identity have increased in recent years. Such assaults tend to disproportionately victimize sexual and gender diverse people of color and transgender people.

Statistics from the Uniform Crime Reports suggest that sexual orientation hate crimes have increased since 2013. While gender identity victimizations comprise a small share of all hate crimes, they tend to be more violent and result in severe bodily injury. SGD populations are at a higher risk of criminal victimizations beyond hate crimes, including intimate partner violence, verbal harassment, and physical or sexual assault.

REFERENCES

Baams, L., Wilson, B.D.M., and Russell, S.T. (2019). LGBTQ youth in unstable housing and foster care. *Pediatrics*, *143*(3), doi: 10.1542/peds.2017-4211.

Baskin, S., Ahmed, A., and Forbes, A. (2016). Criminal laws on sex work and HIV transmission: Mapping the laws, considering the consequences. *Denver Law Review*, *93*, 355.

Bryan, S.M. (2019). U.S. considers more options for detaining transgender migrants. *AP News*, June 13, 2019. Available: https://apnews/com/6272e6876e4c473adbeae363a606f13.

Burris, S., Wagenaar, A., Swanson, J., Ibrahim, J., Wood, J., and Mello, M. (2010). Making the case for laws that improve health: A framework for public health law research. *Milbank Quarterly*, *88*(2), 169–210.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 133 of 438 PageID #: 2

Carroll, H. (2014). Joining the team: The inclusion of transgender students in United States school-based athletics. In J. Hargreaves and E. Anderson (Eds.), *Routledge Handbook of Sport, Gender and Sexuality* (pp. 367–375). New York: Routledge.

Center for HIV Law and Policy. (2019). *HIV Criminalization in the United States: A Sourcebook on State and Federal HIV Criminal Law and Practice*. Available: http://www.hivlawandpolicy.org/sourcebook.

Centers for Disease Control and Prevention. (2014). Prevalence and public health implications of state laws that criminalize potential HIV exposure in the United States. Available: https://pubmed.ncbi.nlm.nih.gov/24633716.

Choi, S.K., and Wilson, B.D.M. (2018). Gender diversity and child welfare research: Empirical report and implications of the Los Angeles County Foster Youth Study. *Child Welfare*, *96*(1), 79–101.

Commission on Safety and Abuse in America's Prisons. (2006). *Confronting Confinement*. Available: www.prisoncommission.org/pdfs/Confronting_Confinement.pdf.

Conron, K.J., and Goldberg, S.K. (2019). *LGBT Protections from Discrimination: Employment and Public Accommodations*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/NonDiscrimWorkPubAccom.pdf.

Das, P., and Horton, R. (2015). Bringing sex workers to the centre of the HIV response. *The Lancet*, *385*(9962), 3–4. doi: 10.1016/S0140-6736(14)61064-3.

Davis, H.F. (2017). *Beyond Trans: Does Gender Matter*? New York University Press.

Deitch, M. (2010). Special populations and the importance of prison oversight. *American Journal of Criminal Law*, *37*(3), 101–125.

Department of Health and Human Services. (2016, May 18). Nondiscrimination in health programs and activities. 45 CFR Part 92, *Federal Register*, *81*(96), 31376–31473. Available: https://www.govinfo.gov/content/pkg/FR-2016-05-18/pdf/2016-11458.pdf.

Elders, J., and Steinman, A.M. (2014). *Report of the Transgender Military Service Commission*. Available: https://www.palmcenter.org/publication/report-of-the-transgender-military-service-commission.

Eskridge, W.N., Hunter, N.D., and Joslin, C.G. (2018). *Sexuality, Gender, and the Law*. St. Paul, MN: Foundation Press.

Evans, A. (2020). ICE detaining transgender individuals despite widespread calls for their release. *Boulder Weekly*. Available: https://www.boulderweekly.com/news/ice-detaining-transgender-individuals.

Fair Housing and Equal Opportunity. (2019). *Housing Discrimination and Ppeople Identifying as LGBTQ*. Fair Housing and Equal Opportunity, U.S. Department of Housing and Urban Development. Available: https://www.hud.gov/program_offices/fair_housing_equal_opp/housing_discrimination_and_people_identifying_lgbtq.

Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys. (2016). *Toward a Research Agenda for Measuring Sexual Orientation and Gender Identity in Federal Surveys: Findings, Recommendations, and Next Steps*. Washington, DC: Federal Committee on Statistical Methodology. Available: https://nces.ed.gov/FCSM/pdf/SOGI_Research_Agenda_Final_Report_20161020.pdf.

Fish, J.N., Baams, L., Wojciak, A.S., and Russell, S.T. (2019). Are sexual minority youth overrepresented in foster care, child welfare, and out-of-home placement? Findings from nationally representative data. *Child Abuse & Neglect*, *89*, 203–211.

Flores, A.R., and Herman, J.L. (2020). Including gender identity as a protected class in public accommodations laws does not increase victimization rates: A statewide and countywide assessment. *Journal of Policy Analysis and Management*.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 134 of 438 PageID #: 2

Flores, A.R., Haider-Markel, D.P., Lewis, D.C., Miller, P.R., Tadlock, B.L., and Taylor, J.K. (2020). Public attitudes about transgender participation in sports: The roles of gender, gender identity conformity, and sports fandom. *Sex Roles*. doi: 10.1007/s11199-019-01114-z.

Forge, N., and Ream, G. (2014). Homeless lesbian, gay, bisexual and transgender (LGBT) youth in New York City: Insights from the field. *Social Work Faculty Publications*. Available: https://scholarworks.gsu.edu/ssw_facpub/61.

George, M. (2016). The custody crucible: The development of scientific authority about gay and lesbian parents. *Law and History Review*, *34*(2), 487–529. doi: 10.1017/S0738248016000018.

Goldberg, N., Mallory, C., Hasenbush, A., Stemple, L., and Meyer, I. (2019). Police and the criminalization of LGBT people. In T.R. Lave and E.J. Miller (Eds.*), The Cambridge Handbook of Policing in the United States* (pp. 374–391). doi: 10.1017/9781108354721.020.

Gruberg, S. (2018). *ICE's Rejection of Its Own Rules Is Placing LGBT Immigrants at Severe Risk of Sexual Abuse*. Available: https://www.americanprogress.org/issues/lgbtq-rights/news/2018/05/30/451294/ices-rejection-rules-placing-lgbt-immigrants-severe-risk-sexual-abuse.

Ha, N.Q., Dworkin, S.L., Martinez-Patino, M.J., Rogol, A.D., Rosario, V., Sanchez, F.J., Wrynn, A., and Vilain, E. (2014). Hurdling over sex? Sport, science, and equity. *Archives of Sexual Behavior*, *43*(6), 1035–1042.

Hanssens, C., Moodie-Mills, A., Ritchie, A., Spade, D., and Vaid, U. (2014). *A Roadmap for Change: Federal Policy Recommendations for Addressing the Criminalization of LGBT People and People Living with HIV*. New York: Center for Gender and Sexuality Law at Columbia Law School. Available: http://www.hivlawandpolicy.org/sites/default/files/Roadmap_For_Change_full_report.pdf.

Harp, K., and Oser, C. (2016). Factors associated with two types of child custody loss among a sample of African American mothers: A novel approach. *Social Science Research*, *60*, 283–296.

Hasenbush, A., Wilson, B.D.M., Miyashita, A., and Sharp, M. (2017). *HIV Criminalization and Sex Work in California*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/research/health-and-hiv-aids/hiv-criminalization-sex-work-ca/.

Hasenbush, A., Flores, A.R., and Herman, J.L. (2019). Gender identity nondiscrimination laws in public accommodations: A review of evidence regarding safety and privacy in public restrooms, locker rooms, and changing rooms. *Sexuality Research and Social Policy*, *16*(1), 70–83.

James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L., and Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. Washington, DC: National Center for Transgender Equality. Available: https://www.transequality.org/sites/default/files/docs/USTS-Full-Report-FINAL.PDF.

Jones, B.A., Arcelus, J., Bouman, W., and Haycraft, E. (2017). Sport and transgender people: A systematic review of the literature relating to sport participation and competitive sport policies. *Sports Medicine*, *47*(4), 701–716.

Lehman, J., Gray, S., Mermin, J., Carr, M., Nichol, A., Ruisanchez, A., Knight, D., and Langford, A. (2014). *Prevalence and Public Health Implications of State Laws that Criminalize Potential HIV Exposure in the United States*. Available: https://www.ada.gov/hiv/HIV-criminalization-paper.htm.

Mallory, C., and Sears, B. (2020). LGBT discrimination, subnational public policy, and law in the United States. *Oxford Research Encyclopedia of Politics*. doi: 10.1093/acrefore/9780190228637.013.1200.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 135 of 438 PageID #: 2

Meyer, I.H., Flores, A.R., Stemple, L., Romero, A.P., Wilson, B.D., and Herman, J.L. (2017). Incarceration rates and traits of sexual minorities in the United States: National inmate survey, 2011–2012. *American Journal of Public Health*, *107*, 267–273. doi: 10.2105/AJPH.2016.303576.

Movement Advancement Project. (2020a). *Snapshot: LGBTQ Equality by State*. Available: https://www.lgbtmap.org/equality-maps.

Movement Advancement Project. (2020b). *Mapping LGBTQ Equality: 2010 to 2020*. Available: www.lgbtmap.org/2020-tally-report.

Nadal, K.L. (2014). Transgender women and the sex work industry: Roots in systemic, institutional, and interpersonal discrimination. *Journal of Trauma and Dissociation*, *15*(2), 169–183.

Oztaskin, M. (2019). The harrowing two-year detention of a transgender asylum seeker. *The New Yorker*, October 31, 2019. Available: https://www.newyorker.com/news/dispatch/the-harrowing-two-year-detention-of-a-transgender-asylum-seeker.

Platt, L., Grenfell, P., Meiksin, R., Elmes, J., Sherman, S.G., Sanders, T., Mwangi, P., and Crago, A-L. (2018). Associations between sex work laws and sex workers' health: A systematic review and meta-analysis of quantitative and qualitative studies. *PLoS Medicine*, *15*(12), e1001680. doi: 10.1371/journal.pmed.1002680.

Ream, G.L., Barnhart, K.F., and Lotz, K.V. (2012). Decision Processes about Condom Use among Shelter-Homeless LGBT Youth in Manhattan. *AIDS Research and Treatment*, *2012*, article 659853. doi: 10.1155/2012/659853.

Schaefer, A.G., Iyengar, R., Kadiyala, S., Kavanagh, J., Engel, C.C., Williams, K.M., and Kress, A.M. (2016). *Assessing the Implications of Allowing Transgender Personnel to Serve Openly.* Santa Monica, CA: The RAND Corporation. Available: https://www.rand.org/pubs/research_reports/RR1530.html.

Sears, B., Goldberg, S., and Mallory, C. (2020). *The Criminalization of HIV and Hepatitis B and C in Missouri: An Analysis of Enforcement Data 1990 to 2019*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/publications/hiv-criminalization-mo.

Tamar-Mattis, A. (2006). Exceptions to the rule: Curing the law's failure to protect intersex children. *Berkeley Journal of Gender, Law and Justice*, *21*, *59*.

Taylor, J.K., Lewis, D.C., Haider-Markel, D.P., Flores, A.R., Miller, P.R., and Tadlock, B. (2018). The factors underlying public opinion about transgender rights. In J.K. Taylor, D.C. Lewis, and D.P. Haider-Markel (Eds.), *The Remarkable Rise of Transgender Rights* (pp. 87–106). Ann Arbor: University of Michigan Press.

Van Leeuwen, J.M., Boyle, S., Salomonsen-Sautel, S., Baker, D.N., Garcia, J.T., Hoffman, A., and Hopfer, C.J. (2006). Lesbian, gay, and bisexual homeless youth: An eight-city public health perspective. *Child Welfare*, *85*(2), 151–170.

Walters, M.L., Chen, J., and Breiding, M.J. (2013). The National Intimate Partner and Sexual Violence Survey: 2010 findings on victimization by sexual orientation. *PsycEXTRA Dataset*. doi: 10.1037/e541272013-001.

Westbrook, L., and Schilt, K. (2014). Doing gender, determining gender: Transgender people, gender panics, and the maintenance of the sex/gender/sexuality system. *Gender and Society*, *28*(1), 32–57.

Wilson, B.D.M., and Kastanis, A.A. (2015). Sexual and gender minority disproportionality and disparities in child welfare: A population-based study. *Child and Youth Services Review*, *58*, 11–17.

Wilson, B.D.M., Jordan, S.P., Meyer, I.H., Flores, A.R., Stemple, L., and Herman, J.L. (2017). Disproportionality and disparities among sexual minority youth in custody. *Journal of Youth and Adolescence*, *46*, 1547–1561. doi: 10.1007/s10964-017-0632-5.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 137 of 438 PageID #: 2

6

Public Policy and Structural Stigma

This chapter first provides an overview of three aspects of public life that affect social and gender diverse (SGD) populations: public policy, social movements, and changing public opinion. It then turns to the emerging literature on how structural factors—law, public policy, and public attitudes—influence the well-being of SGD populations, including economic outcomes, experiences of victimization and violence, and mental and physical health. Collectively, this research falls under the umbrella of what researchers call structural stigma, which is defined as "societal-level conditions, cultural norms, and institutional policies that constrain the opportunities, resources, and well-being of the stigmatized" (Hatzenbuehler and Link, 2014, p. 2).

PUBLIC POLICY, SOCIAL MOVEMENTS, AND PUBLIC OPINION

The public policy process includes defining social problems that may require policy solutions, framing public policies for the general public and policy makers, developing strategies to effect policy adoption, effectively implementing public policies, and developing accountability and evaluation mechanisms. Policies seldom change without outside social forces organizing to effect change. Thus, advocacy organizations providing services and seeking changes in public policy, which are often sponsored by government programs, are central to the policy process.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 138 of 438 PageID #: 2

Policy Advocacy Groups

Public policies affecting SGD populations change when advocates articulate what and why changes are needed and how to implement them (Taylor, Lewis, and Haider-Markel, 2018). Given the multiple levels of government—federal, state, and local—and the division of functions associated with the separation of powers, the U.S. political and legal systems offer numerous access points to effect policy change. The complexity also means the process is susceptible to policy gridlock (Baumgartner and Jones, 1993). This means that sustained advocacy for policy change is necessary, and social movement organizing and policy advocacy groups need to have the infrastructure to maintain pressure.

Prior to the emergence of a social movement, however, are the contextual and structural factors that define choices, how individuals define problems, and how they see themselves in relation to those problems (Gusfield, 1993, 1996). Among SGD populations, early organizing centered on gay men and lesbian women who had to construct an identity in the context of high degrees of social and structural stigma (Bernstein, 2002; D'Emilio 1983). This stigma led to individuals not embracing a public gay identity until about 1958, where organizations embraced the term "homophile" as opposed to "homosexual" to de-center sex, which was often viewed in the public eye as associated with sexual deviancy (Armstrong, 2002; Bernstein, 2002; D'Emilio, 1983; Schneider and Ingram, 1993). As the social movement developed and contexts changed, the strategies, identities, and definition of problems have also changed (Gusfield, 1993, 1996).

Early organizing in what can be termed the homophile era (1958–1968) began with organizations such as the Mattachine Society and the Daughters of Bilitis pursuing strategies intended to secure civil liberties for lesbian women and gay men, effectively to remove state policies that criminalized homosexuality (Armstrong, 2002; D'Emilio, 1983). A general way to understand these efforts was a struggle for rights for gay and lesbian people to be left alone, and organizing activities were primarily about quietly lobbying elected officials and engaging with mainstream political institutions (Armstrong, 2002; D'Emilio, 1983). In April 1965, astronomer Frank Kameny and other activists began a new approach by picketing the White House. Inspired by the Civil Rights Movement and Black politics, activists Kameny and Craig Rodwell embraced the slogan, "Gay Is Good," and hinted that a change in strategy to one of a proud and public gay identity needed to be embraced to effect change.

The "Stonewall era" (1969–1973) was characterized by a radically different view, embracing gay liberation (Armstrong, 2002; D'Emilio, 2000; Ghaziani, Taylor, and Stone, 2016). In addition to fully embracing an out-of-the-closet proud gay identity, gay liberation organizations, such

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 139 of 438 PageID #: 2

as the Gay Liberation Front (GLF), embraced a broad policy agenda that supported other liberation movements and direct action protests, seeking to advance economic issues and gender and racial justice, even though there remained sexual stigma in those other movements (Armstrong, 2002). Some gay liberation activists such as Marsha P. Johnson and Sylvia Rivera created Street Transvestite Action Revolutionaries (STAR) to serve some of the most vulnerable SGD people (Shepard, 2013), while others, frustrated with the priorities of the GLF, established the Gay Activists Alliance to pursue policies directly affecting gay and lesbian people, as well as to hold dances to create space for connection, gay identity building, and community (Armstrong, 2002).

This identity-based movement continued with the establishment of the National Gay Task Force in 1973 and the Gay Rights National Lobby in 1976 (the former was renamed the National LGBTQ Task Force and the latter eventually became the Human Rights Campaign). While still building capacity, these organizations pursued policy change through interaction with mainstream political institutions and embraced a public gay identity by engaging in pride marches (D'Emilio, 2000; Ghaziani, Tayor, and Stone, 2016).

Over time, LGBT social movements have engaged in cycles of mainstream tactics and direct action protest tactics, each with their successes and failures (D'Emilio 2000; Ghaziani, Tayor, and Stone, 2016). For example, the direct action protests by ACT UP during the HIV/AIDS crisis changed policies and practices to address the virus (Cohen, 1999; Gould, 2009). The mainstream strategy, which remains dominant, requires a wide range of organizations and the growth of capacity to take advantage of the numerous access points and political opportunities in the U.S. political system.

Because there are multiple access points, there are numerous opportunities for policy and legal change, but only if an infrastructure is present to take advantage of such opportunities (McAdam, 1982). Early efforts to create national advocacy organizations for SGD people were categorized as "weak, poorly funded, and newly created" (Stone, 2012, p. 41). The contemporary LGBT advocacy coalition has significant infrastructure and capacity. The coalition of organizations that advocate on behalf of SGD populations consists of a myriad of groups (Taylor et al., 2018); some focus on policy advocacy, many prioritize litigation, and others are issue specific, faith based, or work primarily to deliver goods and services. For example, the top-ranked grant-receiving organizations in 2017 included organizations that primarily provide public services (e.g., New York LGBT Community Center and Los Angeles LGBT Center); others that focus on national policy advocacy (e.g., the Human Rights Campaign and the National LGBTQ Task Force); many others that focus on legal advocacy (e.g., Transgender Law Center, National Center for Lesbian Rights, and Lambda

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 140 of 438 PageID #: 2

Legal Defense & Education Fund); and select organizations that focus on carrying out research on SGD populations and policies affecting them (e.g., Williams Institute). In 2017, about 29 percent of grants from private groups went to organizations focused on nationwide issues, 5 percent to those focused on regional (multistate) issues, 10 percent to those focused on state issues, 30 percent to those focused on local issues, and 26 percent to those focused on international issues (Wallace, Maulbeck, and Kan, 2019).

Advocacy coalitions and actors who leverage opportunities to effect policy change, collectively known as policy entrepreneurs, frequently share information to spread strategies, tactics, successes, and failures (Boushey, 2010; Mintrom and Norman, 2009). They set policy priorities (Kingdon, 1984), gain access to decision makers and decision-making arenas (Andrews and Edwards, 2004), and engage in public education and lobbying (Wright, 2003). Policy entrepreneurs often monitor the successful implementation of policies (Andrew and Edwards, 2004), and they look for future political opportunities to reinforce their policy priorities (Theodoulou, 2013). Occasionally, the differences between organizations create coordination conflicts that may impede their effectiveness (Engel, 2007; Haider-Markel, 1997).

Alongside the advocacy coalition for SGD people, there is a countermovement that opposes policy advancements designed to further the well-being of SGD people. These organizations also try to gain access to policy makers to advance their interests and control the policy agenda (Fetner, 2008; Stone, 2012; Wilson and Burack, 2012) and to craft arguments to particular audiences in opposition to policies that may benefit SGD people (Burack, 2008). Like advocacy organizations devoted to the advancement of rights for SGD populations, organizations opposed to such advancement also devote considerable resources to framing and tailoring their messages to the public (Flores, 2019; Stone, 2012). These frames are often delivered through costly initiative and referendum campaigns in an attempt to affect ballot measures (e.g., same-sex marriage bans) (Fetner, 2008; Stone, 2012). The use of direct democracy by the countermovement has historically maneuvered the LGBT advocacy coalition into a defensive position (Fetner, 2008; Stone, 2012).

Thus, over time, the SGD rights movement and the countermovement compete over issue priorities and how to frame those issues. In this dynamic context, structural forms of exclusion (e.g., California's Briggs Initiative to ban gay men and lesbian women from being school teachers) and the context of competing movements propelled lesbian women and gay men into the public eye, mobilizing them to engage in canvassing and other forms of activism to advance their positions (Armstrong, 2002). In this political and social environment, the understanding of sexual and gender diversity in the United States has changed as the SGD rights movement strategically framed policies to the voting public (Stone, 2012). Changing such discourses can

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 141 of 438 PageID #: 2

also change how movements understand themselves and their identities (Gusfield, 1993, 1996), which has happened for SGD populations. This kind of change is consistent with studies of numerous social movements in the United States during the 20th and early 21st centuries.

Issue Framing

Political elites, social movements, and mass media can influence which issues become important for public policy and how those issues are framed (Garretson, 2018; Jones and Brewer, 2020; Iyengar and Kinder, 2010; Lee, 2002; Zaller, 1992). The way issues are communicated affects how people come to understand those issues, particularly when certain values are emphasized to frame proposed policies (Brewer, 2001, 2007). Policy advocates and social movements can activate public opinion by drawing attention to social problems (e.g., direct action protest, litigation, and canvassing) (McAdam, 1996), and they can frame those problems through mass media to reach the general population and try to control a narrative (Carroll and Ratner, 1999; Gamson and Wolfsfeld, 1993; Ryan 1991). Framing can facilitate how individuals evaluate social groups (Gamson and Modigliani, 1989).

For example, Brewer (2007) found that the lesbian and gay rights movement in the 1990s and early 2000s was framed around either egalitarianism or moral traditionalism, which worked to polarize people's views. When HIV/AIDS was framed as a condition affecting social deviants, resources were slow to serve the communities most affected (Cohen, 1999). Early on, advocates in favor of marriage equality adopted a "rights and benefits frame," which emphasized the rights denied to same-sex couples by denying them legal marriage recognition (Solomon, 2014; Stone, 2012). The rights frame was countered by a morality frame, which proved appealing to opponents of marriage equality (Hull, 2001). In the 2010s, there was a strategic shift in framing support for marriage equality to "love and commitment," which emphasized the emotional foundations for why people choose to get married, including people in same-sex relationships (Harrison and Michelson, 2017). The love and commitment frame registered a stronger shift in support for LGBT rights than had the rights frame (Harrison and Michelson, 2017; Solomon, 2014). Efforts to reframe issues have profound consequences in public policies affecting SGD populations (Brewer, 2007).

Because framing and public perception are so important, the pursuit of public policies affecting SGD populations is constrained by prioritizing policies that are politically palatable and crafting respectable ways to present and discuss them (Cohen, 1999). For example, in the 1990s and 2000s the advocacy coalition in favor of LGBT rights avoided direct reference to

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 142 of 438 PageID #: 2

transgender people, rendering them invisible in its strategic communications (Stone, 2012). These tactics are tied to traditional electoral politics that primarily focus on the median or "middle" voter (Downs, 1957) and lead campaigns to pursue and present issues that are appealing to political moderates. Initiative and referendum campaigns on issues affecting SGD people tend to hone their political communications to that median (or "persuadable") voter (Solomon, 2014; Stone, 2012), which can create conflict with advocates embracing a more transformative view of "queer politics" (Cohen, 1997) and others embracing a single-issue, pragmatic campaign (Stone, 2012).

The way the subject of sexual and gender diversity is addressed by advocacy coalitions may benefit the well-being of some individuals but fail to benefit others (Ward, 2008). The extent to which LGBT advocacy groups sustain normative practices and ideologies (Ward, 2008) may increase stigmatization of marginalized SGD groups by increasing minority stress (Cyrus, 2017) and decreasing community belonging (Barr, Budge, and Adelson, 2016). Some groups that have felt underrepresented by LGBT advocacy coalitions, such as transgender people and people of color, have challenged how the coalitions have approached diversity, which in many cases led to greater inclusion, representation, and greater outreach (Armstrong, 2002). However, challenges remain. In policy and legal discourses on LGBT rights, for example, Marcus (2015) found that bisexual people have effectively been erased. Even intersectional coalitions like the coordination between LGBTQ and immigrant rights advocacy organizations can advance some policy goals but may perpetuate a single-issue framework that further marginalizes immigrant LGBTQ people who do not meet a "respectable" image (Mayo-Adam, 2020).

Thus, the policy process creates an apparent tension between policy priorities and how inclusive those priorities are of the most vulnerable SGD populations (Hindman, 2017; Murib, 2017; Strolovitch, 2007, 2012). For some, the policies that may affect the well-being of SGD people most may be along other dimensions of marginalization (e.g., race, class, immigration status). As a result, the identity politics framework of LGBT advocacy can overlook policy proposals that can have the most impact on the well-being of multiply marginalized SGD people (Cohen, 1999; Mayo-Adam, 2020; Strolovitch, 2007). In addition, the policies that most affect multiply marginalized SGD populations (e.g., policies relating to sex work) may be avoided due to the political system and the politics of respectability.

The way groups are socially constructed affects whether and how public policies distribute costs and benefits. Schneider and Ingram (1993) noted that policy makers might design policies to create, sustain, or reduce disparities among numerous social strata. They also established that social

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 143 of 438 PageID #: 2

groups may be categorized into one of four typologies based on their degree of deservingness and political power: those who lack deservingness or power (deviants); those who are deserving but lack power (dependents); those who lack deservingness but have power (contenders); and those who are seen as both deserving of and having political power (advantaged). Just as changing frames can shift the way people come to understand issues, the social construction of groups can change over time. In their original categorization scheme, Schneider and Ingram (1993) categorized gay men and lesbian women as deviants, which aligns with research showing that lesbian, gay, and bisexual populations have lacked political power and have been stigmatized (Sherrill, 1996). More recently, people have perceived LGBT people as slightly more deserving of support but still lacking political power relative to other groups (Kreitzer and Smith, 2018). Policy makers and the public may support policies benefiting SGD populations based on how such populations are socially constructed. This perception varies geographically, temporally, and contextually.

Because they still make up a small percentage of the U.S. population, SGD people have had to depend on heterosexual and cisgender individuals to advance their interests in elections (Haider-Markel, 2010) and institutions (Hansen and Treul, 2015; Proctor, 2020). Given their high propensity to vote for the Democratic Party, lesbian and gay people may be considered to be electorally captured—when a political party does not seem compelled to respond to the demands of a constituent group because the group is unlikely to vote for the other political party (Smith, 2007)—though research is inconclusive (Bishin and Smith, 2013; McThomas and Buchanan, 2012). Direct democracy and electoral politics also mean that the attitudes of the general public, both directly and indirectly, affect policies pertaining to the well-being of SGD populations. The frequent use of ballot initiatives and referendums in the passage of state and local policies affecting SGD populations directly involves the attitudes of voters in policy making (Stone, 2012), and it is far more likely than other approaches to position LGBT rights on the losing end of policy debates (Haider-Markel, Querze, and Lindaman, 2007; Lewis, 2019; Stone, 2012).

Public Opinion and Public Policy

Although there is a strong correlation between public opinion on specific gay and transgender rights and whether public policies exist on those specific issues, studies find policies are sometimes out of step with the majority opinion (Flores, Herman, and Mallory, 2015; Lax and Phillips, 2009; Lax and Phillips, 2012). On many issues affecting SGD populations, there is a "democratic deficit," which means that a majority view is not reflected in public policy; in such a situation, a super-majority is needed (Flores,

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 144 of 438 PageID #: 2

Herman, and Mallory, 2015; Krimmel, Lax, and Phillips, 2016; Lax and Phillips, 2009). One source of this difference may be that elected officials, particularly Republican officials, frequently overestimate how conservative their constituents are (Broockman and Skovron, 2018; Krimmel, Lax, and Phillips, 2016). Although policy makers are more likely to vote for gay rights when their constituents include a relatively larger share of same-sex couples (Bishin, 2009; Bishin and Smith, 2013), this effect may be conditioned by local acceptance of such rights (Hansen and Treul, 2015).

Changing Public Attitudes

Because public opinion affects both law and policy, social movements engage in policy and legal strategies to try to affect the hearts and minds of the general public. In addition to issue framing and strategic communications (Solomon, 2014; Stone, 2012), advocates and academics have examined various strategies to change public opinion to be more favorable to SGD populations. This section reviews some of those strategies. At times, these strategies have been developed by advocacy organizations who recruit academics to determine through rigorous experimental and quasi-experimental designs whether their tactics are effective.

Using a canvassing strategy to have face-to-face conversations with people about LGBT rights (Lempinen, 2020), Broockman and Kalla (2016) found in a field experiment that having these conversations about transgender people and having people imagine themselves in the shoes of transgender people—a process known as perspective taking—can reduce transphobia and make people more resistant to arguments opposing the inclusion of gender identity in public accommodations policies. Kalla and Broockman (2020) further found that in-depth conversations between canvassers and individuals are effective when individuals are asked about their own narratives, but ineffective when the canvasser provides arguments for why the individual should support an issue.

In a survey experiment, Flores and colleagues (Flores, Hatzenbuehler, and Gates, 2018; Flores et al., 2018) found that introducing the concept of transgender to people and providing them faces of transgender people can reduce transphobia, thereby potentially increasing support for transgender rights. Harrison and Michelson (2017) showed through a series of experiments that priming a shared identity unrelated to sexual orientation or gender identity (e.g., a sports fan identity) and then emphasizing support for LGBT rights can persuade people to be more supportive of LGBT rights. Michelson and Harrison (2020) showed through a series of experiments that reminding people that they are moral individuals who want do "the right thing" can increase their expressed support for transgender people and rights.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 145 of 438 PageID #: 2

Experimental, quasi-experimental, and observational studies also found that the presence of LGBT characters in mass media can reduce prejudice toward LGBT people (Billard, 2019; Garretson, 2014, 2015, 2018; Schiappa, Gregg, and Hewes, 2005, 2006). These effects are generally explained by Allport's (1954) contact hypothesis, which states that interacting with members of social outgroups can result in prejudice reduction and notes the various ways contact can occur in a mediated fashion, such as through mass media (Schiappa, Gregg, and Hewes, 2005). Garretson (2018) showed that social movement activism rooted in ACT UP eventually led to mass media and entertainment media representing SGD populations. Such representation may be one key driver of the mass opinion change that shifted favorably toward lesbian women and gay men in the United States (Garretson, 2018). Thus, activism and social movement organizing played a role in mass opinion change.

Public Policy Adoption and Diffusion

The presence of SGD elected officials affects the adoption of public policies that advance SGD rights. Haider-Markel (2010) traced the difficulties and accomplishments of "out" gay and lesbian candidates and elected officials and found that gay and lesbian elected officials can translate their descriptive diversity into substantive policies. Reynolds (2013) showed that countries with more out LGBT legislators have more SGD-inclusive policies, and Reynolds (2018) emphasized the work done by openly LGBT legislators in building legislative coalitions to advance policies inclusive of SGD populations. This area of research is nascent, particularly because of the slowly growing number of self-identified SGD elected officials since Harvey Milk won elected office in San Francisco in 1977 and Barney Frank came out as the first out gay congressman in 1987. The first out transgender elected official in a U.S. state legislature, Danica Roem, was elected in 2017 in Virginia.

In 2020, 843 self-identified SGD people held elected office in the United States (Victory Institute, 2020), a noticeable but small minority of the 519,682 total elected officials in the country (Lawless, 2012). Of the 843 holding office, approximately 39 identified their gender as transgender, gender-nonconforming, genderqueer, Two Spirit, or intersex; 458 as gay; 252 as lesbian; 52 as bisexual; 41 as queer; and 11 as pansexual (Victory Institute, 2020).[1] "Out" LGBTQ elected officials often engage in discussions and work on legislation to advance policies that are inclusive of SGD populations (Haider-Markel, 2010; Reynolds, 2018).

Racially and ethnically diverse elected officials have formed coalitions to further advance policies, with some of those policies favorable

[1] Numeric totals converted from percentages.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 146 of 438 PageID #: 2

to SGD communities. These elected officials perceive an intersectional linked fate in which several policy issues cross-cut numerous groups (Tyson, 2016). For example, homeless youth issues intersect with race, class, sexual orientation, and gender identity, such that furthering policies to deal with homeless youth requires a diverse coalition of policy makers. In Congress, this coalition involves members of numerous identity-based caucuses (e.g., the LGBT Equality Caucus and the Congressional Hispanic Caucus). However, the identity politics framework of the LGBT advocacy coalition may make it more difficult to further policies that might benefit multiply marginalized SGD people (Strolovitch, 2007), which may limit policy innovation.

New policies tend to spread at both state and local levels, making it more likely that they are adopted in other locations (Berry and Berry, 2014). Such horizontal diffusion results in states and localities adopting policies similar to their neighbors, which occurred with such innovations as gender identity nondiscrimination protections (Sellers and Colvin, 2014). Innovations can be influenced by a number of factors, including the characteristics of local areas (Colvin, 2007; Taylor et al., 2014), policies in nearby states (Taylor et al., 2012), partisan control of lawmaking bodies (Lewis et al., 2014), and the capacity of local advocacy organizations (Taylor et al., 2018).

Model policies can also shape state or local law through vertical diffusion. For example, the Centers for Disease Control and Prevention has influenced state laws regarding updating birth certificates for transgender people (Taylor, Tadlock, and Poggione, 2013) and policies relevant to HIV (Rugg et al., 1999). Another form of vertical diffusion and innovation is the use of state preemption (Movement Advancement Project, 2018). Although each state constitution differs, local governments have limited powers and are subject to state laws that can further preempt their legislative authority. As a result, as policies change locally, countermovement organizations have sought legislation that removes local authority in certain fields, including anti-discrimination laws (Gossett, 1999; Movement Advancement Project, 2018).

More inclusive laws and policies are perceived as a signal that society has changed to be less stigmatizing to SGD populations (Andersen, 2017; Valelly, 2012). Just as advocates seek to win over the hearts and minds of the general public in the pursuit of policy or legal change, once they achieve policy changes, the public may respond in different ways. A pro-rights policy change has the capacity to produce both backlash or further positive change for SGD populations (Egan, Persily, and Wallsten, 2008), though recent empirical research tends to show mass attitudes become more favorable of SGD populations following adoption of pro-rights laws (Flores and Barclay, 2016; Ofosu et al., 2018; Tankard and Paluck, 2017). Sometimes

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 147 of 438 PageID #: 2

legal inclusion produces opinion backlash. National public support for legalization of same-sex marriage and anti-sodomy laws dropped following *Lawrence v. Texas* in 2003 (Egan, Persily, and Wallsten, 2008), which decriminalized consensual same-sex sexual acts. Ofosu and colleagues (2018) found that when marriage equality was introduced federally, residents of states that did not yet legally recognize marriages for same-sex couples had increases in implicit and explicit antigay bias, suggesting a backlash to federal policy change.

Backlash may follow adoption of inclusive policies that are new to the general public, but the public's response may be different when policies become more familiar. For example, Barclay and Flores (2017) found that increased public familiarity with debates over marriage equality increased support for legalization of same-sex marriage, even if the particular dispute resulted in an exclusionary law.

There are intricate connections among social movements, the public policy process, and changing public opinion. Public policy and public opinion represent structures that establish the overall context for SGD populations. Social movements and advocacy organizations represent the ongoing struggle of SGD people to change those structures to improve their well-being. However, those structures are resistant to change, greatly affecting the well-being of SGD populations.

STRUCTURAL STIGMA

As discussed in Chapter 2, stigma is conceptualized as a multilevel construct (Link and Phelan, 2001), ranging from individual (e.g., self-stigma) and interpersonal processes (e.g., discriminatory treatment) to structural factors (e.g., laws and policies, institutional practices). Until recently, the vast majority of research on stigma had been directed at the individual and interpersonal levels (Major and O'Brien, 2005), despite the acknowledgment by researchers that structural forms of stigma were prevalent and likely played a significant role in shaping the lives of the stigmatized (Corrigan, Markowitz, and Watson, 2004; Corrigan et al., 2005; Link and Phelan, 2001). In the past decade, researchers have begun to address this gap, and research as it specifically relates to SGD populations has proliferated since the Institute of Medicine (2011) report.

In this section we summarize the emerging literature on structural stigma and the well-being of SGD populations, organized around four issues: measurement approaches used to study structural stigma; an evaluation of the evidence on the consequences of structural stigma for the well-being of SGD populations; the challenge of establishing causal inferences regarding the effects of structural stigma on adverse outcomes among SGD populations; and future directions to advance this emerging literature.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 148 of 438 PageID #: 2

Measurement Approaches

The measures used to study structural stigma have tended to follow one of three approaches: legal and policy analysis, aggregated measures of social attitudes, and composite indicators. In legal and policy analysis, the content of laws or policies (whether at the country, state, or municipal level) is coded to determine the presence of structural stigma in institutions (Corrigan et al., 2005). The main advantage of this approach is that it relies on objective data sources to code the policies; the primary limitation is that such analyses often do not capture the unwritten customs or procedures that undergird informal institutional practices (Livingston, 2013).

In the second approach, aggregated measures, researchers obtain data on individuals' attitudes toward members of stigmatized groups and aggregate them to the community level (defined at various geographic scales, such as counties), so that the level of stigma can be compared across communities. This approach has been used to study structural forms of stigma related to mental illness (Evans-Lacko et al., 2012), sexual orientation (Hatzenbuehler, Flores, and Gates, 2017), and HIV/AIDS (Miller et al., 2011). A methodological strength of this approach is that members of stigmatized groups are not asked about their perceptions of community attitudes; instead, the community attitudes are derived from residents' own attitudes.

This approach overcomes same-source bias, which can introduce spurious results when the independent and dependent variables are measured with the same method (Diez Roux, 2007). However, this approach can underestimate levels of structural stigma because self-reported attitudes toward stigmatized groups may be subject to social desirability biases (Livingston, 2013). To address this limitation, researchers have begun to use alternative approaches to capture attitudes that do not rely on self-reported measures. These alternative approaches include measures of implicit attitudes that are assessed with response latencies on computerized tasks, such as the Implicit Association Test (Leitner et al., 2016); aggregation of Google searches of racial epithets (Chae et al., 2015); and objective media market data on exposure to thousands of television campaign ads for and against a topic, such as same-sex marriage (Flores, Hatzenbuehler, and Gates, 2018).

These first two approaches measure a single aspect of structural stigma (i.e., laws, policies, or social attitudes), which may be appropriate for research questions that seek to evaluate which individual components of structural stigma are most robustly associated with the well-being of SGD populations. Under some circumstances, however, it is desirable to develop comprehensive measures of structural stigma that tap into shared variance in order to eliminate or minimize unique variance (e.g., unmeasured variables that reflect constructs other than structural stigma), especially given the high correlation among different components of structural stigma.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 149 of 438 PageID #: 2

Some studies (Hatzenbuehler, 2011; Hatzenbuehler and McLaughlin, 2014; Pachankis et al., 2015) have begun to develop these more comprehensive measures of structural stigma that capture its multiple components (e.g., laws, institutional practices, social norms). This approach reduces measurement error, thereby increasing both construct and statistical validity.

Review of Research

This section reviews and provides illustrative examples of studies of the effects of structural stigma on the well-being of SGD populations, organized by kind of study: cross-sectional, longitudinal, quasi-experimental, field, and laboratory. Table 6-1 summarizes these research examples.

Cross-Sectional Designs

Much of the work on structural stigma and SGD populations began with cross-sectional, observational designs in order to establish whether structural stigma was associated with health inequalities. In an early example of this work, Hatzenbuehler, Keyes, and Hasin (2009) coded all 50 states for the presence or absence of hate crime statutes and employment nondiscrimination policies that included sexual orientation as a protected class (the measure of structural stigma). They then linked this policy information to individual-level data on mental health and sexual orientation from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), a nationally representative health survey of U.S. adults. They found that sexual orientation disparities in psychiatric morbidity were more pronounced in states that measured high in structural stigma than in states that measured low in structural stigma. For instance, LGB adults who lived in states with no protective policies were nearly 2.5 times more likely to have dysthymia (a mood disorder) than were heterosexuals in those same states, controlling for established risk factors. In contrast, there were no disparities in dysthymia by sexual orientation in states with protective policies (Hatzenbuehler, Keyes, and Hasin, 2009).

SGD populations are not passive victims as they experience structural forms of stigma, but instead they engage in a variety of coping responses that buffer the negative effects of structural stigma and lead to positive psychosocial outcomes. Retrospective cross-sectional studies of LGB respondents have revealed sources of resiliency associated with campaign ballot initiatives, including an enhanced sense of personal and communal efficacy, experiences of personal growth (e.g., having a greater understanding of how prejudice affects their lives), and support from certain heterosexual allies; these factors helped to minimize feelings of isolation and powerlessness (Rostosky et al., 2010; Russell and Richards, 2003).

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 150 of 438 PageID #: 2

TABLE 6-1 Studies Examining Structural Stigma and Well-Being among SGD Populations

Design	Measure of Stigma
	Cross-Sectional Studies
	Composite variable of state laws and attitudes toward homosexuality
	Five legislative protections for LGB status at the country level: (1) recognition of same-sex relationships; (2) possibility of same-sex marriage; (3) possibility of same-sex adoption; (4) opportunity to serve openly as gay in the military; and (5) the presence of a legal framework to address all anti-gay discrimination
	Composite variable of two state laws: hate crimes and employment nondiscrimination acts
	Constitutional amendments banning same-sex marriage
	Voter referendum on sexual orientation-based discrimination
	Voter referendum on same-sex marriage (Proposition 8)
	Prevalence of school districts whose anti-bullying policies include sexual orientation as an enumerated class
	Composite variable of four factors: (1) density of same-sex couples; (2) proportion of gay-straight alliances in public high schools; (3) five policies related to sexual orientation discrimination (e.g., same-sex marriage bans, employment nondiscrimination acts that included sexual orientation); and (4) public opinion toward LGB-related policies (e.g., same-sex adoption, public accommodations)
	Lesbian, gay, bisexual, and transgender assault hate crimes obtained from police records

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 151 of 438 PageID #: 2

Outcome	Sample Characteristics	Source
	Cross-Sectional Studies	
Tobacco and alcohol use	Nonprobability sample of young adult sexual minority men (N = 119)	Pachankis, Hatzenbuehler, and Starks (2014)
Internalized homonegativity	Nonprobability sample of sexual minority men from 38 European countries in the European Men Who Have Sex with Men Internet Survey (N = 144,177)	Berg et al. (2013)
Psychiatric disorders	Nationally representative sample of non-institutionalized adults from the National Epidemiologic Survey on Alcohol and Related Conditions (N = 577 LGB respondents)	Hatzenbuehler, Keyes, and Hasin (2009)
Psychological distress (negative affect, stress, depressive symptoms), minority stress experiences, political participation	Nonprobability sample of LGB adults (N = 1,552)	Rostosky et al. (2010)
Stressors and resilience factors	Nonprobability sample of LGB adults (N = 316)	Russell and Richards (2003)
Affect, social relationships, support and conflict	Nonprobability sample of LGB adults (N = 354)	Maisel and Fingerhut (2011)
Suicide attempts	Population-based sample of youth in 11th grade from the Oregon Healthy Teens Survey (N = 1,413 LGB respondents)	Hatzenbuehler and Keyes (2013)
Suicide attempts, tobacco use	Population-based sample of youth in 11th grade from the Oregon Healthy Teens Survey (N = 1,413 LGB respondents)	Hatzenbuehler, (2011); Hatzenbuehler, Wieringa, and Keyes, (2011)
Suicide ideation or attempts, illicit drug use, bullying	Population-based sample of public high school students from the Boston Youth Survey Geospatial Dataset (N = 102 sexual minority youth)	Duncan and Hatzenbuehler (2014); Duncan, Hatzenbuehler, and Johnson (2014); Hatzenbuehler, Duncan, and Johnson (2015)

continued

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 152 of 438 PageID #: 2

TABLE 6-1 Continued

Design	Measure of Stigma
	Composite indicator of five factors of school climate: (1) have a gay-straight alliance and safe space for LGBTQ youth; (2) provide curricula on health matters relevant to LGBTQ youths (e.g., HIV); (3) prohibit harassment based on sexual orientation or gender identity; (4) encourage staff to attend trainings on creating supportive environments for LGBTQ youths; and (5) facilitate access to providers off school property that provide health and other services specifically targeted to LGBTQ youths (from School Health Profile Data of the Centers for Disease Control and Prevention)
	Composite measure of country-level policies related to sexual orientation and aggregated social attitudes toward homosexuality held by the citizens of each country
	Composite measure of country-level policies related to sexual orientation and aggregated social attitudes toward homosexuality held by the citizens of each country
	Voter referendum on same-sex marriage
	Aggregate measure of community attitudes on same-sex marriage
	Sexual orientation enumeration in state anti-bullying statutes
	Religious Freedom Restoration Acts
	Longitudinal Studies
Longitudinal panel	Composite variable of (1) density of same-sex couples; (2) proportion of gay-straight alliances in public high schools; (3) five policies related to sexual orientation discrimination (e.g., same-sex marriage bans, employment nondiscrimination acts that included sexual orientation); and (4) public opinion toward LGB-related policies (e.g., same-sex adoption, public accommodations)

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 153 of 438 PageID #: 2

Outcome	Sample Characteristics	Source
Suicide ideation, plan, and attempts	Population-based sample of public high school students in 8 states and cities from the Youth Risk Behavior Surveillance System (N = 2,782 LGB youth)	Hatzenbuehler et al. (2014a)
Concealment	Nonprobability sample of sexual minority men from 38 European countries in the European Men Who Have Sex with Men Internet Survey (N = 174,209)	Pachankis et al. (2015)
Life satisfaction, concealment, discrimination, and victimization	Nonprobability sample of sexual minorities from 28 countries participating in the European Union Lesbian, Gay, Bisexual, and Transgender survey (N = 85,582)	Pachankis and Bränström (2018)
Life satisfaction, mental health, overall health, perceived social support	Probability-based sample of adults from the Household, Income, and Labour Dynamics in Australia Survey (N = 554 LGB respondents)	Perales and Todd (2018)
Self-rated health, tobacco use	Population-based sample from the Gallup Daily Tracking survey (N = 11,949 LGBT respondents)	Hatzenbuehler, Flores, and Gates (2017)
Bullying, suicidal ideation and attempts in the past 12 months	Population-based sample of youth from the Youth Risk Behavior Surveillance System (N = 2,000 sexual minority youth)	Meyer et al. (2019)
Unhealthy days in the past 30 days	Probability sample of adults from the Behavior Risk Factor Surveillance System (N = 4,911 sexual minorities)	Blosnich et al. (2018)
	Longitudinal Studies	
Cigarette smoking, illicit drug use	Nonprobability sample of youth from the Growing Up Today Study, a longitudinal cohort (N = 2,190 sexual minorities)	Hatzenbuehler et al., (2014b, 2015)

continued

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 154 of 438 PageID #: 2

TABLE 6-1 Continued

Design	Measure of Stigma
Repeated cross-sectional surveys linked prospectively to mortality data in the National Death Index	Aggregate measure of community attitudes on same-sex sexuality
Daily diary study	Voter referendum on same-sex marriage in 4 states
Repeated cross-section	Composite measure of laws and aggregated community attitudes in Sweden
	Quasi-Experiments
Longitudinal panel	Constitutional amendments banning same-sex marriage
Longitudinal panel	Massachusetts Supreme Court decision on constitutionality of same-sex marriage
Longitudinal panel	Illinois law legalizing civil unions (Religious Freedom Protection and Civil Union Act)
Interrupted time series	Voter referendum on same-sex marriage ("Proposition 8")
Repeated cross-sectional samples with fixed effects	Same-sex marriage policies
Repeated cross-sectional samples with fixed effects	State laws permitting the denial of services to same-sex couples ("religious exemption laws")

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 155 of 438 PageID #: 2

Outcome	Sample Characteristics	Source
All-cause mortality	Probability-based sample from the General Social Survey (N = 1,524 individuals reporting same-sex sexual partners)	Hatzenbuehler et al. (2019a)
Psychological and relational well-being	Nonprobability sample of 62 same-sex couples who completed a baseline survey and 10 daily diary reports during the month before the election	Frost and Fingerhut (2016)
Psychological distress	Population-based sample of Swedish adults from the Swedish National Public Health Survey (N = 565 LGB respondents)	Hatzenbuehler, Bränström, and Pachankis (2018)
	Quasi-Experiments	
Psychiatric disorders in the past year	Nationally representative sample of non-institutionalized U.S. adults from the National Epidemiologic Survey on Alcohol and Related Conditions (N = 577 LGB respondents)	Hatzenbuehler et al. (2012)
Health care utilization and expenditures	Nonprobability data from a health clinic serving LGBT individuals (N = 1,211 sexual minority male patients)	Hatzenbuehler et al. (2012)
Hazardous drinking, depressive symptoms, perceived discrimination, stigma consciousness	Nonprobability sample from the Chicago Health and Life Experiences of Women Study (N = 517 sexual minority women)	Everett, Hatzenbuehler, and Hughes (2016)
Homophobic bullying in the past year	Nonprobability sample from the California Healthy Kids Survey (N = 4,977,557 children)	Hatzenbuehler et al. (2019b)
Suicide attempts in the past year	Population-based data from the Youth Risk Behavior Surveillance System (N = 231,413)	Raifman et al. (2017)
Poor mental health in the past 30 days	Population-based data from the Behavioral Risk Factor Surveillance System (N = 4,656 LGB and "unsure" respondents)	Raifman et al. (2018)

continued

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 156 of 438 PageID #: 2

TABLE 6-1 Continued

Design	Measure of Stigma
Repeated cross-sectional samples with fixed effects	Three state policies: (1) same-sex partner recognition, (2) constitutional amendments banning same-sex marriage, and (3) employment nondiscrimination and hate crime laws
Cross-sectional analysis, examining "spillover" into states where "treated" individuals were accidentally exposed to the campaign ads	Media market data of television ads during a voter referendum on same-sex marriage
	Field Experiments
Audit experiment	Legal protections related to employment discrimination
	Laboratory Studies
	Composite variable of (1) density of same-sex couples; (2) proportion of gay-straight alliances in public high schools; (3) five policies related to sexual orientation discrimination (e.g., same-sex marriage bans, employment non-discrimination acts that included sexual orientation); and (4) public opinion toward LGB-related policies (e.g., same-sex adoption, public accommodations)

*NOTE: Studies on presence of gay-straight alliances in schools are discussed in Chapter 10.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 157 of 438 PageID #: 2

Outcome	Sample Characteristics	Source
Hate crimes based on sexual orientation	Federal Bureau of Investigation's Uniform Crime Reporting Program on hate crimes related to sexual orientation	Levy and Levy (2017)
Psychological distress, negative affect	Probability-based sample of LGBT adults (N = 939)	Flores, Hatzenbuehler, and Gates (2018)
	Field Experiments	
Employment discrimination (percentage of gay men who received a callback)	1,769 job postings in states; one resume in each pair was randomly assigned experience in a gay campus organization, and the other resume was assigned a control condition	Tilcsik (2011)
	Laboratory Studies	
Physiological stress response, measured by cortisol	Nonprobability sample of LGB young adults (N = 74)	Hatzenbuehler and McLaughlin (2014)

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 158 of 438 PageID #: 2

Longitudinal Designs

Although cross-sectional studies provide important insights into associations, prospective designs improve the ability to establish temporal ordering of the relationship between structural stigma and the well-being of SGD populations. Longitudinal designs involve an assessment of the same respondents over time. A typical longitudinal design involves panel or cohort studies, in which the same respondents are repeatedly assessed. Below, we describe three types of longitudinal designs that have been used: respondents followed over time, daily diary studies, and repeated cross-sectional samples that examine trends over time.

Respondents Followed over Time Hatzenbuehler and colleagues (2014b, 2015) constructed a composite measure of structural stigma surrounding LGB youth, which included four items at the state level: density of same-sex couples, proportion of gay-straight alliances in public high schools, policies related to sexual orientation, and public opinion toward homosexuality (using aggregated responses from national polls). The researchers linked this information on state-level structural stigma to individual-level data on tobacco and illicit drug use from the Growing Up Today Study, a prospective cohort study of youth. They found that sexual minority youth living in states with low structural stigma were less likely to smoke over time than sexual minority youth in states with high structural stigma states, controlling for individual- and state-level confounders (Hatzenbuehler et al., 2014b).

Daily Diary Studies Experience sampling methods (also known as ecological momentary assessments and daily diary studies) offer a number of methodological strengths, including capturing reported events and psychological reactions longitudinally in their natural context, thereby permitting the examination of person-by-situation interactions; reducing recall bias (because the approach minimizes the amount of time that elapses between an experience and the reporting of the experience); improving the validity of modeling within-individual changes (because of the much larger number of assessments that are possible with this design); and affording researchers the opportunity to examine the temporal sequence of events and to control for third variables by using individuals as their own controls, thereby improving causal inferences (Bolger, Davis, and Rafaeli, 2003).

Daily diary studies are increasingly being used to study structural stigma among SGD populations. For instance, Frost and Fingerhut (2016) used this design to obtain daily reports on health and stress exposure from 62 same-sex couples from four states in the month before state voting on same-sex marriage in voter referenda. Self-reported exposure to negative campaign messages was associated with increased negative affect, as well as with decreased positive affect and relationship satisfaction, controlling

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 159 of 438 PageID #: 2

for baseline measures of depression and daily fluctuations in general stress among both members of the couple. Thus, even though all four states voted in favor of same-sex marriage, the negative social environment created by public debates about the rights of SGD individuals affected the mental health of same-sex couples.

Repeated Cross-Sectional Samples Repeated cross-sectional samples are used to examine trends over time. In one example of this approach, researchers used a population-based dataset in Sweden that has assessed sexual orientation and mental health every 5 years since 2005 (2005, 2010, 2015). Over this 10-year period, there were marked declines in structural forms of stigma, including changes in laws and policies that provided protections to sexual minorities, as well as declines in prejudicial attitudes towards homosexuality. These declines in structural stigma were associated with a significant reduction in the magnitude of the sexual orientation disparity in mental health: in 2005, gay men and lesbian women were nearly three times more likely to meet criteria for elevated psychological distress than heterosexual men and women, but in 2015 the sexual orientation disparity was eliminated (Hatzenbuehler, Bränström, and Pachankis, 2018). This finding is important because it suggests that sexual orientation disparities in mental health are responsive to changes in the social context.

Quasi-Experimental Designs

Researchers have complemented observational designs through the use of several different methods, such as quasi-, or natural, experiments, which permit stronger inferences regarding the relationship between structural stigma and outcomes in well-being. Quasi-experiments are used in situations in which it is not possible or ethical to randomly assign individuals to a particular condition, as is the case in studying structural forms of stigma. Three types of quasi-experimental designs have been used: those that use longitudinal panel studies, those that use repeated cross-sectional samples, and those that use interrupted time-series designs.

Quasi-Experiments Using Longitudinal Panel Studies In this approach, researchers use quasi-experiments to examine changes in health following changes in structural stigma (usually through a change in a social policy) among the same set of respondents who have been assessed both before and after the policy change. In one example of this work, Hatzenbuehler and colleagues (2010) took advantage of the fact that, leading up to and during the 2004 election, several states passed constitutional amendments banning same-sex marriage. These events occurred between two waves of data collection of NESARC. Respondents were first interviewed in 2001 and then reinterviewed in 2005, following the adoption of bans on same-sex marriage. LGB adults who lived in states that passed same-sex marriage bans

Copyright National Academy of Sciences. All rights reserved.

experienced a 37 percent increase in mood disorders, a 42 percent increase in alcohol use disorders, and a 248 percent increase in generalized anxiety disorder between the two waves (Hatzenbuehler et al., 2010). In contrast, LGB respondents in states that did not adopt such bans did not experience a significant increase in psychiatric disorders during the study period. The mental health of heterosexuals in states that adopted the bans was largely unchanged between the two waves.

Complementing this study, which suggests that implementing structural stigma through state laws may have negative mental health consequences for LGB populations, there is evidence that abolishing structural forms of stigma may improve their health. When Massachusetts became the first state to legalize same-sex marriage in 2003, researchers obtained data (from previously collected medical records) from a community-based health clinic in Massachusetts to examine the influence of the law on health care use and costs among sexual minority men. There was a 15 percent reduction in mental and medical health care utilization and costs among these men in the 12 months following the legalization of same-sex marriage, compared with the 12 months before (Hatzenbuehler et al., 2012).

Quasi-experimental designs cannot rule out the possibility that some other factor that occurred contemporaneously with the change in structural stigma affected the results. However, the plausibility of alternative factors can be evaluated by examining whether they occurred during the same time period and, if so, whether they could have contributed to the results. For example, in the aforementioned study by Hatzenbuehler and colleagues (2012), the researchers examined data from the Centers for Medicare & Medicaid Services to determine trends in health care costs during the study period, 2002–2004. These data revealed that health care costs in the general population of Massachusetts residents increased during the study period. This pattern was in the opposite direction of those observed in the study's sample of sexual minority men, suggesting that external factors in the Massachusetts health care environment were unlikely to have influenced the results.

Quasi-Experiments Using Repeated Cross-Sectional Samples A second quasi-experimental approach uses repeated cross-sectional samples with state fixed effects to examine the consequences of structural stigma for SGD populations. In this approach, the same respondents are not followed, as in the studies reviewed above; instead, different "snapshots" of a population are followed over time to determine whether changes in structural stigma affect outcomes in well-being.

In one example of this work, Raifman and colleagues (2018) used a difference-in-difference-in-differences analysis[2] that compared changes in

[2] Difference-in-difference-in-differences is a statistical technique that studies the status of a "treatment" group" and a "control group" before a treatment is administered, as well as studying the outcomes of each group after the treatment.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 161 of 438 PageID #: 2

mental distress among LGB and heterosexual respondents in three states that implemented laws in 2015 denying public accommodations services to same-sex couples (treatment group) with changes in mental distress among LGB and heterosexual respondents in six geographically nearby states with similar demographics but without these laws (control group). Data on mental health and sexual orientation came from the Behavioral Risk Factor Surveillance System. The only group experiencing an increase in mental distress during this period was that of the sexual minorities living in states with the denial law. This increase was equivalent to a 46 percent relative increase in sexual minority adults experiencing mental distress in these states (Raifman et al., 2018). This study used state fixed effects, which controlled for baseline differences in rates of mental distress across states, and for time-invariant characteristics (e.g., political climate) that could have affected both the independent and dependent variables.

Levy and Levy (2017) used a similar quasi-experimental approach in a study looking at a different well-being outcome: hate crimes targeting LGBT populations. The authors used repeated cross-sectional data on hate crimes from the Federal Bureau of Investigation's Uniform Crime Reporting Program, examining whether state laws (constitutional amendments banning same-sex marriage, same-sex partner recognition, employment nondiscrimination, and hate crime laws) were associated with reduced incidence of hate crimes against LGBT individuals. Results indicated that the presence of hate crime and employment nondiscrimination laws that include sexual orientation as a protected class resulted in a small but statistically reliable reduction in the incidence of hate crimes against LGBT populations. For instance, states instituting a nondiscrimination law had one fewer reported hate crime per 900,000 people during the year the policy was adopted and an additional one fewer reported crime per 1.2 million people in the following year (Levy and Levy, 2017).

Quasi-Experiments Using Interrupted Time Series Another quasi-experimental approach is the use of interrupted time-series designs, a statistical tool used in nonexperimental data for assessing associations between policy or legislation and outcomes of interest. With a series of repeated observations, this approach compares the rates of a phenomenon before and after a policy or legislative change. Hatzenbuehler and colleagues (2019b) used this approach to examine the associations between a voter referendum that restricted marriage to heterosexuals in California (Proposition 8, in 2008) and homophobic bullying among youth. They strategically combined data from nearly 5 million youth in more than 5,000 schools across 14 school years, linked to statewide data on school gay-straight alliances, to determine whether rates of homophobic bullying increased as a result of the referendum. The interrupted time-series analyses found that the 2008–2009 academic year, during which Proposition 8 was passed, served as a turning

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 162 of 438 PageID #: 2

point in homophobic bullying (Hatzenbuehler et al., 2019b). Specifically, the rate of homophobic bullying increased and accelerated in the period prior to Proposition 8 and then gradually declined in the years following the vote. Specificity analyses showed that these trends were not observed among students who reported that they were bullied because of their race, ethnicity, religion, or gender, but not because of their sexual orientation. The analysis also showed that the presence of gay-straight alliances served as a protective factor specific to school contexts among LGBT youth; they were associated with a smaller increase in homophobic bullying during the pre-Proposition 8 period.

Field Experiments

One of the strengths of field experiments is that they retain the internal validity of a traditional randomized experiment but improve external validity by examining stigma processes in "real-world" settings. One particular type of field experiment is the audit experiment, which has been used in several studies on discrimination. An innovative example of this approach was conducted by Tilcsik (2011), who explored discrimination based on sexual orientation in employment outcomes among men. The researcher submitted a pair of fictitious, but ostensibly real, resumes to job postings of white-collar, entry-level jobs in seven states that were chosen on the basis of whether they had employment nondiscrimination laws that included sexual orientation as a protected class. The sexual orientation of the applicant was randomly assigned to each pair before the resumes were sent: the sexual orientation of the apparent applicant was signaled through the applicant's membership in a campus organization during college. Although the resumes differed slightly to avoid raising suspicion, there was no systematic relationship between resume quality and sexual orientation; as such, any difference that was observed in call-back rates (the dependent variable of interest) could be attributed to the sexual orientation of the applicant.

Gay men were approximately 40 percent less likely to be offered a job interview than similarly qualified heterosexual men, an effect that is similar to previous audit studies on Black-white disparities in employment outcomes (Tilcsik, 2011). However, there was also substantial variation in the level of hiring discrimination across the seven states. Specifically, rates of employment discrimination against gay men were higher in states that did not have employment nondiscrimination policies that protected gay men. Thus, this study provided experimental evidence not only that both interpersonal and structural discrimination influence employment outcomes, but also that these forms of discrimination interact to produce adverse employment outcomes for gay men.

Copyright National Academy of Sciences. All rights reserved.

Laboratory Studies

The primary advantage of laboratory designs is that researchers can examine how structural stigma moderates responses to the same stimuli as measured in a controlled setting. In these studies, individuals are recruited on the basis of their prior exposure to structural stigma (high or low) and then are assigned to different conditions to examine how structural stigma influences their behavioral, psychosocial, and physiological responses.

In one example of this work, researchers recruited 74 LGB young adults who were raised in 24 different states as adolescents. The states differed widely in terms of structural stigma, which was coded on the basis of a composite measure that included, among other factors, state laws and attitudes (Hatzenbuehler and McLaughlin, 2014). All respondents were currently living in New York, a low structural stigma state. In order to examine how prior exposure to structural stigma during adolescence affected subsequent physiological stress responses during young adulthood, participants completed a validated laboratory stressor, the Trier Social Stress Test (TSST), and neuroendocrine measures were collected. LGB young adults who were raised in high structural stigma states as adolescents evidenced a blunted cortisol response following the TSST compared with LGB young adults raised in low structural stigma states. This blunted cortisol response has been similarly documented in other groups that have experienced chronic stressors, including children exposed to childhood maltreatment (Gunnar et al., 2009). Thus, these results suggest that the stress of growing up in high structural stigma environments may exert biological consequences that are similar to those from other chronic life stressors.

Establishing Causal Inferences

Researchers have used several different approaches to achieve the strongest inferences possible regarding the effects of structural stigma on the well-being of SGD populations. Below, we briefly discuss six of these strategies.

First, as shown in the studies above, researchers have used a multimeasure, multimethod, multi-outcome approach to examine the consequences of structural stigma for SGD populations. This is an established approach to assessing validity; when convergence is demonstrated, one can be relatively confident that the results are not spuriously confounded by particular methods, measures, or outcomes (Campbell and Fiske, 1959). Relatedly, the findings of structural stigma have been documented across multiple research groups using different methods, samples, and measures, providing further support for the robustness of these findings.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 164 of 438 PageID #: 2

Second, researchers have explored whether the effects of structural stigma are apparent among SGD populations and not among cisgender, heterosexual populations. When associations between structural stigma and well-being outcomes are observed only among members of the stigmatized group, it is likely that this result is due to structural stigma itself rather than to factors that may be associated with it (e.g., better economic conditions). Studies have generally documented this kind of specificity (e.g., Blosnich et al., 2018; Duncan and Hatzenbuehler, 2014; Hatzenbuehler and Keyes, 2013; Hatzenbuehler et al., 2010, 2014a; Raifman et al., 2018), or they have shown that the association between structural stigma and well-being outcomes is more pronounced for SGD populations than for non-SGD populations (e.g., Hatzenbuehler, Bränström, and Pachankis, 2018; Raifman et al., 2017); however, there are some studies that have shown that structural stigma is associated with health outcomes among both stigmatized and non-stigmatized groups (e.g., Hatzenbuehler, 2011; Meyer et al., 2019).

A third approach for improving causal inferences comes through the direct assessment of plausible alternative explanations. One alternative explanation for the relationship between structural stigma and health is that people with better health move away from policy regimes and attitudinal contexts that disadvantage them, leaving unhealthy respondents behind. If this occurs, differential selection by health status could contribute to the observed association between structural stigma and health. Studies have begun to address this possibility and have thus far not found strong evidence for this selection hypothesis. For instance, using data from the General Social Survey (2008–2014), Hatzenbuehler, Flores, and Gates (2017) found that among participants who self-reported fair or poor health, sexual minorities were *more* likely to have moved out of state than heterosexuals (43 percent and 37 percent, respectively), the opposite of what the social selection hypothesis would predict. This finding indicates that differential selection by health status is unlikely to be responsible for the observed association between structural stigma and well-being outcomes among SGD populations.

Fourth, researchers have controlled for a variety of potential individual- and structural-level confounders to rule out spurious associations between structural stigma and well-being. By and large, results remain robust to the inclusion of these confounders. In addition, researchers have used fixed effects analyses (e.g., Levy and Levy, 2017; Raifman et al., 2017, 2018), which control for baseline differences across geographic units (e.g., states) in the analysis, as well as for time-invariant characteristics that could affect both structural stigma and health outcomes.

Fifth, researchers have conducted falsification tests that show structural stigma does not predict outcomes it theoretically should not influence,

Copyright National Academy of Sciences. All rights reserved.

such as fruit juice consumption (Raifman et al., 2017) or cancer diagnoses (Flores et al., 2018).

Finally, one potential methodological limitation that can affect internal validity (and therefore causal inferences) is expectancy effects, meaning that researchers' biases in obtaining support for their hypotheses about the effects of structural stigma may influence their coding behaviors of the independent (i.e., structural stigma) or dependent (e.g., health) variables. The studies discussed above have largely minimized the threat of expectancy effects because of the methodological approaches that were used. Specifically, researchers first obtained data on structural stigma, typically from external sources. Data on policies were either collected by outside groups that use legal and policy experts to independently code the policies or were obtained from publicly available data sources whose accuracy can be objectively verified by comparisons with legislative records (Krieger et al., 2013; Pachankis et al., 2015). In studies that used data on aggregated social attitudes as the indicator of structural stigma, researchers usually obtained these data from publicly available data sources (e.g., the General Social Survey) rather than collecting the data themselves, thereby reducing the likelihood of expectancy effects. Information on structural stigma was then linked to datasets in which the outcomes were previously collected by other researchers who were, by definition, blind to study hypotheses (because the data were not originally collected for the purposes of studying structural stigma). This approach further minimizes the threat of expectancy effects.

Advancing Research on Structural Stigma

Although research has advanced understanding of how structural stigma affects the well-being of SGD populations, several gaps remain. In this section we review these gaps, as well as needed data. In addition, we identify key barriers that have hindered work in this area and offer suggestions for addressing these data needs in order to advance the evidence base.

Research Needs

For research that is needed to advance the emerging field of structural stigma and SGD well-being, we focus on five areas: mediating pathways, expanding measurement of structural stigma, life course and developmental trajectories, structural stigma relevant to individuals with diverse genders and sexualities, and intersectionality.

Mediating Pathways Although most research to date has focused on main effect relations between structural stigma and well-being outcomes among SGD populations, research has begun to identify potential mechanisms explaining this association. This work has largely focused on two

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 166 of 438 PageID #: 2

primary pathways: stress mechanisms and psychosocial mechanisms. Evidence for a stress pathway comes from both direct tests—e.g., research indicating that structural stigma is associated with dysregulated physiological stress responses among LGB young adults (Hatzenbuehler and McLaughlin, 2014)—and from indirect tests (Hatzenbuehler et al., 2012).

The second potential pathway involves psychosocial mechanisms, such as social isolation and maladaptive forms of emotion regulation, which have been shown to mediate the health effects of individual and interpersonal forms of stigma (Hatzenbuehler, 2009; Hatzenbuehler, Phelan, and Link, 2013). For example, LGB respondents who live in countries with higher levels of structural stigma report greater identity concealment, which in turn predicts lower life satisfaction (Pachankis and Bränström, 2018). In addition, in Australia, LGB respondents who lived in communities with higher levels of structural stigma (i.e., constituencies with higher proportions of residents voting against same-sex marriage) reported less social support, which in turn was associated with worse life satisfaction, as well as poorer mental health and overall health (Perales and Todd, 2018).

These initial findings have been important, but research is needed to identify additional mediating pathways—including material (e.g., income, educational attainment), psychosocial (e.g., emotion regulation), and biological (e.g., inflammation) pathways. This topic represents an important avenue for future inquiry and can inform potential targets for preventive interventions to reduce the negative consequences of structural stigma for SGD well-being.

Expanding Measurement of Structural Stigma As reviewed above, studies have measured structural stigma in a variety of ways. While this diversity of measurement represents a methodological strength, the work has thus far focused on a limited set of social institutions (largely, state laws and aggregated social norms). Research that expands the measurement of structural stigma to include social institutions that have thus far not received as much empirical attention in the literature is needed: those institutions include health care settings, policing, and the criminal justice and juvenile justice systems. Research is also needed that more comprehensively examines the implementation of social policies relevant to SGD populations, as well as the social, economic, and political factors that affect variability in implementation and enforcement.

In addition, the advent of "big data" sources—such as Google searches, social media (e.g., Twitter feeds), and exposure to various media content (e.g., television ads)—offers new ways of measuring the presence and scope of structural stigma, as reflected in aggregated social norms and attitudes, that affect SGD populations. To date, studies are only beginning to use these big data sources to study structural stigma as it relates to diverse sexual orientations and gender identities (Flores et al., 2018), and compre-

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 167 of 438 PageID #: 2

hensive information on the psychometric properties of these data sources does not yet exist. This area represents an important avenue for future research on structural stigma.

Life Course and Developmental Trajectories Research on structural stigma and the well-being of SGD people has been conducted among adolescents (Duncan and Hatzenbuehler, 2014; Hatzenbuehler and Keyes, 2013; Raifman et al., 2017), young adults (Hatzenbuehler and McLaughlin, 2014; Pachankis, Hatzenbuehler, and Starks, 2014), and adults (Hatzenbuehler et al., 2010, 2012; Pachankis and Bränström, 2018; Perales and Todd, 2018; Raifman et al., 2018). However, most research examines exposure to structural stigma at a single point in development, and attention to developmental timing and chronicity of exposure to structural stigma has been relatively lacking. Thus, although it is clear that structural stigma matters for the health and well-being of SGD populations, how this develops over the life course is not well understood. Future research should therefore consider how structural stigma unfolds using life course and developmental trajectories in order to advance this line of work. Researchers could also study dose–response relationships between length of exposure to structural stigma over a person's life course and adverse outcomes among SGD populations.

Structural Stigma Relevant to Individuals of Diverse Genders and Sexualities Most research has examined structural stigma related to sexual orientation, with a particular focus on same-sex sexuality. Comparatively fewer studies have been conducted about structural stigma related to other sexual orientations, such as bisexuality, as well as to individuals with intersex traits. In addition, there is a dearth of research on structural stigma related to gender identity (for an exception, see Perez-Brumer et al., 2015), despite acknowledgment that transgender populations confront several sources of structural stigma (Hughto, Reisner, and Pachankis, 2015).

There are at least two reasons for this relative dearth of research. One is the lack of data structures that include measures of diverse genders and sexualities and that sample respondents across multiple contexts that vary in the level of structural stigma against these groups. Another reason is the lack of measurement development regarding structural forms that may be unique to specific groups of SGD populations. For instance, prejudice related to bisexuality involves different stereotypic content than prejudice related to homosexuality (Dodge et al., 2016; Worthen, 2013), indicating the importance of developing new measures that capture the facets of structural stigma and prejudice that are distinct to bisexuality, as well as to other diverse sexualities and genders.

Intersectionality Research to date has largely explored structural forms of stigma that are shared by LGBT populations related to their sexual orientation. This work is important, but it has tended to obscure the fact that

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 168 of 438 PageID #: 2

LGBT individuals have other identities that are relevant to their well-being, including race, ethnicity, gender, and socioeconomic status (for a notable exception, see Everett, Hatzenbuehler, and Hughes, 2016). Thus, how structural forms of stigma across multiple axes of social stratification interact to confer risk for, or protection against, adverse outcomes among SGD people with intersecting identities is not well understood. Recent research has begun to address this gap, using novel approaches to testing intersectionality (Pachankis et al., 2017), but more work is needed.

Data Needs

The most widely used approaches for studying structural stigma and well-being among SGD populations include multilevel or population-average models that provide an estimate of the effect of structural stigma on well-being outcomes, net of individual and contextual factors (Hatzenbuehler, 2017). In order to conduct these studies, researchers require datasets with the four variables (1) demographic measures of sexual orientation and gender identity (at the individual level); (2) covariates to control for potential confounders and plausible alternative explanations (measured at the individual and contextual levels); (3) dependent variables (e.g., health outcomes or other indicators of social and economic well-being, measured at the individual level); and (4) geographic information on respondents' residence (e.g., ZIP codes) that enables researchers to link structural stigma variables (i.e., the independent/predictor variable) to individual-level data.

This last point is particularly important, because without geographic measures of where respondents are located, it is not possible to examine the influence of structural stigma on SGD well-being. Currently, numerous datasets either do not provide this information on geographic residence or else release data at only one geographic level of analysis (e.g., state), which restricts researchers' ability to examine structural forms of stigma across multiple geographic levels simultaneously (e.g., state, county, city, and school). This lack of data on geographic residence across different spaces in which SGD individuals live, work, and play has created a significant barrier to advancing the literature on structural stigma.

Another data and methodological challenge in conducting research on structural stigma is the lack of a centralized mechanism by which government or private actors initiate and track surveillance of laws and policies relevant to SGD populations and their enforcement (Blake and Hatzenbuehler, 2019). This hinders the ability of researchers to longitudinally track how laws and policies, as well as their enforcement (or lack thereof), affect the well-being of SGD populations.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 169 of 438 PageID #: 2

SUMMARY AND CONCLUSIONS

There are numerous advocacy organizations devoted to the advancement of rights for SGD populations. The contemporary LGBT advocacy coalition has growing infrastructure and capacity, and hundreds of foundations and corporations have invested in issues addressing sexual and gender diversity. At the same time, however, there are organizations opposed to the advancement of rights for SGD populations that also try to control the policy agenda and reach the public through counter campaigns and social movements.

The way issues are communicated affects how people come to understand them. The strategic shift of a frame, as with marriage equality, for example—from an "egalitarian" movement to one that was centered on "love and commitment"—can cause a shift in support and have a profound effect on public policy. However, the pursuit of polices likely to garner public support may stigmatize or erase certain SGD groups, such as bisexual and transgender men and women.

CONCLUSION 6-1: The pursuit of public policies affecting sexual and gender diverse populations is constrained by the need to frame policies that are politically palatable and socially acceptable to voters. Sometimes legal inclusion in one policy area can produce opinion backlash on other policy areas affecting those populations.

Because SGD populations make up a small percentage of the U.S. population, they have had to depend on heterosexual and cisgender individuals to advance their interests in elections, which means that the attitudes of the general public both directly and indirectly affect public policies. Contextual factors, such as the geographic distribution of the population density of SGD people, can result in differences in levels of acceptance. Policy makers are more likely to vote for gay rights when their constituencies have a larger share of same-sex couples, though this may be conditioned by local attitudes.

The majority of U.S. adults support nondiscrimination protections for LGBT people in employment, public accommodations, and housing and support transgender people being able to serve openly in the military. The public is more divided on such issues as gender identity protections in public accommodations, such as public restrooms, and businesses' right to deny services to LGBT people because of religious belief. Personalizing sexual and gender diverse people when placing them in context for poll respondents—i.e., highlighting a shared identity unrelated to sexual orientation or gender identity—can bolster support for LGBT rights.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 170 of 438 PageID #: 2

The presence of sexual and gender diverse elected officials affects SGD public policy adoption. "Out" LGBT elected officials often work to advance policies that are inclusive of sexual and gender diverse populations, but they make up a small minority of all elected officials. Policies can diffuse horizontally, when states and localities adopt policies similar to neighboring legislations, or vertically, when national organizations effect changes to state laws or states do so to localities. More inclusive laws and policies are perceived as a signal that society has changed to be less stigmatizing of SGD populations.

CONCLUSION 6-2: Tracking shifts in policies and public opinion is important to illuminate the policy environments for sexual and gender diverse populations and to understand the processes and consequences of legal and policy changes.

The well-being of SGD populations is affected not only by legal and political institutions and public attitudes, but also by structural factors, including structural stigma. There is now a growing body of evidence that structural stigma affects the health and well-being of people of diverse sexualities and genders.

Research using multiple methods has documented associations between structural stigma and well-being. The multiple dimensions of well-being across which the effects of structural stigma can be found include mental health (e.g., psychiatric diagnoses, suicide attempts, psychological distress); physiological stress response (e.g., cortisol reactivity); victimization experiences (e.g., hate crimes, homophobic bullying); and employment (e.g., employment discrimination).

CONCLUSION 6-3: Structural stigma is an important mechanism that contributes to inequalities for sexual and gender diverse populations across numerous domains that are essential for living healthy, productive, and fulfilling lives, including socioeconomic well-being, physical and mental health, and physical safety.

In looking at the effects of structural stigma, studies have begun identifying mediating pathways, such as stress and psychosocial mechanisms, but work is needed to understand whether other pathways (e.g., material and biological) underlie the established associations between structural stigma and the well-being of SGD people. Research is also need to expand beyond the study of large social institutions and federal and state policies to include less-studied institutions, such as health care settings and criminal justice systems.

Big data sources may also provide insight on the ways structural stigma affects diverse sexual orientations and gender identities. Research has been

Copyright National Academy of Sciences. All rights reserved.

conducted among adolescents, young adults, and adults, but it has not been conducted on how structural stigma develops and evolves over the life course. Furthermore, most structural stigma research has focused on gay men and lesbian women and has not considered intersectional characteristics, such as race, ethnicity, gender identity, and socioeconomic status, that are relevant to well-being. Also needed are studies that focus on less-represented SGD subgroups and consider the role of intersectionality in structural stigma. For this research, there are a number of data needs, including developing systems and methods that identify geographic indicators for SGD respondents (e.g., state or city of residence) and remove barriers in access to or use of such indicators in datasets.

CONCLUSION 6-4: Research on structural stigma has been hampered by the lack of available geographic data for sexual and gender diverse respondents and the absence of a centralized mechanism for longitudinally tracking the status and enforcement of laws and policies relevant to sexual and gender populations.

REFERENCES

Allport, G. (1954). *The Nature of Prejudice*. Boston, MA: Addison-Wesley.

Andersen, E.A. (2017). Transformative events in the LGBTQ rights movement. *Indiana Journal of Law and Social Equality, 5*(2), 441–472.

Andrews, K., and Edwards, B. (2004). Advocacy organizations in the U.S. political process. *Annual Review of Sociology, 30*, 479–506.

Armstrong, E.A. (2002). *Forging Gay Identities: Organizing Sexuality in San Francisco, 1950–1944*. Chicago: University of Chicago Press.

Baumgartner, B., and Jones, B. (1993). *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.

Barclay, S., and Flores, A.R. (2017). Policy backlash: Measuring the effect of policy venues using public opinion. *Indiana Journal of Law and Social Equality, 391*, 391–408.

Barr, S.M., Budge, S.L., and Adelson, J.L. (2016). Transgender community belongingness as a mediator between strength of transgender identity and well-being. *Journal of Counseling Psychology, 63*(1), 87–97.

Berg, R.C., Ross, M.W., Weatherburn, P., and Schmidt, A.J. (2013). Structural and environmental factors are associated with internalised homonegativity in men who have sex with men: Findings from the European MSM Internet Survey (EMIS) in 38 countries. *Social Science & Medicine, 78*, 61–69.

Bernstein, M. (2002). Identities and politics: Toward a historical understanding of the lesbian and gay movement. *Social Science History, 26*(3), 531–581.

Berry, F.S., and Berry, W.D. (2014). Innovation and diffusion models in policy research. In P.A. Sabatier and C.M. Weble (Eds.), *Theories of the Policy Process* (pp. 307–362). Boulder, CO: Westview Press.

Billard, T.J. (2019). Experimental evidence for differences in the prosocial effects of binge-watched versus appointment-viewed television programs. *Journalism and Mass Communication Quarterly, 96*(4), 1025–1051. doi: 10.1177/2F1077699019843856.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 172 of 438 PageID #: 2

Bishin, B.G. (2009). *Tyranny of the Minority: The Subconstituency Politics Theory of Representation*. Philadelphia, PA: Temple University Press.

Bishin, B.G., and Smith, C.A. (2013). When do legislators defy popular sovereignty? Testing theories of minority representation using DOMA. *Political Research Quarterly, 66*(4), 794–803.

Blake, V., and Hatzenbuehler, M.L. (2019). Legal remedies to address stigma-based health inequalities in the United States: Opportunities and challenges. *Milbank Quarterly, 97,* 480–504.

Blosnich, J.R., Cassese, E.C., Friedman, M.R., Coulter, R.W., Sang, J.M., Matthews, D.D., and Mair, C. (2018). Religious freedom restoration acts and sexual minority population health in the United States. *American Journal of Orthopsychiatry*, *89*(6), 675–681. doi: 10.1037/ort0000349.

Bolger, N., Davis, A., and Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, *54*(1), 579–616. doi: 10.1146/annurev.psych.54.101601.145030.

Boushey, G. (2010). *Policy Diffusion Dynamics in America*. New York: Cambridge University Press.

Brewer, P.R. (2001). Value words and lizard brains: Do citizens deliberate about appeals to their core values? *Political Psychology, 22*(1), 45–64. doi: 10.1111/0162-895X.00225.

Brewer, P.R. (2007). *Value War: Public Opinion and the Politics of Gay Rights*. Lanham, MD: Rowman and Littlefield Publishers.

Broockman, D., and Kalla, J. (2016). Durably reducing transphobia: A field experiment on door-to-door canvassing. *Science, 352*(6282), 220–224.

Broockman, D.E., and Skovron, C. (2018). Bias in perception of public opinion among political elites. *American Political Science Review, 112*(3), 542–563.

Burack, C. (2008). *Sin, Sex, and Democracy: Antigay Rhetoric and the Christian Right*. Albany: State University of New York Press.

Campbell, D.T., and Fiske, D.W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81–105. doi: 10.1037/h0046016.

Carroll, W.K., and Ratner, R.S. (1999). Media strategies and political projects: A comparative study of social movements. *Canadian Journal of Sociology, 24*(1), 1–34.

Chae, D.H., Clouston, S., Hatzenbuehler, M.L., Kramer, M.R., Cooper, H.L., Wilson, S.M., Stephens-Davidowitz, S.I., Gold, R.S., and Link, B.G. (2015). Association between an internet-based measure of area racism and black mortality. *Public Library of Science, 10*(4), e0122963. doi: 10.1371/journal.pone.0122963.

Cohen, C.J. (1997). Punks, bulldaggers, and welfare queens: The radical potential of queer politics? *GLQ: A Journal of Lesbian and Gay Studies, 3*, 437–465.

Cohen, C.J. (1999). *Boundaries of Blackness: AIDS and the Breakdown of Black Politics*. Chicago: University of Chicago Press.

Colvin, R.A. (2007). The rise of transgender-inclusive laws: How well are municipalities implementing supportive nondiscrimination public employment policies? *Review of Public Personnel Administration, 27*(4), 336–360.

Corrigan, P.W., Markowitz, F.E., and Watson, A.C. (2004). Structural levels of mental illness stigma and discrimination. *Schizophrenia Bulletin*, *30*(3), 481–491.

Corrigan, P.W., Watson, A.C., Heyrman, M.L., Warpinski, A., Gracia, G., Slopen, N., and Hall, L.L. (2005). Structural stigma in state legislation. *Psychiatric Services*, *56*(5), 557–563. doi: 10.1176/appi.ps.56.5.557.

Cyrus, K. (2017). Multiple minorities as multiply marginalized: Applying the minority stress theory to LGBTQ people of color. *Journal of Gay and Lesbian Mental Health, 21*(3), 194–202.

Copyright National Academy of Sciences. All rights reserved.

D'Emilio, J. (1983). *Sexual Politics, Sexual Communities: The Making of a Homosexual Minority in the United States, 1940–1970*. (1983). Chicago: University of Chicago Press.

D'Emilio, J. (2000). Cycles of change, question of strategy: The gay and lesbian movement after fifty years. In C.A. Rimmerman, K.D. Wald, and C. Wilcox (Eds.), *The Politics of Gay Rights* (pp. 31–53). Chicago: University of Chicago Press. doi: 10.1080/21565503.2018.1517047.

Diez Roux, A.V. (2007). Neighborhoods and health: Where are we and where do we go from here? *Revue d'Epidemiologie et de Sante Publique*, 55(1), 13–21. doi: 10.1016/j.respe.2006.12.003.

Dodge, B., Herbenick, D., Friedman, M.R., Schick, V., Fu, T.C., Bostwick, W., Bartlet, E., Muñoz-Laboy, D.P, Reece, M., and Sandfort, T.G.M. (2016). Attitudes toward bisexual men and women among a nationally representative probability sample of adults in the United States. *PLoS One*, *11*(10). doi: 10.1371/journal.pone.0164430.

Downs, A. (1957). *An Economic Theory of Democracy*. New York: Columbia University Press.

Duncan, D.T., and Hatzenbuehler, M.L. (2014). Lesbian, gay, bisexual, and transgender hate crimes and suicidality among a population-based sample of sexual-minority adolescents in Boston. *American Journal of Public Health*, *104*(2), 272–278. doi: 10.2105/ajph.2013.301424.

Duncan, D.T., Hatzenbuehler, M.L., and Johnson, RM. (2014). Neighborhood-level LGBT hate crimes and current illicit drug use among sexual minority youth. *Drug and Alcohol Dependence*, *135*, 65–70.

Egan, P.J., Persily, N., and Wallsten, K. (2008). Gay rights. In N. Persily, J. Citrin, and P.J. Egan (Eds.), *Public Opinion and Constitutional Controversy* (pp. 234–266). New York: Oxford University Press.

Engel, S. (2007). Organizational identity as a constraint on strategic action: A comparative analysis of gay and lesbian interest groups. *Studies in American Political Development, 21*(1), 66–91.

Evans-Lacko, S., Brohan, E., Mojtabai, R., and Thornicroft, G. (2012). Association between public reviews of mental illness and self-stigma among individuals with mental illness in 14 European countries. *Psychological Medicine*, *42*(8), 1741–1752. doi: 10.1017/s0033291711002558.

Everett, B.G., Hatzenbuehler, M.L., and Hughes, T.L. (2016). The impact of civil union legislation on minority stress, depression, and hazardous drinking in a diverse sample of sexual-minority women: A quasi-natural experiment. *Social Science and Medicine*, *169*, 180–190.

Fetner, T. (2008). *How the Religious Right Shaped Lesbian and Gay Activism*. Minneapolis: University of Minnesota Press.

Flores, A.R. (2019). Persuasion and ballot initiatives: How persuasive were the televised ads on same-sex marriage? *Politics, Groups, and Identities, 7*(1), 177–193.

Flores, A.R., and Barclay, S. (2016). Backlash, consensus, legitimacy, or polarization: The effect of same-sex marriage policy on mass attitudes. *Political Research Quarterly, 69*(1), 43–56.

Flores, A.R., Herman, J.L., and Mallory, C. (2015). Transgender inclusion in state non-discrimination policies: The democratic deficit and political powerlessness. *Research and Politics, 2*(4), doi: 10.1177/2053168015612246.

Flores, A.R., Hatzenbuehler, M.L., and Gates, G.J. (2018). Identifying psychological responses of stigmatized groups to referendums. *Proceedings of the National Academy of Sciences*, *115*(15), 3816–3821.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 174 of 438 PageID #: 2

Flores, A.R., Haider-Markel, D.P. Lewis, D.C., Miller, P.R., Tadlock, B.L., and Taylor, J.K. (2018). Transgender prejudice reduction and opinion on transgender rights: Results from a mediation analysis on experimental data. *Research and Politics*, 5(1), doi: 10.1177/2053168018764945.

Frost, D.M., and Fingerhut, A.W. (2016). Daily exposure to negative campaign messages decreases same-sex couples' psychological and relational well-being. *Group Processes and Intergroup Relations*, *19*(4), 477–492. doi: 10.1177/1368430216642028.

Gamson, W.A., and Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American Journal of Sociology, 95*(1), 1–37. doi: 10.1086/229213.

Gamson, W.A., and Wolfsfeld, G. (1993). Movements and media as interacting systems. *Annals of the American Academy of Political and Social Science, 528*(1), 114–125.

Garretson, J.J. (2014). Exposure to the lives of lesbian women and gay men and the origin of young people's greater support for gay rights. *International Journal of Public Opinion Research, 27*(2), 277–288.

Garretson, J.J. (2015). Does change in minority and women's representation on television matter? A thirty-year study of television and social tolerance. *Politics, Groups, and Identities, 3*(4), 615–632.

Garretson, J.J. (2018). *The Path to Gay Rights: How Activism and Coming Out Changed Public Opinion*. New York: New York University Press.

Ghaziani, A., Taylor, V., and Stone, A. (2016). Cycles of sameness and difference in LGBT social movements. *Annual Review of Sociology, 42*, 165–183.

Gossett, C.W. (1999). Dillon's Rule and gay rights: State control over local efforts to protect the rights of lesbian women and gay men. In E.D.B. Riggle and B.L. Tadlock (Eds.), *Gay and Lesbian Women in the Democratic Process: Public Policy, Public Opinion, and Political Representation* (pp. 62–88). New York: Columbia University Press.

Gould, D.B. (2009). *Moving Politics: Emotion and ACT UP's Fights against AIDS*. Chicago: University of Chicago Press.

Gunnar, M.R., Frenn, K., Wewerka, S.S., and Van Ryzin, M.J. (2009). Moderate versus severe early life stress: Associations with stress reactivity and regulation in 10–12-year-old children. *Psychoneuroendocrinology*, *34*(1), 62–75. doi: 10.1016/j.psyneuen.2008.08.013.

Gusfield, J.R. (1993). The social symbolism of smoking and health. In R.A. Rabin and S.D. Sugarman (Eds.), *Smoking Policy: Law, Politics, and Culture* (pp. 49–68). New York: Oxford University Press.

Gusfield, J.R. (1996). *Contested Meanings: The Construction of Alcohol Problems*. Madison: University of Wisconsin Press.

Haider-Markel, D.P. (1997). Interest group survival: Shared interests versus competition for resources. *Journal of Politics, 59*(3), 903–912.

Haider-Markel, D.P. (2010). *Out and Running: Gay and Lesbian Candidates, Elections, and Policy Representation*. Washington, DC: Georgetown University Press.

Haider-Markel, D.P., Querze, A., and Lindaman, K. (2007). Lose, win, or draw? A reexamination of direct democracy and minority rights. *Political Research Quarterly, 60*(2), 304–314.

Hansen, E.R., and Treul, S.A. (2015). The symbolic and substantive representation of LGB American in the US House. *Journal of Politics, 77*(4), 955–967.

Harrison, B.F., and Michelson, M.R. (2017). *Listen, We Need to Talk: How to Change Attitudes about LGBT Rights*. New York: Oxford University Press.

Hatzenbuehler, M.L. (2009). How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological Bulletin, 135,* 707–730.

Hatzenbuehler, M.L. (2011). The social environment and suicide attempts in lesbian, gay, and bisexual youth. *Pediatrics*, *127*(5), 896–903.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 175 of 438 PageID #: 2

Hatzenbuehler, M.L. (2017). Structural stigma and health. In B. Major, J.F. Dovidio, and B.G. Link, (Eds.), *The Handbook of Stigma, Discrimination and Health* (pp. 105–121). Oxford: Oxford University Press.

Hatzenbuehler, M.L., and Keyes, K.M. (2013). Inclusive anti-bullying policies and reduced risk of suicide attempts in lesbian and gay youth. *Journal of Adolescent Health*, *53*(1, Supplement), S21–S26. doi: 10.1016/j.jadohealth.2012.08.010.

Hatzenbuehler, M., and Link, B. (2014). Introduction to the special issue on structural stigma and health. Social Science & Medicine, *103*, 1–6. doi: 10.1016/j.socscimed.2013.12.017.

Hatzenbuehler, M.L., and McLaughlin, K.A. (2014). Structural stigma and hypothalamic–pituitary–adrenocortical axis reactivity in lesbian, gay, and bisexual young adults. *Annals of Behavioral Medicine*, *47*(1), 39–47.

Hatzenbuehler, M.L., Keyes, K.M., and Hasin, D.S. (2009). State-level policies and psychiatric morbidity in lesbian, gay, and bisexual populations. *American Journal of Public Health*, *99*(12), 2275–2281. doi: 10.2105/AJPH.2008.153510.

Hatzenbuehler, M.L., McLaughlin, K.A., Keyes, K.M., and Hasin, D.S. (2010). The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study. *American Journal of Public Health*, *100*(3), 452–459. doi: 10.2105/AJPH.2009.168815.

Hatzenbuehler, M.L., Wieringa, N.F., and Keyes, K.M. (2011). Community-level determinants of tobacco use disparities in lesbian, gay, and bisexual youth: Results from a population-based study. *Archives of Pediatric & Adolescent Medicine, 165*(6), 527–532. doi: 10.1001/archpediatrics.2011.64. PMID: 21646585.

Hatzenbuehler, M.L., O'Cleirigh, C., Grasso, C., Mayer, K., Safren, S., and Bradford, J. (2012). Effect of same-sex marriage laws on health care use and expenditures in sexual minority men: A quasi-natural experiment. *American Journal of Public Health*, *102*(2), 285–291. doi: 10.2105/Ajph.2011.300382.

Hatzenbuehler, M.L., Phelan, J.C., and Link, B.G. (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health*, *103*(5), 813–821.

Hatzenbuehler, M.L., Birkett, M., Van Wagenen, A., and Meyer, I.H. (2014a). Protective school climates and reduced risk for suicide ideation in sexual minority youths. *American Journal of Public Health, 104*(2), 279–286. doi: 10.2105/AJPH.2013.301508.

Hatzenbuehler, M.L., Jun, H.-J., Corliss, H.L., and Austin, S.B. (2014b). Structural stigma and cigarette smoking in a prospective cohort study of sexual minority and heterosexual youth. *Annals of Behavioral Medicine*, *47*(1), 48–56.

Hatzenbuehler, M., Duncan, D., and Johnson, R. (2015). Neighborhood-level LGBT hate crimes and bullying among sexual minority youths: A geospatial analysis. *Violence and Victims, 30*. doi: 10.1891/0886-6708.VV-D-13-00166.

Hatzenbuehler, M.L., Jun, H.-J., Corliss, H.L., and Austin, S.B. (2015). Structural stigma and sexual orientation disparities in adolescent drug use. *Addictive Behaviors*, *46*, 14–18. doi: 10.1016/j.addbeh.2015.02.017.

Hatzenbuehler, M.L., Flores, A.R., and Gates, G.J. (2017). Social attitudes regarding same-sex marriage and LGBT health disparities: Results from a national probability sample. *Journal of Social Issues, 73*(3), 508–528.

Hatzenbuehler, M.L., Bränström, R., and Pachankis, J.E. (2018). Societal-level explanations for reductions in sexual orientation mental health disparities: Results from a ten-year, population-based study in Sweden. *Stigma and Health, 3,* 16–26.

Hatzenbuehler, M.L., Rutherford, C., McKetta, S., Prins, S.J., and Keyes, K.M. (2019a). Structural stigma and all-cause mortality among sexual minorities: Differences by sexual behavior? *Social Science and Medicine*, 112463.

Hatzenbuehler, M.L., Shen, Y., Vandewater, E.A., and Russell, S.T. (2019b). Proposition 8 and homophobic bullying in California. *Pediatrics, 143*(6), e20182116.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 176 of 438 PageID #: 2

Hindman, M.D. (2017). Promiscuity of the past: Neoliberalism and gay sexuality pre- and post-AIDS. *Politics, Groups, and Identities, 7*(1), 52–70.

Hughto, J.M.W., Reisner, S.L., and Pachankis, J.E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science and Medicine*, *147*, 222–231. doi: 10.1016/j.socscimed.2015.11.010.

Hull, K.E. (2001). The political limits of the rights frame: The case of same-sex marriage in Hawaii. *Sociological Perspectives, 44*(2), 207–232.

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

Iyengar, S., and Kinder, D.R. (2010). *News that Matters: Television and American Opinion*. Chicago: University of Chicago Press. (Original work published in 1987.)

Jones, P.E., and Brewer, P.R. (2020). Elite cues and public polarization on transgender rights. *Politics, Groups, and Identities, 8*(1), 71–85.

Kalla, J.L., and Broockman, D.E. (2020). Reducing exclusionary attitudes through interpersonal conversation: Evidence from three field experiments. *American Political Science Review, 114*(2), 410–425. doi: 10.1017/S0003055419000923.

Kingdon, J.W. (1984). *Agendas, Alternatives, and Public Policies*. Boston: Little, Brown and Company.

Kreitzer, R.J., and Smith, C.W. (2018). Reproducible and replicable: An empirical assessment of the social construction of politically relevant target groups. *Political Science and Politics, 51*(4), 768–774.

Krieger, N., Chen, J.T., Coull, B., Waterman, P.D., and Beckfield, J. (2013). The unique impact of abolition of Jim Crow laws on reducing inequities in infant death rates and implications for choice of comparison groups in analyzing societal determinants of health. *American Journal of Public Health*, *103*(12), 2234–2244. doi: 10.2105/AJPH.2013.301350.

Krimmel, K., Lax, J.R., and Phillips, J.H. (2016). Gay rights in congress: Public opinion and (mis)representation. *Public Opinion Quarterly, 80*(4), 888–913.

Lawless, J.L. (2012). *Becoming a Candidate: Political Ambition and the Decision to Run for Office*. New York: Cambridge University Press.

Lax, J.R., and Phillips, J.H. (2009). Gay rights in the states: Public opinion and policy responsiveness. *American Political Science Review, 103*(3), 367–386.

Lax, J.R., and Phillips, J.H. (2012). The democratic deficit in the states. *American Journal of Political Science, 56*(1), 148–166.

Lee, T. (2002). *Mobilizing Public Opinion: Black Insurgency and Racial Attitudes in the Civil Rights Era*. Chicago: University of Chicago Press.

Leitner, J.B., Hehman, E., Ayduk, O., and Mendoza-Denton, R. (2016). Racial bias is associated with ingroup death rate for Blacks and Whites: Insights from Project Implicit. *Social Science and Medicine*, *170*, 220–227.

Lempinen, E. (2020). *To Persuade an Opponent, Try Listening, Berkeley Scholar Says*. Phys.org. Available: https://phys.org/news/2020-06-opponent-berkeley-scholar.html#:~:text=For%20a%202016%20study%20published%20in%20Science%2C%20Broockman,control%20group%2C%20said%20nothing%20to%20residents%20about%20transphobia.

Levy, B.L., and Levy, D.L. (2017). When love meets hate: The relationship between state policies on gay and lesbian rights and hate crime incidence. *Social Science Research*, *61*, 142–159. doi: 10.1016/j.ssresearch.2016.06.008.

Lewis, D.C. (2019). Direct democracy and LGBT rights. In D.H. Markel (Ed.), *The Oxford Encyclopedia of LGBT Politics and Policy*. New York: Oxford University Press. Available: https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-1205.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 177 of 438 PageID #: 2

Lewis, D.C., Taylor, J.K., DiSarro, B., and Jacobmeiser, M. (2014). Is transgender policy different? Policy complexity, policy diffusion, and LGBT nondiscrimination laws. In J.K. Taylor and D.P. Haider-Markel (Eds.), *Transgender Rights and Politics: Groups, Issue Framing, and Policy Adoption* (pp. 155–188). Ann Arbor: University of Michigan Press.

Link, B.G., and Phelan, J.C. (2001). Conceptualizing stigma. *Annual Review of Sociology, 27*, 363–385.

Livingston, J.D. (2013). *Mental Illness-Related Structural Stigma: The Downward Spiral of Systemic Exclusion*. Calgary, Alberta: Mental Health Commission of Canada.

Maisel, N.C. and Fingerhut, A.W. (2011). California's Ban on Same Sex Marriage: The Campaign and its Effects on Gay, Lesbian, and Bisexual Individuals. *Journal of Social Issues, 67*: 242–263. doi.org/10.1111/j.1540 560.2011.01696.x.

Major, B., and O'Brien, L.T. (2005). The social psychology of stigma. *Annual Review of Psychology*, 56, 393–421. doi: 10.1146/annurev.psych.56.091103.070137.

Marcus, N.C. (2015). Bridging bisexual erasure in LGBT-rights discourse and litigation. *Michigan Journal of Gender and Law, 22*, 291–344.

Mayo-Adam, E. (2020). *Queer Alliances: How Power Shapes Political Movement Formation.* Stanford: Stanford University Press.

McAdam, D. (1982). *Political Process and the Development of Black Insurgency, 1930–1970.* Chicago: University of Chicago Press.

McAdam, D. (1996). The framing function of movement tactics: Strategic dramaturgy in the American Civil Rights Movement. In D. McAdam, J.D. McCarthy, and M.N. Zaled (Eds.), *Comparative Perspectives on Social Movements* (pp. 338–355). New York: Cambridge University Press.

McThomas, M., and Buchanan, R.J. (2012). President Obama and gay rights: The 2008 and 2012 presidential elections. *Political Science and Politics, 45*(3), 442–448.

Meyer, I.H., Luo, F., Wilson, B.D., and Stone, D.M. (2019). Sexual orientation enumeration in state antibullying statutes in the United States: Associations with bullying, suicidal ideation, and suicide attempts among youth. *LGBT Health*, *6*(1), 9–14.

Michelson, M.R., and Harrison, B.F. (2020). *Transforming Prejudice: Identity, Fear, and Transgender Rights*. New York: Oxford University Press.

Miller, C.T., Grover, K.W., Bunn, J.Y., and Solomon, S.E. (2011). Community norms about suppression of AIDS-related prejudice and perceptions of stigma by people with HIV or AIDS. *Psychological Science*, *22*(5), 579–583.

Mintrom, M., and Norman, P. (2009). Policy entrepreneurship and policy change. *Policy Studies Journal, 37*(4), 649–667. doi: 10.1111/j.1541-0072.2009.00329.x.

Movement Advancement Project. (2018). *The Power of State Preemption: Preventing Progress and Threatening Equality*. Boulder, CO: Movement Advancement Project. Available: http://www.lgbtmap.org/file/Preemption-Report-FINAL.pdf.

Murib, Z. (2017). Rethinking GLBT as a descriptive and analytic category in political science. In M. Brettschneiders, S. Burgess, and C. Keating (Eds.), *LGBTQ Politics: A Critical Reader* (pp. 14–33). New York: New York University Press.

Ofosu, E.K., Chambers, M.K., Chen, J.M., and Hehman, E. (2018). Same-sex marriage legalization associated with reduced implicit and explicit antigay bias. *Proceedings of the National Academy of Sciences of the United States of America, 116*(18), 8846–8851.

Pachankis, J.E., and Bränström, R. (2018). Hidden from happiness: Structural stigma, sexual orientation concealment, and life satisfaction across 28 countries. *Journal of Consulting and Clinical Psychology*, *86*(5), 403.

Pachankis, J.E., Hatzenbuehler, M.L., and Starks, T.J. (2014). The influence of structural stigma and rejection sensitivity on young sexual minority men's daily tobacco and alcohol use. *Social Science and Medicine*, *103*, 67–75.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 178 of 438 PageID #: 2

Pachankis, J.E., Hatzenbuehler, M.L., Hickson, F., Weatherburn, P., Berg, R., Marcus, U., and Schmidt, A.J. (2015). Hidden from health: Structural stigma, sexual orientation concealment, and HIV across 38 countries in the European MSM Internet Survey (EMIS). *AIDS*, *29*, 1239–1246. doi: 10.1097/QAD.0000000000000724.

Pachankis, J.E., Hatzenbuehler, M.L., Berg, R.C., Fernandez-Davila, P., Mirandola, M., Marcus, U., Weatherburn, O., and Schmidt, A.J. (2017). Anti-LGBT and anti-immigrant structural stigma: An intersectional analysis of sexual minority men's HIV risk when migrating to or within Europe. *Journal of Acquired Immune Deficiency Syndromes*, *76*(4), 356–366. doi: 10.1097/QAI.0000000000001519.

Perales, F., and Todd, A. (2018). Structural stigma and the health and well-being of Australian LGB populations: Exploiting geographic variation in the results of the 2017 same-sex marriage plebiscite. *Social Science and Medicine*, *208*, 190–199.

Perez-Brumer, A., Hatzenbuehler, M.L., Oldenburg, C.E., and Bockting, W. (2015). Individual- and structural-level risk factors for suicide attempts among transgender adults. *Behavioral Medicine*, *41*(3), 164–171.

Proctor, A. (2020). LGBT people as a relatively politically powerless group. In D.P. Haider-Markel (Ed.), *Oxford Encyclopedia of LGBT Politics and Policy*. New York: Oxford University Press. Available: https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-1185.

Raifman, J., Moscoe, E., Austin, S.B., and McConnell, M. (2017). Difference-in-differences analysis of the association between state same-sex marriage policies and adolescent suicide attempts. *JAMA Pediatrics*, *171*, 350–356.

Raifman, J., Moscoe, E., Austin, S.B., Hatzenbuehler, M.L., and Galea, S. (2018). Association of state laws permitting denial of services to same-sex couples with mental distress in sexual minority adults: A difference-in-difference-in-differences analysis. *JAMA Psychiatry*, *75*(7), 671–677.

Reynolds, A. (2013). Representation and rights: The impact of LGBT legislators in comparative perspective. *American Political Science Review, 107*(2), 259–274.

Reynolds, A. (2018). *The Children of Harvey Milk: How LGBTQ Politicians Changed the World*. New York: Oxford University Press.

Rostosky, S.S., Riggle, E.D., Horne, S.G., Denton, F.N., and Huellemeier, J.D. (2010). Lesbian, gay, and bisexual individuals' psychological reactions to amendments denying access to civil marriage. *American Journal of Orthopsychiatry*, *80*(3), 302–310.

Rugg, D., Buehler, J., Renaud, M., Gilliam, A., Heitgerd, J., Westover, B., Wright-Deaguero, L., Bartholow, K., and Swanson, S. (1999). Evaluating HIV prevention: A framework for national, state and local levels. *American Journal of Evaluation, 20*(1), 35–56.

Russell, G.M., and Richards, J.A. (2003). Stressor and resilience factors for lesbian women, gay men, and bisexuals confronting antigay politics. *American Journal of Community Psychology*, *31*(3-4), 313–328.

Ryan, C. (1991). *Prime Time Activism: Media Strategies for Grassroots Organizing*. Boston: South End Press.

Schiappa, E., Gregg, G.G., and Hewes, D.E. (2005). The parasocial contact hypothesis. *Communication Monographs, 72*(1), 92–115.

Schiappa, E., Gregg, G.G., and Hewes, D.E. (2006). Can one TV show make a difference? Will & Grace and the parasocial contact hypothesis. *Journal of Homosexuality, 51*(4), 15–37.

Schneider, A., and Ingram, H. (1993). Social construction of target populations: Implications for politics and policy. *American Political Science Review, 87*(2), 334–347. doi: 10.2307/2939044.

Sellers, M.D., and Colvin, R. (2014). Policy learning, language, and implementation by local governments with transgender-inclusive nondiscrimination policies. In J.K. Taylor and D.P. Haider-Markel (Eds.), *Transgender Rights and Politics: Groups, Issue Framing, and Policy Adoption* (pp. 208–230). Ann Arbor: University of Michigan Press.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 179 of 438 PageID #: 2

Shepard, B. (2013). From community organization to direct services: The Street Trans Action Revolutionaries to Sylvia Rivera Law Project. *Journal of Social Service Research*, *39*(1), 95–114.

Sherrill, K. (1996). The political power of lesbian women, gays, and bisexuals. *Political Science and Politics*, *29*(3), 469–473.

Smith, C.A. (2007). The electoral captures of gay and lesbian Americans: Evidence and implications from the 2004 election. In A. Sarat (Ed.), *Studies in Law, Politics, and Society, Vol. 40* (pp. 103–121). Bingley: Emerald Group Publishing.

Solomon, M. (2014). *Winning Marriage: The Inside Story of How Same-Sex Couples Took on the Politicians and Pundits—And Won*. Lebanon, NH: University Press of New England.

Stone, A. (2012). *Gay Rights at the Ballot Box*. Minneapolis: University of Minnesota Press.

Strolovitch, D.Z. (2007). *Affirmative Advocacy: Race, Class, and Gender in Interest Group Politics*. Chicago: University of Chicago Press.

Strolovitch, D.Z. (2012). Intersectionality in time: Sexuality and shifting boundaries of intersectional marginalization. *Politics and Gender, 8*(3), 386–396.

Tankard, M.E., and Paluck, E.L. (2017). The effect of a Supreme Court decision regarding gay marriage on social norms and personal attitudes. *Psychological Science, 28*(9), 1334–1444. doi: 10.1177%2F0956797617709594.

Taylor, J.K., Lewis, D.C., Jacobmeier, M.L., and DiSarro, B. (2012). Content and complexity in policy reinvention and diffusion: Gay and transgender-inclusive laws against discrimination. *State Politics and Policy Quarterly, 12*(1), 75–98.

Taylor, J.K., Tadlock, B.L., and Poggione, S. (2013). State LGBT rights policy outliers: Transsexual birth certificate amendment laws. *American Review of Politics, 34*(Winter), 245–270.

Taylor, J.K., Tadlock, B.L., Poggione, S., and DiSarro, B. (2014). Transgender inclusive ordinances in cities: Form of government, local politics, and vertical influences. In J.K. Taylor and D.P. Haider-Markel (Eds.), *Transgender Rights and Politics: Groups, Issue Framing, and Policy Adoption* (pp. 135–154). Ann Arbor: University of Michigan Press.

Taylor, J.K., Lewis, D.C., and Haider-Markel, D.P. (2018). *The Remarkable Rise of Transgender Rights*. Ann Arbor: University of Michigan Press.

Taylor, J.K., Lewis, D.C., Haider-Markel, D.P., Flores, A.R., Miller, P.R., and Tadlock, B. (2018). The factors underlying public opinion about transgender rights. In J.K. Taylor, D.C. Lewis, and D.P. Haider-Markel, *The Remarkable Rise of Transgender Rights* (pp. 87–106). Ann Arbor: University of Michigan Press.

Theodoulou, S. (2013). In search of a framework to understand the policy process. In M. Cahn (Ed.), *Public Policy: The Essential Readings*, 2nd Ed. (pp. 123–133). Boston, MA: Pearson.

Tilcsik, A. (2011). Pride and prejudice: Employment discrimination against openly gay men in the United States. *American Journal of Sociology*, *117*(2), 586–626. doi: 10.1086/661653.

Tyson, V.C. (2016). *Twists of Fate: Multiracial Coalition and Minority Representation in the US House of Representatives*. New York: Oxford University Press.

Valelly, R.M. (2012). LGBT politics and American political development. *Annual Review of Political Science, 15*, 313–332.

Victory Institute. (2020). *Out for America 2020: A Census of LGBTQ Elected Officials Nationwide*. Washington, DC: Victory Institute. Available: https://victoryinstitute.org/out-for-america-2020/.

Ward, J. (2008). *Respectably Queer: Diversity Culture in LGBT Activist Organizations*. Nashville: Vanderbilt University Press.

Wallace, A., Maulbeck, B.F., and Kan, L.M. (2019). *2017 Tracking Report: Lesbian, Gay, Bisexual, Transgender, and Queer Grantmaking by U.S. Foundations*. New York: Funder for LGBTQ Issues. Available: https://lgbtfunders.org/research-item/2017-tracking-report/.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 180 of 438 PageID #: 2

Wilson, A.R., and Burack, C. (2012). "Where liberty reigns and God is supreme": The Christian Rights and the Tea Party Movement. *New Political Science, 34*(2), 172–190. doi: 10.1080/07393148.2012.676395.

Worthen, M.G.F. (2013). An argument for separate analyses of attitudes toward lesbian, gay, bisexual men, bisexual women, MtF and FtM transgender individuals. *Sex Roles*, *68*(11), 703–723. doi: 10.1007/s11199-012-0155-1.

Wright, J. (2003). *Interest Groups and Congress: Lobbying, Contributions, and Influence.* New York: Longman.

Zaller, J.R. (1992). *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 181 of 438 PageID #: 2

7

Community and Civic Engagement

Sexual and gender diverse (SGD) populations are composed of multiple communities and groups of people with intersecting identities, experiences, and oppressions. The cultural and social contexts that define these groups ultimately shape possibilities for civic and political engagement—what we call sociopolitical involvement—of SGD people (Harris, Battle, and Pastrana, 2018). Communities are composed of and influenced by a variety of actors: the social-ecological context explains the individual, interpersonal, community, and societal factors that affect and shape the conditions in which those actors exist.

Beginning more than a half century ago, SGD community organizations emerged and began to provide spaces for people not only to name and recognize their identities but also to establish venues and strategies for collective action toward visibility and, ultimately, social recognition and legal rights. These spaces, whether physical, virtual, or institutional, have been instrumental in providing the resources and the physical ability to convene for SGD communities. This chapter considers what community is while examining the ways that SGD communities claim, integrate, and negotiate spaces. It also includes a discussion of the effects that community and mobilization have on the lives and histories of SGD populations and explores how space is used as a tool for community building and mobilization.

THE NATURE OF SEXUAL AND GENDER DIVERSE COMMUNITIES

For SGD populations, community has long been an important way to mobilize a range of people with disparate experiences around a set of issues

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 182 of 438 PageID #: 2

and problems. As discussed throughout this report, SGD people in the United States face forms of oppression, discrimination, and violence because aspects of their gender identities, sexual identities, and expression do not conform to societal conventions and sexualities (Rubin, 1993; Spade, 2011; Warner, 2000). They often struggle with racial, gender, and class divisions, hierarchies, and exclusions. Communities serve as a means through which SGD people survive, withstand, and, in some cases, overcome these conditions.

The word "community" has been used so pervasively to describe numerous groups and sectors of people throughout the country that some scholars believe the value of its meaning has eroded (Joseph, 2007). "Community" is often invoked to describe sociopolitical movements across spectrums of race and ethnic, social, cultural, gender, and sexual identities and experiences. Yet communities are diverse and are forged around a myriad of experiences and consensus issues, rather than solely shared identities (Cohen, 1997, 1999).

SGD communities are made up of people from a variety of racial and ethnic, socioeconomic, cultural, political, regional, age, and ability groups (Joseph, 2007). Some communities with cross-cutting concerns come together and forge strategic connections to meet particular needs and address certain problems. These communities can be active for the long or short term, and they can experience cohesion and conflict, inclusion and exclusion, and affirmation and degradation all at the same time. Defining and understanding the role of community for SGD populations is complex and multidimensional. As other chapters in this report discuss, many SGD people experience socioeconomic deprivation: homelessness and housing instability, under- and unemployment, and institutional violence and discrimination. In this context, community becomes an important means of emotional, social, moral, and political support. In general, the role of community can be examined as three interconnected points: a form of public culture, a site of internal and external contests, and a key source of social and political support. Thus, community is both a site and a source of struggle, hierarchy, and liberation for SGD populations. Community serves as a source of belonging, value, affirmation, and collectivity, all of which are values and feelings associated with well-being.

Community psychologists emphasize the importance that community has on individuals' sense of well-being and their need for relationships and relationship building (Coulombe and Krzesni, 2019). In fact, well-being has been defined as "a positive state of affairs, brought about by the simultaneous and balanced satisfaction of diverse objectives and subjective needs of individuals, relationships, organizations, and communities" (Prilleltensky, Prilleltensky, and Voorhees, 2016, p. 1; Coulombe and Krzesni, 2019). Scholars emphasize that social needs are satisfied by feelings of community, thus contributing not just to well-being but also to happiness (Davidson

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 183 of 438 PageID #: 2

and Cotter, 1991). For marginalized groups, communities not only contribute to their overall well-being, but also serve as a way to resist and survive the daily forms of oppression they face and a way to withstand and overcome rejection from families and communities of origin.

Communities may form around social and cultural identities, particularly if these identities are marginalized and contested, as is the case with SGD populations. The oppression that they experience—including housing and job discrimination, lack of access to health and medical care, and homophobic and transphobic violence by police (Arredondo and Suárez, 2019)—encourage community formation and mobilization. And even as communities have been a site of refuge, affirmation, and safety, they have also been targets of violence throughout history, as well as targets for surveillance and violence from people who are hostile to sexual and gender diversity.

Often, community and culture overlap or, at least, have notable intersections for many SGD people. According to cultural theorist George Yudice (2007), culture can be a way of life for people, a group, or humanity in general. Many scholars have described SGD communities as subcultures and have referred to larger sexual and gender diverse communities as cultural formations (Bailey, 2013; D'Emilio, 1983). Culture also overlaps with community in the creation of spaces and occasions for political, intellectual, creative, and artistic activities (Yudice, 2007) that celebrate, affirm, and enhance the lives of sexual and gender diverse people. There is a long history of creative endeavors among sexual and gender diverse populations, such as the Mattachine Society and the Daughters of Bilitis—mid-20th century organizations that promoted visibility and acceptance for gay men and lesbian women, respectively (D'Emilio, 1983). These organizations produced publications that highlighted cultural works within these communities (D'Emilio, 1983; Gutterman, 2012). Another example is the Combahee River Collective, a group of Black lesbian feminists who in 1970 crafted the celebrated Combahee River Collective Statement that helped to shape contemporary Black feminist and queer studies, activism, and politics (Combahee River Collective, 1983).

Central to community formations for SGD people is access to public space. Contemporary understandings of what "public" includes are increasingly expanding to include everything from physical spaces to community online engagement, as well as all spaces of social and cultural convening in a given location. Public cultural events are also opportunities for meeting people for romantic, intimate, and sexual relations. Thus, public culture for SGD populations can be understood as occasions, spaces, and domains that enable people to come together to socialize, connect, engage, and, in some cases, create, affirm, and promote, either implicitly or explicitly, shared social identities, experiences, and locations.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 184 of 438 PageID #: 2

Two of the most notable and celebrated moments of public culture and catalysts for the contemporary lesbian and gay liberation movement were the Compton Cafeteria riots in the Tenderloin district in San Francisco in 1966 (Stryker and Silverman, 2005) and the Stonewall rebellion in 1969 at the Stonewall Inn, a gay bar on Christopher Street in Greenwich Village in New York City (D'Emilio, 1983; Jagose, 1996). Both of these events were led by Black and Latinx transgender women, although their efforts were overshadowed by the white, cisgender gay men who participated (Snorton, 2018). Two very prominent figures in the liberation movement sparked by the Stonewall Riots were transgender and drag queen militants Sylvia Rivera and Marsha P. Johnson, who cofounded Street Transvestite Action Revolutionaries (STAR) (Johnson and Rivera-Servera, 2016). The two activists started this organization to help young homeless drag queens find housing and other services. Though the actual diversity of the contemporary lesbian and gay liberation movement—across racial, sexual orientation, and gender axes—is often excluded from the popular narrative, the Compton and Stonewall uprisings are but two of the many examples of the work of SGD communities in fighting against inequalities and oppression. It is important to note that these exclusions from SGD histories coincide with race, gender, and class hierarchies that still affect SGD communities.

THE IMPORTANCE OF SPACE TO SEXUAL AND GENDER DIVERSE COMMUNITIES

"We're here. We're queer. Get used to it" was often chanted at LGBTQ festivals, events, and rallies in the 1980s and 1990s, not only as a message to heterosexual and cisgender populations but also as a message to SGD individuals to reaffirm their rights to be themselves, form communities, and take up space. In this context, space can be described as the means through which marginalized communities, particularly SGD populations, reimagine and remap spatial landscapes, domains, and "spheres that are livable under often unlivable conditions" (Bailey and Shabazz, 2014, p. 450). Space can be created both physically—through the construction of brick and mortar buildings and designated areas—and socially, through the mechanisms of social production. Space is a site of engagement, community formation, and mobilization (Shabazz, 2014). An individual's engagement in multiple communities not only contributes greatly to social change but also helps foster feelings of belonging and connectedness. Such feelings of belonging are particularly important for marginalized groups and, in particular, those facing multiple forms of marginalization (Harris, Battle, and Pastrana, 2018).

Twentieth century queer activists believed "sexuality was constitutional to one's identity, and that subscribing members were a discriminated minor-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 185 of 438 PageID #: 2

ity" group in need of resources and support (Martos, Wilson, and Meyer, 2017). This idea helped shift the focus from discussions of sex and sexuality to broader notions of identity. The Daughters of Bilitis and the Mattachine Society are good historical examples because these organizations provided support, resources, and a sense of community for sexual and gender diverse people who sought increased visibility and acceptance after WWII (D'Emilio, 1983). In addition, the Daughters of Bilitis also provided physical space for lesbian women and other women with same-sex attractions to meet outside of bars, which were then frequently raided by law enforcement officials. *Transvestia,* the nation's first transgender-specific magazine, first published in 1960, provided educational resources while also pushing for both the recognition of transgender identity and the decriminalization of non-binary dress. In part influenced by the social movements of the 1950s and 1960s, these community movements were motivated by the need for SGD groups to take up space and be seen. In this context, pivotal moments in the effort to combat SGD oppression, like the Compton riot and the Stonewall uprising, can be seen as violent responses by authorities and others to prevent SGD people from convening and taking up space.

Activism and political mobilization in SGD communities continued throughout the 1970s and into the early 1980s, and it contributed to the rise in HIV/AIDS activism in LGBTQ+ communities. As the decades progressed, other struggles included the fight for equal employment opportunities and housing, the opportunity to serve openly in the military, the striking down of anti-sodomy laws, the legalization of same-sex marriage in 2015, and the 2020 U.S. Supreme Court decision that confirmed LGBT protections from employment discrimination in Title VII of the 1964 Civil Rights Act. Although landmark achievements have been made, groups continue to fight for explicit comprehensive nondiscrimination protections on the basis of sexual orientation, gender identity, and expression. In addition, activism is a more directly intersectional approach to promoting social justice around issues of race, disability, social class, immigration, and aging.

Physical Space

Neighborhoods with large concentrations of SGD people, and businesses therein that cater to them as residents and consumers, are informally known as gayborhoods or gay villages—areas and communities that are considered to be safe spaces for SGD people (Hanhardt, 2013). Gayborhoods are often found in urban communities and are often the center of SGD communities and nightlife. Gay urban enclaves began to emerge shortly after WWII, when queer women and men were discharged from the armed services and sought out areas that were generally considered more

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 186 of 438 PageID #: 2

tolerant to SGD people (Ghaziani, 2014). Today, these neighborhoods tend to consist primarily of and cater to white gay males.[1]

Gayborhoods provide an important space not only for those who live there but also for those who use them as a refuge from the homophobia they may experience in their daily lives and communities (Gray, 2009). Convening places for SGD populations, such as bookstores, coffee shops, restaurants, bars, clubs, and bathhouses, have been a defining feature of gayborhoods. Each of these spaces has been especially popular during particular historical moments. For example, gay bathhouses were popular in the 1970s but declined in popularity when they were banned due to fears of HIV in the 1980s. Gay clubs also declined in popularity in the early 1980s, only to regain popularity in the 1990s and to again decrease in popularity in the late-2000s due, in large part, to the rise in social media and online dating. Spaces for public convening and culture for social and sexual activities for SGD people, such as lesbian and gay clubs, have continued to diminish (Oswin, 2008). Even queer-friendly vacation spaces, or "gaycation" communities, have seen a decline (Nash, 2005, 2006; Oswin, 2008). Nonetheless, these gayborhoods have provided space for queer communities—at home and even on vacation—where they have not only had a sense of safety and protection but also a real sense of community. As a result of COVID-19, there is a further decline in gay spaces, especially clubs and restaurants, many of which may never reopen (Barreira, 2020). In fact, the pandemic forced queer spaces to again reinvent themselves in an era of social distancing, moving online and even having virtual clubs and DJed Zoom sessions (Kornhaber, 2020).

In addition to bars, clubs, restaurants, and bookshops, an important feature of gayborhoods, many of which face high rental costs and operating expenses, are LGBTQ+ community centers. Such centers have been a staple in SGD communities for decades, originally serving as a space for social gathering and to provide welcome space for people of all ages. Most major cities and urban and many suburban areas have LGBTQ+ community centers (Conradson, 2003), which typically provide a variety of resources that include health services and HIV testing; workshops on the home buying process; and support groups and programs geared toward small communities and different stages of the life course. In addition to community centers, SGD groups also hold gatherings in spaces that are not necessarily LGBTQ+ focused, such as churches and schools.

[1] Examples include the Castro in San Francisco; West Hollywood in Los Angeles; Chelsea in New York City; Boystown in Chicago; Dupont Circle in Washington, D.C.; the Short North in Columbus, Ohio; Midtown in Atlanta; and the Melrose District in Phoenix. There are comparatively fewer lesbian districts in urban centers, such as Park Slope in Brooklyn and Jamaica Plain in Boston.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 187 of 438 PageID #: 2

The diminishment of public spaces for SGD people noted above is partly the result of restructuring and gentrification of neighborhoods in many cities (McGlotton, 2013). As urban communities have become increasingly gentrified, rental and ownership costs and taxes have increased, as have the costs of living in and operating businesses in them. This has forced out many LGTBQ+-owned businesses and individuals (Nero, 2005). Issues of race, class, and gender have prevented many SGD people from accessing the political, social, and economic resources and spaces in gayborhoods (Gieseking, 2013). This has especially been the case for lesbian and queer women, who have seen a sharp decline in public spaces for meeting and convening, such as bookshops, cafes, bars, and clubs (Podmore, 2006).

These changes have had an especially negative impact on queer bars and clubs. Sociologist Greggor Mattson found that between 1997 and 2017, 33 percent of gay bars closed.[2] In addition, there has been an increase in the heterosexual appropriation of queer spaces, such as heterosexual women who hold their bridal and bachelorette parties in what are generally gay male spaces (Casey, 2004).[3]

Although research on gayborhoods and on queer spaces has primarily focused on gay men, studies have documented the complicated history that lesbian women and women in general have had in claiming space in urban areas (Gieseking, 2013). In many instances, women who identified as lesbian and queer did not have access to the political, economic, and social capital enjoyed by their gay male counterparts (Adler and Brenner, 1992; Rothenberg, 1995). Throughout history, there are examples of lesbian women responding to that lack of political control by seeking out separate living environments, often in rural settings such as communes.[4] Though the number of these communities is diminishing as their residents age, these spaces have been important in providing opportunity for networking, political mobilization, and socializing (Valentine, 1993). In more urban and suburban communities, particularly among women of color, now that the lesbian and feminist bookstores and other more traditional forms of convening have closed (Liddle, 2005) there has been an increase in these women attending private parties and social gatherings at people's homes and in rented spaces (Moore, 2011).

There are arguments for the continued need and relevancy of the gayborhood (Ghaziani, 2014), but others suggest that, with increased acceptance of homosexuality, these gay-specific communities are no longer

[2] See https://greggormattson.com/2017/06/13/who-needs-gay-bars-summer-2017-tour/.

[3] See https://www.out.com/lifestyle/2016/4/11/bridal-party-problems-how-bachelorettes-are-ruining-gay-nightlife.

[4] See https://www.nytimes.com/2019/08/24/style/womyns-land-movement-lesbian-communities.html.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 188 of 438 PageID #: 2

necessary (Doan and Higgins, 2011). Gayborhoods have been criticized for being exclusionary and even for being heteronormative. Some of the controversies about gayborhoods are complicated by tense racial histories, as many of these neighborhoods were once communities of color that have since been gentrified by white LGBTQ+ people (Rosenberg, 2016). Most gayborhoods are white and predominately gay male spaces that have not historically been welcoming to homeless people, poor women, people of color, transgender people, or gender-nonconforming people who come to these neighborhoods seeking services, support, and a sense of community (Rosenberg, 2016). Rosenberg notes: "In some gay villages, those who challenge and diminish politics of respectable normativity have often been openly and deliberately targeted for expulsion" through the community policing of queer spaces (2016, p. 137). In many of these spaces, such as Christopher Street in the West Village of New York City, the mere congregating of queer and transgender youth of color has been heavily policed by white SGD adults in the community (Daniel-McCarter, 2012; Namaste, 2000).

Many spaces of gay consumption and convening are spaces of bounded exclusions based on race and gender, catering to mostly white gay men with socioeconomic privilege and maintaining prejudices against other sexual minorities (Bell and Binnie, 2004; Phelan, 2001). Because access to space to participate in public culture is influenced by the intersections of race, gender, sexuality, and social class, working class and poor SGD people of color have been disproportionately affected by this shift in the spatial politics of cities. And because public spaces for SGD populations are often situated in segregated neighborhoods, SGD communities of color suffer "spatial marginalization" (Sibley, 1995; Wilkins, 2000). Spatial marginalization is a term that describes how SGD people of color are denied access to public spaces due to their race, gender, or sexual identities or the socially transgressive practices in which they engage (Bailey and Shabazz, 2014; Nero, 2005). And as noted above, many SGD communities of color experience race and gender exclusion within the larger SGD community.

Social Space

Festivals and group celebrations are an important part of LGBTQ+ culture (Morris, 2005). Lesbian and feminist festivals date back to the mid-1970s and include large annual gatherings, such as the Michigan Womyn's Festival, also known as MichFest (1976–2015); Lilith Fair, a traveling musical festival featuring all women-identified performers (1997–1999); and Dinah Shore, the Palm Springs, California, party surrounding a tennis tournament of the same name that started in 1991 and continues to attract lesbian women from around the nation and around the world.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 189 of 438 PageID #: 2

The most well-known annual LGBTQ+ celebrations that take place in most large cities are LGBTQ+ pride events; see Box 7-1. In looking at these celebrations, however, it is important to note that most of the cultural, political, and scholarly emphasis on SGD populations has been about upper- and middle-class white SGD people living in urban centers. As one of the most conspicuous sites of SGD expression, affirmation, and advocacy, LGBTQ+ pride celebrations in New York, San Francisco, and Chicago are widely known and well attended (McFarland Bruce, 2016), but there are now LGBTQ+ pride events in every major city throughout the United States, and they usually draw thousands of people to parades and multiday events throughout the year.

Although there is notably less research on the topic, discrimination and self-segregation are common within queer spaces, as many of these spaces explicitly and implicitly exclude transgender and gender diverse populations, people of color, immigrants (Epstein and Carillo, 2014), and those at their intersections. For example, although they reject the notion that they are transphobic, the Michigan Womyn's Music Festival was the object of intense backlash and a boycott from activists and community members after it actively excluded transgender women. The festival founder, Lisa Vogel, argued for a "womyn-born womyn" space, stating, "I believe in the integrity of autonomous space used to gather and celebrate for any group, whether that autonomous space is defined by age, race, ethnicity, sexual orientation, ability, gender, class, or any other identity."[5]

Similarly, many LGBTQ+ pride events are racially self-segregated. White SGD people garner far more popular attention, sociopolitical influence, and financial resources (i.e., corporate sponsorship) than other groups (Battle et al., 2002; McFarland Bruce, 2016). In many ways, the social privilege afforded to white SGD people in various domains is brought to bear at majority white LGBTQ+ pride celebrations. In some cases, LGBTQ+ pride event leadership and planning committees struggle to be racial and ethnically inclusive, and SGD people of color have challenged these planning committees to include people of color. Some SGD people stage protests at LGBTQ+ pride events to underscore the exclusion. At the 2017 Phoenix, Arizona, LGBTQ+ pride celebration, Trans Queer Pueblo, a community-based migrant and LGBTQ+ organization, carried a banner that prominently displayed the words "No Justice, No Pride" (Cashman, 2019).

There are several LGBTQ+ pride events in most major U.S. cities for other SGD subgroups, including youth, Latinx, Asian, and Native American and Indigenous groups. These and other unique LGBTQ+ events provide space to convene for many SGD people who have been excluded from or

---

[5] Excerpted from https://web.archive.org/web/20150330195141/http:/michfest.com/letter-to-the-community-4_11_13/.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 190 of 438 PageID #: 2

BOX 7-1
Black Pride Celebrations

According to Dwayne Jenkins, coordinator of Nashville Black Pride, "pride events are an opportunity for us to celebrate the life and culture of Black LGBT people."* Since the very first Black pride celebration in 1990 in Washington, D.C., Black pride events have served as a means through which some Black LGBT people come together and affirm their identities and experiences and create community. Black LGBTQ+ community formations require a kind of work, or what cultural historian Robin D. G. Kelley (2008) calls cultural labor, which sustains Black LGBT communities in the face of simultaneous forms of racial, socioeconomic, gender, and sexual marginalization and exclusion. Black pride celebrations have been one of a very few ways that Black LGBT people can collectively contend with and challenge their current conditions and contemplate ways to alter them.

There are more than twenty-five Black pride celebrations held annually, for Black LGBT people not only to celebrate and affirm their non-normative gender and sexual identities, but to contemplate issues that disproportionately affect them.* These issues include, but are not limited to, HIV/AIDS and other health disparities, education, employment, poverty, and social justice. For instance, the Hotter than July Black Pride celebration in Detroit has been referred to by event co-organizer Curtis Lipscomb as a social justice rally.** Unlike white LGBT pride celebrations that always include a parade, Black pride events typically do not include a parade, which may be reflective of the notion that Black SGD people do not come out and publicly proclaim queer gender and sexual identities at the same rate or in the same manner as do white SGD people. Rather, the celebrations, which include both old and young people, consist of such activities as candlelight vigils to commemorate people who have died, conferences, boat rides, dances, cookouts, brunches, church services, and ball events.

Black SGD people are often excluded from discourses on and political advocacy for rights and social equity for both LGBT people on the one hand and Black people on the other. Notably, simultaneous forms of oppression and exclusion contribute to Black gay men and transgender women's disproportionate representation in the HIV/AIDS epidemic, as well as their experiences with substance abuse, homelessness, and gender and sexual violence. In many ways, as a public cultural practice, Black pride celebrations mitigate feelings of isolation and low self-worth that some Black LGBTQ+ people experience.

---

*From an interview with Jasmyne Cannick, "Celebrating Black Gay Prides," on National Public Radio, June 9, 2005.

**See http://www.uixdetroit.com/people/curtislipscomb.aspx.

marginalized within mainstream SGD communities. Phoenix is said to hold the largest Latinx LGBTQ+ pride event in the country, and there are also events in Dallas and other cities with large Latinx SGD populations.

Another SGD cultural phenomenon is the ballroom culture. Sometimes referred to as the house/ball community, contemporary ballroom culture

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 191 of 438 PageID #: 2

involves Black and Latinx LGBTQ+ people, as well as straight people (Arnold and Bailey, 2009; Bailey, 2011, 2013). Three inextricable dimensions constitute the social world of ballroom culture: the gender system, houses, and balls. Although these are three separate facets of the ballroom culture, they are strongly interconnected; there are no houses without balls and no balls without houses.

First popularized by Jennie Livingstone's documentary film *Paris is Burning* (1990), ballroom culture has expanded throughout the globe in both presence and popularity. Although dimensions of ballroom culture date back to the early 20th century, the contemporary ballroom scene started in the 1960s in Harlem, New York. One of the first houses was the legendary House of LeBeija in Harlem, founded in 1970. The award-winning FX Network TV television series "Pose" is based on the ballroom community.

The gender system is a collection of six gender and sexual identities that include butch queens (gay men), femme queens (transgender women), butches (transgender men), butch queens up in drag (gay men who perform as women), and cisgender men and women. The gender system organizes the gender and sexual relations in houses and the familial (kinship) structures (Bailey, 2011). Houses consist of mothers, fathers, children, and, in many cases, an entire lineage of members who are socially connected with the ballroom community. In ballroom culture, parent-child relationships are not based on chronological age or actual blood relationships; rather, members become (or are appointed) parents of houses based on their success at walking balls (winning trophies and cash prizes) and their experience and prestige in the ballroom scene. Parents of ballroom houses provide social support, guidance, and nurturing for their house members, as well as others in the larger ballroom community. It is well known in ballroom culture that, with few exceptions, there are no houses without balls and no balls without houses. Another important role that parents play is that they train their house members (children) to compete successfully at balls.

Balls are the ritualized events that houses produce, and they draw participants from throughout North America. Although the number and kinds of categories of competition abound, most categories are based on performative gender and sexual categories, vogue and theatrical performance, and the effective presentation of fashion and physical attributes (Bailey, 2011, 2013). People participate and compete on behalf of their house or as free agents known as "007s."

For the most part, the ballroom culture has been a community consisting of working class and poor SGD people of color who have been ostracized from or marginalized within their families and communities of origin because of their non-normative genders and sexualities. For SGD populations of color, ballroom culture has been a space and practice of

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 192 of 438 PageID #: 2

social support, service, love, and critique (Bailey, 2013). In other places throughout the world in which ballroom practices have been adopted, it has been by people and communities who are marginalized in their societies. It is important to note that ballroom is a separate autonomous community formation that is highly stigmatized in the larger Black LGBT community; this situation highlights the complexity and multidimensionality of Black LGBT communities.

Virtual Space

The issues that are significant in the physical world can also be relevant in virtual worlds. Online communities can provide safe spaces for people to explore their identities and express themselves authentically, often with others who share their experiences. This type of safe space can be especially important for people who feel alienated or alone in their local communities or do not have access to in-person resources because of geographic barriers, such as those living in rural communities (Hardy, 2019). SGD youth report using online communities primarily to find peer support, and they are more likely than their non-LGBT peers to be friends with people they initially met online (Ybarra et al., 2015). SGD adults use online communities primarily to find sexual and romantic partners (Baams et al., 2011). Lesbian women and gay men are more likely to meet their partners online than are their heterosexual counterparts (Rosenfeld and Thomas, 2012).

Online communities sometimes emerge out of needs for information, connection, and support among less-visible and marginalized SGD groups. The Asexual Visibility and Education Network[6] provides information on and support around asexuality (Robbins, Low, and Query, 2016), and the InterACT website maintains a list of intersex community and advocacy organization sites in multiple countries.[7] There are also online communities for supporting LGBTQ+ people's interactions with medical professionals, including for family planning, HIV, and cancer support (Holland, 2019; Lee et al., 2019; Peterson, 2009). In addition, many SGD people create their own online communities so they can participate safely in activities that have traditionally excluded minority populations, such as Black SGD women creating communities on the online video gaming platform Xbox One (Gray, 2018).

Intersex people have relied on the internet to connect with each other for both support and social change since the 1990s. Although the practice of nondisclosure of medical information about intersex traits was intended to protect children from stigma and gender uncertainty, a consequence was

[6] See www.asexuality.org.
[7] See https://interactadvocates.org/resources/intersex-organizations/.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 193 of 438 PageID #: 2

to isolate people with intersex traits from each other. When people were informed about their medical history, they were typically told "that their anatomical differences were extremely rare and that they were unlikely to ever meet another person with a similar anatomical trait" (Davis and Preves, 2017, p. 27).

When Bo Laurent, then writing under the name of Cheryl Chase, founded the Intersex Society of North America,[8] the organization became the first important hub for intersex communities, providing sociohistorical and health resources to advance the cause of changing medical practice. Around the same time, organizations like the Androgen Insensitivity Syndrome Support Group (now InterConnect) and Bodies Like Ours coalesced with the help of the internet to provide support to people with intersex traits. Through chat rooms, email circles, and message boards, intersex people found an antidote to secrecy and isolation, sharing stories with each other and finding validation and community. Some of these groups, like InterConnect, hosted and continue to host annual in-person meetings, in addition to maintaining online connection throughout the year. The second generation of online communities sprang up with the advent of social media, especially Facebook, where virtually every intersex advocacy and support organization has a presence (Davis and Preves, 2017). Social media has also been a crucial means of raising intersex visibility, with platforms like Facebook, Tumblr, Twitter, and Instagram bringing millions of views to videos like "What it Means to Be Intersex" (Valentine, Spade, and Trautner, 2020).[9]

While SGD populations derive many benefits from online communities, negative interactions like online bullying, harassment, and discrimination also occur. Despite an overall sense of greater social safety in online communities than in real-world interactions, almost one-half of LGBTQ+ youth report being bullied online (Kosciw et al., 2017). Occasionally, SGD groups discriminate against one another by spreading exclusionary and racist rhetoric about less-prominent SGD populations (Crowley, 2010). The accessibility of the internet has also caused alarm over privacy concerns. Gay and bisexual men are more likely than heterosexual women and men to be victims of revenge porn (i.e., the nonconsensual sharing of nude or seminude photographs) (Waldman, 2019). Additionally, there have been numerous reports of violent predators using social media dating to lure SGD individuals into unsafe or potentially fatal situations.[10]

[8] See https://isna.org/faq/history/.

[9] See https://www.youtube.com/watch?v=cAUDKEI4QKI.

[10] See https://www.nbcnews.com/feature/nbc-out/michigan-man-charged-grindr-slaying-n1109596 and https://www.justice.gov/opa/pr/dallas-men-charged-hate-crimes-kidnapping-and-conspiracy-after-targeting-gay-men-violent.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 194 of 438 PageID #: 2

SGD populations can also be stigmatized online because of the design of certain websites. For instance, recent reports show that YouTube has been demonetizing videos from some SGD users because of an algorithm that appears to flag words like "gay" or "transgender" as adult content, thereby decreasing advertisement opportunities.[11] There are also reports of advertisements from anti-LGBTQ groups being added to videos with LGBTQ content.[12] Tumblr, a popular website previously known for its openness and inclusivity, banned all adult content in 2018, which disproportionately affected LGBTQ people, especially transgender and non-binary people. The site's efforts to flag and remove adult content removed blogs maintained by transgender and non-binary individuals who documented their transitions and other personal, social, and medical experiences meant to be informative to their peers (Haimson et al., 2019).

Understanding the interactions between online and real-world communities can help to maximize the benefits that SGD populations can gain from online communities while minimizing the negative outcomes. There is also a need for the technology industry to understand the needs of SGD populations in order to avoid creating technology that can lead to discrimination, harassment, and violence. Thus, although online communities are frequently charged with helping to destroy the bars, bookstores, clubs, and other spaces that have been a mainstay of SGD communities, these online communities have helped to redefine the meaning and the uses of space for SGD people. They provide a safe space in which SGD people are able to increase their social networks and access information and resources relevant to their issues, concerns, and identities.

Space in Institutions

Social institutions and systems present particular challenges for SGD populations, whose identities and presentations may clash with dominant codes and mores. In this section, we consider the role of community in efforts to make space within or to transform institutions to serve the needs of SGD individuals in religious, health care, educational, and political institutions.

Religious Institutions

The role that churches play among communities of SGD people is multifaceted and complex. In many ways, the relationship can be a mixture of

[11] See https://www.forbes.com/sites/meganhills1/2018/06/04/youtube-anti-lgbt-ads/#5b85ff74f734.

[12] See https://www.usatoday.com/story/tech/2018/07/02/youtube-apologizes-lgbtq-creators-restrictions-demonetization/751712002.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 195 of 438 PageID #: 2

affirmation, antagonism, and indifference. This section focuses primarily on Christian religious institutions as the dominant religion in the United States, though a considerable number of SGD people belong to other religions and engage in other spiritual practices.

The central role that religious institutions play in the lives of SGD populations is widely recognized, as is the fact that many of those people have antagonistic experiences in non-affirming religious institutions (Bailey and Richardson, 2019; Wilcox, 2003). Queer-antagonistic and non-open-and-affirming religious institutions often police the boundaries of gender and sexuality within communities (Bailey and Richardson, 2019). Gibbs and Goldbach's (2015) qualitative study of religious and sexual identity conflict, internalized homophobia, and suicidality among LGBT young adults aged 18–24 found that many of them reported experiencing discrimination and internalized homophobia in non-affirming religious contexts. Despite this, many SGD people belong to queer-antagonistic churches (Talvacchia, Pettinger, and Larrimore, 2015). Some of them maintain an ambivalent relationship to religious institutions while continuing to rely on them for spiritual, theological, social, and emotional support. Some SGD people challenge antagonistic and exclusionary religious groups to be open and affirming; others have separated from these religious institutions, or they have started their own SGD-accepting religious institutions.

There are several kinds of mostly Christian churches that are open to or welcome SGD populations. Scheitle, Merino, and Moore (2010) define open and affirming churches as religious denominations, institutions, or programs in which member congregations signal their acceptance of all gender identities and sexual orientations (Scheitle, Merino, and Moore, 2010; Wilcox, 2003). There are churches that have had an official designation and others that function as open on an informal basis. Open and affirming churches allow for SGD people to participate in a radically inclusive theology and, in this way, to obtain social support from clergy and fellow congregants. These churches also allow congregants to reconcile conflicts they may have felt between their theology and their sexual and gender identities and experiences (Campbell, Skovdal, and Gibbs, 2011; McQueeny, 2009).

The United Church of Christ (UCC) was one of the first denominations to openly welcome LGBTQ+ people. In 1985, the general synod of the UCC called on the congregation to adopt a nondiscrimination policy and a covenant of openness and affirmation of people who are LGBTQ+ (Scheitle, Merino, and Moore, 2010; United Church of Christ Coalition for LGBT Concerns, 2005; Wilcox, 2003). Thus, the UCC churches are known as open and affirming churches. Other denominations are referred to as gay- and lesbian-friendly congregations (Scheitle, Merino, and Moore, 2010; Wilcox, 2003).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 196 of 438 PageID #: 2

SGD people have also created LGBTQ+-designated religious spaces. These churches are preferred by some SGD people because they draw from a theology that emphasizes the lived experiences of SGD people and situates these experiences in their religious and spiritual teachings (Talvacchia, Pettinger, and Larrimore, 2015). The Universal Fellowship of Metropolitan Community Churches (UFMCC) is a denomination whose mission is to minister to SGD people (Wilcox, 2003). Troy Perry, the founder of the first UFMCC congregation in Los Angeles in 1968, believed that this church should serve "those seeking and celebrating the integration of their spirituality and sexuality" (Wilcox, 2003, p. 18). In 1982, Carl Bean, a former Motown and gospel singer, met with worshipers at his Los Angeles home and later founded Unity Fellowship Church, the first Black LGBTQ denomination.[13] Unity, with churches throughout the country, is not only the first and only Black gay denomination; it also identifies as a social movement working to respond to both the spiritual and emotional needs of congregants and their physical needs (Harris, 2014).

Much of the discussion about SGD people and religion has focused on Christianity, which has led to presumptions that other religions are not as inclusive. At a seminar entitled "Amplifying Visibility and Increasing Capacity for Sexual and Gender Diverse Populations,"[14] Khadija Kahn (Muslim Youth Leadership Council at Advocates for Youth) noted that the stereotype that Islam is inherently anti-LGBTQ and anti-woman is dangerous and untrue. LGBT Muslims are often viewed as victims trapped in a religious institution that is antagonistic toward SGD people. However, there is a growing community of LGBT people who are Muslims and who resist the stereotype that LGBT Muslims are oppressed, while also challenging the oppression and exclusion of LGBT people in Islam (al-Haqq Kugle, 2014).

There are several supportive groups in the country that provide safe spaces for SGD Muslims, such as Queer Muslims of Boston, a Facebook group for the Muslim Alliance for Gender and Sexual Diversity, and Arabian Nights, a queer Middle Eastern group in Michigan (Opalewski, 2017). Because LGBT Muslims are "a minority within a minority within a minority," they need to build bridges across gender, sexual, racial, ethnic, and religious and secular differences (al-Haqq Kugle, 2014, p. 156). While working to create inclusion within Islam, LGBT Muslims are also working with other minority communities to provide supportive and safe spaces outside of conventional spaces of Islamic practices.

Since SGD people are coming out at younger ages, they are being exposed to a variety of challenges at earlier ages. Kahn noted at the seminar

[13] See https://ufcmlife.org/.

[14] The seminar was held at the National Academies of Science, Engineering, and Medicine in August 2019: see Appendix B for the full agenda.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 197 of 438 PageID #: 2

that young LGBTQ+ Muslims face a range of challenges related to homophobia, transphobia, Islamophobia, relationship violence, immigration, the "Muslim ban," stigma around HIV, and many other issues. She said that LGBTQ+ Muslims between the ages 14 and 24 are pivotal to the Islamic activist movement.

Institutionalized religion is not the only means through which SGD people engage in spirituality. Many of them create religious and spiritual spaces that are more in alignment with their cultural identities and are not institutionalized. Some of these practices allow members to atone for the harm that institutionalized religions have done to their ancestors (e.g., the church's role in slavery) while also creating a space to affirm SGD identities.

There are a number of Indigenous, Native American, and other cultural spiritual practices that are not formally associated with institutions or traditional denominations in the United States. For example, as discussed in Chapter 1, among some Native American tribes the term "Two Spirit" refers to a gender and sexual identity that emphasizes spirituality and downplays the homosexual persona (Jacobs, Thomas, and Lang, 1997). Within such a cultural context, the spiritual is not only viewed as inseparable from gender and sexuality; it also expands the gender and sexual possibilities that members can take up (Lane, 1997). Thus, Two Spirit identity is viewed as consistent with Native American spirituality, not outside of it. This is a departure from dominant notions of LGBT identity.

Several groups of SGD worshipers throughout the United States draw from and mix traditional African religious practices, such as Candomblé, Santería, and Vodou, shaping the practices to fit their context and conditions (Matory, 2009; Strongman, 2019). These practices recognize that the binarisms that underpin sex, gender, and sexuality categories of identities are a result of settler colonialism and do not reflect traditional African spiritual systems (Jolivette, 2016; Strongman, 2019). These African diasporic religious practices, like Native American spiritual practices, include "the commingling of the human and the divine" to produce identities and experiences in which gender is not dictated by assigned sex at birth (Strongman, 2019, p. 2). This view also speaks to sexual fluidity, wherein heterosexuality is neither the only sexuality nor is it mandatory.

Health Care Institutions

This section examines the role of community in raising awareness around key health issues for SGD populations, such as HIV/AIDS (access to health care is discussed in Chapter 12). Community connectedness has been shown to help SGD people address health disparities by connecting them to important resources. For example, Hussen and colleagues (2018) found that community organizations foster shared understanding and build

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 198 of 438 PageID #: 2

social capital among Black gay and bisexual men living with HIV, which can facilitate more positive outcomes at the individual, social, and community levels.

A major impediment to the struggle for health and access to health care for LGBT people, people with intersex traits, and other SGD populations has been the social construction, medicalization, and pathologization of sexual and gender diversity (Martos, Wilson, and Meyer, 2017). Ironically, it was the early medicalization and pathologization of same-sex sexual behavior and gender nonconformity that caused health organizations and agencies to overlook the unique health issues and disparities facing SGD communities, especially those who are among the most marginalized in those communities—people of color, transgender individuals, undocumented immigrants, and those living in poverty—for whom intersecting structural oppressions exacerbate many of the health concerns they face.

Social constructionism (see Chapter 2) argues that societies and cultures inform how people perceive and understand their social world (Lupton, 2000). Just as sexuality, race, and gender identity are socially constructed, so too are understandings of health, illness, and death (Brown, 1995). Medical professionals and institutions shape the ways in which health, illness, and the body are defined, and they also helped define and medicalize same-sex attraction and gender dysphoria as health issues in need of medical intervention.

In the early 1970s, activists focused their efforts on encouraging health care professionals to declassify "homosexuality" as a mental illness. They succeeded in these efforts in 1973; however, Martos, Wilson, and Meyer (2017) describe the split that occurred between LGB and transgender organizations and groups when the diagnosis of "gender identity disorder" appeared in the *Diagnostic and Statistical Manual of Mental Disorders* in 1980. The 1970s also saw an increase in the number of organizations dedicated to providing support, resources, and community to LGBT people, with more than 1,000 LGBT organizations emerging during that time (Martos, Wilson, and Meyer, 2017).

Organizations also began to consider the unique issues facing SGD communities with the publication of a chapter on lesbian health in the second edition of *Our Bodies, Ourselves* in 1973. Soon, organizations providing resources and support for SGD groups also began to offer alternative access to health information resources, and this later included medical care. With more people coming out and seeking community, LGBT urban enclaves grew, and some health care organizations responded to a shift in local demographics by beginning to offer support for SGD patient populations. For example, Fenway Health, the nation's oldest LGBT-focused health center, was founded in 1971 in Boston not as an LGBT clinic but as a sexual health clinic that, due to demographic shifts, gained expertise in providing

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 199 of 438 PageID #: 2

health care services and treatment to LGBT patients. Like Fenway Health, other urban health centers began to cater more toward SGD patient populations, providing such services as mental health counseling, substance abuse treatment, and sexual health care in safe and LGBT-affirming environments. By the mid-1980s, the National Gay and Lesbian Task Force estimated that there were "over 100 clinics and medical service programs and over 300 counseling and mental health programs, with services ranging from testing and treatment for sexually transmitted infection to counseling and care of substance users, that were openly LGBT friendly and accepting" (Martos, Wilson, and Meyer, 2017).

The increasing number of HIV infections and the high rate of HIV-related deaths among gay and bisexual men and transgender women changed the nature of LGBT community mobilization and activism. Access to health care education, resources, and services became an issue of life or death throughout the 1980s, as LGBT and AIDS activists pressured government, religious, and health care leaders for support and services. These activists and organizations "leveraged the health implications of HIV/AIDS to raise awareness about such issues as domestic partnerships, access to the sick and dying, inheritance, and housing" (Martos, Wilson, and Meyer, 2017). As rates of HIV began to increase, more LGBT community centers and groups began to focus on policies, funding, and programs to provide HIV testing, prevention, and treatment, and this also bolstered efforts to connect LGBT communities with a wide range of health care services. Founded in 1999 by Black gay AIDS activist Phill Wilson, the Black AIDS Institute in Los Angeles is an example of a community-based organization created to address a health crisis that disproportionately impacted Black people (particularly Black gay men at that time) in a time of inadequate responses by government health agencies (Wilson, 2020).

However, just as transgender and gender-nonconforming people were excluded from much of the LGB activism taking place during the 1980s, cisgender women similarly faced sexism and misogyny among AIDS activists and the larger LGBT movement. For example, some scholars argue that sexism played a decisive role in the eventual decline of the AIDS Coalition to Unleash Power (ACT UP) Movement in the 1990s (Gould, 2009).

The first LGBT community health center to be recognized as a Federally Qualified Health Center (FQHC) by the Health Resources and Services Administration Bureau of Primary Health Care was Baltimore's Chase Brexton in 2002, and several more have since been recognized, including Fenway Health, the Los Angeles LGBT Center, New York City's Callen-Lorde Community Health Center, Philadelphia's Mazzoni Center, and Washington, D.C.'s Whitman-Walker Health. The FQHC designation ensures federal funding and reimbursement for health services provided by these health centers (Martos, Wilson, and Meyer, 2017).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 200 of 438 PageID #: 2

Although these health centers and many more organizations across the country are addressing health and wellness among SGD populations, many LGBTQ people still experience homophobia, biphobia, and transphobia in health care settings. And too many LGBTQ people of color continue to experience health disparities and a disproportionate representation in the HIV/AIDS epidemic (Bailey and Bost, 2020). As a result, these communities often seek out support from LGBTQ-specific health care organizations or from support groups in religious organizations, such as HIV/AIDS support groups in some Black churches; breast cancer support groups for LGB women; transgender support groups; and other in-person and online communities dedicated to issues such as domestic violence and mental health. More recently, some studies have noted increased levels of acceptance for lesbians, gays, and bisexuals in health care settings (Macapagal, Bhatia, and Green, 2016). Nonetheless, differences in health care access, use, and experiences among LGBTQ populations, particularly LGBTQ people of color, continue to affect patients' experiences with health care and feelings of acceptance in medical settings (Macapagal, Bhatia, and Green, 2016).

Educational Institutions

As a direct result of the activism of LGBTQ+ faculty, students, staff, and their allies, colleges and universities have increased services for SGD populations in recent years. Many have developed LGTBQ+ resource centers that offer community for SGD people on campus and provide space for gay-straight alliances to meet. For some SGD students these centers provide emotional, social, and academic support, shaping and improving the quality of their experiences in colleges and universities (see Chapter 9). However, many students, faculty, and staff may have limited access to these opportunities (Duran, Blockett, and Nicolasso, 2020).

Traditional campus social groups and organizations can be cis-normative and heteronormative, and in some cases, like sororities and fraternities, they can exclude SGD people because of explicit and implicit expectations of adherences to traditional gender and sexual norms. In some places, SGD students have responded to these forms of exclusion by creating their own societies, fraternities, and sororities to provide the opportunity for SGD students to experience social support throughout their education and beyond. More broadly, many SGD student populations create "counterspaces" (Blockett, 2017), in which they can come together to create alternatives for themselves when their college or university is either unable or unwilling to create spaces and resources that are inclusive, affirming, and safe for them.

Not all SGD groups feel welcomed and affirmed at LGBTQ+ resource centers. While the stated aims of these centers center around inclusion, they also produce what is experienced as "colorblind" politics for some groups

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 201 of 438 PageID #: 2

(Bailey and Richardson, 2019; Blockett, 2017). The centers may not challenge the host institution's views around racism, homophobia, and transphobia; rather, they do the intellectual and political labor of respectability and normativity at the university by creating an inclusive environment within the larger, less-inclusive environment. As these LGBTQ+ organizations become institutionalized, they often make tradeoffs to be sustained in historically conservative host institutions and so have difficulty creating and sustaining fully inclusive environments and spaces for a diverse range of SGD students and others on campus.

Although most SGD students struggle to find inclusive and safe spaces in colleges and universities, SGD populations of color face greater challenges because of the interconnected oppressions of race, gender, and sexuality. SGD students have to navigate a range of social issues at colleges and universities, and many of them find it difficult to form community around gender and sexuality alone, to the exclusion of their racial and cultural identities (Blockett, 2017). At the same time, many SGD students of color do not feel fully included in their racial and cultural communities of origin. Institutions of higher education have often failed to create and facilitate the conditions under which SGD students of all racial and ethnic backgrounds can feel supported, affirmed, and included in the classroom and, more broadly, in campus life.

CIVIC AND POLITICAL INVOLVEMENT

Understanding the sociopolitical engagement of SGD populations is important to understanding patterns of resilience among historically stigmatized populations (Bruce, Harper, and Bauermeister, 2015). Engaging in political affairs is one source of resilience for SGD communities. This section considers how SGD groups engage in political and civic affairs, how they create their own space when not invited, and how they transform political spaces.

Under previous presidential administrations, LGBTQ+ rights and protections at the federal level had gained strong support in the public sector, with few exceptions. While progress continues to be made in sectors such as employment, legal rights and protections for SGD people in other domains have been rapidly rolled back. While a more detailed discussion on the legal and political challenges confronting SGD populations is taken up elsewhere in this report, this chapter considers how SGD communities help to mitigate some of the harm they experience from legal setbacks through creation and participation in public culture and their sociopolitical involvement.

There are many ways people may engage in formal political institutions, including donating money to campaigns, electioneering for candidates or issues, and attending rallies or protests. The civic and political

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 202 of 438 PageID #: 2

engagement of SGD people is multidimensional and multifaceted, and studies show that lesbian, gay, and bisexual adults tend to be more civically and politically engaged than heterosexual adults (Egan, Edelman, and Sherrill, 2008; Flores, 2019). They have higher rates of discussing politics online, contacting government officials, donating to campaigns, attending protests and rallies, and volunteering on campaigns than non-LGBT people (Flores, 2019). Studies suggest SGD people are slightly more certain that they are registered to vote than cisgender, heterosexual people (Bowers and Whitley, 2020; James et al., 2016; Pew Research Center, 2013).

Data from the 2015 U.S. Transgender Survey suggest that 76 percent of transgender people are registered to vote, compared with 65 percent of the adult population (James et al., 2016). From probability-based surveys, the Pew Research Center (2013) found that 77 percent of LGBT people are registered to vote, and Mallory (2019) found that about 79 percent of LGBT people are registered to vote; both numbers are less than the 88 percent of the general population that is registered to vote (Goldmacher, 2016). However, information is limited regarding registration rates from nationally representative studies of SGD populations that overcome potential biases of self-reported measures. There are potential barriers for some SGD populations to register to vote. Transgender adults face increased barriers in states that have policies requiring the presentation of identity documents with a photo in order to register (Herman, 2012; Herman and Brown, 2018; O'Neill and Herman, 2020; also see Chapter 12). The problem is encountered both for registration and voting.

Since the early 1990s, the National Election Pool (NEP) has been documenting both sexual orientation and gender identity in its exit poll questionnaire. Over the years, the results of the NEP tend to show that the percentage of voters who identify as LGBT is about 5 percent (Flores, 2019). The LGBT vote may now be a larger portion of the electorate, as Schaffner (2019) shows that about 11 percent of the electorate identified as LGBT in the 2018 midterm election.

In a study of a representative sample of college students, Swank and Fahs (2017) found that sexual minorities participate in political marches at higher rates than heterosexual persons; the primary explanation is their embeddedness and activism in political groups (see also Swank and Fahs, 2019). A field experiment suggested that social esteem—recognizing SGD people who participated in pride rallies by publishing their names and photographs on social media—can be a key driver leading them to participate in politics (McClendon, 2014). Activism, however, can be emotionally stressful and taxing: in one study, 84 percent of a purposive sample of LGBTQ+ activists reported being emotionally taxed by LGBTQ+ activism (Pepin-Neff and Wynter, 2020). Pepin-Neff and Wynter (2020) found that activists described constant pressure to participate in LGBTQ+ pride

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 203 of 438 PageID #: 2

marches and other rallies as emotionally taxing, especially for people at the intersections of race, age, and gender identity.

At the 2019 public seminar on amplifying visibility and increasing capacity for SGD populations, Todd Snovel (Pennsylvania Commission on LGBTQ Affairs)[15] discussed the broad nature of civic engagement and sociopolitical involvement in what he termed queer communities. He explained that some people equate civic engagement with political engagement, which complicates the concept—especially when political engagement often gets further reduced to partisan engagement. He added: "Any time that someone sees social inequalities or sees areas that could be bettered within a community and raises voice, raises energy, raises resources around improving models for that in a community basis, we would consider all of that under civic engagement." Mary Anne Adams (Zami NOBLA) added to Snovel's points at the seminar, saying that many people are involved in some form of civic engagement, even if they do not define or call it that. She said social media is a prime example of a platform informally used as a way to improve communities and the common good, as well as a voice of resistance and social justice for marginalized communities. Her points reinforce the role of online forums as a platform for sociopolitical involvement and activism as a way to build stronger positive identities among SGD populations (Ceglarek and Ward, 2016). In examining motivators for sociopolitical involvement and civic engagement among SGD populations of color, research reveals that individual connectedness to other SGD people (not necessarily people of color) is a strong predictor of sociopolitical involvement (Harris, Battle, and Pastrana, 2018). Early organizing sought to build community and raise awareness of the social, economic, and political problems that lesbian women and gay men encountered (Armstrong, 2002). This focus continued into the 1970s with service organizations, such as Street Transvestite Action Revolutionaries (STAR), led by Sylvia Rivera and Marsha P. Johnson, and activist organizations such as the Gay Liberation Front and the Gay Activists Alliance (Ghaziani, Taylor, and Stone, 2016; Shepard, 2013). Community organization and activism played a pivotal role in the 1980 and 1990s during the HIV/AIDS crises (Cohen, 1999), and community and activist organizations remain central to the well-being of SGD people (see Chapter 6).

Historically, some organizations rarely included SGD people of color and were known to be comprised primarily of middle-class white gay men and lesbian women (Armstrong, 2002; Cohen, 1999). As a result, community organizations with an intersectional mindset have emerged in various communities seeking to advance the well-being of SGD people

[15] Snovel is now Special Assistant to the President for Strategic Initatives at the Pennsylvania College of Art and Design.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 204 of 438 PageID #: 2

(Stone, 2012). However, mainstream political organizations tend to prioritize policy and legal changes on topics that may not address the needs of the most vulnerable subgroups (Stone, 2012), though this has also been changing to be more inclusive in recent years. This inclusiveness advances policy and broadens services to further the well-being of SGD people, and it provides agency and political power to them.

SUMMARY AND CONCLUSIONS

SGD communities represent a variety of racial, ethnic, and cultural identities and experiences and both shared and disparate interests and concerns, but they all need access to resources and safe spaces. Over the past several years, spaces for public convening and engagement in social, cultural, and personal activities have diminished substantially for SGD people. Because access to space is linked to participation in public culture, which is also influenced by the intersections of race, gender, sexuality, and social class, working class and poor SGD people of color do not always have access to the same spaces as do SGD people of other races and classes.

CONCLUSION 7-1: Space is an essential aspect of building community, which is an important source of resilience for sexual and gender diverse populations. However, not all sexual and gender diverse people have access to affirming and safe physical, virtual, and social spaces.

Festivals and group celebrations are an important part of LGBTQ+ culture. LGBTQ+ pride celebrations in major cities attract thousands of attendees, but many remain self-segregated, leaving ethnically diverse SGD groups to respond by protest or creating their own pride events. Online communities provide and transform spaces in which SGD people can explore their identities and express themselves openly. Online communities are sometimes created out of the need for information, connection, and support among less visible and marginalized SGD groups.

SGD people have sought to carve out niches in religious and educational institutions, as well as in the realm of civic and political engagement. The past several years have seen the insurgence of LGBTQ+-affirming churches and denominations and noninstitutional and Indigenous spiritual practices, as well as gay-straight alliances on college and university campuses. Community connectedness has also been shown to help SGD people address health disparities by connecting them to important resources.

CONCLUSION 7-2: For sexual and gender diverse populations, access to affirming space enables community engagement, which influences

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 205 of 438 PageID #: 2

feelings of recognition, inclusion, connectedness, and safety that are often otherwise denied to them.

In civic affairs, lesbian, gay, and bisexual adults tend to be more civically and politically engaged than heterosexual adults: they engage government officials, donate to and volunteer in campaigns, and attend protests and rallies at higher rates than non-LGBT people. In addition, transgender people are registered to vote at higher rates than the cisgender population. Connectedness to other SGD people is a strong predictor of sociopolitical involvement. While political involvement is often conflated with civic engagement, experts note that the two are different, and civic engagement can manifest itself through participation in both in-person and virtual activism (i.e., social media and online forums).

CONCLUSION 7-3: Community mobilization and sociopolitical involvement have been key to the struggle for equality, inclusion, and social justice for sexual and gender diverse populations.

REFERENCES

Adler, S., and Brenner, J. (1992). Gender and space: Lesbians and gay men in the city. *International Journal of Urban and Regional Research*, *16*(1), 24–34. doi: 10.1111/j.1468-2427.1992.tb00463.x.

al-Haqq Kugle, S.S. (2014). *Living out Islam: Voices of Gay, Lesbian, and Transgender Muslims*. New York: New York University Press.

Armstrong, E.A. (2002). *Forging Gay Identities: Organizing Sexuality in San Francisco, 1950–1994*. Chicago: University of Chicago Press.

Arnold, E.A., and Bailey, M.M. (2009). Constructing home and family: How the ballroom community supports African American GLBTQ youth in the face of HIV/AIDS. Journal of Gay *and Lesbian Social Services, 21*(2-3), 171–188. doi: 10.1080/10538720902772006.

Arredondo, M.I., and Suárez, M.I. (2019). Ecological determinants of child welfare and juvenile justice involvement: K-12 schooling. In K.J. Conron and B.D.M. Wilson (Eds.), *A Research Agenda to Reduce System Involvement and Promote Positive Outcomes with LGBTQ Youth of Color Impacted by the Child Welfare and Juvenile Justice Systems* (pp. 21–26). Los Angeles: Williams Institute, UCLA School of Law.

Baams, L., Jonas, K.J., Utz, S., Bos, H.M.W., and Van Der Vuurst, L. (2011). Internet use and online social support among same sex attracted individuals of different ages. *Computers in Human Behavior*, *27*(5), 1820–1827.

Bailey, M. (2011). Gender/racial realness: Theorizing the gender system in ballroom culture. *Feminist Studies*, 37(2), 365–386.

———. (2013). *Butch Queens Up in Pumps: Gender, Performance and Ballroom Culture in Detroit*. Ann Arbor: University of Michigan Press.

Bailey, M., and Bost, D. (2020). Guest editors' note. *Souls: A Critical Journal of Black Politics, Culture, and Society*, *21*(2–3), 97–106.

Bailey, M.M., and Richardson, M. (2019). "Will the real men stand up?" Regulating gender and policing sexuality through black common sense. In A. Davis and Black Sexual Economies Working Group (Eds.), *Black Sexual Economies: Race and Sex in a Culture of Capital* (pp. 108–123). Champaign: University of Illinois Press.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 206 of 438 PageID #: 2

Bailey, M.M., and Shabazz, R. (2014). Editorial: Gender and sexual geographies of blackness: Anti-black heterotopias (part 1). *Gender, Place and Culture, 21*(3), 316–321. Available: https://www.tandfonline.com/doi/abs/10.1080/0966369X.2013.781305.

Barreira, A. (2020, June 12). Can LGBTQ bars survive the Covid-19 pandemic? *San Francisco Business Times*. Available: https://www.bizjournals.com/sanfrancisco/news/2020/06/12/can-lgbtq-bars-survive-through-covid-19.html.

Battle, B., Cohen, C.J., Warren, D., Fergerson, G., and Audam, S. (2002). *Say It Loud: I'm Black and I'm Proud—Black Pride Survey 2000*. New York: The Policy Institute of the National Gay and Lesbian Task Force. Available: https://www.lgbtracialequity.org/publications/SayItLoudBlackAndProud.pdf.

Bell, D., and Binnie, J. (2004). Authenticating queer space: Citizenship, urbanism and governance. *Urban Studies, 41*(9), 1807–1820.

Blockett, R.A. (2017). "I think it's very much placed on us": Black queer men laboring to forge community at a predominantly white and (hetero)cisnormative research institution. *International Journal of Qualitative Studies in Education, 30*(8), 800–816. doi: 10.1080/09518398.2017.1350296.

Bowers, M.M., and Whitley, C.T. (2020). Assessing voter registration among transgender and gender non-conforming individuals. *Political Behavior, 42*, 143–164. Available: https://link.springer.com/article/10.1007/s11109-018-9489-x.

Brown, P. (1995). Naming and framing: The social construction of diagnosis and illness. *Journal of Health and Social Behavior 35*, 34–54.

Bruce, D., Harper, G.W., and Bauermeister, J.A. (2015). Minority stress, positive identity development, and depressive symptoms: Implications for resilience among sexual minority male youth. *Psychology of Sexual Orientation and Gender Diversity, 2*(3), 287–296. doi: 10.1037/sgd0000128.

Campbell, C., Skovdal, M., and Gibbs, A. (2011). Creating social spaces to tackle AIDS-related stigma: Reviewing the role of church groups in Sub-Saharan Africa. *AIDS and Behavior, 15*(6), 1204–1219. doi: 10.1007/s10461-010-9766-0.

Casey, M. (2004). De-dyking queer space(s): Heterosexual female visibility in gay and lesbian spaces. *Sexualities,* 7(4), 446–461. doi: 10.1177/1363460704047062.

Cashman, H. (2019). What Phoenix's jotería is saying: Identity, normativity, resistance. *Language in Society*, *48*(4), 519–539. doi: 10.1017/S0047404519000411.

Ceglarek, P.J.D., and Ward, L.M. (2016). A tool for help or harm? How association between networking use, social support, and mental health differ for sexual minority and heterosexual youth. *Computers in Human Behavior, 65*, 201–209.

Cohen, C.J. (1997). Punks, bulldaggers, and welfare queens: The radical potential of queer politics? *GLQ: A Journal of Lesbian and Gay Studies,* 3, 437–465.

———. (1999). *The Boundaries of Blackness: AIDS and the Breakdown of Black Politics*. Chicago: University of Chicago Press.

Combahee River Collective. (1983). Combahee River Collective Statement. In Barbara Smith (Ed.), *Home Girls, A Black Feminist Anthology* (pp. 264–274). New York: Kitchen Table: Women of Color Press.

Conradson, D. (2003). Spaces of care in the city: The place of a community drop-in centre. *Social and Cultural Geography, 4*(4), *507–525*.

Coulombe, S., and Krzesni, D.A. (2019). Associations between sense of community and well-being: A comprehensive variable and person centered exploration. *Journal of Community Psychology*, *47*(5), 1246–1268.

Crowley, M.S. (2010). Experiences of young bisexual women in lesbian/bisexual groups on MySpace. *Journal of Bisexuality*, *10*(4), 388–403.

Daniel-McCarter, O. (2012). Us vs. them! Gays and the criminalization of queer youth of color in Chicago. *Children's Legal Rights Journal, 32*(1), 5–17.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 207 of 438 PageID #: 2

Davidson, W.B., and Cotter, P.R. (1991). The relationship between sense of community and subjective well-being: A first look. *Journal of Community Psychology*, *19*(3), 246–243.

Davis, G., and Preves, S. (2017). Reflecting on intersex: 25 years of activism, mobilization, and change. In J.Z. Spade and C.F. Valentine (Eds.), *The Kaleidoscope of Gender: Prisms, Patterns, and Possibilities* (pp. 30–43). Thousand Oaks, CA: SAGE Publishing.

D'Emilio, J. (1983). *Sexual Politics, Sexual Communities: The Making of the Homosexual Minority in the United States, 1940–1970*. Chicago: University of Chicago Press.

Doan, P.L., and Higgins, H. (2011). The demise of queer space? Resurgent gentrification and the assimilation of LGBT neighborhoods. *Journal of Planning Education and Research, 31*(1), 6–25.

Duran, A., Blockett, R.A., and Nicolazzo, Z. (2020). An interdisciplinary return to queer and trans studies in higher education implications for research and practice. In M.B. Paulsen and L.W. Perna (Eds.), *Higher Education: Handbook on Theory and Research* (Vol. 35). New York: Springer.

Egan, P.J., Edelman, M.S., and Sherrill, K. (2008). *Findings from the Hunter College Poll: New Discoveries about the Political Attitudes of Lesbians, Gays and Bisexuals*. Paper presented at the American Political Science Association. New York: Hunter College CUNY.

Epstein, S., and Carrilo, H. (2014). Immigrant sexual citizenship: Intersectional templates among Mexican gay immigrants to the USA. *Citizenship Studies, 18*(3–4), 259–276.

Flores, A.R. (2019). LGBTQ voters. In J. Pierceson (Ed.), *An Encyclopedia of Activists, Candidates, and Officeholders* (pp. 83–95). Santa Barbara, CA: ABC-CLIO.

Ghaziani, A. (2014). *There Goes the Gayborhood?* Princeton: Princeton University Press.

Ghaziani, A., Taylor, V., and Stone, A. (2016). Cycles of sameness and difference in LGBT social movements. *Annual Review of Sociology, 42*, 165–183. doi: 10.1146/annurev-soc-073014-112352.

Gibbs, J.J., and Goldbach, J. (2015). Religious conflict, sexual identity, and suicidal behaviors among LGBT young adults. *Archives of Suicide Research, 19*(4), 472–488. doi: 10.1080/13811118.2015.1004476.

Gieseking, J.J. (2013). Queering the meaning of "neighbourhood": Reinterpreting the lesbian-queer experience of Park Slope, Brooklyn, 1983-2008. In M. Addison and Y. Taylor (Eds.), *Queer Presences and Absences: Genders and Sexualities in the Social Sciences* (pp. 178–200). London: Palgrave Macmillan.

Goldmacher, S. (2016, Oct. 19). America hits new landmark: 200 million registered voters. *Politico*. Available: https://www.politico.com/story/2016/10/how-many-registered-voters-are-in-america-2016-229993.

Gould, D.B. (2009). *Moving Politics: Emotion and ACT UP's Fight Against AIDS*. Chicago: The University of Chicago Press.

Gray, K.L. (2018). Gaming out online: Black lesbian identity development and community building in Xbox Live. *Journal of Lesbian Studies*, *22*(3), 282–296.

Gray, M. (2009). *Out in the Country: Youth, Media, and Queer Visibility in Rural America*. New York: New York University Press.

Gutterman, L. (2012). The house on the borderland: Lesbian desire, marriage, and the household, 1950–1979. *Journal of Social History*, *46*(1), 1–22.

Haimson, O.L., Dame-Griff, A., Capello, E., and Richter, Z. (2019). Tumblr was a trans technology: The meaning, importance, history, and future of trans technologies. *Feminist Media Studies*, 1–17.

Hanhardt, C.B. (2013). *Safe Space: Gay Neighborhood History and the Politics of Violence*. Durham, NC: Duke University Press.

Hardy, J. (2019). Queer information literacies: Social and technological circulation in the rural Midwestern United States. *Information, Communication and Society*, 1–16.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 208 of 438 PageID #: 2

Harris, A. (2014). Conflicts within Black churches. In A. Thatcher (Ed.), *The Oxford Handbook of Theology, Sexuality and Gender*. London: Oxford University Press. doi: 10.1093/oxfordhb/9780199664153.013.019.

Harris, A., Battle, J., and Pastrana, Jr., A. (2018). *Queer People of Color: Connected, but Not Comfortable*. New York: Lynne Rienner.

Herman, J.L. (2012). *The Potential Impact of Voter Identification Laws on Transgender Voters*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://escholarship.org/uc/item/9gw3c861.

Herman, J.L., and Brown T.N.T. (2018). *The Potential Impact of Voter Identificaiton Laws in the 2018 General Election*. Los Angeles: Williams Institute, UCLA School of Law. Available: https://escholarship.org/content/qt0441c9rs/qt0441c9rs.pdf.

Holland, S. (2019). Constructing queer mother knowledge and negotiating medical authority in online lesbian pregnancy journals. *Sociology of Health and Illness*, *41*(1), 52–66.

Hussen, S.A., Easley, K.A., Smith, J.C., Shenvi, N., Harper, G.W., Camacho-Gonzalez, A.F., Stephenson, R., and Del Rio, C. (2018). Social capital, depressive symptoms, and HIV viral suppression among young black, gay, bisexual and other men who have sex with men living with HIV. *AIDS and Behavior*, *22*(9), 3024–3032. doi: 10.1007/s10461-018-2105-6.

Jacobs, S.E., Thomas, W., and Lane, S. (Eds.) (1997). *Two Spirit People: Native American Gender Identity, Sexuality, and Spirituality*. Urbana: University of Illinois Press.

Jagose, A.R. (1996). *Queer Theory: An Introduction*. New York: New York University Press.

James, S.E., Herman, J.L., Rankin, S., Kesiling, M., Mottet, L., and Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey.* Washington, DC: National Center for Transgender Equality. Available: https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-Dec17.pdf.

Johnson, E.P., and Rivera-Servera, R.H. (2016). Introduction: Ethnoracial intimacies in blacktino queer performance. In Johnson, E.P. and Rivera-Severa, R.H. (Eds.). *Blacktino Queer Performance* (pp. 1–18). Durham, NC: Duke University Press.

Jolivette, A.J. (2016). *Indian Blood: HIV and Colonial Trauma in San Francisco's Two Spirit Community*. Seattle: University of Washington Press.

Joseph, M. (2007). Community. In B. Burgett and G. Hendler (Eds.), *Keywords for American Cultural Studies* (pp. 53–56). New York: New York University Press.

Kelley, R.D. (2008). *Yo' Mama's Disfunktional!: Fighting the Culture Wars in Urban America*. Boston, MA: Beacon Press.

Kornhaber, S. (2020, June). The coronavirus is testing queer culture. *The Atlantic*. Available: https://www.theatlantic.com/culture/archive/2020/06/how-quarantine-reshaping-queer-nightlife/612865.

Kosciw, J.G., Greytak, E.A., Zongrone, A.D., Clark, C.M., and Truong, N.L. (2017). *The 2017 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual, Transgender, and Queer Youth in Our Nation's Schools*. GLSEN. Available: https://www.glsen.org/sites/default/files/2019-10/GLSEN-2017-National-School-Climate-Survey-NSCS-Full-Report.pdf.

Lane, S. (1997). Various kinds of Two-Spirit people: Gender variance and homosexuality in Native American communities. In S.E. Jacobs, W. Thomas, and S. Lane (Eds.), *Two Spirit People: Native American Gender Identity, Sexuality, and Spirituality* (pp. 100–118). Urbana: University of Illinois Press.

Lee, Y.J., Kamen, C., Margolies, L., and Boehmer, U. (2019). Online health community experiences of sexual minority women with cancer. *Journal of the American Medical Informatics Association*, *26*(8–9), 759–766.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 209 of 438 PageID #: 2

Liddle, K. (2005). More than a bookstore: The continuing relevance of feminist bookstores for the lesbian community. In E.D. Rothblum and P. Sablove (Eds.), *Lesbian Communities: Festivals, RVs and the Internet* (pp. 145–160). New York: Routledge.

Lupton, D. (2000). *Medicine as Culture: Illness, Disease and the Body in Western Societies*. Thousand Oaks, CA: SAGE Publishing.

Macapagal, K., Bhatia, R., and Green, G.J. (2016). Differences in healthcare access, use, and experiences within a community sample of racially diverse lesbian, gay, bisexual, transgender and questioning emerging adults. *LGBT Health, 3*(6), 434–442. doi: 10.1089/lgbt.2015.0124.

Mallory, C. (2019). *The 2020 LGBT Vote: Preferences and Characteristics of LGBT Voters*. Los Angeles: Williams Institute UCLA School of Law. Available: https://escholarship.org/content/qt4232v8j9/qt4232v8j9.pdf.

Martos, A.J., Wilson, P.A., and Meyer, I.H. (2017). Lesbian, gay, bisexual, and transgender (LGBT) health services in the United States: Origins, evolution, and contemporary landscape. *PLoS One*, *12*(7), e0180544. doi: 10.1371/journal.pone.0180544.

Matory, L. (2009). *Black Atlantic Religion, Traditions, Transnationalism, and Matriarchy in the Afro-Brazilian Condembl*é. Durham, NC: Duke University Press.

McClendon, G.H. (2014). Social esteem and participation in contentious politics: A field experiment at an LGBT pride rally. *American Journal of Political Science, 58*(2), 279–290.

McFarland Bruce, K. (2016). *Pride Parades: How a Parade Changed the World*. New York: New York University Press.

McGlotton, S. (2013). *Virtual Intimacies: Media, Affect, and Queer Sociality.* Albany: State University of New York Press.

McQueeny, K. (2009). "We are God's children, y'all": Race, gender, and sexuality in lesbian and gay-affirming congregations. *Social Problems*, *56*(1), 151–173.

Moore, M.R. (2011). *Invisible Families: Gay Identities, Relationships and Motherhood Among Black Women*. Berkeley, CA: University of California Press.

Morris, B. (2005). Negotiating lesbian worlds: The festival communities. In E.D. Rothblum and P. Sablove (Eds.), *Lesbian Communities: Festivals, RVs and the Internet* (pp. 55–62). New York: Routledge.

Namaste, V. (2000). *Invisible Lives: The Erasure of Transsexual and Transgendered People*. Chicago: University of Chicago Press.

Nash, C.J. (2005). Contesting identity: Politics of gays and lesbians in Toronto in the 1970s: *Gender, Place and Culture*, *12*(1), 113–135.

———. (2006). Toronto's gay village (1969–1982): Plotting the politics of gay identity. *The Canadian Geographer, 50*(1), 1–16.

Nero, C. (2005). Why are gay ghettos white? In E.P. Johnson and M.G. Henderson (Eds.), *Black Queer Studies: A Critical Anthology* (pp. 228–245). Durham, NC: Duke University Press.

O'Neill, K., and Herman, J.L. (2020). *The Potential Impact of Voter Identification Laws on Transgender Voters in the 2020 General Election*. Los Angeles: Williams Institute, UCLA School of Law. Available: https://escholarship.org/content/qt1qx199j7/qt1qx199j7.pdf.

Opalewski, K. (2017). LGBT Middle-Eastern Americans Find Community during Arabian Nights. *Between the Lines: Pride Source Media Group*. Available: https://pridesource.com/article/83223-2/.

Oswin, N. (2008). Critical geographies and the uses of sexuality: Deconstructing queer space. *Progress in Human Geography, 32*(1), 89–103. doi: 10.1177/0309132507085213.

Copyright National Academy of Sciences. All rights reserved.

Pepin-Neff, C., and Wynter, T. (2020). The costs of pride: Survey results from LGBTQI activists in the United States, United Kingdom, South Africa, and Australia. *Politics and Gender, 16*(2), 498–524. Available: https://www.cambridge.org/core/journals/politics-and-gender/article/costs-of-pride-survey-results-from-lgbtqi-activists-in-the-united-states-united-kingdom-south-africa-and-australia/35A758971D436833E0E3740A88DBA359.

Peterson, J.L. (2009). "You have to be positive.": Social support processes of an online support group for men living with HIV. *Communication Studies*, *60*(5), 526–541.

Pew Research Center. (2013). *A Survey of LGBT Americans: Attitudes, Experiences and Values in Changing Times*. Washington, DC: Pew Research Center. Available: https://www.pewsocialtrends.org/2013/06/13/a-survey-of-lgbt-americans/.

Phelan, S. (2001). *Sexual Strangers: Gays, Lesbians, and Dilemmas of Citizenship*. Philadelphia, PA: Temple University Press.

Podmore, J.A. (2006). Gone "underground"? Lesbian visibility and the consolidation of queer space in Montréal. *Social and Cultural Geography, 7*(4), 595–625.

Prilleltensky, I., Prilleltensky, O., and Voorhees, C. (2016). Psychopolitical validity in the helping professions: Applications to research, interventions, case conceptualization, and therapy. Available: https://sites.education.miami.edu/faculty/wp-content/uploads/2016/09/psychopolitical.pdf.

Robbins, N.K., Low, K.G., and Query, A.N. (2016). A qualitative exploration of the "coming out" process for asexual individuals. *Archives of Sexual Behavior*, *45*(3), 751–760.

Rosenberg, R. (2016). The whiteness of gay urban belonging: Criminalizing LGBTQ youth of color in queer spaces of care. *Urban Geography, 38*(1), 137–148. doi: 10.1080/02723638.2016.1239498.

Rosenfeld, M.J., and Thomas, R.J. (2012). Searching for a mate: The rise of the Internet as a social intermediary. *American Sociological Review*, *77*(4), 523–547.

Rothenberg, T. (1995). "And she told two friends": Lesbians creating urban social space. In D. Bell and G. Valentine (Eds.), *Mapping Desire: Geographies of Sexualities*. London: Routledge.

Rubin, G. (1993). Thinking sex: Notes for a radical theory of the politics of sexuality. In H. Abelove, M. Barale, A.Michèle, and D.M. Halparin (Eds.), *The Gay and Lesbian Studies Reader* (pp. 3–37). New York: Routledge.

Schaffner, B. (2019). *CCES: US House Vote 2018* (v1) [Google Sheets]. Medford, MA. Available: https://docs.google.com/spreadsheets/d/1GWxlFixhhErfJVh95xwDFyqClrwNHkLMGrByTAou8rE/htmlview.

Scheitle, C.P., Merino, S.M., and Moore, A. (2010). On the varying meaning of "open and affirming." *Journal of Homosexuality, 57*(10), 1223–1236. doi: 10.1080/00918369.2010.517064.

Shabazz, R. (2014). *Spatializing Blackness: Architectures of Confinement and Black Masculinity*. Urbana: University of Illinois Press.

Shepard, B. (2013). From community organization to direct services: The Street Trans Action Revolutionaries to Sylvia Rivera Law Project. *Journal of Social Service Research, 39*(1), 95–114.

Sibley, D. (1995). *Geographies of Exclusion: Society and Difference in the West*. New York: Routledge.

Snorton, C.R. (2018). *Black on Both Sides: A Racial History of Trans Identity*. Minneapolis: University of Minnesota Press.

Spade, D. (2011). *Normal Life: Administrative Violence, Trans Politics, and the Limits of the Law*. New York: South End Press.

Stone, A.L. (2012). *Gay Rights at the Ballot Box*. Minneapolis: University of Minnesota Press.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 211 of 438 PageID #: 2

Strongman, R. (2019). *Queering Black Atlantic Religions: Transcorporeality in Candomblé, Santería and Vodou*. Durham, NC: Duke University Press.

Stryker, S., and Silverman, V. (Directors). (2005). *Screaming Queens: The Riot at Compton's Cafeteria* [Documentary]. Independent Television Service.

Swank, E.W., and Fahs, B.R. (2017). College students, sexualities identities, and participation in political marches. *Sexuality Research and Social Policy, 14*(2), 122–132.

———. (2019). Explaining the sexuality gap in protest participation. *Journal of Homosexuality, 66*(3), 324–348.

Talvacchia, K.T., Pettinger, M.F., and Larrimore, M. (2015). *Queer Christianities: Lived Religion in Transgressive Forms*. New York: New York University Press.

United Church of Christ Coalition for LGBT Concerns. (2005). In support of equal marriage rights for all. Available: http://uccfiles.com/pdf/in-support-of-equal-marriage-rights-for-all-with-background.pdf.

Valentine, C.G., Spade, J.Z., and Trautner, M.N. (2020). *The Kaleidoscope of Gender: Prisms, Patterns, and Possibilities*, 6th edition. Thousand Oaks, CA: SAGE Publishing.

Valentine, G. (1993). (Hetero)sexing space: Lesbian perceptions and experiences of everyday spaces. *Environment and Planning D: Society and Space*, *11*(4), 395–413. doi: 10.1068/d110395.

Waldman, A.E. (2019). Law, privacy, and online dating: "Revenge porn" in gay online communities. *Law and Social Inquiry*, *44*(4), 987–1018.

Warner, M. (2000). *The Trouble with Normal: Sex, Politics, and the Ethics of Queer Life*. Cambridge: Harvard University Press.

Wilcox, M.M. (2003). *Coming Out in Christianity: Religion, Identity, and Community.* Bloomington: Indiana University Press.

Wilkins, C.L. (2000). (W)rapped space: The architecture of hip hop. *Journal of Architectural Education, 54*(1), 7–19.

Wilson, A.L. (2020). Interview with Raniyah Coeland, President and CEO of the Black AIDS Institute Discussing Black Feminist Leadership, and Black Women at Risk. *Souls: A Critical Journal of Black Politics, Culture, and Society*, *21*(2–3), 2019–2235.

Ybarra, M.L., Mitchell, K.J., Palmer, N.A., and Reisner, S.L. (2015). Online social support as a buffer against online and offline peer and sexual victimization among U.S. LGBT and non-LGBT youth. *Child Abuse and Neglect*, *39*, 123–136.

Yudice, G. (2007). Culture. In B. Burgett and G. Hendler (Eds.), *Keywords for American Cultural Studies* (pp. 68–72). New York: New York University Press.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 213 of 438 PageID #: 2

8

Families and Social Relationships

Decades of study reveal that individuals who are relatively more socially connected are in better health and live longer than those who are relatively more socially isolated (Holt-Lunstad, Smith, and Layton, 2010). Close relationships and social connections, such as those found in families, are fundamentally important to health and well-being throughout life (Umberson and Karas Montez, 2010; Umberson and Thomeer, 2020). Supportive and stable relationships foster health and well-being, and relationships early in life have implications for the quality and stability of social ties in adolescence and adulthood. Throughout adulthood, people who are more socially connected have better mental and physical health and lower mortality than those who are more socially isolated (Yang et al., 2016).

Sexual and gender diverse (SGD) populations have not been a focus of this research to date, even though minority stress and discrimination experienced by SGD populations contribute to patterns of social engagement and patterns of isolation. Beginning in childhood, SGD populations face unique sources of stigma and discrimination due to SGD status that may introduce strain in relationships with others, inhibit family formation, and contribute to social isolation (Patterson, 2019; Riskind and Patterson, 2010; Russell and Fish, 2016). Close social ties can help individuals cope with sexual minority stress and offer sources of connection, resilience, and support that foster health and well-being (Umberson and Thomeer, 2020).

This chapter presents an overview of research findings relevant to social relationships and family lives across the life course. The discussion focuses on research about relationships in childhood and adolescence, on parenting

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 214 of 438 PageID #: 2

and parent-child relationships, and on social ties in adulthood. In assessing the evidence, attention is devoted to contexts of relationships (such as stigma and discrimination), diversity in social ties as a function of diverse identities (such as sex and gender, social and economic status, and race and ethnicity), and on factors related to risk and resilience.

SOCIAL AND FAMILY RELATIONSHIPS IN CHILDHOOD AND ADOLESCENCE

Research over recent years has found that SGD youth show high rates of behavioral, mental, and physical health risks (Institute of Medicine, 2011; Russell and Fish, 2016). These vulnerabilities are one of the earliest and most consistent areas of scientific evidence regarding the lives of SGD people (Russell and Fish, 2016). In recent years, scholars have begun to trace many such risks to experiences of stigma and discrimination, whether at home, in the form of family rejection (Parker et al., 2018), or at school, in the form of bullying by peers (Moyano and del Mar Sánchez-Fuentes, 2020).

Most of the scientific research in this area has relied on measures of sexual identity (mostly on gay and lesbian identities); there is much less empirical research on gender identity or expression and even less on the health and well-being of intersex children and adolescents. However, newer studies on transgender youth and youth who question their sexual or gender identities show results generally consistent with the pattern found for lesbian, gay, and bisexual (LGB) youth: experiences of stigma or discrimination undermine health and well-being (Connolly et al., 2016; Russell and Fish, 2016). To the extent that youth might experience stigma or discrimination due to differences of sex development (DSD) or intersex traits, one might expect similar patterns, but research on this population is lacking.

While SGD people in earlier generations most often came out—that is, disclosed their identities as lesbian, gay, bisexual, transgender, or queer (LGBTQ)—in young adulthood, many SGD people now come out in adolescence (Floyd and Bakeman, 2006; Martos, Nezhad, and Meyer, 2015). A study that examined sexual identity developmental milestones across groups defined by gender or race and ethnicity found that developmental milestones are generally earlier for gay men than for lesbian women, but it found no significant differences across racial and ethnic groups (Martos, Nezhad, and Meyer, 2015). An earlier study, however, suggested that disclosure of SGD identity in early adolescence may be more likely among white than among Black or Latinx youth (Rosario, Schrimshaw, and Hunter, 2004). Finally, in a recent national probability sample of sexual minority people in the United States, gay males and SGD people from more recent generations generally reported earlier milestones than those from older

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 215 of 438 PageID #: 2

generations and those with other sexual minority identities, and white participants reported later ages of some milestones than Black and Latinx participants (Bishop et al., 2020).

The shift over time in the age of coming out is especially relevant for adolescent social relationships: it means that contemporary youth come out in the context of legal, social, and financial dependence on their parents or caregivers, and during a period of life when extra-familial social relationships revolve primarily around school, a setting with few options and for which attendance is mandatory. While the potential for bullying or other forms of social rejection is greater for youth who come out (Russell et al., 2014), coming out also opens the door for positive social relationships, such as SGD-affirming friendships and romantic relationships (Russell, Watson, and Muraco, 2011; Whitton et al., 2018). Thus, over the recent past, youth have encountered experiences in families, schools, and peer groups that had not previously been encountered by SGD youth.

Family Relationships

Early studies of gay and lesbian youth described their fears of coming out at home (D'Augelli, Hershberger, and Pilkington, 1998). For many youth, coming out to parents or family members was very difficult if not impossible, and those who did come out reported experiences of family rejection ranging from guilt and shame to physical violence and being driven out of the home (Rosario et al., 2001). In an early study of LGB youth, D'Augelli and colleagues (1998) found that, when compared with youth who did not come out at home, those who did come out to family members reported more verbal and physical harassment and more suicidal thoughts and behavior. Since then, studies have assessed multiple dimensions or behaviors related to family rejection: they found strong associations between rejecting behaviors by parents and a range of emotional and behavioral health problems among LGBT youth (Puckett et al., 2015; Ryan et al., 2009). For example, LGBT youth who reported high levels of family rejection also reported more depressive symptoms, suicidal ideation, and suicidal behavior than did their peers (Ryan et al., 2009). A study of transgender adolescents (Johnson et al., 2020) and a retrospective survey of transgender adults identified similar correlates of family rejection in adolescence and adult well-being (Klein and Golub, 2016).

The dynamics of coming out and family relationships are distinctly gendered. Youth are more likely to come out to mothers than fathers or to come out to mothers before fathers (Floyd and Bakeman, 2006; Rothman et al., 2012; Savin-Williams, 2001), and reactions of fathers are usually feared more than reactions from mothers (Heatherington and Lavner, 2008). Like the gendered pattern of relations with parents, SGD youth report that their

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 216 of 438 PageID #: 2

sisters are more likely to be confidants for disclosure of SGD identities than are their brothers (Toomey and Richardson, 2009).

Negative family experiences among SGD youth are often concentrated around the time of coming out (D'Augelli, Hershberger, and Pilkington, 1998). The conflict related to a youth's asserted SGD identity can set off relationship tension or disruption in families. In previous generations and in the context of profound stigma related to sexual and gender diversity and development, parents were often unable to understand a child's same-sex sexuality or transgender identity (Herdt and Koff, 2000). Today, in a social context of greater awareness, positive images of SGD people in the media, and increased visibility of SGD populations, many parents are able to be more accepting of their sexual and gender variant children (Russell and Fish, 2019).

In recent years, increased public understanding of transgender identities has also made possible the growing numbers of young children who assert gender identities that are not aligned with the sex they were assigned at birth (Johnson et al., 2020; Olson, Key, and Eaton, 2015). For intersex youth, coming out to immediate families may be less relevant, since their differences of sex development are often known by parents from birth or early childhood, and they are understood as physiological sexual differences rather than differences based in personal identity and expression (Gough et al., 2008). However, routine disclosure of intersex status by physicians to patients and families is a relatively recent practice. At the same time, many intersex youth and their families still struggle over whether and how to disclose to other people (Hollenbach, Eckstrand, and Dreger, 2014). Thus, coming out experiences among SGD youth are diverse and may vary as a function of gender, race and ethnicity, and other characteristics, as well as sexual and gender identities (Grov et al., 2006; Martos, Nezhad, and Meyer, 2015; Rosario, Schrimshaw, and Hunter, 2004).

Supportive family relationships are a foundation for child and adolescent well-being. For LGB and transgender children and adolescents, accepting behaviors by parents are associated with both multiple indicators of positive youth adjustment (e.g., higher self-esteem, reported social support, and general health) and lower levels of mental and behavioral health risk (e.g., fewer depressive symptoms, less suicidality, and less substance use) (Durwood, McLaughlin, and Olson, 2017; Johnson et al., 2020; Olson et al., 2016; Ryan et al., 2010). Recent studies provide evidence of the primary role of parental support (relative to support from friends or teachers) for the mental health of youth (Shilo and Savaya, 2011; Snapp et al., 2015; Watson, Grossman, and Russell, 2019). Research on parents of intersex children has focused largely on parents' understanding of differences of sex development and decision making regarding medical approaches to treatment (Ernst et al., 2018; Gough et al., 2008).

Copyright National Academy of Sciences. All rights reserved.

Relationships with Teachers and Other Adults

Teachers are among the most important nonfamily adults in the lives of youth. Having a supportive teacher has been identified as a protective factor for sexual and gender diverse students (Russell, Seif, and Truong, 2001). (This topic is treated in detail in Chapter 10.) Studies have also documented the role of other important nonfamily adults in the lives of SGD youth. For example, in a qualitative study of how they coped with school victimization, LGBT students reported the need for adult mentors as well as supportive teachers (Grossman et al., 2009).

Peers and Friendships

Studies of SGD youth and their peers have been dominated by studies of victimization or bullying (Horn and Romeo, 2010). Research documents the persistence of negative peer interactions, such as patterns of bullying, for both previous and recent cohorts of SGD students (Earnshaw et al., 2016; NASEM, 2019; Toomey and Russell, 2016). Beyond bullying, early studies documented the pain of losing of close friends when a young person comes out (D'Augelli, 2003; Diamond and Lucas, 2004) and that some SGD youth lack friends and feel lonely (Grossman and Kerner, 1998).

More recent studies have examined the potential positive social influence of peers and the positive role of friendships for SGD youth (Snapp et al., 2015; Watson, Grossman, and Russell, 2019). As they do for other youth, friendships support positive adjustment for SGD youth (Rosario, Scrimshaw, and Hunter, 2009; Shilo and Savaya, 2011). Maintaining friendships following coming out is protective: lesbian and bisexual adolescent girls reported better psychosocial adjustment when they did not lose friends after coming out (D'Augelli, 2003). Support from friends is a common and important form of social support for SGD youth (Watson, Grossman, and Russell, 2019). Importantly, studies have documented the distinctive salience of SGD friendships for SGD youth: in comparison with social support from family and heterosexual friends, LGB youth reported more social support from LGB friends, and LGB friend support was associated with fewer psychological symptoms (Doty et al., 2010).

Romantic Partners

Romantic relationships emerge in the adolescent years; most youth experience their first romantic attractions and relationships as adolescents and begin to develop relationship skills that they will carry forward into adulthood. The development of romantic relationships is normative and expected for heterosexual youth, but in some cultural or historical con-

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 218 of 438 PageID #: 2

texts, same-sex romantic relationship experiences may not have been or be possible (D'Augelli, Hershberger, and Pilkington, 1998; Savin-Williams, 1994). In some environments, youth may have been (or may still be) unable to carry on romantic relationships with partners of the same sex. In order to conform to expectations among family and peers or because they deny same-sex attractions, some avoid same-sex romantic relationships (Diamond, in press; Diamond, Savin-Williams, and Dubé, 1999). A study based on a national sample of youth who were adolescents in the mid-1990s showed that youth with same-sex romantic attractions were not less likely to date, but the majority dated different-sex partners (Russell and Consolacion, 2003). Much has changed since then, although little is known about national patterns today. Intersex youth with diverse external genitalia may experience fear of rejection by romantic partners due to anatomical differences or concerns about future fertility (Slowikowska-Hilczer et al., 2017), but there is less research in this area.

There has been significant attention to experiences of peer victimization and bullying among LGBT youth, but less attention to victimization in the context of romantic relationships. Research shows that LGBT youth are at higher risk for dating violence compared with heterosexual youth (Reuter, Sharp, and Temple, 2015). Furthermore, rates of dating violence are higher for female than male youth and for transgender than for cisgender youth (Dank et al., 2014), as well as for Black youth compared with white youth (Reuter et al., 2017). LGBT youth who report intimate partner violence reported more sexual risk-taking and compromised mental health (Reuter et al., 2017). Finally, there may be not only higher rates of victimization but also more dating violence perpetration among LGBT youth (Dank et al., 2014): one recent study documented associations between minority stressors (e.g., internalized homonegativity, concealment) and partner violence among LGBTQ college students (Edwards and Sylaska, 2013).

The advent of the internet has made a significant difference in the social lives of SGD youth. With its growth and influence, otherwise isolated SGD youth were able to find SGD peers for the first time online (Russell, 2002). The internet has allowed SGD youth to meet others like them and to build friendships and romantic relationships (DeHaan et al., 2013). LGBTQ youth may be more likely than non-LGBTQ youth to meet romantic partners online (Korchmaros, Ybarra, and Mitchell, 2015), yet LGBTQ youth remain less likely overall than their heterosexual peers to be involved in romantic relationships. Despite barriers, there is evidence from a small number of recent studies that SGD youth who develop same-sex romantic relationships in adolescence report better adjustment than those who do not develop such relationships (Bauermeister et al., 2010; Glover, Galliher, and Lamere, 2009; Whitton et al., 2018). These findings are consistent with research on the normative and positive role that romantic relationships play

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 219 of 438 PageID #: 2

in adolescent development (Russell, Watson, and Muraco, 2011). The role of positive social relationships with family members, as well as with those outside the family, is important in helping youth develop in positive ways. Intersex youth and adults tend to report fewer sexual partners, with some evidence that intersex individuals report later initiation of sexual activity (Kreukels et al., 2019).

PARENTING AND OTHER FAMILY RELATIONSHIPS

This section presents information based on research on family formation, parenting, children, and other family ties, ending with a discussion of the concept of "chosen family."

Family Formation

Parenthood is one of the most universal and highly valued of human experiences (Bornstein, 2019). LGBTQ people are, however, less likely than heterosexual individuals to want or intend to have children or to become parents (Goldberg, 2010; Patterson, 2019; Reczek, 2020). Studies of nationally representative datasets have shown that adult lesbian women and gay men are less likely than their heterosexual peers to express desire for parenthood. Indeed, sexual minority women may be more likely than heterosexual women to have pregnancies that were not planned (Everett, McCabe, and Hughes, 2017). In addition, gay men who desire parenthood are less likely than their heterosexual peers to expect that they will attain it (Riskind and Patterson, 2010). Researchers have explored reasons for these disparities, and they have identified relevant contextual as well as individual-level variables (Tate and Patterson, 2019a). In contrast, desires for parenthood among bisexual men and women seem to be more similar to those among heterosexual individuals (Riskind and Tornello, 2017; Simon et al., 2018). The study of parenting desires and intentions among intersex and transgender people is only beginning (Tornello and Bos, 2017). Some intersex traits are associated with infertility, but some are not, and fertility has gained increased attention in clinical care and research (Slowikowska-Hilczer et al., 2017). Many intersex people desire and achieve parenthood through assisted or unassisted conception, adoption, and surrogacy, though little research has explored these pathways to parenthood.

There is some recent evidence that lower desire and expectation for parenthood in SGD populations may be related to lower expectations (but not desires) over a broad range of life goals (Tate and Patterson, 2019c). In a convenience sample of 368 lesbian, gay, and heterosexual young adults, participants were asked about their desires and expectations with respect

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 220 of 438 PageID #: 2

to life goals in a number of areas, such as marriage, parenthood, friendship, and career. With the exception of desire for parenthood, which was lower among sexual minority respondents, lesbian and gay young adults reported desires that were very similar to those of heterosexual peers, but they described expectations that were consistently lower for most other aims. Thus, lesbian and gay young adults reported life aims that were similar to those of heterosexual peers, but they did not believe that they would achieve them (Tate and Patterson, 2019c). These results suggest that lower parenting desires among SGD adults may be part of a larger pattern and may reflect social and cultural constraints.

Despite divergent overall rates of desires and expectations, many SGD people become parents, and they do so through many pathways. However, the numbers of SGD parents in the United States are difficult to estimate. Using 2014–2016 data from the American Community Survey (ACS), Goldberg and Conron (2018) estimated that there are currently just over 700,000 households headed by same-sex couples, of which approximately half are headed by male couples and half by female couples (Goldberg and Conron, 2018). In this sample, 39 percent of male-female couples, 8 percent of male couples, and 24 percent of female couples described themselves as parents of children 18 years of age or younger (Goldberg and Conron, 2018). Census and ACS data do not include information on sexual or gender identity, so those identifying as lesbian, gay, bisexual, transgender, or queer cannot be identified from these data. Similarly, census and ACS data cannot identify nonresidential parents or households headed by single SGD parents. As a consequence, estimates of parenthood among SGD population based on census and ACS data are likely to provide an undercount of these families.

Some SGD people become parents in the context of heterosexual relationships (Patterson, 2013). For example, a gay man or lesbian woman could have married a partner of a different sex and had children; the couple could have subsequently divorced when one of them came out as non-heterosexual. Some findings suggest that this pathway to parenthood is more common among older people and less common among younger individuals (Tornello and Patterson, 2015), but it remains an important pathway to parenthood among LGBT people in the United States (Goldberg and Conron, 2018).

Another pathway to parenthood among LGBTQ+ people involves the use of assisted reproductive technology, such as sperm donation, egg donation, in vitro fertilization, surrogacy, and related procedures (Blake et al., 2017; Golombok, 2015, 2019). People who cannot produce sperm may pursue sperm donation and artificial insemination; people who cannot produce eggs or do not have uteruses may pursue egg donation and gestational surrogacy (Golombok, 2015). The costs of such techniques can be

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 221 of 438 PageID #: 2

high, so access to these options is limited to those with substantial financial resources.

Legal or policy issues vary across states and may also provide obstacles for some LGBTQ+ people who wish to become parents (Farr, Vazquez, and Patterson, 2020). For example, in addition to its high economic costs, surrogacy is legally banned in some jurisdictions and highly regulated in others (Green et al., 2019). Thus, access to reproductive technology among SGD individuals and couples may be greater for those with substantial economic resources and for those who live in states or local jurisdictions that legally permit the technology (see Chapter 5).

Adoption and foster care are also pathways to parenthood that are pursued by many LGBTQ+ people (Farr, Vazquez, and Patterson, 2020). Recent estimates based on data from the 2014–2016 ACS suggest that same-sex couples are far more likely than male-female couples to be foster or adoptive parents: 21 percent of same-sex couples were adoptive parents, compared with only 3 percent of male-female couples, and 3 percent of same-sex couples were foster parents, compared with only 0.4 percent of male-female couples (Goldberg and Conron, 2018). In addition to the issues that may be encountered by heterosexual people who hope to foster or adopt children, additional obstacles may be encountered by prospective lesbian, gay, and transgender foster and adoptive parents (Farr, Vazquez, and Patterson, 2020). Many uncertainties surround adoption as a pathway to parenthood for transgender individuals; only a handful of states prohibit discrimination against prospective parents who identify as transgender. Thus, transgender prospective adoptive parents may face added scrutiny.

Sexual and Gender Diverse Parenting and Children

The many studies that have examined parenting processes among SGD parents have found these family relationships to be generally warm and positive (Biblarz and Stacey, 2010; Goldberg, 2010; Golombok et al., 2014; Patterson, 1992, 2000, 2017). Both children and adolescents generally enjoy supportive relationships with lesbian and gay parents (Farr, Forssell, and Patterson, 2010a; Golombok et al., 2014; Wainright, Russell, and Patterson, 2004). Overall, and with some exceptions, both lesbian and gay couples seem to share child care and household labor more evenly than do heterosexual couples (Farr and Patterson, 2013; Patterson, Sutfin, and Fulcher, 2004). In contrast, research on small samples of the cisgender female partners of transgender men has shown that cisgender women report doing more household labor than their transgender male partners (Pfeffer, 2010); studies of child care in these couples have not been reported. Likewise, little information is available about parenting among those who identify as bisexual or intersex (Stotzer, Herman, and Hasenbush, 2014).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 222 of 438 PageID #: 2

Many studies have focused on the development of children reared by lesbian and gay parents. Much of the research is focused on children with lesbian mothers (Goldberg, 2010; Golombok, 2015; Patterson, 1992, 2000, 2017), although some studies have also included children of gay fathers (Farr, Forssell, and Patterson, 2010a; Golombok et al., 2014, 2018; Tornello and Patterson, 2015). The research has focused on sexual and gender identity of children with LGBT parents, on peer relationships and other aspects of social development, academic performance, and overall adjustment (Farr, Forssell, and Patterson, 2010a; Farr et al., 2018; Farr and Patterson, 2013; Fedewa, Black, and Ahn, 2015; Golombok et al., 2014, 2018; Potter, 2012; Potter and Potter, 2016; Wainright and Patterson, 2008; Wainright, Russell, and Patterson, 2004). In general, across all characteristics, children of lesbian and gay parents have shown typical development (Manning, Fettro, and Lamidi, 2014; Patterson, 2017). At the same time, there is evidence that, when compared with children in heterosexual-parent families, children with lesbian parents report less pressure to conform to gender expectations and have more egalitarian attitudes regarding gender (Bos and Sandfort, 2010). Similarly, adult children of lesbian and gay parents report that they were raised with less rigid gender stereotypes than others (Goldberg, 2007). Regardless of their own sexual orientation, adult offspring of lesbian and gay parents report greater well-being when they live in social climates that are supportive for SGD people (Lick et al., 2012). Little information is available about children with bisexual, transgender, or intersex parents, but researchers have not identified special behavior problems of any kind among these children (Goldberg, 2010; Golombok, 2015; Patterson, 2000, 2017).

Much of the existing research has been based on relatively small convenience samples of participating families, leaving open questions about possible sample bias; this is especially true of early work (Patterson, 1992). Increasingly, however, research has been conducted using data from larger samples that are representative of the populations from which they were drawn, and this work has yielded findings that are similar to those from the earlier studies (Patterson, 2017). For example, data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) study (Wainright and Patterson, 2006, 2008; Wainright, Russell, and Patterson, 2004) and from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–1999 study (Potter, 2012; Potter and Potter, 2016) have produced findings that are consistent with those from earlier work. These studies drew on data from representative samples, so they do not reflect sample biases that are likely to be present in purposive and convenience samples.

Thus, after conducting a careful review of the research, in a resolution the American Psychological Association (2005) concluded:

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 223 of 438 PageID #: 2

> [T]here is no scientific evidence that parenting effectiveness is related to parental sexual orientation; lesbian and gay parents are as likely as heterosexual parents to provide supportive and healthy environments for their children . . . [and] research has shown that the adjustment, development, and psychological well-being of children are unrelated to parental sexual orientation and that the children of lesbian and gay parents are as likely as those of heterosexual parents to flourish.

Similarly, in its review of the literature, the American Sociological Association concluded that the clear and consistent social science consensus is that children reared by same-sex parents fare just as well as children reared by different-sex parents (American Sociological Association, 2015, p. 5).

Without question, however, multiple stressors, such as harassment and bullying, are often encountered by SGD parents and their children. The evidence clearly shows that children who are bullied by peers are more likely than other children to show behavior problems (Goldberg, 2010; Patterson, 2017). Some SGD-parent families also experience more economic stress, unemployment, and lack of health insurance relative to families headed by heterosexual parents (Patterson and Goldberg, 2016). Moreover, the experiences of offspring of SGD parents are influenced by the social climate in which they grow up (Golombok et al., 2018; Lick et al., 2012). The findings in this area suggest possible roles for law and policy in improving the lives of SGD parents and their children (see Chapter 5).

Other Family Ties

In addition to their roles as parents, SGD adults have other family ties, such as those with their own parents, siblings, and extended family. Of these, the relationships that have been studied most often are those between adult lesbian and gay people and their own parents. Overall, most researchers have reported that, on average, lesbian and gay adults have more distant, less positive relationships with their parents than do their heterosexual peers (Needham and Austin, 2010; Reczek, 2014; Tate and Patterson, 2019b; Ueno, 2005) and that this is a source of stress for many lesbian and gay adults. Research-based information about the relationships of bisexual and transgender adults and their parents and other members of families of origin is still scarce and often based on small, nonrepresentative samples (Brumbaugh-Johnson and Hull, 2018; Fredriksen-Goldsen et al., 2016; Norwood, 2013). In two studies using data from representative samples, however, indications of such stress have included depressive symptoms, substance use, and sleep problems (Patterson et al., 2018; Rothman et al., 2012).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 224 of 438 PageID #: 2

A small number of studies have been conducted to assess variations across racial and ethnic minority groups with regard to relationships of SGD adults and members of their families of origin. For instance, Pastrana (2015) studied large samples of Black and Latinx SGM adults and found that disclosure of SGD identities ("outness") was associated with support from members of the family of origin. In both Black and Latinx groups, those who had disclosed sexual and gender minority identities were more likely to feel supported (Pastrana, 2015); similar findings have been reported by Swendener and Woodell (2017). Among cisgender SGD Latinas, Acosta (2013) found that those who embodied conventional femininity were more likely to feel accepted by members of their families of origin. While these findings are important, they are not based on representative samples, and they do not allow comparisons across racial or ethnic groups. Additional research in this area would be valuable.

CLOSE RELATIONSHIPS IN ADULTHOOD

The most salient close relationships in adulthood are those with romantic partners, other family members (e.g., aging parents), and close friends. Close friends are sometimes referred to as one's "chosen family" in SGD communities, in part due to weaker or more strained ties to one's family of origin (Reczek, 2020). In this section we focus primarily on intimate and romantic relationships, which have been the focus of a great deal of research, and then highlight recent evidence concerning relationships with close friends and family.

Intimate and Romantic Relationships

Demographics and Relationship Status

Recent data from the Gallup Daily Tracking Survey indicates (Jones, 2017, cited in Goldberg and Romero, 2019, p. 3):

> [O]f the more than 10.7 million LGBT-identified adults in the United States as of June 2017 (Romero, 2017): 17% were married to or living with a same-sex partner; 17% were married to or living with a different-sex partner, and 10% were divorced, separated, or widowed.

About 10.2 percent of the Gallup sample identified as being married to a same-sex spouse, and the number of married same-sex couples in the United States is growing—from 390,000 in 2015 to 547,000 in 2017 (Romero, 2017). Notably, over half of LGBT-identified people in the Gallup Tracking Survey are classified as single (see below, "Chosen Families").

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 225 of 438 PageID #: 2

The legalization of same-sex marriage and more favorable societal attitudes towards same-sex coresidential relationships have likely contributed to the increased number of reported same-sex relationships (Gates and Brown, 2015). Same-sex couples are more likely than different-sex couples to be interracial and well educated (Gates, 2014) and to participate in the labor force (Gates, 2013). Women are also more likely than men to enter into same-sex relationships (Gates, 2014). Same-sex couples are more likely than different-sex couples to reside in urban areas (Gates, 2006) and in more LGBT tolerant regions of the United States, such as those where same-sex marriage was first legalized (Gates, 2009, 2014).

Romantic Partnerships and Health

There has been significant research on intimate partnerships of lesbian and gay populations, with most of the early research in this area focused on cohabiting relationships, civil unions, and domestic partnerships. This area of research expanded significantly to include attention to married same-sex couples when (as discussed above) the United States extended constitutional protection for marriage equality in 2015. In part, proponents of marriage equality argued that same-sex marriage recognition could improve the health of sexual minority adults and their children and that restriction from marriage was discriminatory and negatively affected health. A great deal of research has addressed the link between relationship status and health, and many of the findings rely on nationally representative and publicly available datasets.

Theoretical work on minority stress and gender-as-relational perspectives undergirds much of the influential research in this area. *Minority stress theory* points to the unique stressors and stigma associated with sexual minority status (LeBlanc, Frost, and Bowen, 2018), and *gender-as-relational* perspectives emphasize the different patterns of men's and women's partner interactions, depending on whether they are in a same- or different-sex union (Thomeer, Umberson, and Reczek, 2020). Higher levels of stress for sexual minority populations may mean that same-sex spouses encounter more stress in their daily lives in ways that strain their relationships and undermine their health. At the same time, marriage may be especially important in helping sexual minority populations to cope with stress and to protect their health and well-being.

Several studies on romantic partnerships and health of same-sex couples have relied on nationally representative data (e.g., data from the National Health Interview Study [NHIS]) and conclude that same-sex cohabiting couples' health is worse than that of different-sex married couples but better than that of unpartnered adults (not differentiated by heterosexual/LGB status) (Denney, Gorman, and Barrera, 2013; Liu, Reczek, and Brown,

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 226 of 438 PageID #: 2

2013). Research suggests that greater legal recognition (i.e., marriages, civil unions, and registered domestic partnerships versus no legal status) is associated with better health and that same- and different-sex couples receive similar health benefits from marriage (LeBlanc, Frost, and Bowen, 2018).

There is much less research on bisexual, transgender, and intersex people in romantic partnerships. Growing evidence indicates that bisexual populations are in poorer health (on multiple measures, including mental health and functional limitations) than people who identify as gay, lesbian, or heterosexual (Bostwick et al., 2010; Conron et al., 2010; Fredriksen-Goldsen et al., 2010; Gorman et al., 2015; Hsieh and Ruther, 2016). One recent study, based on data from the NHIS, found that married persons who identify as bisexual report poorer health than their unmarried counterparts after adjusting for socioeconomic status and health behaviors (both of which are disadvantaged for bisexual respondents) (Hsieh and Liu, 2019). This study found a health advantage for married heterosexual partners and, to a lesser extent, men and women in same-sex partnerships, in comparison with their unmarried peers.

Hsieh and Liu (2019) also report that men and women who identify as bisexual in different-sex marriages are less healthy than those in same-sex marriages. The authors suggest that, although marriage may benefit the health of self-identified gay, lesbian, and heterosexual people, marriage may not benefit the health of those who identify as bisexual, perhaps due to higher levels of stigma and partner conflict associated with bisexuality. It is likely that individuals who identify as bisexual encounter unique sources of stress and stigma in their relationships (Feinstein and Dyar, 2017)—an important topic for future research. These findings also point to the importance of considering variation in romantic partnerships and health across diverse groups.

Current research on relationship status and health for couples in which at least one partner is transgender or gender-nonconforming is limited. With a few exceptions, the available evidence is descriptive and based on qualitative data drawn from small samples. This research has focused primarily on individuals who transition while in an existing relationship, and it addresses their specific challenges and supports. Emerging evidence suggests that an intimate partner relationship is a source of social and emotional support that can reduce perceived levels of discrimination for transgender people (Liu and Wilkinson, 2017; Pfeffer, 2016), suggesting potential health benefits. Liu and Wilkinson (2017) analyzed data from the National Transgender Discrimination study and found that married transgender women reported less discrimination than cohabiting and previously married transgender women (but not less than never-married transgender women). These patterns were partly explained by greater economic resources for married people. However, these patterns were not found for

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 227 of 438 PageID #: 2

transgender men. Taken together, these findings point to the importance of addressing variations as a function of gender identity and socioeconomic status, as well as race and ethnicity, in research.

Research on heterosexual populations shows that marriage becomes even more important to health with advancing age, as individuals develop health conditions, cognitive decline, or functional limitations. This finding may also emerge among aging sexual minority populations, but relevant research is not yet available. In a study of SGD adults over 50 years old, those who had a same-sex partner, regardless of marital status, reported better health and fewer depressive symptoms than those who were single (Williams and Fredriksen-Goldsen, 2014). Further study on aging and later-life SGD couples is needed, particularly longitudinal studies that allow researchers to follow couples as they grow older.

Relationship Dissolution

Longitudinal research on heterosexual populations clearly documents that marital dissolution through divorce or widowhood undermines health and well-being and increases mortality risk and that this effect is stronger for men than for women (Rendall et al., 2011). Much less is known about the effects of marital dissolution in SGD populations. The first book on this subject, published in 2019, represents a multidisciplinary effort to compile the current evidence (Goldberg and Romero, 2019), but study in this area is still quite new.

Divorce and Separation of Partners Numerous studies have considered rates of relationship dissolution among same-sex couples. Manning and Joyner (2019) reviewed these studies and concluded that, across same-sex and different-sex couples, dissolution rates for married and cohabiting couples are fairly similar; cohabiting couples show higher rates than do married couples. Moreover, cohabiting same-sex female couples have higher probabilities of relationship dissolution than same-sex male couples (Manning and Joyner, 2019). Both for same- and different-sex couples, legally recognized relationships are characterized by greater stability.

Several factors have been associated with higher rates of relationship dissolution among SGD populations, especially among female same-sex couples. Joyner and colleagues (2017) analyzed Add Health data and found that, for young adults, racial minority status and lower socioeconomic status increase marital instability for same-sex couples, much as it does for different-sex couples. Transgender people may also be at greater risk for marital instability, particularly for those who married prior to transition. Meier and colleagues (2013) report that, among transgender men who were partnered prior to transition, half of the relationships were dissolved during or after transition. Again, relatively few data are available in this area.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 228 of 438 PageID #: 2

Widowhood (Death) of a Partner Very little is known about the bereavement experiences of sexual minority populations following the death of a partner. Notably, the landmark case leading to marriage equality, *Obergefell v. Hodges,* was based on the inability of a bereaved spouse to be listed on the death certificate of his partner (thus, disallowing spousal benefits granted to different-sex spouses). Many of the existing studies of partner bereavement in sexual minority populations (primarily gay men) are focused on death of partners due to HIV-related causes; these studies have found increased social isolation, risky sexual behavior, and mental health problems during the bereavement process (Hatzenbuehler, Nolen-Hoeksema, and Erikson, 2008; Rosengard and Folkman, 1997; Satterfield, Folkman, and Acree, 2002). Additional work on bereavement following loss of a partner is needed, including the possibility of unique bereavement experiences of SGD populations (compared with different-sex couples) due to differences in marital dynamics, the presence or absence of children, family support, and sexual or gender minority stressors (Donnelly, Reczek, and Umberson, 2018). Indeed, results of available studies of bereavement in sexual minority populations due to non-HIV-related causes suggest that sexual minority populations face bereavement experiences that are shaped by the quality of interactions with health care providers prior to a partner's death and also by more complex legal and financial issues than those experienced by different-sex couples (Bristowe, Marshall, and Harding, 2016).

Relationship Dynamics, Health, and Well-Being

The accumulation of daily experiences and partner interactions in couples influences health and well-being over time. Partners may help each other to cope with stress, yet partners can also be a source of stress. There is a large research literature on relationship dynamics of different-sex couples: findings from this literature describe how cohabiting, marital, and other committed partnerships contribute to or detract from health and well-being. Information is, however, much more limited for SGD populations; the available evidence suggests certain types of variation in relationship dynamics and health for men and women in same-sex relationships in comparison with different-sex relationships (Umberson and Thomeer, 2020). The rest of this section highlights some of the key relationship dynamics known to be important for couples: overall relationship quality, sexual minority stress, division of labor, the dynamics of sexual and emotional intimacy, intimate partner violence, partners' influences on health behaviors, and caregiving dynamics when a partner is ill.

Overall Relationship Quality Much of the research on SGD couples has focused on partner interactions and relationship quality. The preponderance of evidence suggests that same-sex and different-sex couples are

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 229 of 438 PageID #: 2

similar in overall relationship quality, such as closeness and emotional support (Farr, Forssell, and Patterson, 2010b; Kurdek, 2005).

Sexual Minority Stress Although it is well established that sexual minority stress adversely affects the health of individuals (Hatzenbuehler et al., 2012), a growing research literature has also explored the ways in which sexual minority stress affects couples (Frost et al., 2017; LeBlanc, Frost, and Wight, 2015). This approach emphasizes that individuals in SGD couples may be vulnerable to couple-level minority stressors that cannot be understood in individual terms (Neilands et al., 2019). These stressors may include lack of integration with families of origin, management of stereotypes about their relationships, and couple-level experiences of discrimination (Neilands et al., 2019). Spouses or partners can also play an important role in helping each other cope with minority stress. In fact, relationships can help to buffer individuals from adverse effects of minority stress (Cao et al., 2017; Donnelly, Robinson, and Umberson, 2019). Members of the couple's families of origin may also affect romantic relationships. When parents are critical of a partner or of a relationship, it can impose strain on couple relationships; however, the joint efforts of couples to cope with this kind of stress can also promote resilience (Frost, 2011; Graham and Barnow, 2013; Macapagal et al., 2015; Reczek, 2016).

Division of Labor Considerable research has been conducted on the division of household and child care labor in same-sex partnerships. The preponderance of evidence has shown that same-sex couples are more egalitarian in their division of household and child care than are different-sex couples (Patterson, Sutfin, and Fulcher, 2004). However, much of this research focuses on small, nonrepresentative samples of predominantly white lesbian and gay couples. There may be important variations across racial and ethnic and socioeconomic statuses, and these may covary with family structure (Moore, 2011), so it is difficult to draw clear general conclusions at this time (Patterson, Sutfin, and Fulcher, 2004). Qualitative research on families of transgender people (Pfeffer, 2016; Ward, 2010) suggests that cisgender women coupled with transgender men do comparatively more housework in an effort to clarify and assert gender order.

Dynamics of Sexual and Emotional Intimacy Studies based on national samples indicate that overall satisfaction with sex is similar for those in gay, lesbian, and heterosexual couples (Holmberg and Blair, 2009; Kurdek, 1991; Peplau and Fingerhut, 2007). Gay couples report less sexual exclusivity (Joyner, Manning, and Prince, 2019) and more frequent sexual encounters of shorter duration than do lesbian couples, but no differences in sexual satisfaction (Blair and Pukall, 2014; Farr, Forssell, and Patterson, 2010b). Qualitative data suggest that same-sex partners (both male and female) are more concordant than different-sex partners in their levels of sexual desire and views of intimacy. Lesbian women are more concerned

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 230 of 438 PageID #: 2

with and do more work to promote sex in their relationships than do gay men, possibly because they are more likely to see sex as indicative of intimacy, closeness, and relationship quality (Umberson et al., 2015).

Intimate Partner Violence The available evidence, limited by the few studies that rely on representative data, indicates that the incidence of intimate partner violence in LGB couples is similar to or greater than that in heterosexual couples (Edwards, Sylaska, and Neal, 2015; Rollè et al., 2018). Notably, intimate partner violence is more likely in cohabiting couples than in marital relationships, and it is especially prevalent among bisexual individuals (National Intimate Partner and Sexual Violence Survey, 2010). The risk factors for intimate partner violence are also similar for heterosexual and LGB partners and include lower socioeconomic status, being younger, substance use disorders, and exposure to family violence as a child (Edwards, Sylaska, and Neal, 2015). In addition, unique risk factors have been observed for LGB populations, including sexual minority stress, internalized homonegativity, and the failure of community and health care systems to identify and treat intimate partner violence in SGD populations (Edwards, Sylaska, and Neal, 2015; Rollè et al., 2018). (See Chapter 11 for additional studies of LGBTQ victimization.)

Partners' Influences on Health Behaviors Spousal influence on health behaviors is often identified as one reason for the better health status of married different-sex couples compared to their unmarried counterparts (Rendall et al., 2011). Only recently have researchers had access to data that clearly identified the union status of SGD individuals. Although patterns of health behavior in different-sex marriages often differ for men and women (e.g., men are more likely than women to drink heavily), health behaviors in same-sex marriages seem to be characterized by more similarity between spouses. A recent study of more than 400 couples using dyadic data shows that same-sex spouses are more similar to one another than are different-sex spouses in their smoking, drinking, and exercise habits (Holway, Umberson, and Donnelly, 2018); results of this study showed greater concordance for lesbian than for gay spouses. Exactly how same-sex spouses influence one another's health and well-being, and how that influence may evolve over the life course, is a topic for future study.

Caregiving Dynamics When a Partner Is Ill Spouses are typically the front line of defense when an adult becomes ill, and spouses who provide informal care or facilitate formal health care for their partners may promote the partner's health and well-being—even while caregiving may impose stress on the caregiver. One study of interview data from 90 spouses (45 couples) considered how spouses co-construct illness experiences in ways that shape relationship dynamics (Umberson et al., 2016). In both same- and different-sex marriages, men tend to downplay illness

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 231 of 438 PageID #: 2

and thus perform less care work when their spouse is ill; women tend to construct illness as involving intensive care work (Umberson et al., 2016). Same-sex spouses described similar constructions of illness more often than different-sex couples and, as such, same-sex spouses described less illness-related disagreement and stress around caregiving (Umberson et al., 2016).

These qualitative findings are supported by dyadic survey data from more than 800 respondents who reported on couples' behavior during serious illness events (Umberson et al., 2017). Women tended to provide and receive more instrumental care than men; women who were married to women provided and received the most instrumental care. Men and women in same-sex marriages reported providing more emotional support for their sick spouse than did men and women in different-sex marriages. However, during their own health event, women—whether they were married to a man or a woman—provided more emotional support to their spouse than did men. These findings point to the many similarities in caregiving across union types and suggest that differences across union types reflect the intersection of gender and sexuality.

There may be a greater need for caregiving in SGD than in heterosexual communities due to higher levels of certain chronic conditions, poorer overall health, and higher risk of cognitive impairment (Baumle, 2014; Fredriksen-Goldsen et al., 2018). Because SGD people are less likely than others to have a spouse or partner and less likely to have children, those who need care may also face unique challenges in getting that care. Members of families of origin who do not accept SGD identities may create additional strains in this regard. Both SGD caregivers and SGD care recipients may face challenges in obtaining needed services and medical care, in that the legacy of stigma and discrimination in institutional settings contributes to underutilization of medical and social services for older LGBT adults (SAGE, 2014).

Very little is known about end-of-life experiences for SGD couples and families (Marsack and Stephenson, 2018; Reczek, 2020). One small-scale qualitative study found that lesbian and gay couples were more likely than heterosexual couples to plan for their end of life (e.g., by having wills and related documents), in part because same-sex couples were more concerned about possible interference from members of their families of origin due to their sexual minority status (Thomeer et al., 2017). Now that marriage equality is the law, this situation may shift, but little is yet known about this possibility.

Overall, and apart from studies of caregiving within intimate relationships, little is known about illness and caregiving among adult or aging SGD populations (Reczek and Umberson, 2016), and there are even fewer studies of end-of-life issues among SGD people. A few studies suggest dif-

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 232 of 438 PageID #: 2

ferences in caregiving needs and experiences of SGD people in comparison with other older people, but little is yet known about this topic. These are areas of research in need of further study.

Chosen Families

Marital and romantic partnerships are clearly important to the health and well-being of SGD as well as heterosexual populations, but more than half of LGBT-identified people were classified as single in recent Gallup tracking surveys (Romero, 2017). Moreover, SGD adults report less frequent contact and more strain in their family-of-origin relationships than do heterosexual adults (Reczek, 2020). Several types of evidence suggest that, compared with their heterosexual counterparts, SGD people rely more on support from "chosen families"—selected friend and social network ties.

Recent evidence on the function and composition of support networks reveals considerable complexity. Using data from a community study of 524 lesbian, gay, bisexual, and heterosexual adults living in New York City, Frost and colleagues (2016) reported that, although heterosexual and LGB individuals relied more on friends than families of origin for routine support (e.g., talking about problems), gay and bisexual men relied more on friends than did lesbian and bisexual women. For major support (such as borrowing money), heterosexual people and lesbian and bisexual women relied mostly on members of their families of origin, whereas gay and bisexual men relied more on friends. Frost and colleagues (2016) found additional variation based on race and ethnicity—with racial and ethnic minority SGD individuals reporting less overall support than others. These findings, like those concerning romantic and marital relationships, point to the need for future research to consider the intersection of gender and sexuality, as well as race and ethnicity, in understanding the relationship dynamics that influence health and well-being in potentially different ways across SGD groups.

Chosen families may also play an important role in caregiving in SGD communities. In one study, for example, in contrast to the 6 percent of heterosexual older adults who reported providing care to a friend, 21 percent of older LGBT adults reported having provided care to friends (MetLife Mature Market Institute and American Society on Aging, 2010). Another survey of American adults (Robbins et al., 2017) found that LGBTQ adults were more likely than others to have taken time off from work to care for someone in their chosen family. Although friends who provide care may experience caregiving stress and psychological distress associated with that caregiving (Shiu, Muraco, and Fredriksen-Goldsen, 2016), this care is valuable in supporting the independence, health, and well-being of the SGD recipients of that care.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 233 of 438 PageID #: 2

SUMMARY AND CONCLUSIONS

Close, supportive, and stable relationships foster health and well-being, and relationships early in life have implications for the quality and stability of social ties in adolescence and adulthood. Many SGD and intersex people are coming out at younger ages than in previous years, and this affects their social relationships. SGD youth are at higher risk of depressive symptoms, anxiety, and suicidality than other youth. In addition, many SGD youth encounter harassment and hostility at home or at school, which can have negative effects on their mental and physical health.

Supportive family relationships are a foundation for child and adolescent well-being for SGD as for other people. Parental acceptance of their SGD youth is associated with positive youth adjustment; conversely, parental rejection is associated with a range of emotional and behavioral health problems. Supportive teachers are among the most important nonfamily adults in the lives of contemporary SGD youth. Maintaining friendships throughout and following the coming out process supports positive adjustment for SGD youth. Romantic relationships in youth are also supportive in many cases, although the risk of intimate partner violence is higher for SGD youth than for other youth.

CONCLUSION 8-1: Relationships with parents, teachers, peers, and romantic partners are important in shaping development and well-being among children and adolescents; these relationships can be strained for sexual and gender diverse youth.

Further research is needed on developmental processes among SGD youth as well as on the effects of intersectional identities, stigma, and discrimination on developmental processes. Study is especially needed on bisexual, transgender, and intersex youth.

The number of married same-sex couples has nearly doubled since 2015. There is much more evidence on union status and health of gay and lesbian couples than on that of other SGD populations. Higher levels of stress for sexual minority populations may mean that same-sex spouses encounter more stress in their daily lives in ways that strain their relationships and undermine their health. At the same time, marriage may be especially important in helping sexual minority populations to cope with stress and to protect their health and well-being. The legal status of romantic unions is associated with other markers of advantage and disadvantage, particularly socioeconomic status. Those of higher socioeconomic status are more likely to marry, and marriage itself may also provide economic benefits. As with different-sex couples, legally recognized same-sex relationships are less likely than others to dissolve over time.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 234 of 438 PageID #: 2

CONCLUSION 8-2: The legal status of romantic unions is associated with better health outcomes. It is also associated with other markers of advantage and disadvantage, such as income and education.

The existing evidence is characterized by sample and research design limitations. To clarify links between union status and health, longitudinal data with well-validated measures of sexual and gender identity are needed.

Lesbian, gay, and intersex individuals are less likely than heterosexual individuals to become parents. Less is known about the prevalence of parenthood among bisexual and transgender people. Some SGD people become parents in the context of prior heterosexual relationships—a pathway that is more common for older people than younger people. Another pathway to parenthood among LGBTQ+ people involves the use of assisted reproductive technology; however, the costs of such techniques can be high, so access to these options is limited to those with substantial financial resources. Some SGD adults also become foster or adoptive parents. Both children and adolescents have been found to enjoy supportive relationships with lesbian and gay parents, and children of lesbian and gay parents have shown typical development.

CONCLUSION 8-3: Sexual orientation is not a significant determinant of parenting ability or child development. Children with lesbian and gay parents have generally been found to develop in typical ways. Family processes and family stability are more important determinants of development among children and youth in these families than parental sexual orientation.

In contrast to the evidence about lesbian and gay parents, less is known about parenting by bisexual or transgender people, but existing research suggests that they are as competent in parenting roles as other parents. Additional research is needed on relationship development in adolescence, adult family formation among SGD (especially bisexual, transgender, and intersex) people, as well as family processes and couple dynamics among older SGD individuals and families.

Throughout adulthood, people who are more socially connected have better mental and physical health and lower mortality than those who are more socially isolated. Evidence suggests that SGD adults rely more on support from friends and "chosen families" than do their heterosexual counterparts. In comparison with heterosexual peers, SGD adults report less frequent contact and more strain in their family-of-origin relationships. Overall, lesbian and gay adults report more strained relationships with their own parents than do heterosexual adults, and these strained relationships are associated with stress, psychological distress, and unhealthy behaviors.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 235 of 438 PageID #: 2

Friends and members of chosen families may also play an important role in SGD communities. For example, many more LGBT than heterosexual older adults reported providing care to a friend. This care is invaluable in supporting the independence, health, and well-being of SGD care recipients.

Research is needed on the effects of relationships on SGD well-being that uses reliable assessment tools, samples that are based on nationally representative data, and longitudinal designs. Research on SGD families and couples that devotes attention to diversity and intersectionality, with a particular focus on multiple, intersecting forms of inequality, is also needed.

REFERENCES

Acosta, K.L. (2013). *Amigas y Amantes: Sexually Nonconforming Latinas Negotiate Family.* New Brunswick, NJ: Rutgers University Press.

American Psychological Association. (2005). *Resolution on Sexual Orientation, Gender Identity (SOGI), Parents and Their Children.* Available: https://www.apa.org/pi/lgbt/resources/policy/sexual-orientation.

American Sociological Association. (2015). *Brief of Amicus Curiae American Sociological Association in Obergefell v. Hodges*, Supreme Court of the United States. Available: https://www.asanet.org/sites/default/files/savvy/documents/ASA/pdfs/ASA_March_2015_Supreme_Court_Marriage_Equality_Amicus_Brief.pdf.

Bauermeister, J.A., Johns, M.M., Sandfort, T.G., Eisenberg, A., Grossman, A.H., and D'Augelli, A.R. (2010). Relationship trajectories and psychological well-being among sexual minority youth. *Journal of Youth and Adolescence*, *39*(10), 1148–1163.

Baumle, A.K. (2014). Same-sex cohabiting elders versus different-sex cohabiting and married elders: Effects of relationship status and sex of partner on economic and health outcomes. *Social Science Research*, *43*, 60–73.

Biblarz, T.J., and Stacey, J. (2010). How does the gender of parents matter? *Journal of Marriage and the Family, 72*, 3–22.

Bishop, M.D., Fish, J.N., Hammack, P.L., and Russell, S.T. (2020). Sexual identity development milestones in three generations of sexual minority people: A national probability sample. *Developmental Psychology.* doi: 10.1037/dev0001105.

Blair, K.L., and Pukall, C.F. (2014). Can less be more? Comparing duration vs. frequency of sexual encounters in same-sex and mixed-sex relationships. *The Canadian Journal of Human Sexuality*, *23*(2), 123–136.

Blake, L., Carone, N., Raffanello, E., Slutsky, J., Ehrhardt, A., and Golombok, S. (2017). Gay fathers' motivations for and feelings about surrogacy as a path to parenthood. *Human Reproduction, 32*, 860–867.

Bornstein, M.H. (Ed.). (2019). *Handbook of Parenting: Volume 5: The Practice of Parenting*. New York: Routledge.

Bos, H., and Sandfort, T.G. (2010). Children's gender identity in lesbian and heterosexual two-parent families. *Sex Roles*, *62*(1–2), 114–126.

Bostwick, W.B., Boyd, C.J., Hughes, T.L., and McCabe, S.E. (2010). Dimensions of sexual orientation and the prevalence of mood and anxiety disorders in the United States. *American Journal of Public Health, 100*, 468–475.

Bristowe, K., Marshall, S., and Harding, R. (2016). The bereavement experiences of lesbian, gay, bisexual and/or trans people who have lost a partner: A systematic review, thematic synthesis and modelling of the literature. *Palliative Medicine*, *30*(8), 730–744.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 236 of 438 PageID #: 2

Brumbaugh-Johnson, S.M., and Hull, K.E. (2018). Coming out as transgender: Navigating the social implications of a transgender identity. *Journal of Homosexuality*, *66*(1), 1–30.

Cao, H., Zhou, N., Fine, M., Liang, Y., Li, J., and Mills-Koonce, W.R. (2017). Sexual minority stress and same sex relationship well-being: A meta-analysis of research prior to the U.S. nationwide legalization of same-sex marriage. *Journal of Marriage and Family*, *79*(5), 1258–1277.

Connolly, M.D., Zervos, M.J., Barone II, C.J., Johnson, C.C., and Joseph, C.L. (2016). The mental health of transgender youth: Advances in understanding. *Journal of Adolescent Health*, *59*(5), 489–495.

Conron, K.J., Mimiaga, M.J., and Landers, S.J. (2010). A population-based study of sexual orientation identity and gender differences in adult health. *American Journal of Public Health, 100*, 1953–1960.

Dank, M., Lachman, P., Zweig, J.M., and Yahner, J. (2014). Dating violence experiences of lesbian, gay, bisexual, and transgender youth. *Journal of Youth and Adolescence*, *43*(5), 846–857.

D'Augelli, A.R. (2003). Lesbian and bisexual female youths aged 14 to 21: Developmental challenges and victimization experiences. *Journal of Lesbian Studies, 7*, 9–29.

D'Augelli, A.R., Hershberger, S.L., and Pilkington, N.W. (1998). Lesbian, gay, and bisexual youth and their families: Disclosure of sexual orientation and its consequences. *American Journal of Orthopsychiatry*, *68*(3), 361–371.

DeHaan, S., Kuper, L.E., Magee, J.C., Bigelow, L., and Mustanski, B.S. (2013). The interplay between online and offline explorations of identity, relationships, and sex: A mixed-methods study with LGBT youth. *Journal of Sex Research, 50,* 421–434.

Denney, J.T., Gorman, B.K., and Barrera, C.B. (2013). Families, resources, and adult health: Where do sexual minorities fit? *Journal of Health and Social Behavior*, *54,* 46–63. doi: 10.1177/0022146512469629.

Diamond, L.M., and Lucas, S. (2004). Sexual-minority and heterosexual youths' peer relationships: Experiences, expectations, and implications for well-being. *Journal of Research on Adolescence*, *14*(3), 313–340.

Diamond, L.M., Savin-Williams, R.C., and Dubé, E.M. (1999). Sex, dating, passionate friendships, and romance: Intimate peer relations among lesbian, gay, and bisexual adolescents. In W. Furman, B.B. Brown, and C. Feiring (Eds.), *The Development of Romantic Relationships in Adolescence* (pp. 175–210). New York: Cambridge University Press.

Donnelly, R., Reczek, C., and Umberson, D. (2018). What we know (and don't know) about the bereavement experiences of same-sex spouses. In A.E. Goldberg and A. Romero (Eds.), *LGBTQ Divorce and Relationship Dissolution: Psychological and Legal Perspectives and Implications for Practice*. New York: Oxford University Press.

Donnelly, R., Robinson, B.A., and Umberson, D. (2019). Can spouses buffer the impact of discrimination on depressive symptoms?: An examination of same-sex and different-sex marriages. *Society and Mental Health, 9*(2), 192–210. doi: 10.1177/2156869318800157.

Doty, N.D., Willoughby, B.L., Lindahl, K.M., and Malik, N.M. (2010). Sexuality related social support among lesbian, gay, and bisexual youth. *Journal of Youth and Adolescence*, *39*(10), 1134–1147.

Durwood, L., McLaughlin, K., and Olson, K. (2017). Mental health and self-worth in socially transitioned transgender youth. *Journal of the American Academy of Child and Adolescent Psychiatry, 56*, 116–123.

Earnshaw, V.A., Bogart, L.M., Poteat, V.P., Reisner, S.L., and Schuster, M.A. (2016). Bullying among lesbian, gay, bisexual, and transgender youth. *Pediatric Clinics*, *63*(6), 999–1010.

Edwards, K.M., and Sylaska, K.M. (2013). The perpetration of intimate partner violence among LGBTQ college youth: The role of minority stress. *Journal of Youth and Adolescence*, *42*(11), 1721–1731.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 237 of 438 PageID #: 2

Edwards, K., Sylaska, K.M., and Neal, A.M. (2015). Intimate partner violence among sexual minority populations: A critical review of the literature and agenda for future research. *Psychology of Violence, 5*(2), 112–121. doi: 10.1037/a0038656.

Ernst, M.M., Liao, L.M., Baratz, A.B., and Sandberg, D.E. (2018). Disorders of sex development/intersex: Gaps in psychosocial care for children. *Pediatrics*, *142*(2), e20174045.

Everett, B.G., McCabe, K.F., and Hughes, T.L. (2017). Sexual orientation disparities in mistimed and unwanted pregnancy among adult women. *Perspectives in Sexual and Reproductive Health, 49*, 157–165.

Farr, R.H., and Patterson, C.J. (2013). Coparenting among lesbian, gay, and heterosexual couples: Associations with adopted children's outcomes. *Child Development*, *84*, 1226–1240.

Farr, R.H., Forssell, S.L., and Patterson, C.J. (2010a). Parenting and child development in adoptive families: Does parental sexual orientation matter? *Applied Developmental Science, 14,* 164–178.

———. (2010b). Gay, lesbian, and heterosexual adoptive parents: Couple and relationship issues. *Journal of GLBT Family Studies, 6,* 199–213.

Farr, R.H., Vazquez, C.P., and Patterson, C.J. (2020). LGBTQ adoptive parents and their children. In A.E. Goldberg and K.R. Allen (Eds.), *LGBT-Parent Families: Innovations in Research and Implications for Practice* (2nd ed.). New York: Springer.

Farr, R.H., Bruun, S.T., Doss, K.M., and Patterson, C.J. (2018). Children's gender-typed behavior from early to middle childhood in adoptive families with lesbian, gay, and heterosexual parents. *Sex Roles, 78*, 528–541.

Fedewa, A.L., Black, W.W., and Ahn, S. (2015). Children and adolescents with same-gender parents: A meta-analytic approach in assessing outcomes. *Journal of GLBT Family Studies, 11*, 1–34.

Feinstein, B.A., and Dyar, C. (2017). Bisexuality, minority stress, and health. *Current Sexual Health Reports*, *9*(1), 42–49. doi: 10.1007/s11930-017-0096-3.

Floyd, F.J., and Bakeman, R. (2006). Coming-out across the life course: Implications of age and historical context. *Archives of Sexual Behavior*, *35*(3), 287–296.

Fredriksen-Goldsen, K., Kim, H., Barkan, S., Balsam, K., and Mincer, S. (2010). Disparities in health-related quality of life: A comparison of lesbians and bisexual women. *American Journal of Public Health, 100,* 2255–2261.

Fredriksen-Goldsen, K.I., Shiu, C., Bryan, A.E., Goldsen, J., and Kim, H.J. (2016). Health equity and aging of bisexual older adults: Pathways of risk and resilience. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *72*(3), 468–478.

Fredriksen-Goldsen, K.I., Jen, S., Bryan, A.E., and Goldsen, J. (2018). Cognitive impairment, Alzheimer's disease, and other dementias in the lives of lesbian, gay, bisexual and transgender (LGBT) older adults and their caregivers: Needs and competencies. *Journal of Applied Gerontology*, *37*, 545–569.

Frost, D.M. (2011). Stigma and intimacy in same-sex relationships: A narrative approach. *Journal of Family Psychology*, *25*(1), 1.

Frost, D.M., Meyer, I.H., and Schwartz, S. (2016). Social support networks among diverse sexual minority populations. *American Journal of Orthopsychiatry, 86*(1), 91–102.

Frost, D.M., LeBlanc, A.J., de Vries, B., Alston-Stepnitz, E., Stephenson, R., and Woodyatt, C. (2017). Couple-level minority stress: An examination of same-sex couples' unique experiences. *Journal of Health and Social Behavior*, *58*(4), 455–472.

Gates, G.J. (2006). *Same-Sex Couples and the Gay, Lesbian, Bisexual Population: New Estimates from the American Community Survey*. Los Angeles, CA: Williams Institute, UCLA School of Law.

———. (2009). *Same-Sex Spouses and Unmarried Partners in the American Community Survey, 2008*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Copyright National Academy of Sciences. All rights reserved.

———. (2013). *Same-Sex and Different-Sex Couples in the American Community Survey: 2005–2011*. Los Angeles, CA: Williams Institute, UCLA School of Law.

———. (2014). *LGB Families and Relationships: Analyses of the 2013 National Health Interview Survey.* Los Angeles, CA: Williams Institute, UCLA School of Law.

Gates, G.J., and Brown, T.N.T. (2015). *Marriage and Same-Sex Couples after Obergefell*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Glover, J.A., Galliher, R.V., and Lamere, T.G. (2009). Identity development and exploration among sexual minority adolescents: Examination of a multidimensional model. *Journal of Homosexuality*, *56*(1), 77–101.

Goldberg, A.E. (2007). (How) does it make a difference? Perspectives of adults with lesbian, gay, and bisexual parents. *American Journal of Orthopsychiatry*, *77*(4), 550–562.

Goldberg, A.E. (2010). *Lesbian and Gay Parents and Their Children: Research on the Family Life Cycle*. Washington DC: American Psychological Association.

Goldberg, A.E., and Romero, A.P. (2019). *LGBTQ Divorce and Relationship Dissolution: Psychological and Legal Perspectives and Implications for Practice*. New York: Oxford University Press.

Goldberg, S.K., and Conron, K.J. (2018). *How Many Same-Sex Couples in the U.S. Are Raising Children?* Los Angeles, CA: Williams Institute, UCLA School of Law.

Golombok, S. (2015). *Modern Families: Parents and Children in New Family Forms*. Cambridge, UK: Cambridge University Press.

______. (2019). Parenting and contemporary reproductive technologies. In M.H. Bornstein (Ed.), *Handbook of Parenting* (3rd ed.), Volume 5. New York: Routledge.

Golombok, S., Mellish, L., Jennings, S., Casey, P., Tasker, F., and Lamb, M.E. (2014). Adoptive gay father families: Parent-child relationships and children's psychological adjustment. *Child Development, 85*, 456–468.

Golombok, S., Blake, L., Slutsky, J., Raffanello, E., Roman, G., and Ehrhardt, A. (2018). Parenting and the adjustment of children born to gay fathers through surrogacy. *Child Development, 89*, 1223–1233.

Gorman, B.K., Denney, J.T., Dowdy, H., and Medeiros, R.A. (2015). A new piece of the puzzle: Sexual orientation, gender, and physical health status. *Demography, 52*, 1357–1382.

Gough, B., Weyman, N., Alderson, J., Butler, G., and Stoner, M. (2008). "They did not have a word": The parental quest to locate a "true sex" for their intersex children. *Psychology and Health*, *23*(4), 493–507.

Graham, J.M., and Barnow, Z.B. (2013). Stress and social support in gay, lesbian, and heterosexual couples: Direct effects and buffering models. *Journal of Family Psychology*, *27*(4), 569.

Green, R.-J., Rubio, R.J., Rothblum, E.D., Bergman, K., and Katuzny, K.E. (2019). Gay fathers by surrogacy: Prejudice, parenting, and well-being of female and male children. *Psychology of Sexual Orientation and Gender Identity, 6*, 269–283.

Grossman, A.H., and Kerner, M.S. (1998). Self-esteem and supportiveness as predictors of emotional distress in gay male and lesbian youth. *Journal of Homosexuality, 35*(2), 25–39. doi: 10.1300/J082v35n02_02.

Grossman, A.H., Haney, A.P., Edwards, P., Alessi, E.J., Ardon, M., and Howell, T.J. (2009). Lesbian, gay, bisexual and transgender youth talk about experiencing and coping with school violence: A qualitative study. *Journal of LGBT Youth*, 6, 24–46.

Grov, C., Bimbi, D.S., Nanín, J.E., and Parsons, J.T. (2006). Race, ethnicity, gender, and generational factors associated with the coming-out process among gay, lesbian, and bisexual individuals. *Journal of Sex Research*, *43*(2), 115–121.

Hatzenbuehler, M.L., Nolen-Hoeksema, S., and Erickson, S.J. (2008). Minority stress predictors of HIV risk behavior, substance use, and depressive symptoms: Results from a prospective study of bereaved gay men. *Health Psychology*, *27*(4), 455.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 239 of 438 PageID #: 2

Hatzenbuehler, M.L., O'Cleirigh, C., Grasso, C., Mayer, K., Safren, S., and Bradford, J. (2012). Effect of same-sex marriage laws on health care use and expenditures in sexual minority men: A quasi-natural experiment. *American Journal of Public Health*, *102*(2), 285–291.

Heatherington, L., and Lavner, J.A. (2008). Coming to terms with coming out: Review and recommendations for family systems-focused research. *Journal of Family Psychology*, *22*(3), 329.

Herdt, G., and Koff, B. (2000). *Something to Tell You: The Road Families Travel When a Child Is Gay*. New York: Columbia University Press.

Hollenbach, A.D., Eckstrand, K.L., and Dreger, A. (2014). Association of American Medical Colleges. Implementing curricular and institutional climate changes to improve health care for individuals who are LGBT, gender nonconforming, or born with DSD: A resource for medical educators. Available: https://members.aamc.org/eweb/upload/Executive%20LGBT%20FINAL.pdf.

Holmberg, D., and Blair, K.L. (2009). Sexual desire, communication, satisfaction, and preferences of men and women in same-sex versus mixed-sex relationships. *Journal of Sex Research*, *46*(1), 57–66.

Holt-Lunstad, J., Smith, T., and Layton, J.B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine, 7,* e1000316.

Holway, G.V., Umberson, D., and Donnelly, R. (2018). Health and health behavior concordance between spouses in same-sex and different-sex marriages. *Social Currents*, *5*(4), 319–327.

Horn, S.S., and Romeo, K.E. (2010). Peer contexts for lesbian, gay, bisexual, and transgender students: Reducing stigma, prejudice, and discrimination. *Prevention Researcher*, *17*(4), 7–10.

Hsieh, N., and Liu, H. (2019). Bisexuality, union status, and gender composition of the couple: Reexamining marital advantage in health. *Demography*, *56*(5), 1791–1825. doi: 10.1007/s13524-019-00813-2.

Hsieh, N., and Ruther, M. (2016). Sexual minority health and health risk factors: Intersection effects of gender, race, and sexual identity. *American Journal of Preventive Medicine, 50*, 746–755.

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

Johnson, K.C., LeBlanc, A.J., Sterzing, P.R., Deardorff, J., Antin, T., and Bockting, W. (2020). Trans adolescents' perceptions and experiences of their parents' supportive and rejecting behaviors. *Journal of Counseling Psychology, 67*, 156–170.

Jones, J.M. (2017). *In U.S. 10.2% of LGBT Adults Now Married to Same-Sex Spouse*. Gallup. Available: https://news.gallup.com/poll/212702/lgbt-adults-married-sex-spouse.aspx.

Joyner, K., Manning, W.D., and Bogle, R.H. (2017). Gender and the stability of same-sex and different-sex relationships among young adults. *Demography, 54*(6), 2351–2374. doi: 10.1007/s13524-017-0633-8.

Joyner, K., Manning, W., and Prince, B. (2020). *Social Context and the Stability of Same-Sex and Different-Sex Relationships*. New Brunswick, NJ: Rutgers University Press. doi: 10.2307/j.ctv128fqjw.19.

Klein, A., and Golub, S.A. (2016). Family rejection as a predictor of suicide attempts and substance misuse among transgender and gender nonconforming adults. *LGBT Health*, *3*(3), 193–199.

Korchmaros, J.D., Ybarra, M.L., and Mitchell, K.J. (2015). Adolescent online romantic relationship initiation: Differences by sexual and gender identification. *Journal of Adolescence*, *40*, 54–64.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 240 of 438 PageID #: 2

Kreukels, B.P., Cohen-Kettenis, P.T., Roehle, R., van de Grift, T.C., Slowikowska-Hilczer, J., Claahsen-van der Grinten, H., Hirschberg, A.L., de Vries, A.L.C., Reisch, N., Bouvattier, C., Nordenström, A., Thyen, U., Köhler, B., and on behalf of the dsd-LIFE group. (2019). Sexuality in adults with differences/disorders of sex development (DSD): Findings from the dsd-LIFE study. *Journal of Sex and Marital Therapy*, *45*(8), 688–705.

Kurdek, L.A. (1991). Correlates of relationship satisfaction in cohabiting gay and lesbian couples: Integration of contextual, investment, and problem-solving models. *Journal of Personality and Social Psychology*, *61*(6), 910.

______. (2005). What do we know about gay and lesbian couples? *Current Directions in Psychological Science, 14*(5), 251–254. doi: 10.1111/j.0963-7214.2005.00375.x.

LeBlanc, A.J., Frost, D.M., and Bowen, K. (2018). Legal marriage, unequal recognition, and mental health among same-sex couples. *Journal of Marriage and Family*, *80*, 397–408. doi: 10.1111/jomf.12460.

LeBlanc, A.J., Frost, D.M., and Wight, R.G. (2015). Minority stress, stress proliferation, and mental health among same-sex and other marginalized couples. *Journal of Marriage and Family*, 77, 40–59. doi: 10.1111/jomf.12160.

Lick, D.J., Tornello, S.L., Riskind, R.G., Schmidt, K.M., and Patterson, C.J. (2012). Social climate for sexual minorities predicts well-being among heterosexual offspring of lesbian and gay parents. *Sexuality Research and Social Policy, 9,* 99–112.

Liu, H., and Wilkinson, L. (2017). Marital status and perceived discrimination among transgender people. *Journal of Marriage and Family*, *79,* 1295–1313. doi: 10.1111/jomf.12424.

Liu, H., Reczek, C., and Brown, D. (2013). Same-sex cohabitors and health: The role of race-ethnicity, gender, and socioeconomic status. *Journal of Health and Social Behavior*, *54*, 25–45. doi: 10.1177/0022146512468280.

Macapagal, K., Greene, G.J., Rivera, Z., and Mustanski, B. (2015). "The best is always yet to come": Relationship stages and processes among young LGBT couples. *Journal of Family Psychology*, *29*(3), 309.

Manning, W.D., and Joyner, K. (2019). Demographic approaches to same-sex relationship dissolution and divorce. In A.E. Goldberg and A.P. Romero (Eds.), *LGBTQ Divorce and Relationship Dissolution: Psychological and Legal Perspectives and Implications for Practice* (pp. 35–48). New York: Oxford University Press.

Manning, W.D., Fettro, M.N., and Lamidi, E. (2014). Child well-being in same-sex parent families: Review of research prepared for American Sociological Association amicus brief. *Population Research and Policy Review, 33*(4), 485–502. doi: 10.1007/s11113-014-9329-6.

Marsack, J., and Stephenson, R. (2018). Barriers to end-of-life care for LGBT persons in the absence of legal marriage or adequate legal documentation. *LGBT Health*, *5*(5), 273–283. doi: 10.1089/lgbt.2016.0182.

Martos, A.J., Nezhad, S., and Meyer, I.H. (2015). Variations in sexual identity milestones among lesbians, gay men, and bisexuals. *Sexuality Research and Social Policy*, *12*(1), 24–33.

Meier, S.C., Sharp, C., Michonski, J., Babcock, J.C., and Fitzgerald, K. (2013). Romantic relationships of female-to-male trans men: A descriptive study. *International Journal of Transgenderism*, *14*(2), 75–85.

MetLife Mature Market Institute and American Society on Aging. (2010). *Still Out, Still Aging: The MetLife Study of Lesbian, Gay, Bisexual, and Transgender Baby Boomers.* Available: https://www.asaging.org/sites/default/files/files/mmi-still-out-still-aging.pdf.

Moore, M.R. (2011). *Invisible Families: Gay Identities, Relationships and Motherhood Among Black Women.* Berkeley, CA: University of California Press.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 241 of 438 PageID #: 2

Moyano, N., and del Mar Sánchez-Fuentes, M. (2020). Homophobic bullying at schools: A systematic review of research, prevalence, school-related predictors and consequences. *Aggression and Violent Behavior*, 101441.

National Academies of Sciences, Engineering, and Medicine. (2019). *The Promise of Adolescence: Realizing Opportunity for All Youth*. Washington, DC: National Academies Press.

National Intimate Partner and Sexual Violence Survey. (2010). Available: http:www.cdc.gov/violenceprevention/pdf/cdc_nisvs_victimization_final-a.pdf

Needham, B.L., and Austin, E.L. (2010). Sexual orientation, parental support, and health during the transition to young adulthood. *Journal of Youth and Adolescence, 39*, 1189–1198. doi: 10.1007/s10964-010-9353-6.

Neilands, T.B., LeBlanc, A.J., Frost, D.M., Bowen, K., Sullivan, P.S., Hoff, C.C., and Chang, J. (2019). Measuring a new stress domain: Validation of the couple-level minority stress scale. *Archives of Sexual Behavior, 49*, 249–265. doi: 10.1007/s10508-019-01487-y.

Norwood, K. (2013). Meaning matters: Framing trans identity in the context of family relationships. *Journal of GLBT Family Studies*, *9*(2), 152–178.

Olson, K.R., Key, A.C., and Eaton, N.R. (2015). Gender cognition in transgender children. *Psychological Science*, *26*(4), 467–474.

Olson, K., Durwood, L., DeMeules, M., and McLaughlin, K. (2016). Mental health of transgender children who are supported in their identity. *Pediatrics, 137*, e20153223.

Parker, C.M., Hirsch, J.S., Philbin, M.M., and Parker, R.G. (2018). The urgent need for research and interventions to address family-based stigma and discrimination against lesbian, gay, bisexual, transgender, and queer youth. *Journal of Adolescent Health, 63*, 383–393.

Pastrana, A.J. (2015). Being out to others: The relative importance of family support, identity and religion for LGBT Latina/os. *Latino Studies*, *13*(1), 88–112.

Patterson, C.J. (1992). Children of lesbian and gay parents. *Child Development, 63*, 1025–1042.

———. (2000). Sexual orientation and family life: A decade review. *Journal of Marriage and the Family, 62*, 1052–1069.

———. (2013). Sexual orientation and family lives. In C.J. Patterson and A.R. D'Augelli (Eds.), *Handbook of Psychology and Sexual Orientation*. New York: Oxford University Press.

———. (2017). Parental sexual orientation and child development. *Child Development Perspectives, 11,* 45–49.

———. (2019). Lesbian and gay parenting. In M.H. Bornstein (Ed.), *Handbook of Parenting,* (3rd ed.), Volume 3. New York: Routledge.

Patterson, C.J., and Goldberg, A.E. (2016). *Lesbian and Gay Parents and Their Children.* NCFR Brief, National Council on Family Relations. Available: https://www.ncfr.org/sites/default/files/2017-01/ncfr_policy_brief_november_final.pdf.

Patterson, C.J., Sutfin, E.L., and Fulcher, M. (2004). Division of labor among lesbian and heterosexual parenting couples: Correlates of specialized versus shared patterns. *Journal of Adult Development, 11*, 179–189.

Patterson, C.J., Tate, D., Sumontha, J., and Xu, R. (2018). Sleep difficulties among sexual minority adults: Associations with family relationship problems. *Psychology of Sexual Orientation and Gender Diversity, 5,* 109–116.

Peplau, L.A., and Fingerhut, A.W. (2007). The close relationships of lesbians and gay men. *Annual Review of Psychology*, *58*, 405–424.

Pfeffer, C.A. (2010). "Women's work"? Women partners of transgender men doing housework and emotion work. *Journal of Marriage and Family, 72*, 165–183.

———. (2016). *Queering Families: The Postmodern Partnerships of Cisgender Women and Transgender Men.* New York: Oxford University Press.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 242 of 438 PageID #: 2

Potter, D. (2012). Same sex parent families and children's academic achievement. *Journal of Marriage and Family, 74*, 556–571.

Potter, D., and Potter, E.C. (2016). Psychosocial well-being in children of same-sex parents: A longitudinal analysis of familial transitions. *Journal of Family Issues, 38*(16), 2303–2328. doi: 10.1177/0192513X16646338.

Puckett, J.A., Woodward, E.N., Mereish, E.H., and Pantalone, D. (2015). Parental rejection following sexual orientation disclosure: Impact on internalized homophobia, social support, and mental health. *LGBT Health, 2,* 265–269.

Reczek, C. (2014). The intergenerational relationships of gay men and lesbian women. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *69*(6), 909–919.

———. (2016). Parental disapproval and gay and lesbian relationship quality. *Journal of Family Issues*, *37*(15), 2189–2212.

———. (2020). Research on gender and sexual minority families: A 2010–2020 decade in review. *Journal of Marriage and Family, 82,* 300–325.

Reczek, C., and Umberson, D. (2016). Greedy spouse, needy parent: The marital dynamics of gay, lesbian, and heterosexual intergenerational caregivers. *Journal of Marriage and Family,* 78, 957–974. doi: 10.1111/jomf.12318.

Rendall, M.S., Weden, M.M., Favreault, M.M., and Waldron, H. (2011). The protective effect of marriage for survival: A review and update. *Demography*, *48*, 481–506. doi: 10.1007/s13524-011-0032-5.

Reuter, T.R., Sharp, C., and Temple, J.R. (2015). An exploratory study of teen dating violence in sexual minority youth. *Partner Abuse*, *6*(1), 8–28.

Reuter, T.R., Newcomb, M.E., Whitton, S.W., and Mustanski, B. (2017). Intimate partner violence victimization in LGBT young adults: Demographic differences and associations with health behaviors. *Psychology of Violence, 7,* 101–109.

Riskind, R.G., and Patterson, C.J. (2010). Parenting intentions and desires among childless lesbian, gay, and heterosexual individuals. *Journal of Family Psychology, 24*, 78.

Riskind, R.G., and Tornello, S.L. (2017). Sexual orientation and future parenthood in a 2011–2013 nationally representative United States sample. *Journal of Family Psychology, 31*, 792.

Robbins, K.G., Durso, L.E., Bewkes, F.J., and Schultz, E. (2017). *People Need Paid Leave Policies that Cover Chosen Family*. Washington DC: Center for American Progress.

Rollè, L., Giardina, G., Caldarera, A.M., Gerino, E., and Brustia, P. (2018). When intimate partner violence meets same sex couples: A review of same sex intimate partner violence. *Frontiers in Psychology*, *9*, 1506. doi: 10.3389/fpsyg.2018.01506.

Romero, A. (2017). *1.1 Million LGBT Adults Are Married to Someone of the Same Sex at the Two-Year Anniversary of Obergefell v. Hodges*. Los Angeles, CA: The William Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Obergefell-2-Year-Marriages.pdf.

Rosario, M., Schrimshaw, E.W., and Hunter, J. (2004). Ethnic/racial differences in the coming-out process of lesbian, gay, and bisexual youths: A comparison of sexual identity development over time. *Cultural Diversity and Ethnic Minority Psychology*, *10*(3), 215.

———. (2009). Disclosure of sexual orientation and subsequent substance use and abuse among lesbian, gay, and bisexual youths: Critical role of disclosure relations. *Psychology of Addictive Behaviors*, *23*, 175–184. doi: 10.1037/a0014284.

Rosario, M., Hunter, J., Maguen, S., Gwadz, M., and Smith, R. (2001). The coming-out process and its adaptational and health-related associations among gay, lesbian, and bisexual youths: Stipulation and exploration of a model. *American Journal of Community Psychology*, *29*(1), 133–160.

Rosengard, C., and Folkman, S. (1997). Suicidal ideation, bereavement, HIV serostatus and psychosocial variables in partners of men with AIDS. *AIDS Care*, *9*(4), 373–384.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 243 of 438 PageID #: 2

Rothman, E.F., Sullivan, M., Keyes, S., and Boehmer, U. (2012). Parents' supportive reactions to sexual orientation disclosure associated with better health: Results from a population-based survey of LGB adults in Massachusetts. *Journal of Homosexuality*, *59*(2), 186–200.

Russell, S.T. (2002). Queer in America: Citizenship for sexual minority youth. *Applied Developmental Science*, *6*(4), 258–263.

Russell, S.T., and Consolacion, T.B. (2003). Adolescent romance and emotional health in the United States: Beyond binaries. *Journal of Clinical Child and Adolescent Psychology*, *32*(4), 499–508.

Russell, S.T., and Fish, J.N. (2016). Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. *Annual Review of Clinical Psychology*, *12*, 465–487.

———. (2019). Sexual minority youth, social change, and health: A developmental collision. *Research in Human Development, 16*, 5–20.

Russell, S.T., Seif, H., and Truong, N.L. (2001). School outcomes of sexual minority youth in the United States: Evidence from a national study. *Journal of Adolescence*, *24*(1), 111–127.

Russell, S.T., Watson, R., and Muraco, J.A. (2011). The development of same-sex intimate relationships during adolescence. In B. Laursen and W.A. Collins (Eds.), *Relationship Pathways: From Adolescence to Young Adulthood*. Thousand Oaks, CA: Sage.

Russell, S.T., Toomey, R.B., Ryan, C., and Diaz, R.M. (2014). Being out at school: The implications for school victimization and young adult adjustment. *American Journal of Orthopsychiatry, 84*(6), 635–643. doi: 10.1037/ort0000037.

Ryan, C., Huebner, D., Diaz, R.M., and Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in white and Latino lesbian, gay, and bisexual young adults. *Pediatrics, 123*, 346–352. doi: 10.1542/peds.2007-3524.

Ryan, C., Russell, S.T., Huebner, D., Diaz, R., and Sanchez, J. (2010). Family acceptance in adolescence and the health of LGBT young adults. *Journal of Child and Adolescent Psychiatric Nursing*, *23*(4), 205–213.

SAGE. (2014). Out & visible: The experieces and attitudes of lesbian, gay, bisexual and transgender older adults, ages 45–75. Available: https://www.sageusa.org/resource-posts/out-visible-the-experiences-and-attitudes-of-lesbian-gay-bisexual-and-transgender-older-adults-ages-45-75-by-the-numbers-full-report.

Satterfield, J.M., Folkman, S., and Acree, M. (2002). Explanatory style predicts depressive symptoms following AIDS-related bereavement. *Cognitive Therapy and Research*, *26*(3), 393–403.

Savin-Williams, R.C. (1994). Dating those you can't love and loving those you can't date. In R. Montemayor, G. Adams, and T. Gullotta (Eds.), *Personal Relationships during Adolescence* (pp. 163–175). Thousand Oaks, CA: Sage Press.

———. (2001). *Mom, Dad. I'm Gay: How Families Negotiate Coming Out*. American Psychological Association. doi: 10.1037/10437-000.

Shilo, G., and Savaya, R. (2011). Effects of family and friend support on LGB youths' mental health and sexual orientation milestones. *Family Relations*, *60*(3), 318–330.

Shiu, C., Muraco, A., and Fredriksen-Goldsen, K. (2016). Invisible care: Friend and partner care among older lesbian, gay, bisexual, and transgender (LGBT) adults. *Journal of the Society for Social Work and Research*, *7*(3), 527–546.

Simon, K.A., Tornello, S.L., Far, R.H., and Bos, H.M.W. (2018). Envisioning future parenthood among bisexual, lesbian, and heterosexual women. *Psychology of Sexual Orientation and Gender Diversity, 5*, 253–259.

Slowikowska-Hilczer, J., Hirschberg, A.L., Claahsen-van der Grinten, H., Reisch, N., Bouvattier, C., Thyen, U., Cohen Kettinis, P., Roehle, R., Kohler, B., and Nordenstrom, A. (2017). Fertility outcome and information on fertility issues in individuals with different forms of disorders of sex development: Findings from the dsd-LIFE study. *Fertility and Sterility, 108*, 822–831.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 244 of 438 PageID #: 2

Snapp, S.D., Watson, R.J., Russell, S.T., Diaz, R.M., and Ryan, C. (2015). Social support networks for LGBT young adults: Low cost strategies for positive adjustment. *Family Relations*, *64*(3), 420–430.

Stotzer, R.L., Herman, J.L., and Hasenbush, A. (2014). *Transgender Parenting: A Review of Existing Research*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Swendener, A., and Woodell, B. (2017). Predictors of family support and well-being among Black and Latina/o sexual minorities. *Journal of GLBT Family Studies*, *13*(4), 357–379.

Tate, D.P., and Patterson, C.J. (2019a). Sexual minority women's attitudes toward infants, children, and parenthood. *Journal of Lesbian Studies*, *23*(4), 464–475. doi: 10.1080/10894160.2019.1629807.

———. (2019b). Sexual orientation, relationships with parents, stress, and depressive symptoms among adults. *Journal of GLBT Family Studies, 15,* 256–271.

———. (2019c). Desire for parenthood in context of other life aspirations among lesbian, gay, and heterosexual young adults. *Frontiers in Psychology, 10*, 2679.

Thomeer, M., Umberson, D., and Reczek, C. (2020). The gender-as-relational approach for theorizing about romantic relationships of sexual and gender diverse mid- to later-life adults. *Journal of Family Theory and Review*. doi: 10.1111/jftr.12368.

Thomeer, M.B., Donnelly, R., Reczek, C., and Umberson, D. (2017). Planning for future care and the end of life: A qualitative analysis of gay, lesbian, and heterosexual couples. *Journal of Health and Social Behavior*, *58*(4), 473–487.

Toomey, R.B., and Richardson, R.A. (2009). Perceived sibling relationships of sexual minority youth. *Journal of Homosexuality*, *56*(7), 849–860.

Toomey, R.B., and Russell, S.T. (2016). The role of sexual orientation in school-based victimization: A meta-analysis. *Youth and Society*, *48*(2), 176–201.

Tornello, S.L., and Bos, H. (2017). Parenting intentions among transgender individuals. *LGBT Health, 4*(2), 115–120. doi: 10.1089/lgbt.2016.0153.

Tornello, S.L., and Patterson, C.J. (2015). Timing of parenthood and experiences of gay fathers: A life course perspective. *Journal of GLBT Family Studies, 11,* 35–56.

Ueno, K. (2005). Sexual orientation and psychological distress in adolescence: Examining interpersonal stressors and social support processes. *Social Psychology Quarterly*, 68(3), 258–277.

Umberson, D., and Karas Montez, J. (2010). Social relationships and health: A flashpoint for public policy. *Journal of Health and Social Behavior, 51*: S54–S66. doi: 10.1177/0022146510383501.

Umberson, D., and Thomeer, M. (2020). Family matters: Research on family ties and health, 2010–2020. *Journal of Marriage and Family, 82*(1), 404–419.

Umberson, D., Thomeer, M., Kroeger, R., Lodge, A., and Minle, X. (2015). Challenges and opportunities for research on same-sex relationships. *Journal of Marriage and Family*, *77*, 96–111.

Umberson, D., Thomeer, M., Reczek, C., and Donnelly, R. (2016). Physical illness in gay, lesbian, and heterosexual marriages: Gendered dyadic experiences. *Journal of Health and Social Behavior, 57*, 517–531. doi: 10.1177/0022146516671570.

Umberson, D., Reczek, C., Thomeer, M., Donnelly, M, and Kroeger, R. (2017). Instrumental- and emotion-focused care work during physical health events: Comparing gay, lesbian, and heterosexual marriages. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 72*(3), 498–509. doi: 10.1093/geronb/gbw133.

Wainright, J.L., and Patterson, C.J. (2006). Delinquency, victimization, and substance use among adolescents with female same-sex parents. *Journal of Family Psychology, 20*, 526–530.

———. (2008). Peer relations among adolescents with female same-sex parents. *Developmental Psychology, 44*, 117–126.

Copyright National Academy of Sciences. All rights reserved.

Wainright, J.L., Russell, S.T., and Patterson, C.J. (2004). Psychosocial adjustment and school outcomes of adolescents with same-sex parents. *Child Development, 75*, 1886–1898.

Ward, J. (2010). Gender labor: Transmen, femmes, and collective work of transgression. *Sexualities*, *13*(2), 236–254.

Watson, R.J., Grossman, A.H., and Russell, S.T. (2019). Sources of social support and mental health among LGB youth. *Youth and Society*, *51*(1), 30–48.

Whitton, S.W., Dyar, C., Newcomb, M.E., and Mustanski, B. (2018). Romantic involvement: A protective factor for psychological health in racially-diverse young sexual minorities. *Journal of Abnormal Psychology*, *127*(3), 265.

Williams, M.E., and Fredriksen-Goldsen, K.I. (2014). Same-sex partnerships and the health of older adults. *Journal of Community Psychology, 42*(5), 558–570.

Yang, C., Boen, C., Gerke, K., Li, T., Schorpp, K., and Harris, K.M. (2016). Social relationships and physiological determinants of longevity across human life span. *Proceedings of the National Academy of Sciences, 113*, 578–583.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

9

Educational Environments

This chapter considers the body of research in the last decade on the school experiences of sexual and gender diverse (SGD) students (Russell and Horn, 2016; Wimberly, 2015). Most research in this area has focused on school experiences in middle schools and high schools, but we note examples where research has extended to elementary schools and higher education. Much of the research has focused on experiences of bullying and victimization (NASEM, 2016), yet there is a growing body of research that identifies educational policies and practices that are associated with positive experiences for SGD students, whether through reducing bullying and victimization or improving school climates. As discussed in Chapter 8, SGD youth are coming out at younger ages and are therefore encountering unique experiences in schools with peer groups based on their sexual orientation and gender identity at earlier stages.

Experiences that SGD students have in school are important because school has historically been a primary institution that has socialized cisnormativity and heteronormativity in the lives of children and youth (McNeill, 2013; Pascoe, 2011). Furthermore, negative experiences in school not only undermine personal well-being but also affect educational attainment and, ultimately, occupational attainment and socioeconomic status. In addition, SGD issues in education extend beyond the experiences of individual students. Research on lesbian and gay parents and their children has illuminated the issues that parents navigate in their children's schools, as well as the experiences of their children as students.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 248 of 438 PageID #: 2

Before considering the research findings, it is important to describe the range of methodological approaches that researchers have used in the study of SGD issues in education. The earliest studies were based on community (often called "convenience") samples of self-identified gay and lesbian students. These studies, both qualitative (e.g., interviews and ethnographies) and quantitative (e.g., survey questionnaires), were not intended to be representative but rather to highlight the unique experiences of SGD students in schools. Other studies documented the culture and climate of schools. For example, Pascoe's (2011) ethnographic study of a U.S. high school illuminated ways that rigid rules of masculinity undergird school climates characterized by heteronormativity and homophobia.

In the past 20 years, surveys have become central to understanding the experiences of SGD students as new ways to reach SGD youth populations were identified, and SGD measures began to be included on youth surveys. In 1999 the Gay, Lesbian & Straight Education Network (now known as GLSEN) introduced its biennial National School Climate Survey. The survey was created to capture the experiences of SGD students and thus included multiple measures relevant to their experiences (e.g., whether they are "out" at school) that would otherwise not be feasible to include in general population school surveys. Although not a population-based or representative sample, the survey has provided a valuable source of information about SGD students and their experiences in schools.

Also in the 1990s, several states included questions about sexual identity or same-sex sexual behavior in their Youth Risk Behavior Surveys (YRBS). These studies were the first to provide population-based estimates of health-related risk behaviors for gay and lesbian youth, as well as youth with a history of same-sex sexual behavior. Most of the early focus was on health and risk behaviors, rather than school experiences. Also over the past two decades, measures of same-sex sexual behavior, sexual identity, and gender identity have been included in multiple local, state, and federal education and health monitoring systems, making population-based estimates possible. Although most of these studies exclude questions specific to the experiences of SGD students in schools, several include questions about SGD discrimination, such as being bullied "because you are gay or lesbian or someone thought you were" (Russell et al., 2012, p. 144).

Most research attention has been on the experiences of sexual minority students (students who report LGB identities) or has combined sexual and gender minority youth into global measures of SGD students. Recently, however, 10 states and 9 urban school districts that participated in the 2017 YRBS included a measure of transgender identity. Results from the YRBS are reported at various points in this chapter.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 249 of 438 PageID #: 2

DISCRIMINATORY EXPERIENCES AT SCHOOL

Bullying, Victimization, and Well-Being

Early research identified victimization and bullying as significant issues in the lives of what was then termed gay youth (Hunter and Schaecher, 1987; Rofes, 1993), a theme that has continued to this day. Findings from the 2015 YRBS showed that 34 percent of LGB students reported being bullied on school property, compared with 19 percent of heterosexual students (Kann et al., 2016). In 2017, the YRBS included a measure of transgender identity in some states and localities; results showed that 35 percent of transgender students reported being bullied at school (Johns et al., 2019b). A recent consensus study by the National Academies (2016) highlighted bullying as a significant social problem in schools and identified both that LGBTQ students are a population at higher risk for being bullied and that discriminatory bullying often takes the form of homophobic or transphobic bullying. Although most research has focused on secondary schools, similar patterns of discriminatory behavior have been documented for sexual minority and transgender students in higher education (Beemyn, 2012; Rankin, 2005). Several recent studies have examined school restroom and locker room access for transgender and other gender diverse students, showing in one case that transgender students who were restricted from using restroom and locker rooms that matched their gender identity were at higher risk for assault (Murchison et al., 2019). Another study found that transgender and gender-nonconforming students who felt unsafe in bathrooms reported lower quality of life and more anxiety (Weinhardt et al., 2017).

Not surprisingly, bullying and lack of safety at school have been consistently linked to the compromised mental, behavioral, and academic well-being of SGD students. Population-based studies have documented the association between bullying at school and mental health problems (e.g., depressive symptoms and suicidality) and risk behaviors (e.g., substance use) for sexual minority students (Russell et al., 2012), and recent studies document similar patterns for transgender students (Day et al., 2017; Perez-Brumer et al., 2017). For LGBT college students, perceived discrimination is associated with both adjustment at college and indecision regarding vocation (Schmidt, Miles, and Welsh, 2011). In one of the few studies of the school experiences of adults with intersex traits, an online survey of more than 200 Australians, many respondents reported school bullying, and many dropped out of school before receiving a high school certification (Jones, 2016).

The association of bullying with mental health and risk behaviors is strong and consistent across studies. Some studies have found a similar pat-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 250 of 438 PageID #: 2

tern in the link between bullying and poor academic achievement (Poteat, Scheer, and Mereish, 2014), but the evidence is less consistent. Other studies have found a bimodal distribution in attainment: some SGD youth reported higher attainment than their non-SGD peers, and others reported lower attainment (Watson and Russell, 2016). Since many LGBT students reported negative peer experiences, such as victimization and associated mental health challenges, as well as higher rates of suspension or expulsion (Poteat, Scheer, and Chong, 2016), those experiences may undermine academic focus and achievement or prompt disengagement at school. Yet the higher educational attainment reported by some SGD students may be due to their focus on academic achievement (Pachankis and Hatzenbuehler, 2013). Negative experiences at school might induce some students to align their interests with academics and the adult achievement values of their schools while withdrawing from peer settings where they are at risk for victimization (Watson and Russell, 2016).

Differential Treatment in Schools

SGD students interact extensively with school personnel, and there is evidence that LGBTQ students may be treated differently than other students. One study that used data from a school survey of nearly 900 LGBQ students matched with comparison heterosexual youth found that the LGBQ students reported more school suspensions and more juvenile justice system involvement and that the differences were not explained by different rates of punishable behavior at school (Poteat, Scheer, and Chong, 2016). These results parallel well-documented racial disparities in exclusionary discipline that have shown that Black and Latinx youth are much more likely to be suspended or expelled from schools than white youth (Gregory, Skiba, and Noguera, 2010). Recent studies have also documented the intersections of race with sexual and gender diversity, such as the ways that LGBTQ youth of color are overrepresented in exclusionary discipline in schools (Chmielewski et al., 2016). Qualitative studies have documented the ways that gender, race, and sexuality intersect to disadvantage youth who are gender nonconforming: for example, Latinx girls whose gender expression is masculine may be perceived by teachers as threatening, while Black boys whose gender expression is feminine may be disciplined for their dress, behavior, or expression (Snapp et al., 2015a).

EDUCATIONAL ATTAINMENT

Economic opportunities are considered in the next chapter, yet education shapes the economic opportunities available to LGBT people, and education itself reflects a measure of socioeconomic status. The research on

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 251 of 438 PageID #: 2

attainment provides support for different hypotheses. Due to experiences of discrimination or victimization at school, SGD students may skip school, drop out, not plan to attend college, and have lower academic achievement. Lack of family support might hinder enrollment in higher education enrollment. In contrast, however, sexual and gender minorities might invest more in education to compensate for the psychological and economic effects of stigma (Pachankis and Hatzenbuehler, 2013). Moreover, individuals expecting to partner with someone of the same sex might make different educational investments because of variation in expectations of having children or the need to contribute earnings to their families (Carpenter, 2009).

The research on educational attainment supports both hypotheses: most national samples of LGB people find higher-than-average levels of education, but lower levels for transgender people, while surveys of younger cohorts of people in the United States suggest that educational attainment is lower for LGBT people. It appears that, since SGD people from younger cohorts have been coming out earlier, they have greater likelihoods of exposure to risk factors for poor educational attainment, such as victimization in schools or loss of parental support. In national surveys that cut across age cohorts for adults, most (but not all) found higher average levels of education for self-identified LGB people or for people in same-sex couples (Black, Sanders, and Taylor, 2007; Gates, 2014).

Transgender people's relative education level also varies across surveys. The 2015 U.S. Transgender Survey found higher levels of educational attainment among transgender and gender-nonconforming adults in comparison with the general population of adults in the United States (James et al., 2016). However, transgender people in the Behavioral Risk Factor Surveillance System reported significantly lower average levels of education than cisgender people (Carpenter, Eppink, and Gonzales, 2020).

The range of experiences in the population—and the different times they went through the education system—makes it difficult to know why average education levels might be higher for LGB people, and few analyses of educational outcomes have drawn on these broad datasets. An important perspective comes from several studies that compared educational attainment of relatively recent cohorts of young people in longitudinal studies. Those studies found evidence of lower educational attainment for LGBT young people. One recent study using data from the High School Longitudinal Study of 2009 (Sansone, 2019) found that LGB people were almost 2 percent less likely to graduate from high school and 3 percent less likely to attend college than heterosexual people 7 years later, after holding constant demographic, family, school, and state characteristics. Transgender people had similar differences that were not statistically significant. A set of studies analyzing data from the National Longitudinal Study of Adolescent to Adult Health also found lower levels of education among young sexual

Copyright National Academy of Sciences. All rights reserved.

minority women, who were less likely to graduate from high school or to enroll in and complete college than heterosexual women (Pearson and Wilkinson, 2017; Ueno, Roach, and Peña-Talamantes, 2013). In contrast, most men with same-sex attraction, identity, or behavior had similar educational levels as heterosexual men in their age group. However, the "late bloomers"—those who first reported same-sex attractions or behavior in adulthood—were more likely than heterosexual men to finish high school and college. Both women and men who identified as bisexual in adulthood were less likely to complete high school or to enroll in college than nonbisexual people, although the difference was only statistically significant for bisexual women (Mollborn and Everett, 2015).

Little is known about whether sexual orientation and gender identity influence students' choice of college majors. An analysis of data from the 1993 National Survey of College Graduates found that women in same-sex couples were more likely than other women to report college majors that had higher percentages of men (Black, Sanders, and Taylor, 2007). Conversely, men in same-sex couples were more likely to have majors with higher proportions of women. A recent study replicates this finding for science, technology, engineering, and mathematics (STEM) majors: sexual minority men who entered college wanting to be a STEM major are less likely than heterosexual men to actually end up with a STEM major four years later, while sexual minority women who entered with STEM interests are more likely than similar heterosexual women to be in a STEM major (Hughes, 2018).

EDUCATION LAWS AND SCHOOL POLICIES

There is now clear evidence that state and local K–12 education policies that are inclusive of SGD students—that enumerate status characteristics—provide a context for positive school climate and student well-being and success. Enumerated policies list status characteristics that may be the basis of bullying or discrimination and typically mandate protection for them; in some cases, policies identify strategies to promote school safety and reduce bullying.

There is no federal law pertaining to nondiscrimination in education based on sexual orientation, gender identity or expression, or intersex characteristics. In the absence of federal law or policy, many states and school districts have responded by outlining such protections. As of the writing of this report, every state had an anti-bullying law or policy (Centers for Disease Control and Prevention [CDC], 2018), but only 21 states, 1 territory, and the District of Columbia had laws that prohibit bullying on the basis of sexual orientation and gender identity; 24 states and 1 territory had no laws protecting SGD students; 5 states and 1 territory had no laws but had

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 253 of 438 PageID #: 2

school regulations or teacher codes that prohibit bullying based on sexual orientation or gender identity (Movement Advancement Project, 2020).

Federal and state agencies provide guidance for interpretation of applicable laws and policies. Although there had not been explicit protection for transgender students in federal law, in 2016 the White House issued guidance to schools to allow students to use restrooms and locker rooms that match their gender identities, citing Title IX of the Education Amendments of 1972, which protects students from sex discrimination. However, in early 2017, the U.S. Department of Education and U.S. Department of Justice reversed that guidance, pointing to the role of states to establish educational policy, effectively removing protection for transgender students under Title IX. A 2019 report revealed that, although transgender students were overrepresented in Title IX complaints and that harassment was the most frequent form of Title IX complaint, dramatically fewer LGBTQ-related complaints resulted in corrective action following the 2017 reversal (Mirza and Bewkes, 2019).

Research from several countries, U.S. states, and multiple local communities has found that the existence of nondiscrimination policies is associated with positive school climate and with more positive experiences for SGD and, indeed, all students (Black, Fedewa, and Gonzalez, 2012; Russell et al., 2010; Kull et al., 2016). As noted above, research to date on inclusive and enumerated policies has focused primarily on secondary education (middle and high schools). In schools that have nondiscrimination policies that include sexual orientation and gender identity or expression, students not only reported feeling safer, but they also reported hearing fewer homophobic remarks and seeing less bullying (Kosciw et al., 2016; Kull et al., 2016); better school attendance (Greytak, Kosciw, and Boesen, 2013); higher self-esteem (Kosciw et al., 2013), fewer mental health problems (Goodenow, Szalacha, and Westheimer, 2006; Hatzenbuehler, 2011; Hatzenbuehler et al., 2014), including lower risk for suicidal behaviors (Meyer et al., 2019); and lower substance use (Konishi et al., 2013). Moreover, in schools with such policies, teachers are seen as being more supportive of LGBT students (Swanson and Gettinger, 2016) and are more likely to intervene in bullying (Kosciw et al., 2016), and students are less likely to report homophobic attitudes toward LGBT peers (Horn and Szalacha, 2009).

SCHOOL CLIMATE

In the past decade there has been a dramatic advance in research on school practices and programs that are associated with safe and supportive school climates for all students and with positive adjustment and well-being for SGD students (NASEM, 2019). These strategies include education or training for teachers, administrators, and other school personnel; school clubs that support students' needs and interests; and explicit inclusion of

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 254 of 438 PageID #: 2

SGD topics in school curricula or in other school resources (e.g., libraries, posters or visual images, and designated safe spaces) (Day, Ioverno, and Russell, 2019; Gower et al., 2018; Johns et al., 2019a). Although a number of studies have documented prejudice and harassment of SGD students on college campuses (Rankin and Garvey, 2015; Rankin and Reason, 2006), most of the research has been focused on secondary schooling.

Professional Education and Training

Teachers play a defining role in the lives of all students, and support from teachers has been identified as a critical factor in the well-being of SGD students (Russell, Seif, and Truong, 2001). When SGD students view school personnel as supportive, they feel safer, have better attendance, and show better school performance (Greytak, Kosciw, and Boesen, 2013; Kosciw et al., 2016; Seelman et al., 2012). Teacher support may come in the form of proactive, SGD-affirming relationships between students and their teachers or may be as basic as intervention in bullying and harassment when it takes place. In one study based in a large U.S. urban area, students said that teachers were less likely to intervene when they heard homophobic remarks than racist or sexist remarks (Kosciw et al., 2016). In fact, some students have reported that school personnel use homophobic language: in a national survey of LGBT students, 56 percent reported hearing homophobic remarks from school personnel (Kosciw et al., 2016). Thus, preventing bullying—especially bullying motivated by prejudice or bias—is a vexing challenge (NASEM, 2016). Many teachers and other school personnel are not professionally prepared to intervene in bullying or victimization or to promote school safety for SGD students.

Of course, there are many SGD teachers who themselves navigate school climate that may be hostile to SGD people. One of the few wide-scale surveys of LGBT teachers found that, although the majority reported feeling comfortable being out at school, the majority also reported hearing homophobic remarks at school with little intervention by their peers; furthermore, one-third reported hearing homophobic marks in the presence of administrators, the majority of which went unchecked (Wright and Smith, 2015). In addition, state laws and school district policies vary in nondiscrimination protections for students as well as teachers: some school communities do not support teachers to be assertive about promoting the well-being of SGD students, and many teachers lack employment protection based on their SGD status (Graves, 2018; see also Chapters 5 and 6).

Given these findings, professional education for teachers, administrators, and other personnel (e.g., bus drivers, cafeteria workers) has been identified as a key strategy to improve school experiences and promote

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 255 of 438 PageID #: 2

positive school climates for all students. According to the nationwide 2018 School Health Profiles, a national survey of principals and school health teachers, 55.6–95.7 percent of schools reported that staff were "encouraged to attend professional development on safe and supportive school environments for all students, regardless of sexual orientation or gender identity" (CDC, 2019, p. 40). Several studies have documented the efficacy of training school personnel to understand and support SGD students (Gower et al., 2018; Greytak et al., 2016; Swanson and Gettinger, 2016). For example, in a national sample of secondary school teachers (Greytak et al., 2016), teachers who had professional development regarding LGBT issues were more likely to intervene when they heard homophobic remarks; however, general professional development on bullying was not associated with intervention in homophobic remarks.

School Clubs

Gay-straight alliances (GSAs, sometimes known as gender-sexuality alliances) are student-led clubs that aim to create a safe, welcoming school climate for all youth, regardless of sexual orientation or gender identity. The percentage of U.S. schools with GSAs had grown from less than 25 percent of schools in 2008 to nearly 40 percent of schools in 2018 (CDC, 2019). However, there is significant variability in access to GSAs across the nation. In 2018, the percentage of high schools with GSAs ranged from 14.5 percent in Mississippi to 71.9 percent in Rhode Island (median, 36.8 percent) (CDC, 2019). Participating in a GSA has been linked to academic performance (i.e., higher grade point average) (Walls, Kane, and Wisneski, 2010), school belonging (Toomey, McGuire, and Russell, 2012), school safety (Ioverno et al., 2016), and a number of indicators of civic involvement or participation (Poteat et al., 2019, 2020).

Several early studies described the "whiteness" of GSAs (Herdt et al., 2006; McCready, 2004), and several recent studies have investigated differences in participation in and support from GSAs for students, showing differences by race and ethnicity as well as by sexual and gender identity. In one study, racial and ethnic minority GSA members reported less frequent GSA attendance and receiving less peer support (Poteat et al., 2015) and less engagement in their GSA than white youth (Poteat et al., 2015). At the same time, transgender and genderqueer students reported greater involvement in their GSAs, and sexual minority students reported more support and engagement in GSAs than other students (Poteat et al., 2016).

The benefits of GSAs are not limited to participants. Several studies have found that the presence of a GSA at a school (regardless of a student's membership) is linked to positive outcomes for both LGBT students

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 256 of 438 PageID #: 2

(Chesir-Teran and Hughes, 2009; Goodenow, Szalacha, and Westheimer, 2006; Kosciw et al., 2016; Lee, 2002; O'Shaughnessy et al., 2004; Szalacha, 2003; Walls, Kane, and Wisneski, 2010) and heterosexual students (Poteat et al., 2013; Saewyc et al., 2014; Szalacha, 2003). Students who attended schools with GSAs reported hearing less homophobic language, seeing less bullying, and feeling more belonging (Kosciw et al., 2016).

In addition, having a GSA has been linked to better health and health behaviors for LGBT students, including lower risk behaviors (Heck et al., 2014; Poteat et al., 2013) and better mental health (Goodenow, Szalacha, and Westheimer, 2006; McCormick, Schmidt, and Clifton, 2015; Saewyc et al., 2014; Toomey et al., 2011; Walls, Freedenthal, and Wisneski, 2008; Walls, Wisneski, and Kane, 2013). A recent meta-analysis showed that, across studies, LGBT students with GSAs in their schools were less likely to be victimized and more likely to feel safe than LGBT students in schools without GSAs (Marx and Kettrey, 2016). In one longitudinal study, having a GSA was linked with less bullying and more safety the following school year (Ioverno et al., 2016). Another recent study showed that having a well-functioning GSA was associated with less homophobic bullying, especially in schools with a negative climate overall, and especially for transgender students (Ioverno and Russell, 2020).

School Resources and Inclusive Curricula

A growing body of research has identified the ways that resources and inclusive curricula in schools contribute to positive school climates and SGD student well-being (Black, Fedewa, and Gonzalez, 2012; Russell et al., 2010). In a national study of LGBTQ students (Kosciw et al., 2016), those who had access to supportive information felt safer at school. Another study showed that students with access to LGBTQ-related resources were more likely to believe that adults cared about them and that teachers were fair (O'Shaughnessy et al., 2004). "Safe spaces" or "safe zones," designated school personnel, classrooms, and student organizations where SGD students can receive support, have emerged in K–12 schools in recent years. Across states, data from the School Health Profiles indicate that safe spaces are now present in between 44.2 and 95.2 percent of schools (CDC, 2019). There is as yet little empirical evaluation of the efficacy of safe spaces for SGD students in K–12 education, but several studies show that the presence of safe zones contributes to feelings of safety and greater connectedness for SGD students in college (Evans, 2002; Katz et al., 2016).

There is strong evidence that curricula that are inclusive of sexual and gender diversity contribute to school safety for all students (Burdge et al.,

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 257 of 438 PageID #: 2

2013; Snapp et al., 2015b). Although many studies have documented the affirming role of inclusive curricula, there are few examples of standard curriculum modules that are publicly available: see Box 9-1 for a model example. Some states have laws that require nonpejorative descriptions of SGD people in curricula, yet laws that prohibit the discussion or positive portrayal of homosexuality in instruction, often specifically related to HIV education (and sometimes called "no promo homo laws"), remain in place in six U.S. states. Thus, for SGD youth, there are important geographic differences in the degree to which sexual and gender diversity is included in school curricula.

Multiple studies have found that students who learn about SGD issues at school report less bullying (Greytak, Kosciw, and Boesen, 2013; Russell et al., 2006; Snapp et al., 2015a), more safety (Szalacha, 2003; Toomey, McGuire, and Russell, 2012), and better attendance (Greytak, Kosciw, and Boesen, 2013; Kosciw et al., 2016). A study of over 1,200 students from 154 middle schools and high schools in California found that SGD curricular materials were most common in sexuality education or health education classes (40%), followed by English and social studies classes (27%); mathematics, science, music, art, drama, and physical education were the least likely subjects to include inclusive lessons (Snapp et al., 2015b). The pattern of findings in that study, which compared student-level as well as school-level differences, showed that students who reported using inclusive curricular materials were more likely than students in the same school who did not use inclusive materials to report being bullied; however, at the school level, inclusive curricula were associated with greater feelings of safety. The results suggest that students who may be targets of homophobic bullying may seek out classes that have inclusive curricula, or they may be more attuned to perceive and report bullying.

Finally, there has been growing attention to the inclusion of SGD issues in sexuality education in schools (Meadows, 2018). Inclusive and accurate school-based sexuality education can provide access to information that may not be available to SGD youth in other community settings (Elia et al., 2015). Yet sexuality education programs have historically excluded information about SGD attraction, identities, relationships, or healthy sexual expression (Kubicek et al., 2010; McNeill, 2013; Meadows, 2018), and this silence has directly or indirectly communicated messages of fear, shame, and prejudice to SGD people (Bishop et al., 2020). In the absence of school-based inclusive sexuality education, there are encouraging new models for sexuality education to reach SGD youth; the evaluation of an online sexual health promotion program for LGBT youth found gains across multiple outcomes, including self-acceptance, relationship skills, and safer sex knowledge (Mustanski et al., 2015).

Copyright National Academy of Sciences. All rights reserved.

BOX 9-1
A Model of Inclusive Curricula:
"Defending Democracy at Home"

Many studies have documented the affirming role of inclusive curricula, but there are few publicly available standard curriculum modules. The Massachusetts Department of Elementary and Secondary Education offers a model curriculum unit, "Defending Democracy at Home: Advancing Constitutional Rights, *Obergefell v. Hodges* (2015) Same-Sex Marriage," as part of English language arts/literacy and humanities resources. The unit, also designated as appropriate for history and social science, is designed for grades 11 and 12. It examines "the role of state courts, individuals, and advocacy organizations in working to advocate for the expansion of constitutional rights in advance of *Obergefell v. Hodges* (2015), the Supreme Court Case that led to the protection of same-sex marriage as a fundamental right under the Constitution."

SOURCE: http://www.doe.mass.edu/frameworks/mcu/ela-hssg11-12-defending-democracy.docx.

SEXUAL AND GENDER DIVERSE PARENTS AND THEIR CHILDREN

In adulthood, many SGD people have significant interaction with schools in their roles as parents. Several factors have prompted scholarly interest in these experiences, given the recognized importance of strong relationships between K–12 schools and parents. Several studies, though based on small samples of same-sex couple families, have shown that parents may experience homophobia expressed by teachers (Gartrell et al., 2005) and that teachers may exclude those parents from activities or events (Goldberg, 2014). In addition to these explicit forms of exclusion, heteronormative practices in schools (such as parent forms that have spaces only for mother and father) implicitly exclude many SGD parents (Goldberg, 2014; Leland, 2019).

There has been interest in whether and how SGD parents "come out" in the context of their children's schools. In a nationwide study of more than 500 LGBT parents, two-thirds had self-identified to their children's teachers (Kosciw and Diaz, 2008). In contrast, a study of 50 transgender parents' experiences with their children's school found that disclosure was much less common (Haines, Ajayi, and Boyd, 2014). For some SGD parents, disclosure may be part of the process of school selection; some parents reported disclosing their identities to ensure that they chose a safe and inclusive school for their children (Goldberg, 2014; Leland, 2019). There is emerging research on the degree to which parents explicitly disclose or

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 259 of 438 PageID #: 2

conceal their sexual or gender identities at their children's schools and whether those decisions change over the course of child development: parents' diversity status appears more salient as children get older (Goldberg et al., 2017b).

The experiences that SGD parents have navigating their children's schools have implications for their involvement. Studies of parental involvement in schooling clearly show gendered patterns, with mothers being more involved in schools than fathers. In contrast, recent studies of same-sex couples or lesbian and gay parents have shown greater involvement in early education classrooms by gay male fathers than by heterosexual fathers (Goldberg et al., 2017a). Other studies of lesbian and gay parents' school involvement have reported that involvement is more common among parents who perceive their communities as more homophobic but who also perceive less exclusion from other parents (Goldberg and Smith, 2014). Overall, SGD parents may feel the need to be more active if they perceive a potentially hostile context for their children, yet they are understandably more involved when they feel included with networks of other parents. However, these findings are based on small samples, and further research is needed.

A few studies have investigated the academic or school adjustment of students with SGD parents, focusing on secondary school samples. In a large, geographically diverse sample that included LGBT as well as non-LGBT students, adolescents who identified as LGBT reported that their schools were less safe for students with LGBT parents (Russell et al., 2008). Among all students, those who reported that they had learned about LGBT issues in the school curriculum or who had teachers who intervened in homophobic harassment reported that their schools were safer for students with LGBT parents (Russell et al., 2008). A survey of more than 3,700 Canadian students found that students with an LGBT parent were more likely to report victimization at school and to have skipped school in the past year because they felt unsafe (Peter, Tayor, and Edkins, 2016).

SUMMARY AND CONCLUSIONS

Much of the existing research on sexual and gender diversity in education has focused on experiences of bullying and victimization; however, there is a growing body of research that identifies educational policies and practices associated with positive experiences for SGD students, whether through reducing bullying and victimization or improving school climates. Experiences that SGD students have in school are important not only because negative experiences undermine personal well-being but also because school experiences set the groundwork for educational attainment, future occupational achievement, and socioeconomic status. Because SGD youth are coming out at younger ages, research on school experiences that extends

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 260 of 438 PageID #: 2

to elementary schools and continues through higher education could help researchers gain a clearer understanding of the way these experiences affect students over their life course.

LGBTQ students are at risk for being victimized by homophobic bullying or by experiencing a hostile campus climate. Although most research has focused on secondary schools, similar patterns of discriminatory behavior have been documented for sexual minority and transgender students in higher education. The majority of LGBT students who experience bullying report negative peer experiences such as victimization, as well as higher rates of suspension or expulsion, which can undermine academic focus and achievement or lead to disengagement at school.

CONCLUSION 9-1: Many sexual and gender diverse students experience discrimination or victimization—most commonly, bullying—in educational environments from K–12 through higher education. These experiences are strongly linked to vulnerabilities with respect to mental health, behavioral health, and academic achievement.

Although no federal law explicitly prohibits discrimination in education based on sexual orientation, gender identity or expression, or intersex characteristics, federal courts and agencies have found that such discrimination may be covered under the federal ban on sex discrimination. State and local K–12 education policies that are inclusive of SGD students and that clearly enumerate characteristics of students who have historically been targets of bullying in the language regarding protection from bullying and discrimination (including sexual orientation and gender identity) are associated with positive school climates and with students' well-being and success. In schools with such policies, teachers are also seen as being more supportive of LGBT students and are more likely to intervene in bullying.

CONCLUSION 9-2: The adoption of inclusive and enumerated nondiscrimination and anti-bullying laws and policies is associated with positive school environments for sexual and gender diverse students, as well as students in other marginalized groups. Those laws and policies are also associated with positive student adjustment and achievement.

When SGD students view school personnel as supportive, they feel safer, have better attendance, and show better school performance. Many teachers and other school personnel are not professionally prepared to intervene in bullying or victimization or to promote school safety for SGD students; furthermore, many teachers work in communities where laws or policies may not support them being assertive about promoting the well-being of SGD students. Schools can use such strategies as professional edu-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 261 of 438 PageID #: 2

cation and training for teachers, administrators, and other personnel (e.g., bus drivers, cafeteria workers) to improve school experiences and promote a positive school climate for all students.

The presence of a gay-straight alliance at school (regardless of a student's membership) is linked to positive outcomes for LGBT students, and students with access to LGBTQ-related resources are more likely to believe that adults care about them and that teachers are fair.

CONCLUSION 9-3: Strategies such as teacher education and training to understand and support sexual and gender diverse students—incorporating resources and curricula to support sexual and gender diverse students and providing opportunities for student engagement in creating positive spaces at their schools—are associated with more positive experiences and outcomes for sexual and gender diverse students.

Research on lesbian and gay parents and their children has illuminated the issues that parents encounter in their children's schools, as well as the experiences of their children as students. Several small studies of same-sex couple families have shown that they may experience homophobia expressed by teachers and that teachers may exclude those parents from activities or events.

CONCLUSION 9-4: In comparison with other parents, sexual and gender diverse parents are equally or more engaged in their children's education. However, many sexual and gender diverse parents experience barriers to engagement in the form of direct or indirect discriminatory experiences.

REFERENCES

Beemyn, G. (2012). The experiences and needs of transgender community college students. *Community College Journal of Research and Practice, 36*(7), 504–510. doi: 10.1080/10668926.2012.664089.

Bishop, M.D., Mallory, A.B., Gessner, M., Frost, D.M., and Russell, S.T. (2020). School-based sexuality education experiences across three generations of sexual minority people. *The Journal of Sex Research*, 1–11.

Black, D.A., Sanders, S.G., and Taylor, L.J. (2007). The economics of lesbian and gay families. *Journal of Economic Perspectives*, *21*(2), 53–70. doi: 10.1257/jep.21.2.53.

Black, W.W., Fedewa, A.L., and Gonzales, K.A. (2012). Effects of "safe school" programs and policies on the social climate for sexual-minority youth: A review of the literature. *Journal of LGBT Youth*, *9*(4), 321–339.

Burdge, H., Snapp, S., Laub, C., Russell, S.T., and Moody, R. (2013). *Implementing Lessons that Matter: The Impact of LGBTQ-Inclusive Curriculum on Student Safety, Well-Being, and Achievement*. San Francisco, CA: Gay-Straight Alliance Network and Tucson, AZ: Frances McClelland Institute for Children, Youth, and Families at the University of Arizona.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 262 of 438 PageID #: 2

Carpenter, C.S. (2009). Sexual orientation and outcomes in college. *Economics of Education Review*, *28*(6), 693–703. doi: 10.1016/j.econedurev.2007.10.010.

Carpenter, C.S., Eppink, S.T., and Gonzales, G. (2020). Transgender status, gender identity, and socioeconomic outcomes in the United States. *Industrial and Labor Relations Review, 73*(3), 573–599. doi: 10.1177/0019793920902776.

Centers for Disease Control and Prevention. (2018). *Anti-Bullying Policies and Enumeration: An Infobrief for Local Education Agencies*. Available: https://www.cdc.gov/healthyyouth/health_and_academics/bullying/anti_bullying_policies_infobrief-basic.htm.

———. (2019). *School Health Profiles 2018: Characteristics of Health Programs among Secondary Schools*. Available: https://www.cdc.gov/healthyyouth/data/profiles/pdf/2018/CDC-Profiles-2018.pdf.

Chesir-Teran, D., and Hughes, D. (2009). Heterosexism in high school and victimization among lesbian, gay, bisexual, and questioning students. *Journal of Youth and Adolescence, 38*(7), 963–975.

Chmielewski, J.F., Belmonte, K.M., Fine, M., and Stoudt, B.G. (2016). Intersectional inquiries with LGBTQ and gender nonconforming youth of color: Participatory research on discipline disparities at the race/sexuality/gender nexus. In *Inequality in School Discipline* (pp. 171–188). doi: 10.1057/978-1-137-51257-4_10.

Day, J.K., Ioverno, S., and Russell, S.T. (2019). Safe and supportive schools for LGBT youth: Addressing educational inequities through inclusive policies and practices. *Journal of School Psychology*, *74*, 29–43.

Day, J.K., Fish, J.N., Perez-Brumer, A., Hatzenbuehler, M.L., and Russell, S.T. (2017). Transgender youth substance use disparities: Results from a population-based sample. *Journal of Adolescent Health*, *61*(6), 729–735.

Elia, J.P., Tokunaga, J., Venka Simovska, P., and Ros Kane, D. (2015). Sexuality education: Implications for health, equity, and social justice in the United States. *Health Education*, *115*(1), 105–120. doi: 10.1108/HE-01-2014-0001.

Evans, N.J. (2002). The impact of an LGBT safe zone project on campus climate. *Journal of College Student Development, 43*(4), 522–539.

Gates, G.J. (2014). *LGB Families and Relationships: Analyses of the 2013 National Health Interview Survey.* Los Angeles, CA: Williams Institute, UCLA School of Law.

Gartrell, N., Rodas, C., Deck, A., Peyser, H., and Banks, A. (2005). The National Lesbian Family Study: 4. Interviews with the 10-year-old children. *American Journal of Orthopsychiatry*, *75*(4), 518–524.

Goldberg, A.E. (2014). Lesbian, gay, and heterosexual adoptive parents' experiences in preschool environments. *Early Childhood Research Quarterly*, *29*(4), 669–681.

Goldberg, A.E., and Smith, J.Z. (2014). Perceptions of stigma and self-reported school engagement in same-sex couples with young children. *Psychology of Sexual Orientation and Gender Diversity*, *1*(3), 202.

Goldberg, A.E., Black, K.A., Manley, M.H., and Frost, R. (2017a). "We told them that we are both really involved parents": Sexual minority and heterosexual adoptive parents' engagement in school communities. *Gender and Education*, *29*(5), 614–631.

Goldberg, A.E., Black, K., Sweeney, K., and Moyer, A. (2017b). Lesbian, gay, and heterosexual adoptive parents' perceptions of inclusivity and receptiveness in early childhood education settings. *Journal of Research in Childhood Education*, *31*(1), 141–159.

Goodenow, C., Szalacha, L., and Westheimer, K. (2006). School support groups, other school factors, and the safety of sexual minority adolescents. *Psychology in the Schools, 43*(5), 573–589.

Gower, A.L., Forster, M., Gloppen, K., Johnson, A.Z., Eisenberg, M.E., Connett, J.E., and Borowsky, I.W. (2018). School practices to foster LGBT-supportive climate: Associations with adolescent bullying involvement. *Prevention Science*, *19*(6), 813–821.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 263 of 438 PageID #: 2

Graves, K. (2018). A matter of public concern: The First Amendment and equal employment for LGBT educators. *History of Education Quarterly*, *58*(3), 453–460.

Gregory, A., Skiba, R.J., and Noguera, P.A. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher, 39*(1), 59–68. doi: 10.3102/0013189X09357621.

Greytak, E.A., Kosciw, J.G., and Boesen, M.J. (2013). Putting the "T" in "resource": The benefits of LGBT-related school resources for transgender youth. *Journal of LGBT Youth*, *10*(1–2), 45–63.

Greytak, E.A., Kosciw, J.G., Villenas, C., and Giga, N.M. (2016). *From Teasing to Torment: School Climate Revisited. A Survey of US Secondary School Students and Teachers*. New York: Gay, Lesbian & Straight Education Network (GLSEN).

Haines, B.A., Ajayi, A.A., and Boyd, H. (2014). Making trans parents visible: Intersectionality of trans and parenting identities. *Feminism and Psychology*, *24*(2), 238–247.

Hatzenbuehler, M.L. (2011). The social environment and suicide attempts in lesbian, gay, and bisexual youth. *Pediatrics, 127*(5), 896–903.

Hatzenbuehler, M.L., Birkett, M., Van Wagenen, A., and Meyer, I.H. (2014). Protective school climates and reduced risk for suicide ideation in sexual minority youths. *American Journal of Public Health, 104*(2), 279–286.

Heck, N.C., Livingston, N.A., Flentje, A., Oost, K., Stewart, B.T., and Cochran, B.N. (2014). Reducing risk for illicit drug use and prescription drug misuse: High school gay-straight alliances and lesbian, gay, bisexual, and transgender youth. *Addictive Behaviors*, *39*(4), 824–828.

Herdt, G., Russell, S.T., Sweat, J., and Marzullo, M. (2006). Sexual inequality, youth empowerment, and the GSA: A community study in California. In N. Teunis and G. Herdt (Eds.), *Sexual Inequalities and Social Justice* (pp. 233–251). Berkeley, CA: University of California Press. doi: 10.1525/california/9780520246140.003.0011.

Horn, S.S., and Szalacha, L.A. (2009). School differences in heterosexual students' attitudes about homosexuality and prejudice based on sexual orientation. *International Journal of Developmental Science, 3*(1), 64–79.

Hughes, B.E. (2018). Coming out in STEM: Factors affecting retention of sexual minority STEM students. *Science Advances*, *4*(3), 1–6.

Hunter, J., and Schaecher, R. (1987). Stresses on lesbian and gay adolescents in schools. *Children and Schools*, *9*(3), 180–190.

Ioverno, S., and Russell, S.T. (2020). Homophobic bullying in positive and negative school climates: The moderating role of gender sexuality alliances. *Journal of Youth and Adolescence*, 1–14.

Ioverno, S., Belser, A.B., Baiocco, R., Grossman, A.H., and Russell, S.T. (2016). The protective role of gay-straight alliances for lesbian, gay, bisexual, and questioning students: A prospective analysis. *Psychology of Sexual Orientation and Gender Diversity, 3*(4), 397.

James, S., Herman, J., Rankin, S., Keisling, M., Mottet, L., and Anafi, M.A. (2016). *The Report of the 2015 US Transgender Survey.* Washington, DC: National Center for Transgender Equality.

Johns, M.M., Poteat, V.P., Horn, S.S., and Kosciw, J. (2019a). Strengthening our schools to promote resilience and health among LGBTQ youth: Emerging evidence and research priorities from The State of LGBTQ Youth Health and Wellbeing Symposium. *LGBT Health*, *6*(4), 146–155.

Johns, M.M., Lowry, R., Andrzejewski, J., Barrios, L.C., Demissie, Z., McManus, T., Rasberry, C.N., Robin, L., and Underwood, J.M. (2019b). Transgender identity and experiences of violence victimization, substance use, suicide risk, and sexual risk behaviors among high school students—19 states and large urban school districts, 2017. *Morbidity and Mortality Weekly Report*, *68*(3), 67–71.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 264 of 438 PageID #: 2

Jones, T. (2016). The needs of students with intersex variations. *Sex Education*, *16*(6), 602–618.

Kann, L., Olsen, E.O.M., McManus, T., Harris, W.A., Shanklin, S.L., Flint, K.H., Queen, B., Lowry, R., Chyen, D., Whittle, L., Thornton, J, Lim, C., Yamakawa, Y., Brener, N., and Zaza, S. (2016). Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9–12—United States and Selected Sites, 2015. *Morbidity and Mortality Weekly Report: Surveillance Summaries, 65*(9). Available: https://www.cdc.gov/mmwr/volumes/65/ss/pdfs/ss6509.pdf.

Katz, J., Federici, D., Ciovacco, M., and Cropsey, A. (2016). Effect of exposure to a safe zone symbol on perceptions of campus climate for sexual minority students. *Psychology of Sexual Orientation and Gender Diversity*, *3*(3), 367.

Konishi, C., Saewyc, E., Homma, Y., and Poon, C. (2013). Population-level evaluation of school-based interventions to prevent problem substance use among gay, lesbian and bisexual adolescents in Canada. *Preventative Medicine, 57*(6), 929–933.

Kosciw, J.G., and Diaz, E.M. (2008). *Involved, Invisible, Ignored: The Experiences of Lesbian, Gay, Bisexual and Transgender Parents and Their Children in Our Nation's K–12 Schools*. New York: Gay, Lesbian & Straight Education Network (GLSEN).

Kosciw, J.G., Palmer, N.A., Kull, R.M., and Greytak, E.A. (2013). The effect of negative school climate on academic outcomes for LGBT youth and the role of in-school supports. *Journal of School Violence*, 12(1), 45–63.

Kosciw, J.G., Greytak, E.A., Giga, N.M., Villenas, C., and Danischewski, D.J. (2016). *The 2011 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual and Transgender Youth in our Nation's Schools*. New York: Gay, Lesbian, & Straight Education Network (GLSEN). Available: https://eric.ed.gov/?id=ED574808.

Kubicek, K., Beyer, W.J., Weiss, G., Iverson, E., and Kipke, M.D. (2010). In the dark: Young men's stories of sexual initiation in the absence of relevant sexual health information. *Health Education & Behavior*, *37*(2), 243–263. doi: 10.1177/1090198109339993.

Kull, R.M., Greytak, E.A., Kosciw, J.G., and Villenas, C. (2016). Effectiveness of school district antibullying policies in improving LGBT youths' school climate. *Psychology of Sexual Orientation and Gender Diversity, 3*(4), 407–415. doi: 10.1037/sgd0000196.

Lee, C. (2002). The impact of belonging to a high school gay/straight alliance. *The High School Journal, 85*(3), 13–26.

Leland, A. (2019). The experiences of LGBT parents and caregivers with their children's schooling: A critical review of the literature. *Planning and Changing*, *48*.

Marx, R.A., and Kettrey, H.H. (2016). Gay-straight alliances are associated with lower levels of school-based victimization of LGBTQ+ youth: A systematic review and meta-analysis. *Journal of Youth and Adolescence*, *45*(7), 1269–1282.

McCormick, A., Schmidt, K., and Clifton, E. (2015). Gay–straight alliances: Understanding their impact on the academic and social experiences of lesbian, gay, bisexual, transgender, and questioning high school students. *Children and Schools*, *37*(2), 71–77.

McCready, L. (2004). Some challenges facing queer youth programs in urban high schools: Racial segregation and de-normalizing whiteness. *Journal of Gay and Lesbian Issues in Education*, *1*, 37–51. doi: 10.1300/J367v01n03_05.

McNeill, T. (2013). Sex education and the promotion of heteronormativity. *Sexualities*, *16*(7), 826–846. doi: 10.1177/1363460713497216.

Meadows, E. (2018). Sexual health equity in schools: Inclusive sexuality and relationship education for gender and sexual minority students. *American Journal of Sexuality Education*, *13*(3), 297–309.

Meyer, I.H., Luo, F., Wilson, B.D., and Stone, D.M. (2019). Sexual orientation enumeration in state antibullying statutes in the United States: Associations with bullying, suicidal ideation, and suicide attempts among youth. *LGBT Health*, *6*(1), 9–14.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 265 of 438 PageID #: 2

Mirza, S., and Bewkes, F. (2019). *Secretary DeVos Is Failing to Protect the Civil Rights of LGBTQ Students. Center for American Progress.* Available: https://cdn.americanprogress.org/content/uploads/2019/07/30073047/LGBTQ-Student-Civil-Rights-9.pdf?_ga=2.78004692.1782947992.1598285317-344120623.1598285317.

Mollborn, S., and Everett, B. (2015). Understanding the educational attainment of sexual minority women and men. *Research in Social Stratification and Mobility*, *41*, 40–55. doi: 10.1016/j.rssm.2015.04.004.

Movement Advancement Project. (2020). *Equality Maps: School Safety Laws*. Available: http://www.lgbtmap.org/equality-maps/safe_school_laws.

Murchison, G. R., Agénor, M., Reisner, S.L., and Watson, R.J. (2019). School restroom and locker room restrictions and sexual assault risk among transgender youth. *Pediatrics*, *143*(6), e20182902.

Mustanski, B., Greene, G.J., Ryan, D., and Whitton, S.W. (2015). Feasibility, acceptability, and initial efficacy of an online sexual health promotion program for LGBT youth: The Queer Sex Ed intervention. *The Journal of Sex Research*, *52*(2), 220–230.

National Academies of Sciences, Engineering, and Medicine. (2016). *Preventing Bullying Through Science, Policy, and Practice*. Washington, DC: The National Academies Press.

———. (2019). *The Promise of Adolescence: Realizing Opportunity for All Youth*. Washington, DC: The National Academies Press.

O'Shaughnessy, M., Russell, S., Heck, K., Calhoun, C., and Laub, C. (2004). *Safe Place to Learn: Consequences of Harassment Based on Actual or Perceived Sexual Orientation and Gender Non-Conformity and Steps for Making Schools Safer.* San Francisco: California Safe Schools Coalition.

Pachankis, J.E., and Hatzenbuehler, M.L. (2013). The social development of contingent self-worth in sexual minority young men: An empirical investigation of the "best little boy in the world" hypothesis. *Basic and Applied Social Psychology*, *35*(2), 176–190. doi: 10.1080/01973533.2013.764304.

Pascoe, C.J. (2011). *Dude, You're a Fag: Masculinity and Sexuality in High School*. Berkeley: University of California Press.

Perez-Brumer, A., Day, J.K., Russell, S.T., and Hatzenbuehler, M.L. (2017). Prevalence and correlates of suicidal ideation among transgender youth in California: Findings from a representative, population-based sample of high school students. *Journal of the American Academy of Child and Adolescent Psychiatry*, *56*(9), 739–746.

Peter, T., Taylor, C., and Edkins, T. (2016). Are the kids all right? The impact of school climate among students with LGBT parents. *Canadian Journal of Education*, *39*(1).

Pearson, J., and Wilkinson, L. (2017). Same-sex sexuality and educational attainment: The pathway to college. *Journal of Homosexuality*, *64*(4), 538–576. doi: 10.1080/00918369.2016.1194114.

Poteat, V.P., Scheer, J.R., and Chong, E.S.K. (2016). Sexual orientation-based disparities in school and juvenile justice discipline: A multiple group comparison of contributing factors. *Journal of Educational Psychology, 108*(2), 229–241. doi: 10.1037/edu0000058.

Poteat, V.P., Scheer, J.R., and Mereish, E.H. (2014). Factors affecting academic achievement among sexual minority and gender-variant youth. In *Advances in Child Development and Behavior*, Volume 47 (pp. 261–300). New York: JAI.

Poteat, P.V., Sinclair, K.O., Digiovanni, C.D., Koenig, B.W., and Russell, S.T. (2013). Gay-straight alliances are associated with student health: A multischool comparison of LGBTQ and heterosexual youth. *Journal of Research on Adolescence*, *23*(2), 319–330. doi: 10.1111/j.1532-7795.2012.00832.x.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 266 of 438 PageID #: 2

Poteat, V.P., Yoshikawa, H., Calzo, J.P., Gray, M.L., DiGiovanni, C.D., Lipkin, A., Mundy-Shephard, A., Perrotti, J., Scheer, J.R., and Shaw, M.P. (2015). Contextualizing gay-straight alliances: Student, advisor, and structural factors related to positive youth development among members. *Child Development*, *86*, 176–193. doi: 10.1111/cdev.12289.

Poteat, V.P., Heck, N.C., Yoshikawa, H., and Calzo, J.P. (2016). Greater engagement among members of gay-straight alliances. *American Educational Research Journal*, *53*, 1732–1758. doi: 10.3102/0002831216674804.

Poteat, V.P., Calzo, J.P., Yoshikawa, H., Rosenbach, S.B., Ceccolini, C.J., and Marx, R.A. (2019). Extracurricular settings as a space to address sociopolitical crises: The case of discussing immigration in Gender-Sexuality Alliances following the 2016 US presidential election. *American Educational Research Journal*, *56*(6), 2262–2294.

Poteat, V.P., Godfrey, E.B., Brion-Meisels, G., and Calzo, J.P. (2020). Development of youth advocacy and sociopolitical efficacy as dimensions of critical consciousness within gender-sexuality alliances. *Developmental Psychology*, *56*(6), 1207.

Rankin, S.R. (2005). Campus climates for sexual minorities. *New Directions for Student Services, 111*. doi: 10.1002/ss.170.

Rankin, S.R. and Garvey, J. (2015). Identifying, quantifying, and operationalizing queer-spectrum and trans-spectrum students: Assessment and research in student affairs. *New Directions for Student Services*, *2015*(152), 73–84.

Rankin, S., and Reason, R. (2006). College students' experiences and perceptions of harassment on campus: An exploration of gender differences. *College Student Affairs Journal*, *26*(1), 7–29.

Rofes, E.E. (1993). Making our schools safe for sissies. *The High School Journal*, *77*(1/2), 37–40.

Russell, S.T., and Horn, S.S. (Eds.). (2016). *Sexual Orientation, Gender Identity, and Schooling: The Nexus of Research, Practice, and Policy*, Volume 1. New York: Oxford University Press. doi: 10.1093/med:psych/9780199387656.001.0001.

Russell, S.T., Seif, H., and Truong, N.L. (2001). School outcomes of sexual minority youth in the United States: Evidence from a national study. *Journal of Adolescence*, *24*(1), 111–127.

Russell, S.T., Kostroski, O., McGuire, J.K., Laub, C., and Manke, E. (2006). LGBT issues in the curriculum promotes school safety. *Safe Schools Research Brief*, *4*. San Fransisco: California Safe Schools Coalition.

Russell, S.T., McGuire, J.K., Lee, S.A., Larriva, J.C., and Laub, C. (2008). Adolescent perceptions of school safety for students with lesbian, gay, bisexual, and transgender parents. *Journal of LGBT Youth*, *5*(4), 11–27.

Russell, S.T., Horn, S., Kosciw, J., and Saewyc, E. (2010). Safe schools policy for LGBTQ students and commentaries. *Social Policy Report*, 24(4), 1–25.

Russell, S.T., Sinclair, K.O., Poteat, V.P., and Koenig, B.W. (2012). Adolescent health and harassment based on discriminatory bias. *American Journal of Public Health*, 102(3), 493–495.

Saewyc, E.M., Konishi, C., Rose, H.A., and Homma, Y. (2014). School-based strategies to reduce suicidal ideation, suicide attempts, and discrimination among sexual minority and heterosexual adolescents in western Canada. *International Journal of Child, Youth and Family Studies*, *5*(1), 89–112. doi: 10.1167/iovs.07-1072.

Sansone, D. (2019). LGBT students: New evidence on demographics and educational outcomes. *Economics of Education Review*, *73*(April), 101933. doi: 10.1016/j.econedurev.2019.101933.

Schmidt, C.K., Miles, J.R., and Welsh, A.C. (2011). Perceived discrimination and social support: The influences on career development and college adjustment of LGBT college students. *Journal of Career Development*. doi: 10.1177/0894845310372615.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 267 of 438 PageID #: 2

Seelman, K.L., Walls, N.E., Hazel, C., and Wiskneski, H. (2012). Student school engagement among sexual minority students: Understanding the contributions to predicting academic outcomes. *Journal of Social Service Research, 38*(1), 3–17.

Snapp, S.D., Burdge, H., Licona, A.C., Moody, R.L., and Russell, S.T. (2015a). Students' perspectives on LGBTQ-inclusive curriculum. *Equity and Excellence in Education*, *48*(2), 249–265.

Snapp, S.D., McGuire, J.K., Sinclair, K.O., Gabrion, K., and Russell, S.T. (2015b). LGBTQ-inclusive curricula: Why supportive curricula matter. *Sex Education*, *15*(6), 580–596.

Swanson, K., and Gettinger, M. (2016). Teachers' knowledge, attitudes, and supportive behaviors toward LGBT students: Relationship to Gay-Straight Alliances, antibullying policy, and teacher training. *Journal of LGBT Youth, 13*(4), 326–351.

Szalacha, L.A. (2003). Safer sexual diversity climates: Lessons learned from an evaluation of Massachusetts Safe Schools Program for Gay and Lesbian Students. *American Journal of Education*, *110*(1), 58–88. doi: 10.1086/377673.

Toomey, R.B., McGuire, J.K., and Russell, S.T. (2012). Heteronormativity, school climates, and perceived safety for gender nonconforming peers. *Journal of Adolescence*, *35*(1), 187–196.

Toomey, R.B., Ryan, C., Diaz, R.M., and Russell, S.T. (2011). High school gay–straight alliances (GSAs) and young adult well-being: An examination of GSA presence, participation, and perceived effectiveness. *Applied Developmental Science*, *15*(4), 175–185.

Ueno, K., Roach, T.A., and Peña-Talamantes, A.E. (2013). The dynamic association between same-sex contact and educational attainment. *Advances in Life Course Research*, *18*(2), 127–140. doi: 10.1016/j.alcr.2012.09.002

Walls, N.E., Freedenthal, S., and Wisneski, H. (2008). Suicidal ideation and attempts among sexual minority youths receiving social services. *Social Work*, *53*(1), 21–29.

Walls, N.E., Kane, S.B., and Wisneski, H. (2010). Gay-straight alliances and school experiences of sexual minority youth. *Youth and Society*, *41*(3), 307–332.

Walls, N.E., Wisneski, H., and Kane, S. (2013). School climate, individual support, or both? Gay–straight alliances and the mental health of sexual minority youth. *School Social Work Journal*, *37*(2), 88–111.

Watson, R.J., and Russell, S.T. (2016). Disengaged or bookworm: Academics, mental health, and success for sexual minority youth. *Journal of Research on Adolescence*, *26*(1), 159–165.

Weinhardt, L.S., Stevens, P., Xie, H., Wesp, L.M., John, S.A., Apchemengich, I., Kioko, D., Chavez, Korell, S., Cochran, K.M., Watjen, J.M., and Lambrou, N.H. (2017). Transgender and gender nonconforming youths' public facilities use and psychological well-being: A mixed-method study. *Transgender Health*, *2*(1), 140–150.

Wimberly, G. (Ed.) (2015). *LGBTQ issues in Education: Advancing a Research Agenda*. American Educational Research Association.

Wright, T.E., and Smith, N.J. (2015). A safer place? LGBT educators, school climate, and implications for administrators. *The Educational Forum, 79*(4), 394–407.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 269 of 438 PageID #: 2

10

Economic Well-Being

The health, well-being, and quality of life of sexual and gender diverse (SGD) populations are significantly affected by the economic systems in which they live, develop, and work. Socioeconomic status and educational, employment, and housing opportunities are important measures of well-being. They are also connected to family, health, community, and other aspects of well-being addressed elsewhere in this report. This chapter explores what is known and not known about the economic well-being of SGD populations, and it identifies essential economics research needs. It examines how specific SGD populations fare with respect to economic well-being, focusing on individuals' and families' economic security and access to necessary resources that sustain and enhance life. In the United States, most of those resources or goods and services come from the marketplace, requiring purchases using income acquired through earnings from employment, benefits from a public assistance program, or income derived from sources of wealth. Accordingly, this chapter addresses what is known about income, wealth, and poverty, looking at differences based on sexual orientation and gender identity.

The chapter also discusses several factors that are likely to affect income and wealth. As a complement to the discussion of education in Chapter 9 and the discussion of health in Chapter 11—two areas that contribute to the skills and knowledge that an individual has to offer in the labor market, known as human capital (Goldin, 2016)—this chapter adds a discussion of individual occupational attainment. It considers the dynamics of SGD families and households (one or more adults with or without children living together), the attainment of an adequate or equal standard of living

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 270 of 438 PageID #: 2

for SGD people in comparison with heterosexual and cisgender people, and barriers to that attainment, such as discrimination.

SOCIOECONOMIC STATUS

Overall, studies that measure socioeconomic status as earnings, household income, poverty, and occupational attainment reveal a complex picture of the economic well-being of SGD populations. The research primarily compares people who identify as lesbian, gay, or bisexual with those who identify as heterosexual, or it compares transgender people with those who are cisgender. Much evidence suggests that bisexual and transgender people have lower incomes and higher poverty than lesbian, gay, and cisgender heterosexual people (Badgett, 2018; Badgett, Choi, and Wilson, 2019; Carpenter, Eppink, and Gonzales, 2020). Lesbian women and gay men may have mitigated some of the effects of discrimination on earnings and household income through adaptive strategies in education, occupations, and family decisions, but they still face discrimination in the labor force (Valfort, 2017).

Individual Income from Earnings

Research on individual earnings suggests that, after controlling for differences in income-related characteristics, gay and bisexual men earn less than heterosexual men and that lesbian and bisexual women earn less than heterosexual men but more than heterosexual women (Klawitter, 2015; Valfort, 2017). Recent research suggests that the lower earnings of bisexual men might be driving those general patterns for men, but the research is not conclusive on this point (Carpenter, 2005; Mize, 2016; Sabia, 2014). Some evidence suggests that the wage gap for men might be diminishing over time, but these observations are preliminary and have not been confirmed.

These general findings have been made possible by the growing availability of datasets that have measures of income along with measures of sexual orientation or gender identity, thus improving researchers' ability to analyze income differences. Some datasets have behavioral measures of sexual orientation (the sex of one's sexual partners), and others have measures of self-identity (gay, lesbian, bisexual, or transgender). Many datasets that lack sexual orientation questions do contain household rosters that allow the identification of people with same-sex partners, as in the U.S. census, the American Community Survey (ACS), and the Current Population Survey (U.S. Census Bureau, n.d.). Those datasets expand researchers' ability to compare economic outcomes between people in same-sex couples and people with different-sex partners, but they do not include single people. Other significant data gaps remain. Some samples of older SGD populations are too small for analysis or for detailed comparisons by race or ethnicity.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 271 of 438 PageID #: 2

In addition, no probability-based surveys with individual income measures include questions on transgender status or people with intersex traits, so less is known about the economic status of those groups.

Making comparisons of income among sexual orientation and gender identity categories is a complex task. For example, a recent study of incomes in the 2013–2015 National Health Interview Survey (NHIS) reported average annual earnings; they were $39,903 for heterosexual women but $38,803 for bisexual women and $47,026 for lesbian women. Earnings were $57,033 for heterosexual men, $49,766 for bisexual men, and $59,618 for gay men (Carpenter and Eppink, 2017). However, such simple comparisons of average earnings may be misleading, as differences in the characteristics of groups, such as a higher average education level or different ages, confound observed earnings differences across groups. Accordingly, the rest of this section reviews research from economics and sociology that accounts for other influences on earnings, such as race, sex, age, education, and experience.

Earnings differences by sexual orientation were examined in a recent meta-analysis of 31 studies conducted through 2012, of which 69 percent were from the United States (Klawitter, 2015). After adjusting for key factors that influence earnings, these studies found that, on average, gay and bisexual men earn 11 percent less than comparable heterosexual men, with ranges of 11–16 percent lower wages in the United States and 0–30 percent lower for all countries. The biggest gaps were seen in studies using data on same-sex couples. Earnings for lesbian and bisexual women were nine percent higher than those for heterosexual women on average (the "lesbian premium"). The range of estimates for women was wider than for men, partly because the studies analyzed only full-time workers: differences in earnings between lesbian and bisexual women and heterosexual women ranged from 5 to 15 percent higher earnings for lesbian and bisexual women in the United States and from 25 percent lower earnings to 43 percent higher earnings in studies from all countries.

In general, recent studies continue to find negative earnings gaps for gay and bisexual men (Burn, 2019; Valfort, 2017). However, one U.S. study found a different earnings pattern for gay men in comparison with heterosexual men. An analysis of data from the 2013–2015 NHIS, including more than 1,300 self-identified lesbian, gay, and bisexual people (Carpenter and Eppink, 2017), found that, after controlling for race, age, education, partnership, children, region, and job characteristics, both lesbian women and gay men earned more than their heterosexual counterparts. One possible reason for the unusual finding for men is that the NHIS data did not include a variable for living in an urban area. That variable is important, since urban areas have higher wages and more gay men (Denier and Waite, 2019). More recent studies on earnings differences for lesbian and bisexual

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 272 of 438 PageID #: 2

women show mixed results: some studies report higher earnings for them than for heterosexual women (Burn, 2019; Valfort, 2017); other studies report lower earnings (Curley, 2018; Martell, 2019; Martell and Hansen, 2017). For example, one study using data from the ACS found that women under 45 who have female partners have lower earnings than women with male partners, while women over 45 with female partners have the lesbian "earnings premium" (Martell, 2019).

While most studies reviewed by Klawitter (2015) and Valfort (2017) combined gay or lesbian people with bisexual people and compared the combined group to heterosexual men or women, some studies have been able to estimate separate effects for being bisexual and lesbian or gay people. Two such studies found that bisexual men and women (but not gay men or lesbian women) appear to earn less than heterosexuals and less than gay or lesbian people (Carpenter, 2005; Mize, 2016). In contrast, two other studies found either small or insignificant earnings differences for bisexual men and women compared with heterosexuals (Carpenter and Eppink, 2017; Sabia, 2014).

Some researchers have considered specifically whether the sexual orientation effects on income have fallen over time in the United States. Findings from these studies are inconclusive due to design weaknesses, including confounding, small sample sizes, and failure to report the statistical significance of reported differences (Clarke and Sevak, 2013; Cushing-Daniels and Yeung, 2009; Elmslie and Tebaldi, 2014; Klawitter, 2015; Martell and Hansen, 2017).

Interpretations of Earnings Data

The interpretation of reported wage differences by sexual orientation or gender identity is challenging for several reasons: LGBT people are a heterogeneous population, and the effects may be subgroup specific; studies have used different data sources; time periods vary; and the study designs limit extrapolations.

One possible interpretation is that discrimination accounts for some of the observed wage gaps for gay and bisexual men (Badgett, 1995; Blandford, 2003). A recent study found that the wage gap is larger for men in same-sex couples who live in states with more people who are prejudiced against homosexuals (Burn, 2019). Another study argued that discrimination was an unlikely explanation for the observed pay gap among some bisexual people because they are unlikely to be known as bisexual, such as bisexual men with female partners (Sabia, 2014). Finally, a few studies have estimated the effect of statewide employment nondiscrimination laws on wage gaps, finding some evidence that states with those laws have lower earnings gaps for gay men (Burn, 2018; Klawitter, 2011).

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 273 of 438 PageID #: 2

A second potential interpretation of earnings differences relates to the household division of labor, or how families, particularly couples, divide up paid work and household work responsibilities. Those decisions directly affect how much time an individual devotes to hours worked in the paid labor market and to earnings, as well as how much individuals invest in building the human capital that may increase earnings over time (Becker, 1991). People who are partnered with or expect to partner with a person of the same sex might make different decisions about education, training, experience, and careers than those who plan to partner with a different-sex partner (Antecol and Steinberger, 2013; Badgett, 1995; Black, Sanders, and Taylor, 2007).

Some analysts have argued that gay men will not expect to support a partner and children, so they will invest less in labor market–specific human capital than heterosexual men, reducing gay men's earnings (Black et al., 2003). However, as noted in Chapter 9, measures of actual investment in education do not support this argument.

The thesis about the household division of labor may better fit the common, although not universal, pattern of higher earnings for lesbian and bisexual women. Lesbian and bisexual women might expect not to have a higher earning (male) partner who might be expected to provide for them. This expectation might result in greater investment in their own education, training, and experience, thereby raising their wages above those of heterosexual women (Badgett, 2001; Black et al., 2003). However, although studies that report a lesbian premium did control for education, they did not directly measure labor market experience, requiring researchers to use a proxy (age minus years of education minus five). It is possible that researchers might be underestimating the gap in actual experience between lesbian and heterosexual women, which would make lesbian women look like they have higher earnings. The lack of inclusion of measures of sexual and gender diversity in longitudinal surveys has prevented more detailed comparisons of earnings at different stages of life for SGD people, as well as better insight into measuring labor market experience.

Given the gaps and weaknesses in the available data, studies use novel strategies to approximate the sexual orientation difference in labor market experience and explore whether the lesbian premium is related to greater commitment to and experience in the paid labor market. Two studies showed that the return on one year of potential experience is higher for lesbian women than for heterosexual women (Daneshvary, Waddoups, and Wimmer, 2008; Jepsen, 2007), supporting the idea that lesbian women have more unmeasured human capital than heterosexual women. Also, the wage premium is largest for lesbian women who do not have a bachelor's degree, and it disappears for those with higher levels of education, perhaps because heterosexual women with higher levels of education are also more

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 274 of 438 PageID #: 2

committed to the labor market (Daneshvary, Waddoups, and Wimmer, 2008). Notably, the premium is higher for women in same-sex couples who were never married to men (Daneshvary, Waddoups, and Wimmer, 2009). Overall, it appears plausible that lesbian women have higher earnings because of a greater commitment to the paid labor force, an adaptation that might also counteract a potential negative effect of discrimination on lesbian women's wages.

Overall, making generalizations about the individual earnings of LGBT people is very difficult, and future research is warranted to understand the causes of earnings differences. While the first generation of wage gap studies found a consistent penalty in the United States (and other countries) for gay and bisexual men, more recent studies are less consistent and occasionally find that only bisexual men earn significantly less than heterosexual men. Studies for lesbian and bisexual women have always found a wide range of values, with most U.S. studies showing higher earnings than heterosexual women but lower earnings than gay, bisexual, and heterosexual men, demonstrating the complexity of interpreting wages in the context of a highly gendered labor market.

Intersectionality

The wage effects of sexual orientation and gender identity may not be uniform across gender, race, and ethnicity, immigration status, or disability status given the intersecting effects of those personal characteristics, although there has been little research on intersectionality in economic outcomes. Three studies provide direct evidence that cisgender women and SGD people of color are worse off in terms of income than are their male or white counterparts. Two of these three studies used data on same-sex and different-sex couples from the ACS, which has the largest sample sizes of people presumed to be lesbian, gay, or bisexual (del Río and Alonso-Villar, 2019a; Douglas and Steinberger, 2015). Other sources of data have samples too small to support detailed comparisons by race and ethnicity.

Four perspectives demonstrate the variation in the effects of sexual orientation by gender, race, and ethnicity. First, one study showed that white LGB people earned more than Black, Hispanic, and Asian LGB people with the same characteristics, except for Asian lesbian women and Hispanic gay men (del Río and Alonso-Villar, 2019a; Douglas and Steinberger, 2015). Second, lesbian and bisexual women of all races earn less than their same-race male counterparts (del Río and Alonso-Villar, 2019a). Third, all lesbian women earn more than their same-race heterosexual female counterparts, but studies vary in findings about which group of lesbian women has the largest wage premium (Carpenter and Eppink, 2017; del Río and

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 275 of 438 PageID #: 2

Alonso-Villar, 2019a; Douglas and Steinberger, 2015). Fourth, a sexual orientation penalty consistently exists for white, Hispanic, and Asian gay men compared with same-race heterosexual men, but the relative earnings of Black gay men vary by study (del Río and Alonso-Villar, 2019a; Douglas and Steinberger, 2015). Relative to white heterosexual men, Black gay men have the largest earnings gap, followed by Hispanic, Asian, and then white gay men (del Río and Alonso-Villar, 2019a).

Household Income

Because members of households or families are likely to share income, it is useful to know how household income compares across sexual orientation or gender identity. However, there are only a few studies of LGBT household income that control for other predictors of income, which is important for making appropriate comparisons.

Studies of same-sex couples suggest that the gender composition of couples matters greatly. Married different-sex couples and male same-sex couples have the highest household incomes, while female same-sex couples and unmarried different-sex couples have the lowest (Black, Sanders, and Taylor, 2007; Klawitter, 2011). One recent study found that bisexual men had lower household incomes than heterosexual men (Chai and Maroto, 2019). Among couples in which one or both partners were 65 or older, female same-sex couples had significantly lower levels of income than either older male same-sex couples or older married different-sex couples (Goldberg, 2009).

Only one study assessed household income differences by gender identity (Carpenter, Eppink, and Gonzales, 2020). After taking into account differences in the number of adults in the household, health, education, age, race, and other characteristics, transgender women's household income was 17 percent lower and transgender men's income 9 percent lower than cisgender people's household income. However, the income difference was only statistically significant for the transgender women.

Poverty and Economic Insecurity

In the United States, people are classified as poor if their household income falls below the official poverty line for their family size and age configuration (Semega et al., 2019). A growing body of research suggests that at least some groups in the LGBT population—notably, transgender people and bisexual people—have a higher risk of poverty than heterosexual cisgender people. On average, lesbian women and gay men appear to be equally likely to be poor as heterosexuals, although some groups show a higher risk of poverty. In addition to these and similar measures of

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 276 of 438 PageID #: 2

poverty, this section also addresses food insecurity and other markers of having insufficient income to provide for human needs that suggest a higher level of economic insecurity for LGBT people.

The findings on relative poverty differ somewhat between studies using data on couples and those using data on self-identity among individuals. First, couple comparison studies have mostly found higher poverty rates for female same-sex couples than for women in married different-sex couples, but lower poverty rates for male same-sex couples than for men in married different-sex couples (Albelda et al., 2009; Badgett, 2018; Badgett, Durso, and Schneebaum, 2013; Prokos and Keene, 2010; Schneebaum and Badgett, 2019). However, studies using ACS or census data also found that, after controlling for other predictors of being poor, such as education, employment, region, residence in a rural area, and race, both male and female same-sex couples are at greater risk of being poor than married different-sex couples.

Second, data on self-identified LGBT people show that bisexual and transgender people are more at risk and lesbian women and gay men at equal risk of poverty compared with heterosexual-identified people. One study pooled 2013–2016 NHIS data that included 2,600 self-identified LGB people (Badgett, 2018); the poverty rate was 14.3 percent for heterosexual women, 13.8 percent for lesbian women, and 27.3 percent for bisexual women; and the poverty rate was 11.0 percent for heterosexual men, 11.7 percent for gay men, and 22.9 percent for bisexual men. After controlling for other predictors, lesbian women and gay men were as likely to be poor as heterosexual people, but bisexual women and men were significantly more likely to be poor than heterosexuals with the same demographic, health, education, and other characteristics.[1] A recent study of data from the Behavioral Risk Factor Surveillance System (BRFSS) also found a similar risk of poverty for lesbian women, gay men, and bisexual men compared with their heterosexual counterparts and a significantly higher risk of poverty for bisexual women (Badgett, Choi, and Wilson, 2019).

Transgender people are much more vulnerable to poverty than are cisgender heterosexual, lesbian, and gay people according to two analyses of BRFSS data (Badgett, Choi, and Wilson, 2019; Carpenter, Eppink, and Gonzales, 2020). The poverty rate for transgender men was 33.7 percent, for transgender women 29.6 percent, and for gender-nonconforming people 23.8 percent; in comparison, the rate for cisgender heterosexual men was 13.4 percent, and for cisgender heterosexual women it was 17.8 percent

[1] It is important to note, however, that the public-use NHIS dataset used in this study does not include a measure of urban residence, where wages are higher. As a result, the greater urban concentration of gay men than heterosexual men, in particular, could bias the poverty difference for gay men in the multivariable analysis.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 277 of 438 PageID #: 2

(Badgett, Choi, and Wilson, 2019). After controlling for predictors of poverty, transgender people (combined) had 70 percent higher odds of being poor than cisgender heterosexual men and 38 percent higher odds of being poor than cisgender heterosexual women. Similarly, the 2015 U.S. Transgender Survey (USTS), which is a large, purposive, community-based sample, found that one-third of transgender and gender-nonconforming adult respondents were living in poverty (James et al., 2016).

In addition to disaggregating the LGBT population, some research provides insights into subgroups of the LGBT population who are at greater or lesser risk of poverty.

- LGB people in couples, especially married couples, are less likely to be poor than single LGB people, based on 2013–2016 NHIS data (Badgett, 2018). These differences by marital status could reflect selection into marriage or the poverty-reducing effects of marriage.
- Same-sex couples and lesbian and bisexual women with children are more likely to be poor than childless couples or LGB women (Badgett, 2018; Brown, Manning, and Payne, 2016; Schneebaum and Badgett, 2019). Also, the poverty rates for same-sex couples raising children were twice as high as the rates for married different-sex couples raising children (Albelda et al., 2009; Badgett, Durso, and Schneebaum, 2013).
- Blacks who identify as LGBT or are in same-sex couples have higher poverty rates than white LGBT people or same-sex couples and higher rates than non-LGBT Blacks (Badgett, Choi, and Wilson, 2019; Badgett, Durso, and Schneebaum, 2013).
- People whose sex assigned at birth is female—women in same-sex couples and lesbian women generally, as well as transgender men—have higher rates of poverty than do all groups of cisgender men (Badgett, Choi, and Wilson, 2019).
- Among LGBT people, 26 percent living in rural areas are poor, compared with 21 percent of those living in urban areas (Badgett, Choi, and Wilson, 2019).
- In data from Washington state, LGB people 50 and older are as likely as heterosexuals to have incomes that are less than or equal to 200 percent of the poverty level (Fredriksen-Goldsen et al., 2013). Almost half (47 percent) of transgender people 50 and older had similarly low incomes in a recent survey (Fredriksen-Goldsen et al., 2014).

Relatedly, several characteristics that are more common for LGB people may provide some protection from poverty, most notably higher levels of education and labor force participation, a lower probability of having chil-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 278 of 438 PageID #: 2

dren, and living in urban areas (Badgett, Choi, and Wilson, 2019; Schneebaum and Badgett, 2019). Each of those factors tends to reduce the risk of poverty in general and therefore contributes to reducing the potential gap between LGB and heterosexual poverty rates.

The research on poverty is corroborated by other measures that indicate economic insecurity. An analysis from the National Longitudinal Study of Adolescent to Adult Health found that female sexual minorities were more likely than heterosexual women to have personal incomes in the near-poverty range (100–199 percent of the poverty level); both sexual minority women and men were more likely than heterosexuals to have experienced economic hardship in the past 12 months (such as unpaid rent or utility bills) (Conron, Goldberg, and Halpern, 2018).

Receiving means-tested benefits is another marker of economic insecurity. Same-sex couples are more likely to receive cash or cash-like public assistance benefits (such as Temporary Assistance to Needy Families and the Supplemental Nutrition Assistance Program [SNAP, food stamps]) than are married different-sex couples (Badgett, Durso, and Schneebaum, 2013). Using several population-based surveys between 2011 and 2014, one study found that LGBT adults are more likely to report food insecurity and more likely to participate in the SNAP program than are non-LGBT adults (Brown, Romero, and Gates, 2016). Disparities were higher among bisexual people, women, young adults, and people of color. Other data also suggest that LGBT people overall have higher rates of use of Medicaid and SNAP than non-LGBT people (Rooney, Whittington, and Durso, 2018). Little is known about how low-income SGD populations are treated when seeking services and public assistance, but given the existence of bias in other economic settings, it is possible bias would also exist in public services. Policy simulations suggest that raising the minimum wage and reducing gender and racial wage gaps would reduce LGBT poverty (Badgett and Schneebaum, 2015, 2016).

These research studies have focused on economic insecurity, but many related topics are either mostly or completely unexplored (Burwick et al., 2014). For example, only a few studies have attempted to identify economic issues for aging LGBT people. Surveys show that the LGBT population is young and growing among younger cohorts (see Chapter 3), but older cohorts have faced different historical contexts and might have diminished social and financial resources in retirement, requiring particular policies and services (Fredriksen-Goldsen, 2016). In addition, very little is known about the pathways into poverty or the barriers to leaving poverty for SGD populations. Higher take-up rates for means-tested programs might also disguise differences in treatment and experiences of LGBT people: exploring this issue would require administrative data and other research efforts. No research has focused on how inclusive or effective human services and

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 279 of 438 PageID #: 2

programs are for LGBT adults, nor have studies assessed the effectiveness of other services that are more directly targeted to low-income LGBT people. There has also been little systematic research about the interactions between poverty and the criminal justice system (Hunter, McGovern, and Sutherland, 2018). Finally, one in five respondents to the USTS reported that they had worked in the underground economy at some time in their lives, particularly in the sex or drug trades (James et al., 2016). A small body of available research links participation in survival economic work with arrests and incarceration (Fitzgerald, Elspeth, and Hickey, 2015; James et al., 2016) and social services discrimination (Bakko, 2019).

Occupational Attainment and Segregation

People's occupations provide an additional indicator of socioeconomic status. Only a few studies have directly addressed this issue, finding that LGB people have different occupational patterns than do heterosexuals (del Río and Alonso-Villar, 2019a, 2019b; Pearson and Wilkinson, 2017; Tilcsik, Anteby, and Knight, 2015; Ueno, Peña-Talamantes, and Roach, 2013; Ueno, Vaghela, and Nix, 2018). These differing patterns of occupational attainment by an ascribed status, like gender identity and sexual orientation, are generally called occupational segregation. Occupational segregation matters because occupation is an important determinant of earnings, and it also reflects the inclusiveness of labor markets for SGD populations.

The studies of earnings discussed above usually controlled for occupation in their analyses, and several of them also highlighted that LGB people are overrepresented or underrepresented in particular occupational categories when compared with non-LGBT people (Antecol, Jong, and Steinberger, 2008; Badgett, 1995; Baumle, Compton, and Poston, 2009). One study analyzing detailed occupational data for same-sex partners and different-sex partners in the ACS found clear patterns of occupation segregation: 22.5 percent of people in same-sex couples would have to change their occupations in order to have the same occupational distribution as the overall economy, compared with only 9 percent of people in different-sex couples who would have to change (del Río and Alonso-Villar, 2019b).

Researchers are divided about whether occupational segregation by sexual orientation is a positive or negative outcome. For example, one consistent finding across studies is that gender plays a smaller role in the sorting of LGB individuals into occupations than it does for heterosexual people (Badgett and King, 1997; Baumle, Compton, and Poston, 2009; del Río and Alonso-Villar, 2019b; Ueno, Roach, and Peña-Talamantes, 2013). More specifically, lesbian and bisexual women are in occupations with a

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 280 of 438 PageID #: 2

higher percentage of men than are heterosexual women; gay and bisexual men are in occupations with a higher percentage of women than are heterosexual men. These patterns might be seen as positive if LGB people feel less constrained by early socialization or by gendered expectations about appropriate occupations than do heterosexual men and women. However, stereotyping and discrimination may also generate gendered barriers that shape those patterns. For instance, gay and bisexual men are less likely to be hired into jobs requiring stereotypically masculine characteristics (such as being assertive or aggressive), and lesbian and bisexual women are less likely to be hired when employers seek stereotypically feminine characteristics (such as being cheerful or gentle) (Ahmed, Andersson, and Hammarstedt, 2013; Drydakis, 2015; Tilcsik, 2011).

Stigma may also shape occupational choices of sexual and gender minorities in other ways. Compared with heterosexual people, LGB people are found in occupations that involve more task independence and social perceptiveness, which might protect them against discrimination and harassment if they were to disclose their sexual orientation (Martell, 2018; Tilcsik, Anteby, and Knight, 2015). Also, some evidence from Australia and the United States suggests that LGB people seek out occupations where they will have more tolerant coworkers (Badgett and King, 1997; Plug and Webbink, 2014).

One way to assess whether occupational segregation is benign would be to see its effect on earnings, and two studies suggest that this relationship is complicated by the role of education in both occupational attainment and income. The occupational patterns of men in same-sex couples tend to raise their earnings relative to the average for people in different-sex couples, while women in same-sex couples get only a tiny bump in earnings from their occupational patterns (del Río and Alonso-Villar, 2019b). However, those gains are largely because of individuals' relatively high education levels. After controlling for education and other relevant characteristics, the gains from occupations shrink for men in same-sex couples and are negative for women of all races in same-sex couples. Also, those gains are not the same across race, and it is mainly white and Asian people in same-sex couples who gain from occupational sorting, while Black and Hispanic people in same-sex couples are in occupations that tend to reduce their earnings relative to all earners (del Río and Alonso-Villar, 2019a). A study of one young cohort found that young women who had sexual contact with women in young adulthood had lower status occupations (measured by education and income in occupations) than those with early sexual contact or no sexual contact with women, at least partly because of lower levels of education (Ueno, Peña-Talamantes, and Roach, 2013). In contrast, young men who had dating relationships with men in young adulthood were in higher status occupations than men without same-sex

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 281 of 438 PageID #: 2

dating or those with early same-sex dating, at least partly because of their higher education levels.

In sum, research has established differences in occupational patterns across sexual orientation. But the research on how and why sexual and gender diversity shape occupational segregation is at an early stage. Further research will be necessary to distinguish the extent to which occupational segregation reflects stigma-related stereotyping and barriers or reflects greater freedom from gender stereotypes.

WORKFORCE ISSUES

Employment Discrimination

Research conducted over several decades has found that SGD populations face stigma and unequal treatment in the workforce. Assessments of discrimination toward SGD employees come in a variety of forms, but there are as yet no studies in the United States of discrimination against people with intersex traits. Self-reports of discrimination show that many LGBT people perceive that they have been treated unequally in the workforce. For example, findings from a 2017 survey using a national probability sample of more than 3,400 LGBT adults showed that one in five reported experiencing discrimination associated with their LGBT status when applying for a job (National Public Radio, 2017). A 2017 study of federal agencies in the fields of science, technology, engineering, and mathematics found that LGBT employees reported more negative workplace experiences than their non-LGBT colleagues (Cech and Pham, 2017). More than 9,000 people filed charges of employment discrimination based on either sexual orientation or gender identity discrimination with state and federal nondiscrimination agencies over the 2013–2016 period (Baumle, Badgett, and Boutcher, 2019).

The 2015 USTS includes substantial self-reporting of workplace discrimination by transgender and gender-nonconforming people: 19 percent report being fired, denied a promotion, or not getting hired due to their gender identity or expression (James et al., 2016). Other studies of nonrandom samples of transgender people reveal a range of workplace experiences when transitioning (Brewster et al., 2014; Dietert and Dentice, 2010; Lombardi and Malouf, 2001; Ruggs et al., 2015). In some cases, transgender workers report having supportive workplaces and positive experiences, while others have more negative experiences, including coworkers' refusal to use proper pronouns and negative treatment for deviating from gender norms. One study compared non-binary transgender people to transgender men and transgender women, finding that transgender women often reported the worst workplace outcomes in terms of unemployment, underemployment, and discrimination (Davidson, 2016).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 282 of 438 PageID #: 2

Several audit studies that consider employer responses to resumes provide additional evidence of employment discrimination. These studies involve carefully constructed experiments to see if applicants who are sexual and gender minorities, as indicated primarily by activities on a resume, are treated differently than cisgender heterosexual applicants. A large U.S. study found that openly gay men in many states were less likely to be invited to a first-round interview than otherwise identical straight men (Tilcsik, 2011). That study implied that a gay man would have to apply to 14 jobs to get an interview while a heterosexual man would have to apply for only 9. A similar result was found for LGBT women in the United States (Mishel, 2016). A third experiment found evidence that racial and sexual stereotypes might interact in unexpected ways: Black gay male job applicants were seen as less threatening and as deserving of higher salaries than Black heterosexual male job candidates (Pedulla, 2014). However, transgender people in New York City who applied in person for jobs were significantly less likely to receive job offers for retail sales positions than cisgender applicants with comparable fictionalized resumes (Make the Road New York, 2010). Studies in other countries also find potentially discriminatory hiring practices for gay men and lesbian women in Sweden and the United Kingdom and for transgender people in four Asian countries (Ahmed, Andersson, and Hammarstedt, 2013; Drydakis, 2015; Winter et al., 2018). A challenge associated with experimental designs that focus on reaction to resumes is that they are generally limited to entry-level positions; assessments of discrimination at later career stages are limited.

Other possible evidence of employment discrimination comes from disparities in the probability of unemployment, defined as being available and searching for a job. Analyses of population-based data from Gallup show that 9 percent of LGBT-identified adults report being unemployed compared with 5 percent of non-LGBT adults. The 2015 USTS found that 15 percent of transgender and gender-nonconforming adult respondents said they were unemployed (James et al., 2016), and another study shows that, after controlling for other predictors of unemployment in BRFSS data, transgender people were more likely than cisgender men to be unemployed (Carpenter, Eppink, and Gonzales, 2020). In general, the research base is too thin to draw conclusions about unemployment disparities.

Many important research topics are understudied related to the experiences of LGBT people in the workplace. Expanding the research base will be necessary to better identify the sources of disadvantage and to design and evaluate interventions to reduce discrimination. Such research might include analyzing variation in the experiences of SGD populations by other important characteristics, such as race and ethnicity; variation by geographic location, in relation to policy and attitudes; and varia-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 283 of 438 PageID #: 2

tion by industry and occupation. Research that studies the attitudes and behaviors of supervisors and coworkers of LGBT people might provide additional insights.

Compensation Discrimination

SGD populations experience compensation discrimination in the workplace, which includes unequal treatment between same-sex and different-sex couples regarding health insurance benefits and parental leave and access to transition-related care for transgender populations. Prior to the national legalization of marriage for same-sex couples in 2015, several studies documented disparities in access to health insurance among same-sex couples and their children (Ash and Badgett, 2006; Buchmueller and Carpenter, 2010, 2012; Heck, Sell, and Gorin, 2006; Ponce et al., 2010), with larger disparities for Hispanic men, Black women, and Native American and Alaskan women (Gilbert and Ortiz, 2015; Gonzales and Blewett, 2013). Both qualitative and quantitative studies have shown that LGBT employees in some firms formed "employee resource groups" that were influential in convincing employers to offer domestic partner benefits to employees with same-sex partners (Badgett, 2001; Raeburn, 2004; Briscoe and Safford, 2008; Creed, Douglas, and Scully, 2000), and unions sometimes bargained for these benefits (Boris, 2010; Holcomb, 1999). Access to the right to marry appears to have reduced disparities in health insurance among same-sex couples (Carpenter et al., 2018), although the research is too preliminary to draw strong conclusions.

More generally, several studies have documented changes in access to insurance coverage among SGD populations in relation to passage of the Affordable Care Act (ACA). In 2013, prior to the full implementation of the ACA, 34 percent of a nationally representative sample of LGBT people making less than $45,000 per year were uninsured (Baker, Durso, and Cray, 2014). Uninsurance among LGBT people in this income bracket dropped to 26 percent in 2014 and to 22 percent in 2017 (Baker and Durso, 2017). Data from the Health Reform Monitoring Survey similarly indicated that the share of LGB adults without health insurance across all income ranges decreased from 21.7 percent to 11.1 percent between 2013 and 2015 (Karpman, Skopec, and Long, 2015). Still, a 2017 analysis of Gallup data found that LGBT-identified adults remained less likely to report having health insurance than their non-LGBT counterparts (15 percent and 12 percent, respectively), though this finding did not account for age differences in the two populations: LGBT-identified individuals were younger.[2] (See more detailed discussion in Chapter 12 on health care access.)

[2] See https://williamsinstitute.law.ucla.edu/visualization/lgbt-stats/?topic=LGBT#economic.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 284 of 438 PageID #: 2

For transgender people, insurance exclusions for transition-related care have historically been a common problem in employer plans. In 2012, the Corporate Equality Index began to require self-insured employers to remove these exclusions from their employee benefits in order to receive a full score. By 2019, 62 percent of Fortune 500 employers, representing a 16-fold increase since 2010, had eliminated transgender exclusions from the coverage they offer their employees (Human Rights Campaign, 2019). The Federal Employees Health Benefits Program required participating carriers to eliminate transgender exclusions in 2016 (U.S. Office of Personnel Management, n.d.), and at least 17 state governments and the District of Columbia also offer employee benefits that include transition-related care (Movement Advancement Project, 2020). In a related trend, several courts have found that transgender exclusions in employer-sponsored insurance violate Title VII of the federal Civil Rights Act, which bans sex discrimination in employment, as well as Section 1557 of the ACA, which bans sex discrimination in health care and insurance (Glasser and Labbees, 2018).

Access to Military Service

Research suggests that military service can be a route to better economic outcomes, especially for marginalized populations, and the military is a large employer of SGD people (Martorell et al., 2014; Routon, 2014). Estimates from a 2010 study suggested that 2.2 percent of active and reserve forces in the U.S. military were lesbian, gay, or bisexual (Gates, 2010). A 2014 study estimated that 0.6 percent of U.S. active and reserve forces are transgender. The lifting of the "don't ask, don't tell" policy in 2010 meant that lesbian, gay, and bisexual individuals could serve openly in the U.S. military, but transgender individuals are currently banned from military service. The economic effects on individual LGBT people of both the lifting of the "don't ask, don't tell" policy and the continuation of the ban on transgender people are unknown. Given the research suggesting positive economic benefits of military service among marginalized populations, it seems reasonable to assume that the ban on transgender military service effectively closes an avenue for economic advancement for this already economically disadvantaged population.

Workplace Disclosure of Sexual Orientation and Gender Identity

Another important factor in assessing the effects of workplace discrimination is the degree to which SGD populations are "out" in their workplace environments. A 2013 population-based survey of LGBT adults conducted by the Pew Research Center found that, even though one-half of employed LGBT adults think their workplace is accepting of LGBT employees, only

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 285 of 438 PageID #: 2

one-third say they are open to most of their work colleagues about their sexual orientation or gender identity. Openness about sexual orientation is much higher among lesbian women and gay men (50 percent and 48 percent, respectively) than bisexual individuals (11 percent). Notably, LGBT adults are more out to family and friends than to their work colleagues. More than half of respondents said they were out to all or most of the important people in their lives. However, like the responses about the workplace, lesbian women and gay men were far more likely to be out (71 percent and 77 percent, respectively) than their bisexual counterparts (28 percent). However, the research base on workplace disclosure and its relationship to economic outcomes is very thin, at least in part because large-scale surveys that include sexual orientation and gender identity questions do not also include questions on workplace disclosure. Future research could approach disclosure as both an outcome variable that measures the workplace climate and as an explanatory variable that may predict other outcomes, such as experiencing discrimination, wage gaps, job turnover, and productivity.

Nondiscrimination Policies

Employment discrimination against public-sector workers is prohibited by the Equal Protection Clause of the Fourteenth Amendment. Until the Supreme Court's *Bostock vs. Clayton County* decision in 2020, the status of protection against private-sector discrimination was uncertain, even though coverage had been extended by federal agencies and some federal courts (see Chapter 5). Between 2013 and 2016, more than 9,000 people filed charges of employment discrimination with state and federal nondiscrimination agencies on the basis of either sexual orientation or gender identity discrimination (Baumle, Badgett, and Boutcher, 2019). Enforcement agencies might increase the likelihood of a charge being filed when employees believe they face discrimination by making filing methods more transparent and accessible, as some European human rights agencies have attempted (Organization for Economic Cooperation and Development [OECD], 2020).

Evidence suggests that laws banning workplace discrimination based on sexual orientation have positive economic effects for sexual minority populations. Studies prior to 2020 found that gay men and men in same-sex couples saw lower wage gaps in locations where there was a state anti-discrimination law (Klawitter, 2011). An audit study of resumes found lower levels of discrimination toward gay men in states with anti-discrimination laws (Tilcsik, 2011). A more recent study also found that state anti-discrimination laws are associated with increased wages for gay men, but it also found an association with decreased employment among lesbian women (Burn, 2018). Additional research is needed into the policy

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 286 of 438 PageID #: 2

effects on other economic outcomes, as well as exploring more directly the effects of nationwide nondiscrimination laws on transgender people and on groups within LGBT populations. Early research on the effects of marriage equality suggests that such a policy change may be linked to higher rates of employment, more mortgage applications, and more health insurance coverage (Carpenter et al., 2018; Downing and Cha, 2020; Miller and Park, 2018; Sansone, 2019).

Some businesses and other private-sector employers have implemented their own sexual orientation and gender identity nondiscrimination protections that cover employees regardless of state of residence. In some cases, qualitative research suggests those changes in policy emerged because of direct pressure from the employer's own employees (Badgett, 2001; Raeburn, 2004) or from unions, as noted above. As of the writing of this report, 93 percent of Fortune 500 companies have sexual orientation nondiscrimination policies, and 91 percent of Fortune 500 companies had gender identity protections (Human Rights Campaign, 2020). Other "best practices" by employers in the United States and globally include equal benefits, internal training on employer policies, prejudice-reduction trainings, clear guidelines for gender transitions, and employee resource groups (Human Rights Campaign, 2020; OECD, 2020).

Private-sector workplaces that have policies that affirm the inclusion of SGD people and prohibit discrimination based on sexual orientation and gender identity are associated with positive outcomes for both the businesses and their employees. A review of 36 studies using nonprobability samples found that LGBT-supportive policies and affirming workplace climates are often associated with greater job commitment, improved workplace relationships, increased job satisfaction, and improved health outcomes among LGBT employees (Badgett et al., 2013). LGBT employees also reported an association between LGBT-affirming organizations and less discrimination and more openness. Comparisons of companies with and without LGBT-inclusive policies show that more inclusive companies report higher stock prices, return on assets, productivity, and more patents (Gao and Zhang, 2016; Johnston and Malina, 2008; Li and Nagar, 2013; Pichler et al., 2018; Shan, Fu, and Zheng, 2017; Wang and Schwarz, 2010).

HOUSING

Access to housing is another measure of economic well-being. This topic has received much less research attention than issues of employment, but it is important for several reasons. First, housing is a necessary resource to sustain life, and evidence of high rates of homelessness for LGBT young people indicates a pressing social and individual problem. Second, home ownership is both a means to obtain housing and an asset that makes up a

Copyright National Academy of Sciences. All rights reserved.

significant part of wealth for people in the United States, and evidence of disparities in home ownership between same-sex couples and different-sex couples have implications for differences in the wealth of SGD populations. Third, because of stigma, SGD populations may face barriers in the markets for credit and rental housing. Data on housing outcomes with measures of sexual orientation and gender identity (or other SGD markers) are limited, so the body of research reviewed in this section includes existing studies of population-based data, but it relies heavily on nonprobability samples and experiments to study disadvantages related to housing.

Homelessness

Existing studies show an elevated risk of homelessness among LGBT youth. An analysis of data from eight states using the population-based Youth Risk Behavior Survey found that LGB youth were twice as likely as their non-LGB counterparts to experience homelessness (Cutuli, Treglia, and Herbers, 2019). Surveys of homeless youth service providers also indicate elevated risks of homelessness among LGBTQ youth, with a higher risk among youths of color. Providers have reported that LGBTQ youth experience longer periods of homelessness than their non-LGBTQ counterparts, and service patterns suggest particular increases in transgender youth accessing services for homelessness (Choi et al., 2015). A systematic review of literature identified four main themes associated with LGBTQ+ homelessness: stigma, discrimination, and exclusion; mental health issues and substance use; sexual risks and vulnerability; and interventions and supports (McCann and Brown, 2019).

Studies of adult homelessness among the LGBT population reveal that adult LGBTQ+ people are also vulnerable to homelessness. In one recent study based on nationally representative samples, 3 percent of sexual minority and 8 percent of transgender adults reported having experienced homelessness in the previous 12 months, compared with only 1 percent of cisgender heterosexual adults (Wilson et al., 2020). A recent systematic literature review found that many homeless LGBT adults have challenges associated with HIV and substance use (Ecker, Aubry, and Sylvestre, 2019).

Evidence suggests that adult homelessness may be particularly acute among transgender and gender-nonconforming populations. In the USTS, nearly one-third of respondents reported having ever experienced homelessness, and 12 percent reported being homeless within the past year (James et al., 2016). The New York state 2015 LGBT Health and Human Services Needs Assessment, a community survey of nearly 3,800 people, found that transgender respondents were substantially more likely to report housing insecurity (50 percent), defined as having difficulty paying for housing accommodation, than they were to report having ever been homeless

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 288 of 438 PageID #: 2

(31 percent) (Frazer and Howe, 2015). The New York study highlights a potential gap in the literature addressing homelessness issues among SGD populations, which focuses on a limited assessment of variation in forms of homelessness (e.g., sleeping outdoors, group shelters, "couch surfing" with friends or acquaintances) and rarely considers the extent or effects of housing insecurity. Transgender and gender-nonconforming adults in homelessness systems have reported experiencing frequent concerns regarding safety and gender-affirming supports. One study found that most shelters were not willing to house a transgender homeless woman in accordance with her gender identity (Rooney, Durso, and Gruberg, 2016).

Home Ownership and Wealth

Home ownership is both a source of housing services and an important source of wealth. Some research finds that LGBT populations have lower home ownership rates than cisgender heterosexual people. The 2015 USTS found only 16 percent of transgender and gender-nonconforming adult respondents indicated that they owned their homes, compared with more than 60 percent of all U.S. adults (James et al., 2016). Same-sex couples and sexual minorities are less likely to be homeowners than are heterosexuals after controlling for income and demographic factors (Conron, Goldberg, and Halpern, 2018; Jepsen and Jepsen, 2009; Leppel, 2007). More recent analyses still find lower home ownership rates among married same-sex couples than their married different-sex counterparts, but unmarried cohabiting same-sex couples are more likely to own their homes than unmarried different-sex couples (Gates, 2015). A 2016 study suggests that the introduction of legal marriage for same-sex couples has led to increases in mortgage applications among same-sex couples (Miller and Park, 2018).

Differences in home ownership can be associated with a wide array of possible disparities related to sexual and gender diversity. A gap in ownership rates can be a sign of discrimination in mortgage lending practices. Evidence suggests that same-sex couples experience mortgage discrimination. In a large-scale study of mortgage lending data, same-sex couples were 73 percent more likely than different-sex couples to be denied a mortgage, and they were charged up to 0.2 percent higher fees or interest rates. Also, a neighborhood's higher same-sex couple population density adversely affects both same-sex and different-sex borrowers' lending experiences (Sun and Gao, 2019). A gap could also be a sign of housing insecurity, meaning that SGD populations are more likely than others to lack sufficient resources to buy a home. Finally, differences in home ownership rates offer evidence of differences and possible disparities in asset and wealth accumulation.

Research that considers disparities in asset accumulation and wealth associated with SGD populations is rare. Population-based data resources to

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 289 of 438 PageID #: 2

comprehensively assess these issues do not exist. Although home ownership is occasionally measured, no major U.S. national population-based survey that measures assets and wealth includes measurements of sexual orientation and gender identity, creating a large knowledge gap that requires further research. This gap in knowledge about wealth is particularly problematic for assessing the economic well-being of aging SGD populations, who may receive fewer transfers of wealth from unsupportive families of origin and may have fewer children to count on for unpaid assistance with their needs in old age.

Discrimination in Rental Housing

Research shows that rental-related housing discrimination associated with sexual orientation and gender identity exists, but the extent of that discrimination is not well documented. Findings from the 2011 National Transgender Discrimination Survey (NTDS) and the 2015 USTS show substantial self-reporting of housing discrimination. The NTDS found that 19 percent of respondents reported having ever been refused a home or apartment, and 11 percent reported being evicted because of their gender identity or expression (Grant, Mottet, and Tanis, 2011). Nearly one-quarter (23 percent) of USTS respondents said they had experienced housing discrimination in the past year, which included evictions and being denied a home or apartment because of their transgender or gender-nonconforming status (James et al., 2016). Findings from an internet-based U.S. probability sample of lesbian, gay, and bisexual adults showed that 10 percent reported experiencing housing discrimination, with gay men and lesbian women reporting more discrimination than their bisexual counterparts (Herek, 2009).

In studies other than self-reports, researchers have found differential treatment of LGBT people in experiments that compare responses to LGBT people to those of non-LGBT people at key stages of the rental process, particularly in the initial response to a rental ad. Using telephone and in-person paired testing, two fair housing organizations found differential treatment between LGBTQ individuals and their heterosexual cisgender counterparts (Equal Rights Center, 2014; Fair Housing Centers of Michigan, 2007). A study sponsored by the U.S. Department of Housing and Urban Development (HUD) found that same-sex male couples were significantly less likely than their different-sex couple counterparts to receive email responses from housing providers (Friedman et al., 2013). A separate academic study of email responses to inquiries about rental listings on Craigslist found discrimination against male same-sex couples, with the largest amount of discrimination against Black and Hispanic male couples (where race was designated through names) (Schwegman, 2019). The treatment of Black

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 290 of 438 PageID #: 2

male couples was less unequal in states that ban discrimination against sexual orientation in housing. The Black male couples also received fewer positive responses from property owners. Studies in Sweden and Canada have also found differential treatment between same-sex male and different-sex couples (Ahmed and Hammarstedt, 2009; Lauster and Easterbrook, 2011). One audit study of senior housing in 10 states found that same-sex couples experienced adverse differential treatment in comparison with different-sex couples in almost half of the tests conducted (Equal Rights Center, 2014).

The Urban Institute used in-person, telephone, and email testing to conduct one of the most recent and largest studies of LGBT-related housing discrimination in three metropolitan areas: Dallas-Fort Worth, Los Angeles, and Washington, D.C. (Levy et al., 2017). Their paired-testing study (funded by HUD) assessed differences between same-sex and different-sex couples and differences between transgender and genderqueer individuals compared with their cisgender counterparts. As with other studies, this study found more evidence of differential and discriminatory treatment among men in same-sex couples than among women in same-sex couples. Providers told gay men about fewer available rental units and were slightly less likely to schedule an appointment with them. Gay men were also quoted higher average yearly costs than were heterosexual men. Treatment of same-sex couples, regardless of gender, did not differ much by race or city. Relative to cisgender testers, transgender testers were told about fewer units. Of note, the Urban Institute study was considered a pilot test of methodologies used to assess differential treatment based on sexual orientation and gender nonconformity. The study included several tests of different approaches with regard to selection of testers, disclosure of sexual orientation or gender identity, and a comparison of email and in-person assessments of discrimination.

SUMMARY AND CONCLUSIONS

The social science research on the economic well-being of SGD populations has focused mainly on comparisons of lesbian, gay, and bisexual people with heterosexual people. More recently, data on transgender people have allowed for some comparisons with cisgender populations. The research, which has analyzed earnings, household income, poverty, education, and occupational attainment, reveals a picture of economic inequality for LGBT people. Some research is at an early stage or is limited by currently available data. Accordingly, this chapter notes many unmet data needs and research opportunities. In particular, interventions that may currently exist to enhance well-being and to reduce inequality for SGD groups in these economic contexts are inadequate and untested. However, several general findings on economic well-being emerge from the existing research.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 291 of 438 PageID #: 2

Evidence suggests that transgender people—and possibly bisexual people—have lower incomes and higher poverty than lesbian, gay, and cisgender heterosexual people. Lesbian women and gay men may have mitigated some of the effects of discrimination on earnings and household income through adaptive strategies in education, occupations, and family decisions, but they still face discrimination in the labor force. Research on individual earnings suggests that, after controlling for differences in income-related characteristics, gay and bisexual men earn less than heterosexual men, while lesbian and bisexual women earn less than heterosexual men but more than heterosexual women.

These general findings have been made possible by the growing availability of datasets that have measures of income as well as measures of sexual orientation or gender identity, thus improving the ability to analyze income differences by sexual orientation and gender identity. However, significant data gaps remain. Some samples are too small for analysis of older SGD populations or for detailed comparisons by race or ethnicity. In addition, no probability-based surveys with individual income measures include questions on transgender people or people with intersex traits. Some researchers have asked specifically whether sexual orientation effects on income have fallen over time in the United States. Findings from these studies are inconclusive.

Poverty and economic insecurity are more common among LGBT people than among cisgender, heterosexual people. Poverty rates are higher for female same-sex couples and lower for male same-sex couples than for married different-sex couples, which at least partly reflects the gender composition of the couple. But after adjusting for other predictors of being poor, both male and female same-sex couples are at greater risk of being poor than married different-sex couples. Among self-identified single and coupled LGBT people, bisexual and transgender people are more at risk of poverty and lesbian and gay people are at equal risk of poverty than self-identified heterosexual cisgender people of the same sex. Some groups within the LGBT population are at greater risk of poverty or low-income status: unmarried people, people with children, Black people, people living in rural areas, and people over age 50. Some studies suggest that food and housing insecurity are greater among LGBT people than among cisgender heterosexual people.

CONCLUSION 10-1: There is clear evidence of economic inequality for sexual and gender diverse populations. Economic vulnerabilities are greater for certain groups, including transgender people, bisexual people, lesbian women, and LGBT people of color. However, very little is known about how low-income SGD populations are treated when seeking services and public assistance, or about intersectional inequalities associated with race, ethnicity, and disability status.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 292 of 438 PageID #: 2

In the workforce, lesbian and bisexual women are in occupations with a higher percentage of men than are heterosexual women; gay and bisexual men are in occupations with a higher percentage of women than are heterosexual men. These patterns might be seen as positive if LGB people feel less constrained by gendered expectations about appropriate occupations than do heterosexual men and women. However, stereotyping and discrimination may also generate gendered barriers that shape those patterns. Access to the right to marry appears to have reduced disparities in health insurance among same-sex couples, and changes in access to insurance coverage among SGD populations in relation to passage of the ACA have improved conditions for previously uninsured individuals.

Studies based on self-report data show that many LGBT people perceive that they have been treated unequally in the workforce. Many individual employers have created their own voluntary nondiscrimination policies. SGD populations have also experienced compensation and benefit discrimination in the workplace. In 2020, the Supreme Court held that discrimination based on sexual orientation or gender identity is prohibited by Title VII, the federal law that is part of the 1964 Civil Rights Act (*Bostock v. Clayton County*). The efficacy of this clarity about nationwide anti-discrimination protections will depend on how well federal and state agencies and courts carry out its mandate.

CONCLUSION 10-2: Sexual and gender diverse people face discrimination in employment. The Supreme Court's affirmation that Title VII prohibits such discrimination is new, and the improvement of outcomes for sexual and gender diverse people in the workplace will be contingent on effective enforcement.

Access to housing is another measure of economic well-being for sexual and gender diverse populations, but data on housing outcomes with measures of sexual orientation and gender identity are somewhat limited. Those limited data show significant disparities for SGD people.

There is a greater risk of homelessness among LGBTQ youth, with elevated risk for LGBTQ youth of color, than other youth. Adult homelessness may be particularly acute among transgender and gender-nonconforming populations. There are four main factors associated with LGBTQ homelessness: stigma, discrimination, and exclusion; mental health issues and substance use; sexual risks and vulnerability; and a lack of access to interventions and supports.

Some research finds that LGBT populations have lower home ownership rates than cisgender heterosexual people. Differences in home ownership can be associated with a wide array of possible disparities related to

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 293 of 438 PageID #: 2

sexual and gender diversity and can point to discrimination in mortgage lending practices. Differences in home ownership rates offer evidence of possible disparities in asset and wealth accumulation, but there are no population-based data that comprehensively assess these issues.

Because of stigma, SGD populations may also face barriers in the markets for credit and rental housing. Nearly a quarter of respondents to the 2015 U.S. Transgender Survey said they had experienced housing discrimination in the past year, and there is evidence of more differential and discriminatory treatment among men in same-sex couples than among women in same-sex couples.

> **CONCLUSION 10-3: Sexual and gender diverse people face discrimination in the housing market, with evidence showing differential treatment of LGBT applicants for rental housing and mortgages. LGBT youth have an elevated risk of homelessness, and sexual and gender diverse adults may also be at risk.**

Many outstanding questions about the economic well-being of SGD people can be addressed with enhanced research that addresses known disparities and data gaps. For instance, research on lifetime workforce experience could measure the effects of labor force participation and human capital differences on income differences for SGD populations. Research on the influences on occupational attainment could address the roles of gender and sexuality stereotypes, preferences, barriers, and workplace characteristics. As access to health care is a critical component of well-being, it is important to also study how the provision of LGBT-relevant health care benefits, including same-sex partner benefits and transition-related care benefits, affect SGD communities.

Much more research is needed to assess the economic well-being of transgender people, non-binary people, and people with intersex traits. From wealth and asset accumulation to homelessness and housing insecurity, there is much more to be understood about how certain economic conditions affect SGD populations, particularly for groups identified as having bigger economic challenges, such as people in rural areas, older SGD people, and SGD people of color.

REFERENCES

Ahmed, A.M., and Hammarstedt, M. (2009). Detecting discrimination against homosexuals: Evidence from a field experiment on the Internet. *Economica, 76*(303), 588–597.

Ahmed, A.M., Andersson, L., and Hammarstedt, M. (2013). Are gay men and lesbians discriminated against in the hiring process? *Southern Economic Journal, 79*(3), 565–585. doi: 10.4284/0038-4038-2011.317.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 294 of 438 PageID #: 2

Albelda, R., Badgett, M.V.L., Schneebaum, A., and Gates, G.J. (2009). *Poverty in the Lesbian, Gay, and Bisexual Community*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Antecol, H., and Steinberger, M.D. (2013). Labor supply differences between married heterosexual women and partnered lesbians: A semi-parametric decomposition approach. *Economic Inquiry*, *51*(1), 783–805. doi: 10.1111/j.1465-7295.2010.00363.x.

Antecol, H., Jong, A., and Steinberger, M. (2008). The sexual orientation wage gap: The role of occupational sorting and human capital. *Industrial and Labor Relations Review, 61*(4), 518–543.

Ash, M.A., and Badgett, M.V.L. (2006). Separate and unequal: The effect of unequal access to employment-based health insurance on same-sex and unmarried different-sex couples. *Contemporary Economic Policy, 24*(4), 582–599. doi: 10.1093/cep/byl010.

Badgett, M.V.L. (1995). The wage effects of sexual orientation discrimination. *Industrial and Labor Relations Review, 48*(4), 726–739.

———. (2001). *Money, Myths, and Change: The Economic Lives of Lesbians and Gay Men*. Chicago: University of Chicago Press.

———. (2018). Left out? Lesbian, gay, and bisexual poverty in the U.S. *Population Research and Policy Review, 37*(5), 667–702. doi: 10.1007/s11113-018-9457-5.

Badgett, M.V.L., and King, M.C. (1997). Occupational strategies of lesbians and gay men. In A. Gluckman and B. Reed (Eds.), *Homo Economics: Capitalism, Community, and Lesbian and Gay Life*. New York: Routledge.

Badgett, M.V.L., and Schneebaum, A. (2015). *The Impact of Wage Equality on Sexual Orientation Poverty Gaps*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Wage-Equality-LGB-Poverty-Gap-Jun-2015.pdf.

———. (2016). *The Impact of a $15 Minimum Wage on Poverty Among Same-Sex Couples*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Min-Wage-SS-Couples-Sep-2016.pdf.

Badgett, M.V.L., Choi, S.K., and Wilson, B.D.M. (2019). *LGBT Poverty in the United States: A Study of Differences between Sexual Orientation and Gender Identity Groups*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/National-LGBT-Poverty-Oct-2019.pdf.

Badgett, M.V.L., Durso, L.E., and Schneebaum, A. (2013). *New Patterns of Poverty in the Lesbian, Gay, and Bisexual Community*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: http://williamsinstitute.law.ucla.edu/wp-content/uploads/LGB-Poverty-Update-Jun-2013.pdf.

Badgett, M.V.L., Durso, L.E., Kastanis, A., and Mallory, C. (2013). *The Business Impact of LGBT-Supportive Workplace Policies*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Baker, K.E., and Durso, L.E. (2017). *Why Repealing the Affordable Care Act Is Bad Medicine for LGBT Communities*. Center for American Progress. Available: https://www.americanprogress.org/issues/lgbtq-rights/news/2017/03/22/428970/repealing-affordable-care-act-bad-medicine-lgbt-communities.

Baker, K.E., Durso, L.E., and Cray, A. (2014). *Moving the Needle: The Impact of the Affordable Care Act on LGBT communities*. Center for American Progress. Available: https://www.americanprogress.org/issues/lgbtq-rights/news/2017/03/22/428970/repealing-affordable-care-act-bad-medicine-lgbt-communities.

Bakko, M. (2019). The effect of survival economy participation on transgender experiences of service provider discrimination. *Sexuality Research and Social Policy, 16*(3), 268–277.

Baumle, A.K., Badgett, M.V.L., and Boutcher, S. (2019). New research on sexual orientation and gender identity discrimination: Effect of state policy on charges filed at the EEOC. *Journal of Homosexuality*, *67*(8), 1135–1144. doi: 10.1080/00918369.2019.1603494.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 295 of 438 PageID #: 2

Baumle, A.K., Compton, D., and Poston, Jr., D.L. (2009). *Same-Sex Partners: The Social Demography of Sexual Orientation.* Albany: State University of New York Press.

Becker, G. (1991). *A Treatise on the Family.* Cambridge, MA: Harvard University Press.

Black, D.A., Sanders, S.G., and Taylor, L.J. (2007). The economics of lesbian and gay families. *Journal of Economic Perspectives, 21*(2), 53–70. doi: 10.1257/jep.21.2.53.

Black, D.A., Makar, H.R., Sanders, S.G., and Taylor, L.J. (2003). The earnings effects of sexual orientation. *Industrial and Labor Relations Review*, *56*(3), 449. doi: 10.2307/3590918.

Blandford, J.M. (2003). The nexus of sexual orientation and gender in the determination of earnings. *Industrial and Labor Relations Review, 56*(4), 622–642. doi: 10.2307/3590960.

Boris, M. (2010). Fighting for equal treatment. *Labor Studies Journal*, *3*(2), 157–180.

Brewster, M.E., Mennicke, A., Velez, B.L., and Tebbe, E. (2014). Voices from beyond: A thematic content analysis of transgender employees' workplace experiences. *Psychology of Sexual Orientation and Gender Diversity, 1*(2), 159–169. doi: 10.1037/sgd0000030.

Briscoe, F., and Safford, S. (2008). The Nixon-in-China Effect: Activism, imitation, and the institutionalization of contentious practices. *Administrative Science Quarterly*, *53*, 460–491.

Brown, S.L., Manning, W.D., and Payne, K.K. (2016). Family structure and children's economic well-being: Incorporating same-sex cohabiting mother families. *Population Research and Policy Review*, *35*(1), 1–21. doi: 10.1007/s11113-015-9375-8.

Brown, T.N.T., Romero, A.P., and Gates, G.J. (2016). *Food Insecurity and SNAP Participation in the LGBT Community*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: http://williamsinstitute.law.ucla.edu/wp-content/uploads/Food-Insecurity-and-SNAP-Participation-in-the-LGBT-Community.pdf.

Buchmueller, T.C., and Carpenter, C.S. (2010). Disparities in health insurance coverage, access, and outcomes for individuals in same-sex versus different-sex relationships, 2000-2007. *American Journal of Public Health*, *100*(3), 489–495. doi: 10.2105/AJPH.2009.160804.

———. (2012). The effect of requiring private employers to extend health benefit eligibility to same-sex partners of employees: Evidence from California. *Journal of Policy Analysis and Management, 31*(2), 388–403. doi: 10.1002/pam.

Burn, I. (2018). Not all laws are created equal: Legal differences in state non-discrimination laws and the impact of LGBT employment protections. *Journal of Labor Research, 39*(4), 462–947. doi: 10.1007/s12122-018-9272-0.

———. (2019). The relationship between prejudice and wage penalties for gay men in the United States. *Industrial and Labor Relations Review, 73*(3), 650–675. doi: 10.1177/0019793919864891.

Burwick, A., Gary, G., Baumgartner, S., and Friend, D. (2014). *Human Services for Low-Income and At-Risk LGBT Populations: An Assessment of the Knowledge Base and Research Needs*. *OPRE Report Number 2014-79*. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. Available: https://www.acf.hhs.gov/sites/default/files/opre/lgbt_hsneeds_assessment_reportfinal1_12_15.pdf.

Carpenter, C.S. (2005). Self-reported sexual orientation and earnings: Evidence from California. *Industrial and Labor Relations Review, 58*(2), 258–273.

Carpenter, C.S., and Eppink, S.T. (2017). Does it get better? Recent estimates of sexual orientation and earnings in the United States. *Southern Economic Journal, 84*(2), 426–441. doi: 10.1002/soej.12233.

Carpenter, C.S., Eppink, S.T., and Gonzales, G. (2020). Transgender status, gender identity, and socioeconomic outcomes in the United States. *Industrial and Labor Relations Review*, *73*(3), 573–599.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 296 of 438 PageID #: 2

Carpenter, C., Eppink S.T., Gonzales, G., and McKay, T. (2018). Effects of access to legal same-sex marriage and health: Evidence from BRFSS. *National Bureau of Economic Research Working Paper 24651*. Cambridge, MA: National Bureau of Economic Research. Available: https://www.nber.org/papers/w24651.

Cech, E.A., and Pham, M.V. (2017). Queer in STEM organizations: Workplace disadvantages for LGBT employees in STEM related federal agencies. *Social Sciences, 6*(1), 12. doi: 10.3390/socsci6010012.

Chai, L., and Maroto, M. (2019). Economic insecurity among gay and bisexual men: Evidence from the 1991–2016 U.S. General Social Survey. *Sociological Perspectives, 63*(1), 50–68 doi: 10.1177/0731121419849100.

Choi, S.K., Wilson, B.D.M., Shelton, J., and Gates, G.J. (2015). *Serving Our Youth 2015: The Needs and Experiences of Lesbian, Gay, Bisexual, Transgender, and Questioning Youth Experiencing Homelessness*. Los Angeles: Williams Institute with True Colors Fund.

Clarke, G., and Sevak, P. (2013). The disappearing gay income penalty. *Economics Letters*, *121*(3), 542–545. doi: 10.1016/j.econlet.2013.10.018.

Conron, K.J., Goldberg, S.K., and Halpern, C.T. (2018). Sexual orientation and sex differences in socioeconomic status: A population-based investigation in the National Longitudinal Study of Adolescent to Adult Health. *Journal of Epidemiology and Community Health*, *27*(11), 1016–1026. doi: 10.1136/jech-2017-209860.

Creed, W., Douglas, E., and Scully, M.A. (2000). Songs of ourselves: Employees' deployment of social identity in workplace encounters. *Journal of Management Inquiry*, *9*(4), 391–412.

Curley, C. (2018). Sexual orientation, sexual history, and inequality in the United States. *Feminist Economics*, *24*(1), 88–113. doi: 10.1080/13545701.2017.1388531.

Cushing-Daniels, B., and Yeung, T.Y. (2009). Wage penalties and sexual orientation: An update using the General Social Survey. *Contemporary Economic Policy, 27*(2), 164–175. doi: 10.1111/j.1465-7287.2008.00132.x.

Cutuli, J.J., Treglia, D., and Herbers, J.E. (2019). Adolescent homelessness and associated features: Prevalence and risk across eight states. *Child Psychiatry and Human Development*, *51*, 48–58. doi: 10.1007/s10578-019-00909-1.

Daneshvary, N., Waddoups, C.J., and Wimmer, B.S. (2008). Educational attainment and the lesbian wage premium. *Journal of Labor Research, 29*(4), 365–379. doi: 10.1007/s12122-007-9024-z.

———. (2009). Previous marriage and the lesbian wage premium. *Industrial Relations*, *48*(3), 432–453. doi: 10.1111/j.1468-232X.2009.00567.x.

Davidson, S. (2016). Gender inequality: Nonbinary transgender people in the workplace. *Cogent Social Sciences, 2*(1). doi: 10.1080/23311886.2016.1236511.

del Río, C., and Alonso-Villar, O. (2019a). Occupational achievements of same-sex couples in the United States by gender and race. *Industrial Relations*, 1–28. doi: 10.1111/irel.12246.

———. (2019b). Occupational segregation by sexual orientation in the U.S.: Exploring its economic effects on same-sex couples. *Review of Economics of the Household, 17*, 439–467. doi: 10.1007/s11150-018-9421-5.

Denier, N., and Waite, S. (2019). Sexual orientation at work: Documenting and understanding wage inequality. *Sociology Compass, 13*(4), 1–17. doi: 10.1111/soc4.12667.

Dietert, M., and Dentice, D. (2010). Gender identity issues and workplace discrimination: The transgender experience. *Journal of Workplace Rights, 14*(1), 121–140. doi: 10.2190/wr.14.1.g.

Douglas, J.H., and Steinberger, M.D. (2015). The sexual orientation wage gap for racial minorities. *Industrial Relations, 54*(1), 59–108. doi: 10.1111/irel.12077.

Downing, J., and Cha, P. (2020). Same-sex marriage and gains in employer-sponsored insurance for US adults, 2008-2017. *American Journal of Public Health*, *110*(4), 537–539.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 297 of 438 PageID #: 2

Drydakis, N. (2015). Sexual orientation discrimination in the United Kingdom's labour market: A field experiment. *Human Relations, 68*(11), 1769–1796. doi: 10.1177/0018726715569855.

Ecker, J., Aubry, T., and Sylvestre, J. (2019). A review of the literature on LGBTQ adults who experience homelessness. *Journal of Homosexuality*, *66*(3), 297–323. doi: 10.1080/00918369.2017.1413277.

Elmslie, B., and Tebaldi, E. (2014). The wage gap against gay men: The leveling of the playing field. *Kyklos, 67*(3), 330–345. doi: 10.1111/kykl.12057.

Equal Rights Center. (2014). *Opening Doors: An Investigation of Barriers to Senior Housing for Same-Sex Couples*. Washington, DC: Equal Rights Center. Available: https://equalrightscenter.org/wp-content/uploads/senior_housing_report.pdf.

Fair Housing Centers of Michigan. (2007). *Sexual Orientation and Housing Discrimination in Michigan: A Report of Michigan's Fair Housing Centers*. Ann Arbor: Fair Housing Centers of Michigan.

Fitzgerald, E., Elspeth S., and Hickey, D. (2015). *Meaningful Work: Transgender Experiences in the Sex Trade*. BestPracticesPolicy.org, Red Umbrella Project, National Center for Transgender Equality. https://transequality.org/sites/default/files/Meaningful%20Work-Full%20Report_FINAL_3.pdf.

Frazer, M.S., and Howe, E.E. (2015). *Transgender Health and Economic Insecurity: A Report from the 2015 LGBT Health and Human Services Needs Assessment Survey.* New York: Empire State Pride Agenda. Available: http://strengthinnumbersconsulting.com/wp-content/uploads/2017/06/TG-health-and-economic-insecurity-report-FINAL.pdf.

Fredriksen-Goldsen, K.I. (2016). The future of LGBT+ aging: A blueprint for action in services, policies, and research. *Generations*, *40*(2), 6–15.

Fredriksen-Goldsen, K.I., Kim, H.J., Barkan, S.E., Muraco, A., and Hoy-Ellis, C.P. (2013). Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study. *American Journal of Public Health, 103*(10), 1802–1809. doi: 10.2105/AJPH.2012.301110.

Fredriksen-Goldsen, K.I., Cook-Daniels, L., Kim, H.J., Erosheva, E.A., Emlet, C.A., Hoy-Ellis, C.P., Goldsen, J., and Muraco, A. (2014). Physical and mental health of transgender older adults: An at-risk and underserved population. *Gerontologist, 54*(3), 488–500. doi: 10.1093/geront/gnt021.

Friedman, S., Reynolds, A., Scovill, S., Brassier, F.R., Campbell, R, and Ballou, M. (2013). *An Estimate of Housing Discrimination against Same-Sex Couples*. Philadelphia: M. Davis and Company.

Gao, H., and Zhang, W. (2016). Employment non-discrimination acts and corporate innovation. *Management Science, 63*(9), 2982–2999. doi: 10.2139/ssrn.2473250.

Gates, G.J. (2010). *Lesbian, Gay, and Bisexual Men and Women in the US Military: Updated Estimates*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Gates, G.J. (2015). Demographics of married and unmarried same-sex couples. Available: https://williamsinstitute.law.ucla.edu/publications/demo-ss-couples-us.

Gilbert, G., and Ortiz, K. (2015). Health insurance disparities among racial/ethnic minorities in same-sex relationships: An intersectional approach. *American Journal of Public Health, 105*, 1106–1113. doi: 10.2105/AJPH.2014.302459.

Glasser, N., and Labbees, C. (2018). Group health plans cannot categorically exclude coverage for gender dysphoria, say two more federal courts. *National Law Review*. Available: https://www.natlawreview.com/article/group-health-plans-cannot-categorically-exclude-coverage-gender-dysphoria-say-two.

Goldberg, N.G. (2009). *The Impact of Inequality for Same-Sex Partners in Employer- Sponsored Retirement Plans*. Los Angeles, CA: Williams Institute, UCLA School of Law.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 298 of 438 PageID #: 2

Goldin, C. (2016). Human capital. In C. Diebolt and M. Haupert (Eds.), *Handbook of Cliometrics* (pp. 55–86). Heidelberg, Germany: Springer-Verlag.

Gonzales, G., and Blewett, L.A. (2013). Disparities in health insurance among children with same-sex parents. *Pediatrics, 132*(4), 703–711. Available: https://pediatrics.aappublications.org/content/pediatrics/132/4/703.full.pdf.

Grant, J.M., Mottet, L.A., and Tanis, J. (2011). *Injustice at Every Turn: A Report of the National Transgender Discrimination Survey*. Washington, DC: National Center for Transgender Equality and National Gay and Lesbian Task Force. Available: https://www.thetaskforce.org/wp-content/uploads/2019/07/ntds_full.pdf.

Heck, J.E., Sell, R.L., and Gorin, S.S. (2006). Health care access among individuals involved in same-sex relationships. *American Journal of Public Health, 96*(6), 1111–1118. doi: 10.2105/AJPH.2005.062661.

Herek, G.M. (2009). Hate crimes and stigma-related experiences among sexual minority adults in the United States: Prevalence estimates from a National Probability Sample. *Journal of Interpersonal Violence*, *24*(1), 54–74.

Holcomb, D. (1999). Domestic partner health benefits: The corporate model vs. the union model. In G. Hunt (Ed.), *Labor for Rights* (pp. 103–120). Philadelphia, PA: Temple University Press.

Human Rights Campaign. (2019). *Corporate Equality Index 2019*. Washington, DC: Human Rights Campaign Foundation. Available: https://assets2.hrc.org/files/assets/resources/CEI-2019-FullReport.pdf.

———. (2020). *Corporate Equality Index 2020*. Washington, DC: Human Rights Campaign Foundation. Available: https://assets2.hrc.org/files/assets/resources/CEI-2020.pdf.

Hunter, L.A., McGovern, A., and Sutherland, C., Eds. (2018). *Intersecting Injustice: Addressing LGBTQ Poverty and Economic Justice for All: A National Call to Action*. New York: Social Justice Sexuality Project, Graduate Center, City University of New York.

James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L., and Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey.* Washington, DC: National Center for Transgender Equality. Available: https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-Dec17.pdf.

Jepsen, L.K. (2007). Comparing the earnings of cohabiting lesbians, cohabiting heterosexual women, and married women: Evidence from the 2000 Census. *Industrial Relations*, *46*(4), 699–727. doi: 10.1111/j.1468-232X.2007.00493.x.

Jepsen, C., and Jepsen, L.K. (2009). Does home ownership vary by sexual orientation? *Regional Science and Urban Economics*, *39*(3), 307–315. doi: 10.1016/j.regsciurbeco.2008.11.002.

Johnston, D., and Malina, M.A. (2008). Managing sexual orientation diversity. *Group and Organization Management, 33*(5), 602–625. doi: 10.1177/1059601108321833.

Karpman, M., Skopec, L., and Long, S.K. (2015). QuickTake: Uninsurance rate nearly halved for lesbian, gay, and bisexual adults since mid-2013. *Health Reform Monitoring Survey.* Urban Institute Health Policy Center. Available: http://hrms.urban.org/quicktakes/Uninsurance-Rate-Nearly-Halved-for-Lesbian-Gay-and-Bisexual-Adults-since-Mid-2013.html.

Klawitter, M. (2011). Multilevel analysis of the effects of antidiscrimination policies on earnings by sexual orientation. *Journal of Policy Analysis, 30*(2), 334–358. doi: 10.2307/23018986.

———. (2015). Meta-analysis of the effects of sexual orientation on earnings. *Industrial Relations*, *54*(1), 4–32. doi: 10.1111/irel.12075.

Lauster, N., and Easterbrook, A. (2011). No room for new families? A field experiment measuring rental discrimination against same-sex couples and single parents. *Social Problems*, *58*(3), 389–409.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 299 of 438 PageID #: 2

Leppel, K. (2007). Home-ownership among opposite- and same-sex couples in the US. *Feminist Economics*, *13*(1), 1–30. doi: 10.1080/13545700601075070.

Levy, D.K., Wissoker, D.A., Aranda, C., Howell, B., Pitingolo, R., Sewell, S.H., and Santos, R. (2017). *A Paired-Testing Pilot Study of Housing Discrimination against Same-Sex Couples and Transgender Individuals*. Washington, DC: The Urban Institute. Available: https://www.urban.org/research/publication/paired-testing-pilot-study-housing-discrimination-against-same-sex-couples-and-transgender-individuals.

Li, F., and Nagar, V. (2013). Diversity and performance. *Management Science, 59*(3), 529–544. doi: 10.1287/mnsc.1060.0678.

Lombardi, E.L., and Malouf, D. (2001). Gender violence: Transgender experiences with violence and discrimination. *Journal of Homosexuality, 42*(1), 89–101. doi: 10.1300/J082v42n01_05.

Make the Road New York. (2010). *Transgender Need Not Apply: A Report on Gender Identity Job Discrimination*. Brooklyn, NY: Make the Road New York. Available: http://www.maketheroadny.org/pix_reports/TransNeedNotApplyReport_05.10.pdf.

Martell, M.E. (2018). Identity management: Worker independence and discrimination against gay men. *Contemporary Economic Policy, 36*(1), 136–148. doi.org/10.1111/coep.12233.

———. (2019). Age and the new lesbian earnings penalty. *International Journal of Manpower, 41*(6). doi: 10.1108/IJM-10-2018-0322.

Martell, M.E., and Hansen, M.E. (2017). Sexual identity and the lesbian earnings differential in the U.S. *Review of Social Economy, 75*(2), 159–180. doi: 10.1080/00346764.2016.1219384.

Martorell, P., Miller, T., Daugherty, L., and Borgschulte, M. (2014). *Effects of Military Service on Earnings and Education Revisited: Variation by Service Duration, Occupation, and Civilian Unemployment*. Santa Monica, CA: RAND Corporation. Available: https://www.rand.org/pubs/research_reports/RR342.html.

McCann, E., and Brown, M. (2019). Homelessness among youth who identify as LGBTQ+: A systematic review. *Journal of Clinical Nursing, 28*. doi: 10.1111/jocn.14818.

Miller, J.J., and Park, K.A. (2018). Same-sex marriage laws and demand for mortgage credit. *Review of Economics of the Household, 16*, 229–254. doi: 10.1007/s11150-016-9356-7.

Mishel, E. (2016). Discrimination against queer women in the U.S. workforce: A résumé audit study. *Socius: Sociological Research for a Dynamic World, 2,* 1–13. Available: https://journals.sagepub.com/doi/pdf/10.1177/2378023115621316.

Mize, T.D. (2016). Sexual orientation in the labor market. *American Sociological Review, 81*(6), 1132–1160. doi: 10.1177/0003122416674025.

Movement Advancement Project. (2020). *Healthcare Laws and Policies*. Available: https://www.lgbtmap.org/equality-maps/healthcare_laws_and_policies.

National Public Radio. (2017). *Discrimination in America: Experiences and Views of LGBTQ Americans*. Washington, DC: National Public Radio. Available: https://www.npr.org/documents/2017/nov/npr-discrimination-lgbtq-final.pdf?t=1563962195152.

Organisation for Economic Co-operation and Development. (2020). *Over the Rainbow? The Road to LGBTI Inclusion*. Paris: OECD Publishing. doi: 10.1787/8d2fd1a8-en.

Pearson, J., and Wilkinson, L. (2017). Same-sex sexuality and educational attainment: The pathway to college. *Journal of Homosexuality, 64*(4), 538–576. doi: 10.1080/00918369.2016.1194114.

Pedulla, D.S. (2014). The positive consequences of negative stereotypes: Race, sexual orientation, and the job application process. *Social Psychology Quarterly, 77*(1), 75–94. doi: 10.1177/0190272513506229.

Pichler, S., Blazovich, J.L., Cook, K.A., Huston, J.M., and Strawser, W.R. (2018). Do LGBT-supportive corporate policies enhance firm performance? *Human Resource Management, 57*(1), 263–278. doi: 10.1002/hrm.21831.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 300 of 438 PageID #: 2

Plug, E., and Webbink, D. (2014). Sexual orientation, prejudice, and segregation. *Journal of Labor Economics*, *32*(1), 123–159.

Ponce, N.A., Cochran, S.D., Pizer, J.C., and Mays, V.M. (2010). The effects of unequal access to health insurance for same-sex couples in California. *Health Affairs,* 29(8), 1539–1548. doi: 10.1377/hlthaff.2009.0583.

Prokos, A.H., and Keene, J.R. (2010). Poverty among cohabiting gay and lesbian, and married and cohabiting heterosexual families. *Journal of Family Issues, 31*(7), 934–959. doi: 10.1177/0192513X09360176.

Raeburn, N. (2004). *Changing Corporate America from Inside Out: Lesbian and Gay Workplace Rights*. Minneapolis: University of Minnesota Press.

Rooney, C., Durso L.E., and Gruberg, S. (2016). *Discrimination Against Transgender Women Seeking Access to Homeless Shelters*. Washington, DC: Center for America Progress. Available: https://cdn.americanprogress.org/wp-content/uploads/2016/01/06113001/HomelessTransgender.pdf.

Rooney, C., Whittington, C., and Durso, L.E. (2018). *Protecting Basic Living Standards for LGBTQ People*. Center for American Progress. Available: https://www.americanprogress.org/issues/lgbtq-rights/reports/2018/08/13/454592/protecting-basic-living-standards-lgbtq-people.

Routon, P.W. (2014). The effect of 21st century military service on civilian labor and educational outcomes. *Journal of Labor Research,* 15(1), 15–38. doi: 10.1007/s12122-013-9170-4.

Ruggs, E.N., Hebl, M.R., Martinez, L.R., and Law, C.L. (2015). Workplace "trans"-actions: How organizations, coworkers, and individual openness influence perceived gender identity discrimination. *Psychology of Sexual Orientation and Gender Diversity, 2*(4), 404–412. doi: 10.1037/sgd0000112.

Sabia, J.J. (2014). Sexual orientation and wages in young adulthood: New evidence from Add Health. *Industrial and Labor Relations, 67*(1), 239–267. doi: 10.1177/001979391406700109.

Sansone, D. (2019). LGBT students: New evidence on demographics and educational outcomes. *Economics of Education Review, 73*(April), 101933. doi: 10.1016/j.econedurev.2019.101933.

Schneebaum, A., and Badgett, M.V.L. (2019). Poverty in US lesbian and gay couple households. *Feminist Economics, 25*(1), 1–30. doi: 10.1080/13545701.2018.1441533.

Schwegman, D. (2019). Rental market discrimination against same-sex couples: Evidence from a pairwise-matched email correspondence test. *Housing Policy Debate, 29*(2), 250–272. doi: 10.1080/10511482.2018.1512005.

Semega, J., Kollar, M., Creamer, J., and Mohaty, A. (2019). *Income and Poverty in the United States: 2018*. Washington, DC: Current Population Reports.

Shan, L., Fu, S., and Zheng, L. (2017). Corporate sexual equality and firm performance. *Strategic Management Journal, 38*(9), 1812–1826. doi: 10.1002/smj.

Sun, H., and Gao, L. (2019). Lending practices to same-sex borrowers. *Proceedings of the National Academy of Sciences, 116*(19), 9293–9302. doi: 10.1073/pnas.1903592116.

Tilcsik, A. (2011). Pride and prejudice: Employment discrimination against openly gay men in the United States. *American Journal of Sociology, 117*(2), 586–626. doi: 10.1086/661653.

Tilcsik, A., Anteby, M., and Knight, C.R. (2015). Concealable stigma and occupational segregation: Toward a theory of gay and lesbian occupations. *Administrative Science Quarterly, 60*(3), 446–481. doi: 10.1177/0001839215576401.

Ueno, K., Peña-Talamantes, A.E., and Roach, T.A. (2013). Sexual orientation and occupational attainment. *Work and Occupations, 40*(1), 3–36. doi: 10.1177/0730888412460532.

Ueno, K., Roach, T., and Peña-Talamantes, A.E. (2013). Sexual orientation and gender typicality of the occupation in young adulthood. *Social Forces, 92*(1), 81–108. doi: 10.1093/sf/sot067.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 301 of 438 PageID #: 2

Ueno, K., Vaghela, P., and Nix, A.N. (2018). Gender composition of the occupation, sexual orientation, and mental health in young adulthood. *Stress and Health, 34*(1), 3–14. doi: 10.1002/smi.2755.

U.S. Census Bureau. (n.d.). *Same-Sex Couples*. Available: https://www.census.gov/topics/families/same-sex-couples.html.

U.S. Office of Personnel Management. (n.d.). *Frequently Asked Questions: Benefits for LGBT Federal Employees and Annuitants*. Available: https://www.opm.gov/faqs/topic/benefitsforlgbt/index.aspx?cid=f2dde4b1-d1bf-413f-b3e8-33d46eec6a0c.

Valfort, M. (2017). LGBTI in OECD countries: A review. *OECD Social, Employment and Migration Working Papers*. Paris. doi: 10.1787/d5d49711-en.

Wang, P., and Schwarz, J.L. (2010). Stock price reactions to GLBT nondiscrimination policies. *Human Resource Management, 49*(2), 195–216. doi: 10.1002/hrm.

Wilson, B.D.M., Choi, S.K., Harper, G.W., Lightfoot, M., Russell, S., and Meyer, I.H. (2020). *Homelessness Among LGBT Adults in the U.S.* Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/publications/lgbt-homelessness-us.

Winter, S., Davis-McCabe, C., Russell, C.B., Wilde, D., Ha, C.T., Suparak, A.P., and Wong, J. (2018). *Denied Work: An Audit of Employment Discrimination on the Basis of Gender Identity in South-East Asia*. Bangkok. Available: https://www.asia-pacific.undp.org/content/rbap/en/home/library/democratic_governance/hiv_aids/denied-work.html.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 303 of 438 PageID #: 2

11

Physical and Mental Health

Since the Institute of Medicine report, *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding* (2011), the published literature on the physical and mental health of sexual and gender diverse (SGD) populations has expanded substantially. Recent research emphasizes the complexity of the multilevel and intersecting factors that influence the well-being of SGD people and drive disparities in health status, health care access, and health outcomes in SGD populations. These drivers include stigma; minority stress exposures, such as discrimination; and other behavioral, environmental, and structural risk factors. The intensity and effects of drivers of disparities can vary across the life course and among different SGD communities on the basis of factors such as race, age, and gender. Research has also begun to underscore, however, the degree to which resilience and effective interventions can mitigate health risks and help reduce these disparities.

This chapter reviews the literature on physical and mental health in SGD populations in the United States, identifies major group differences, describes drivers of disparities, and highlights opportunities for interventions to address these disparities. It is outside the scope of this report to assess SGD population health in international contexts, though this is an important area of scholarship. The chapter covers physical health, with a focus on general well-being, health behaviors, cardiovascular disease, and cancer; reproductive and sexual health, including fertility; violence and victimization; and mental and behavioral health. Although these topics are addressed individually to highlight the specific evidence for each, it is important to note that they are deeply intertwined and share cross-cutting

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 304 of 438 PageID #: 2

influences, such as minority stress and systemic barriers to health care services. Research and interventions to understand and improve the health and well-being of SGD populations need to reflect these complex relationships while also seeking to clarify how both disparities and resilience uniquely manifest in specific groups within the SGD population.

Following this chapter, Chapter 12 looks at SGD population health in the United States in the context of health care access and utilization, with a focus on the importance of SGD people having access to adequate insurance coverage; culturally competent providers; and high-quality, evidence-based health care services, including gender-affirming care for transgender and non-binary people. It also discusses the challenges posed by the continued prevalence of two medical approaches to SGD populations that are not evidence based: unnecessary genital surgeries for children with intersex traits and conversion therapy targeting sexual orientation or gender identity.

The information presented in these two chapters reflects both the current body of research and a multidimensional understanding of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization [WHO], 1948). Health is central to well-being and quality of life for all people, but it is not equally distributed across populations. Health disparities are preventable differences in the burden of disease, morbidity, mortality, or opportunities to achieve optimal health. They are associated with a range of social, economic, and political determinants that are dynamic manifestations of the systems that distribute resources, protection, and power across society (Braveman et al., 2017). These determinants affect health by conferring social, economic, or political advantage on certain population groups, while limiting the resources available to members of disadvantaged groups for maintaining and improving their health and well-being. These determinants also mediate exposure to physical and mental health hazards, such as stigma, violence, discrimination, unhealthy environments, and inadequate medical care (Marmot et al., 2008; WHO, 2008). Health disparities thus represent the human embodiment of disadvantage and inequality in the daily conditions in which SGD people grow up, form families, work, age, and die (WHO, 2011).

Consideration of the social determinants of health introduces a moral and ethical dimension, frequently termed "health equity," into discussions of disparities. Health equity means that everyone should have a fair and just opportunity to be as healthy as possible, and it underscores that health disparities are avoidable and, therefore, unjust and unjustifiable (Braveman et al., 2017). Achieving health equity requires eliminating disparities by removing obstacles to good health such as discrimination, stigma, and their consequences. Health equity thus places an implicit

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 305 of 438 PageID #: 2

responsibility on policy makers, researchers, health care providers, advocates, and other stakeholders for accountable efforts to improve the health and well-being of populations experiencing disparities.

PHYSICAL HEALTH

General Health and Well-Being

Studies of general health and well-being have revealed that LGBTI adults tend to report worse health, lower health-related quality of life, and greater prevalence of disabilities than non-LGBTI people (Baker, 2019; Charlton et al., 2018; Fredriksen-Goldsen et al., 2013; Gates, 2014; James et al., 2016; Lett, Dowshen, and Baker, 2020; Meyer et al., 2017; Potter and Patterson, 2019; Rapp et al., 2018; Streed et al., 2017; Ward et al., 2014). Disparities in overall health have been found to be particularly substantial for bisexual and transgender people, especially non-binary people (Downing and Przedworski, 2018; Dyar et al., 2019, 2020; Lefevor et al., 2019). Emerging identity groups, such as asexual and pansexual populations, also appear to experience disparities in overall health and well-being (Borgogna et al., 2019; Yule, Brotto, and Gorzalka, 2013). In terms of mortality, there are only a few studies that focus on sexual orientation or gender identity, and none on intersex status. The studies that exist, however, report that mortality may be higher in LGBT than in non-LGBT populations (Asscheman et al., 2011; Asscheman, Gooren, and Eklund, 1989; Blosnich et al., 2014; Cochran, Björkenstam, and Mays, 2016; Cochran and Mays, 2011; Cochran and Mays, 2015; Dhejne et al., 2011; van Kesteren et al., 1997; Wiepjes et al., 2020).

Drivers of General Health and Mortality Disparities

The literature around both general well-being and mortality in SGD populations emphasizes the degree to which stigma and minority stress related to sexual orientation and gender identity (and presumably intersex status as well, though there is no research in this area) are important influences on these disparities (Gonzales and Ehrenfeld, 2018; Russo et al., 2012; Solazzo, Brown, and Gorman, 2018; Streed, McCarthy, and Haas, 2017). Physiologically, minority stress exposures contribute to the dysregulation of cortisol, which adversely affects metabolism, immune function, cardiovascular health, cognition, and mood (Berger and Sarnyai, 2015; DuBois et al., 2017). Minority stress is also associated with higher prevalence of unhealthy behaviors, such as tobacco use and binge drinking, and it is a risk factor for causes of mortality that include HIV and suicide. More research is needed to accurately measure minority stress exposures in SGD

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 306 of 438 PageID #: 2

populations and to investigate the origins, pathways, and consequences of minority stress for all aspects of health and life expectancy.

Bisexual health disparities, like other SGD health disparities, are often driven by stigma and minority stress (Doan Van et al., 2019; Friedman et al., 2014; Katz-Wise, Mereish, and Woulfe, 2017). While disparities related to minority stress can be buffered by social support, bisexual individuals report lower access to such support both within and outside of sexual minority communities, and they often report feeling socially isolated, invisible, and marginalized in both heterosexual and LGB communities (Meckler et al., 2006; Mulick and Wright, 2011; Saewyc et al., 2009; Yost and Thomas, 2012). Studies have found unfavorable attitudes toward bisexual people among gay and lesbian people as well as among heterosexual people (Dodge et al., 2016). A study using a feeling thermometer technique found that heterosexuals viewed bisexual people less favorably than all other comparison populations (including gays and lesbians and various religious, racial, and political groups) except for injection drug users (Herek, 2002).

For SGD Native American, Black, and other people of color, general health and mortality are additionally affected by exposure to racism. Native Americans, Native Hawaiians and other Pacific Islanders, and Alaska Natives, for example, have experienced centuries of trauma that includes affronts to their cultures and the systematic disruption and destruction of their communities through massacres, transmission of non-Indigenous infectious diseases, and forced migration and assimilation (Brave Heart and Debruyn, 1998; Kirmayer, Gone, and Moses, 2014; Walters and Simoni, 2002; Walters et al., 2011). Trauma from historical slavery and current structural violence, such as police brutality and high rates of incarceration, has similarly had pervasive negative effects on the physical and mental health of Black people (Chae et al., 2020; Williams, 2018). Historical trauma can transmit risk for poorer health and well-being to future generations by depleting psychological resilience and eroding supportive family, community, and economic structures.

Transgenerational transmission of stress- and trauma-related health risks can also occur through inherited epigenetic DNA modifications or in utero maternal-fetal exposure (Conching and Thayer, 2019; Walters et al., 2011). SGD people of color may experience the unique stressors of both racism and ethnocentrism in white SGD communities and rejection of their sexual orientation or gender identity by their racially or ethnically congruent families and communities (Hatzenbuehler, Phelan, and Link, 2013; Isasi et al., 2015; Pascoe and Smart Richman, 2009; Valdiserri et al., 2018; Worthen, 2018). They may therefore face health risks and disparities that differ from and may exceed those facing either white SGD communities or heterosexual and cisgender communities of color (Lett, Dowshen, and Baker, 2020; Tuthill, Denney, and Gorman, 2020).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 307 of 438 PageID #: 2

Interventions to Improve Overall Health and Resilience

Resilience, a process that confers the ability to recover from or adjust to adversity, is an important counterweight to the effects of minority stress on general health and mortality in SGD populations. Studies conducted with a variety of SGD populations indicate that identity affirmation (Fredriksen-Goldsen et al., 2017; Matsuno and Israel, 2018), social support (Baratz, Sharp, and Sandberg, 2014; Sani et al., 2019; Schweizer et al., 2017), family acceptance (Katz-Wise, Rosario, and Tsappis, 2016), and protective laws and policies (Hatzenbuehler and Keyes, 2013; Hatzenbuehler et al., 2014) are associated with positive coping and resilience. Most of the research on resilience interventions has focused on youth. This research provides strong evidence for the role of school-based gay-straight alliances in promoting resilience among LGBTQ youth (Davis, Royne Stafford, and Pullig, 2014; Johns et al., 2019a; Poteat, Calzo, and Yoshikawa, 2016; also see Chapter 9). As of this writing, at least one comparative effectiveness research trial is under way to assess resilience to depression among racial and ethnic minority SGD populations (Vargas et al., 2019). More research is needed to identify effective interventions to promote SGD population resilience.

Health-Related Behaviors

Behavior patterns related to sleep, diet, exercise, and smoking are important determinants of health and well-being. When sleep is inadequate, for instance, people have more illnesses and accidents, and they suffer more chronic mental and physical health problems (Grandner and Pack, 2011; Walker, 2017). Results of recent studies suggest that sleep difficulties, such as reduced sleep duration and lower sleep quality, are more common among LGBT people than among heterosexual and cisgender people (Chen and Shiu, 2017; Cunningham, Dai and Hao, 2017; Harry-Hernandez et al., 2020; Kann et al., 2016; Patterson and Potter, 2019; Patterson et al., 2018; Xu, and Town, 2018). These findings are not completely consistent, however, suggesting that important patterns of disparities may be elucidated by more research on specific groups such as youth and transgender people. There is no evidence about sleep health among people with intersex traits.

Similarly, the evidence about diet and exercise in SGD populations is not entirely consistent. Some studies have found that sexual minority boys and girls were more likely than heterosexual youth to report low intake of fruit and vegetables (Rosario et al., 2014). Others have found no differences by sexual orientation (Boehmer et al., 2012; Laska et al., 2015), and some data suggest that the diets of sexual minority adults are as good as or pos-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 308 of 438 PageID #: 2

sibly better than those of heterosexual individuals (VanKim et al., 2017). Likewise, a number of studies have found that sexual minority youth of all genders are less likely than their heterosexual peers to participate in team sports or regular physical activity (Calzo et al., 2014; Laska et al., 2015; Mereish and Poteat, 2015), while other studies show disparities in exercise habits for some gender or age groups but not for all (Boehmer et al., 2012; Rosario et al., 2014).

Cigarette smoking, by contrast, is clearly elevated among LGBT populations. The National Health Interview Survey found that 21 percent of lesbian, gay, or bisexual adults reported being current cigarette smokers, compared with 15 percent of heterosexual adults (Jamal et al., 2018). Smoking prevalence is also higher among transgender populations (Buchting et al., 2017; Hoffman et al., 2018). Smoking is a major risk factor for numerous diseases and conditions, including pulmonary and cardiovascular diseases, cancer, type 2 diabetes, periodontal disease, adverse pregnancy outcomes, and visual loss and blindness (Centers for Disease Control and Prevention [CDC], n.d.).

Drivers of Health Behavior Disparities

The minority stress theory suggests that disparities in sleep, diet, exercise, and smoking among SGD populations are related to experiences of chronic stress due to stigma and discrimination. It is well known that stress exacerbates sleep difficulties, such as insomnia (Akerstedt, 2006). Peer bullying and structural discrimination, such as laws barring transgender youth from participating in school sports, may discourage adolescents from participating in organized sports (Buzuvis, 2016; Cunningham, Buzuvis, and Mosier, 2018; Douall et al., 2018). Consumption of healthy foods, such as fruits and vegetables, is related to access to economic resources at both the household and neighborhood levels, making poverty and employment discrimination key covariates in investigations of diet among SGD populations (French et al., 2019). In addition to stigma and discrimination, risk factors for cigarette smoking among LGBT people include targeted tobacco marketing, lack of access to smoking cessation programs and treatments due to poverty and lack of health insurance, and a lack of cultural competency in smoking cessation programs (Jamal et al., 2018). For transgender people, a lack of access to gender affirmation is also associated with smoking and other health risk behaviors (Menino et al., 2018). Further study is needed on the drivers of health behaviors related to sleep, diet, exercise, and smoking, especially among SGD adolescents and older adults, transgender people, and people with intersex traits.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 309 of 438 PageID #: 2

Interventions to Improve Health Behaviors

A variety of tailored 12- to 16-week interventions for overweight lesbian and bisexual women have included weekly group meetings, nutrition education, and physical activity support, with or without additional components of mindfulness, gym membership, and pedometer use. These tailored interventions have resulted in significant improvements in multiple health behaviors and health indicators, including physical activity, weight, and waist-to-hip ratio (Rizer et al., 2015). Key characteristics of health behavior interventions for sexual minority women include social support, education and goal setting, peer facilitation, and LGBT-friendly environments (Berger and Mooney-Somers, 2017).

Evidence of the efficacy of smoking cessation interventions for LGBT adults exists for community-wide smoke-free policies (Wintemberg et al., 2017), quit-smoking group-based interventions with or without pharmaceutical components (Eliason et al., 2012; Matthews et al., 2019), web-based interventions (Heffner et al., 2020), and social branding campaigns (Fallin et al., 2015). While LGBT-tailored programs are often preferred by LGBT participants, non-tailored programs can demonstrate similar efficacy (Grady et al., 2014). Promising interventions currently under study include tailored social media and app-based smoking cessation interventions for sexual and gender minority youth (Baskerville et al., 2016; Vogel et al., 2019).

Cross-sectional studies suggest that increased access to legal (e.g., gender-congruent identity documents) and medical (e.g., hormone therapy) gender affirmation and decreased exposure to structural discrimination may reduce smoking and increase physical activity among transgender adults (Jones et al., 2018; Myers and Safer, 2017; Shires and Jaffee, 2016). More research is needed into effective interventions to optimize health behaviors among SGD populations, particularly since interventions designed to improve such health behaviors as sleep, diet, exercise, and smoking have important influences on other areas of health that are discussed in more detail below, such as cardiovascular disease and cancer.

Cardiovascular Disease

Some studies have found no difference between groups such as heterosexual adults and gay and bisexual men in cardiovascular disease (CVD) (Fredriksen-Goldsen et al., 2013). A growing body of evidence, however, indicates that LGBTI populations do experience CVD disparities, including elevated prevalence of coronary artery disease and angina and greater incidence of myocardial infarction and stroke (Alzahrani et al., 2019; Caceres, Veldhuis, and Hughes, 2019;

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 310 of 438 PageID #: 2

Caceres et al., 2017, 2018, 2019a, 2019b; Donato and Ferreira, 2018; Falhammar et al., 2018; Gonzales and Henning-Smith, 2017; Gonzales, Przedworski, and Henning-Smith, 2016; Hatzenbuehler, McLaughlin, and Slopen, 2013; Lagos, 2018; Lunn et al., 2017; Meads et al., 2018; Operario et al., 2015; Reisner et al., 2016a; Salzano et al., 2016, 2018; Silberbach et al., 2018; Streed et al., 2017). These disparities are greatest among bisexual compared to monosexual people, transgender compared to cisgender people, and Black compared with white lesbian women (Caceres, Veldhuis, and Hughes, 2019). One study also reported that gender-nonconforming individuals may have higher prevalence of coronary artery disease and greater incidence of myocardial infarction than either cisgender or transgender men and women (Downing and Przedworski, 2018).

Drivers of Cardiovascular Disparities

Disparities in CVD are driven by the greater prevalence in SGD populations of risk factors that include smoking, high blood pressure, and elevated levels of C-reactive protein, a biomarker of stress-related inflammation important in the pathogenesis of CVD (Hatzenbuehler, McLaughlin, and Slopen, 2013). Among sexual minority women and bisexual men, metabolic syndrome, which can include signs of insulin resistance, is also a common CVD risk factor (Caceres et al., 2018; Cunningham, Xu, and Town, 2018). As is the case for general health and mortality, many CVD risk factors in SGD populations are related to trauma and other minority stress exposures (Caceres et al., 2019a, 2019b; Rosengren et al., 2004; Sinclair and Wallston, 2004; Yusuf et al., 2004).

CVD risk among people with intersex traits varies by type of intersex trait as well as by experiences with hormonal and surgical therapies (El-Maouche, Arlt, and Merke, 2017; Los et al., 2016 Mooij et al., 2017). The cardiovascular effects of long-term hormones prescribed after gonadectomy are poorly understood (Gomez-Lobo and Amies Oelschlager, 2016). Hormone therapy similarly effects CVD risk among transgender people. Transgender women on estrogen therapy have increased risk of venous thromboembolism compared with cisgender people and transgender men (Dutra et al., 2019; Getahun et al., 2018; Gooren and T'Sjoen, 2018; Irwig, 2018; Quinn et al., 2017), and some studies suggest increased risk for myocardial infarction as well (Connelly et al., 2019). In transgender men, testosterone therapy is associated with elevated prevalence of CVD risk factors such as hypertension, insulin resistance, and dyslipidemia, though not with increases in CVD or mortality (Streed et al., 2017).

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 311 of 438 PageID #: 2

Interventions to Improve Cardiovascular Health

Most intervention research on prevention of CVD among SGD populations has focused on smoking cessation among LGBT adults, weight management among sexual minority women, and the benefits versus risks of hormonal therapies among people with intersex traits. Weight management and smoking interventions are discussed above in the section on health behaviors. Data on efficacy of CVD interventions for people with intersex traits are sparse, but several studies suggest early and regular screening and treatment for CVD risk factors such as hypertension and pre-diabetes among groups with elevated risk (Davis and Geffner, 2019; Los et al., 2016; Tamhane et al., 2018).

Cardiovascular health research priorities for SGD populations include the routine use of standardized measures of sexual orientation, gender identity, and intersex status in CVD research studies, especially longitudinal studies; studies that use objective measures of CVD (e.g., biomarkers and electronic health record data) rather than purely self-reported data; and rigorous study designs to investigate the relationship between hormone therapy and CVD risk and outcomes for transgender people and people with intersex traits (Caceres, Brody, and Chyun, 2016). Research is also needed into the impact of and interventions to address intersectional minority stress exposures as risk factors for CVD in SGD populations (Veenstra, 2013).

Cancer

In 2019, the American Cancer Society estimated that 130,000 LGBTQ people were newly diagnosed with cancer, and 45,000 died of cancer. These estimates were derived by applying the estimated percentage of the U.S. population that is LGBTQ to the 2019 projected cancer incidence in the general population. More accurate statistics about the overall prevalence and incidence of cancers among LGBT, intersex, and other SGD populations are precluded by the fact that health care systems, cancer registries, and national repositories of cancer data do not yet routinely capture demographic information about sexual orientation, gender identity, or intersex status (Gomez et al., 2019). Also lacking are population-based prospective studies evaluating cancer-specific risks, mortality, and survivorship issues facing SGD populations (Boehmer, 2018; Kent et al., 2019).

Existing data do suggest, however, that the incidence of certain cancers may be elevated in specific LGBTI populations. These include, for example, anal cancer in gay and bisexual men and breast cancer in lesbian and bisexual women (Quinn et al., 2015). The lifetime risk of germ cell tumors varies considerably across intersex conditions (Pyle and Nathanson, 2017), and gonadal cancers have been associated with

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 312 of 438 PageID #: 2

a variety of intersex conditions (Gomez-Lobo and Amies Oelschlager, 2016). Despite a low risk of gonadal malignancy before puberty, many intersex people have unnecessary gonadectomy in childhood (see discussion in Chapter 12), which means the risks for some cancers in people with intersex traits are unknown.

Drivers of Cancer Disparities

Elevated rates of cancer in SGD populations result from complex interacting risk factors. These factors can be sociodemographic, such as education and age; economic, such as employment and insurance coverage; environmental, such as food, second-hand smoke exposure, and environmental pollution related to health services, such as access to recommended care and providers' levels of cultural and clinical competency in caring for SGD populations; and individual, such as genetics, birth parity, alcohol and tobacco use, and history of sexually transmitted infections. For example, use of alcohol and tobacco, as well as rates of HIV, human papilloma virus (HPV), and hepatitis C infections, are higher in some LGBT populations than non-LGBT populations, which increases the risk of lung, breast, colorectal, and other cancers associated with these exposures (Herbst et al., 2008; Hughes et al., 2017; Lee, Griffin, and Melvin, 2009).

Evidence also indicates that access to cancer-related preventive services is lower in LGBT populations than other populations, which leads to many missed opportunities for primary and secondary cancer prevention (Cathcart-Rake, 2018; Ceres et al., 2018). For example, lesbian and bisexual women are less likely to receive mammograms than heterosexual women and, if diagnosed with breast cancer, are less likely to be engaged in treatment (Malone et al., 2019). Lesbians are less likely to receive HPV vaccinations for cancer prevention than heterosexual women, and cisgender sexual minority women and transgender people with a cervix are less likely to receive cervical cancer screening than cisgender heterosexual women (Agénor et al., 2018; Braun et al., 2017; Porsch et al., 2019). Rates of routine cancer screening among intersex populations have not been studied (Gomez-Lobo and Amies Oelschlager, 2016).

These missed opportunities for prevention are often associated with systemic barriers, which include provider misinformation (e.g., the mistaken perception that lesbians do not need Pap smears) and previous patient experiences with and fear of medical maltreatment, which results in reluctance to seek care (Boehmer, 2018). For sexual minority women and transgender men in particular, a lack of access to gender-affirming practices and spaces around breast and cervical cancer screening can be a formidable barrier (Taylor and Bryson, 2015). These spaces are often socially marked as feminine, with pink color schemes, floral gowns, and

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 313 of 438 PageID #: 2

women's magazines in the waiting rooms. Staff and other patients at such sites are often not prepared to see transgender men or masculine-presenting women, and responses to their presence may range from ignorant to hostile (Kamen et al., 2019). Similarly, health plans or providers may make incorrect assumptions about transgender people's bodies when assessing risk and medical necessity for specific cancer screenings. They also may not be aware that transgender men and non-binary people who retain a cervix require regular Pap tests; transgender women and non-binary people who retain a prostate may require prostate exams, and all people with breast tissue, including transgender men who have had chest reconstruction, may need mammograms (Deutsch, 2016; Pratt-Chapman and Ward, 2020). Barriers to appropriate cancer screenings may be particularly salient for SGD people of color, who may face barriers based on race and ethnicity as well as sexual orientation, gender identity, and intersex status (Malone et al., 2019).

Interventions to Improve Cancer Prevention and Outcomes

Positive, destigmatizing, gender-affirming relationships with health care providers increase acceptance of cervical cancer screening (Agénor et al., 2015; Dhillon et al., 2020) and HPV vaccination (Apaydin et al., 2018) among LGBT people. Sexual minority women and trans-masculine people often prefer self-collected swabs for cervical cancer screening and HPV testing (Goldstein et al., 2020; Johnson et al., 2016; McDowell et al., 2017; Reisner et al., 2018). There is no consensus or national recommendation around screening for anal cancer among gay and bisexual men; however, shared decision making about anal pap smears is recommended for men who have sex with men who are living with HIV (Margolies and Goeren, n.d.; Medical Care Criteria Committee and Brown, 2020).

A brief web-based intervention that provided tailored HPV information and monthly text reminders for gay and bisexual men was associated with increased HPV vaccinations among young sexual minority men (Reiter et al., 2018). Other recommendations for increasing HPV vaccination rates among young sexual minority men include creative use of mobile technology, bundling HPV vaccination with other health services, and increasing vaccine awareness (Fontenot et al., 2016).

The committee found few recent studies of breast cancer interventions for SGD populations. The most recent study described a community-engaged process of developing a culturally tailored breast cancer education program for LGBTQ individuals (Fung et al., 2019). Older studies included a culturally adapted intervention designed to improve breast cancer screening among Black sexual minority women; this intervention trained Black lesbians to be role models and lay health advisors for their community, but no efficacy data from this program have been reported (Washington and

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 314 of 438 PageID #: 2

Murray, 2005). Other intervention research included largely white samples: a tailored education intervention increased breast cancer screening in lesbians (Dibble and Roberts, 2003), and a risk counseling intervention with mostly white sexual minority women increased breast cancer screening rates at 24 months (Bowen, Powers, and Greenlee, 2006).

Data suggest that oncology providers could benefit from more education about SGD populations (Lisy et al., 2018; Schabath et al., 2019). A systematic review of LGBTQ anti-bias training for health care providers found that education was effective at increasing knowledge of LGBTQ health issues, experiential learning was effective at increasing comfort levels with LGBTQ patients, and intergroup contact was effective at promoting more tolerant attitudes toward LGBTQ patients (Morris et al., 2019). More research is needed into interventions to improve the full spectrum of cancer prevention, care, and outcomes for SGD populations, including transgender people and people with intersex traits.

SEXUAL AND REPRODUCTIVE HEALTH

HIV and Other Sexually Transmitted Infections

Historically, much of the research on the health of LGBT populations has focused on HIV and other sexually transmitted infections (STIs) (Coulter et al., 2014). This evidence shows that cisgender gay and bisexual men and other men who have sex with men are overrepresented among people living with HIV and represent the largest proportion of new HIV diagnoses every year in the United States (CDC, 2020). Of all the men living with HIV in the United States, 76 percent are gay, bisexual, and other men who have sex with men, and 26,000 men who have sex with men acquire HIV each year (CDC, 2020). Young Black and Latinx men are overrepresented in these numbers (CDC, 2020). Similarly, men who have sex with men are overrepresented among STI incidence and prevalence figures overall (CDC, 2019).

Transgender people, particularly Black and Latina transgender women, are also heavily affected by HIV: a recent meta-analysis found that one in seven transgender women is living with HIV (Becasen et al., 2019). The rates are 44 percent for Black transgender women and 25 percent for Latina transgender women. Data are limited on HIV among transgender men and non-binary people; however, emerging data suggest that transgender men who have sex with men face similar risks for HIV as their cisgender male counterparts (Golub et al., 2019; Reisner et al., 2019). There are fewer and often poorer quality studies of the prevalence of other STIs among transgender people, with estimates that vary substantially by geography, type of STI, and study population (McNulty and Bourne, 2017).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 315 of 438 PageID #: 2

Sexual minority women who inject drugs or have sex with cisgender men face a higher risk for HIV than heterosexual women with the same risk factors (German and Latkin, 2015; Owen et al., 2020). Data on other STIs among sexual minority women are sparse and often low quality; however, they indicate that STI transmission between women does take place (Takemoto et al., 2019). As with many other health conditions, the committee found no published data on HIV or other STIs among intersex people.

Drivers of HIV/STI Disparities

Stigma, violence, and discrimination across multiple axes of identity converge in the lives of LGBT and other SGD people, leading to higher rates of HIV/STI risk behavior and reduced access to and engagement in prevention (e.g., pre-exposure prophylaxis, condoms) and care services (e.g., anti-retroviral therapy) (Earnshaw et al., 2013; McNulty and Bourne, 2017; Mimiaga et al., 2019a; Mustanski et al., 2017; Nuttbrock et al., 2015; Poteat et al., 2016; Reisner et al., 2016b, 2020a; Sevelius et al., 2020a). Reduced access to protective structural assets, such as stable housing, employment opportunities, and affirming health care, are some of the mechanisms linking stigma to HIV/STI disparities for LGBT populations. For example, employment discrimination limits income-generating opportunities for many transgender women (James et al., 2016). As a result, survival sex work is common and, in the context of criminalization, is associated with increased vulnerability to contracting HIV (Becasen et al., 2019). A lack of access to gender-affirming care has also been identified as an HIV risk factor among transgender women (Sevelius et al., 2019).

Interventions to Address HIV and Other STIs

The magnitude of the burden of HIV and other STIs on LGBT populations has generated substantial research into effective interventions to eliminate these disparities. A growing body of data suggests that stigma-reduction interventions may be effective in reducing sexual risk behavior and improving engagement in HIV care (Mimiaga et al., 2018; White Hughto, Reisner, and Pachankis, 2015; Yang et al., 2018). A recent systematic review of multiple stigma reduction interventions to improve HIV prevention and care outcomes among men who have sex with men identified three main approaches: (1) education and mobile health strategies that reduce internalized and anticipated stigma by promoting self-acceptance, leadership, and motivation for behavior change; (2) peer support and training of health care providers to increase social support, knowledge sharing, and empowerment; and (3) community leader sensitization to reduce enacted and anticipated stigma (Dunbar et al., 2020).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 316 of 438 PageID #: 2

There is strong evidence for the efficacy of group- and community-level behavioral interventions to reduce sexual risk behavior among men who have sex with men (Lorimer et al., 2013). Among a review of more than 100 studies, interventions that were based on a theoretical framework, delivered by trained professionals, and focused on skills building were the most consistently effective (Lorimer et al., 2013). HIV/STI prevention research with sexual minority men has increasingly focused on e-health interventions, including web-based, text-based, online-video, computer-assisted, multimedia, social network virtual simulation, and smartphone applications (Nguyen et al., 2019). A recent systematic review (Henny et al., 2018) identified 55 interventions, of which 49 achieved short-term risk-reduction behavior change; however, of the 4 studies with 12-month follow-up, only 1 of them maintained behavior change over this period. In a review of 45 e-health interventions that addressed the HIV care continuum, mobile texting was the technology most commonly reported (44%) (Henny et al., 2018). Medication adherence (60%) was the most common outcome measured, and 20 percent of interventions measured HIV viral suppression. Approximately 75 percent of studies showed preliminary or proven efficacy. Many of them relied on mobile technology and integrated knowledge or cognition as behavior change mechanisms.

HIV pre-exposure prophylaxis (PrEP) has been a particularly powerful innovation in HIV prevention, capable of reducing HIV risk by more than 90 percent for individuals who adhere to prescribed regimens (Fonner et al., 2016). However, PrEP uptake and adherence has been low, particularly among Black and Latinx transgender women and men who have sex with men (Kanny et al., 2019; Poteat et al., 2019). Existing data suggest that addressing intersectional economic, institutional, interpersonal, and psychosocial barriers to PrEP is critical for effective HIV prevention in these populations (Cahill et al., 2017; Poteat et al., 2017). Employment and other structural intervention studies are currently under study to test their efficacy to reduce HIV/STI vulnerability among transgender women (Benotsch and Zimmerman, 2017; HIV Prevention Trials Network, n.d.) and gay and bisexual men (Hill et al., 2020).

Multiple studies with serodiscordant male sexual partners have demonstrated that HIV transmission does not occur when the partner living with HIV is engaged in effective antiretroviral treatment (Yombi and Mertes, 2018). Advocates have led an education campaign using the slogan "U = U"—"undetectable equals untransmittable"—which has been endorsed by multiple organizations, including the Centers for Disease Control and Prevention (Lancet HIV, 2017). Ensuring that SGD people living with HIV have access to affirming health care from providers who are knowledgeable about current best practices in HIV prevention and treatment is critical both to increasing PrEP uptake and to the success of U = U.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 317 of 438 PageID #: 2

The committee identified only one STI intervention designed for cisgender sexual minority women. A group-based, six-session, psychoeducational intervention with cisgender lesbian, bisexual, and queer women significantly increased sexual risk-reduction practices, STI knowledge, and self-efficacy for barrier use six weeks after the intervention ended (Logie et al., 2015). Similarly, the committee found only one intervention tailored specifically for transgender men: LifeSkills for Men, which adapted a small group-based behavioral HIV prevention intervention originally designed for young transgender women to address the unique needs of young transgender men who have sex with men (Reisner et al., 2016c). A pilot test found the intervention to be feasible and acceptable, with trends suggesting reduced HIV/STI risk behaviors across four months of follow-up.

Multiple group-based behavioral HIV prevention interventions developed for transgender women have shown some evidence of efficacy (Poteat et al., 2017). However, most were limited by less rigorous pre-post designs, short follow-up periods, or lack of any outcome evaluation. The only published full-scale behavioral HIV prevention randomized controlled trial for transgender women to date has been Project LifeSkills for young transgender women (Garofalo et al., 2018). This empowerment-based group intervention was delivered in six 2-hour sessions over 3 weeks, and intervention participants reduced condomless sex acts by 40 percent over 12 months of follow-up when compared with participants in a control group. One "status-neutral" peer-led group intervention, Sheroes, has demonstrated high feasibility, acceptability, and preliminary efficacy (Sevelius et al., 2020b). In another study of a couples-based HIV prevention intervention, transgender women and their primary cisgender male partners were randomized to a couples-based HIV prevention intervention comprised of three counseling sessions (two couples-focused sessions, which discussed relationship dynamics, communication, and HIV risk, and one individual-focused session on HIV prevention concerns) or a control condition (one session on general HIV prevention delivered to both partners together). At 3-month follow-up, participants in the intervention condition had 50 percent reduced odds of condomless sex with primary partners and 30 percent reduction with casual partners relative to the control condition (Operario et al., 2017). As part of a Special Project of National Significance, the Health Resources and Services Administration in the Department of Health and Human Services recently funded nine sites across the country to implement and evaluate interventions to improve care engagement for HIV-positive transgender women of color (Rebchook et al., 2017). While each intervention was different, common elements included community outreach, peer navigation, access to gender-affirming medical care (e.g., hormone therapy), case management, and transgender-competent HIV care (Chapter 12 discusses the lessons learned from this project).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 318 of 438 PageID #: 2

Sexual Function

Most sexual health research with SGD populations, particularly transgender women and gay men, has focused on HIV/STIs, with less attention to other sexual health domains, such as desire, arousal, orgasm, pleasure, and other aspects of sexual function (Stephenson et al., 2017; Wade and Harper, 2017). However, evidence indicates that sexual minority men may report lower orgasm frequency, pleasure, and satisfaction than heterosexual men, and bisexual women report greater physical discomfort during sex and fewer orgasms than lesbians (Flynn, Lin, and Weinfurt, 2017). In an online convenience sample of almost 53,000 adults, heterosexual men were most likely to report that they usually or always orgasmed when sexually intimate (95%), followed by gay men (89%), bisexual men (88%), lesbian women (86%), bisexual women (66%), and heterosexual women (65%) (Frederick et al., 2018).

The study of sexual function among transgender people has focused on genital sensation after gender-affirming surgeries (Frey et al., 2017). Though limited by convenience sampling and small sample sizes, existing studies indicate that most transgender adults retain the ability to achieve orgasm and report satisfaction with their sexual functioning after gender-affirming surgeries (Sigurjonsson et al., 2017; Stephenson et al., 2017). A large European study of transgender adults found increases in sexual desire and arousal after surgery (Kerckhof et al., 2019). Data on sexual function among transgender people who have not had gender-affirming surgeries are limited.

Studies on sexuality among people with intersex traits have focused disproportionately on sexual function as an outcome of childhood genital surgery (see Chapter 12). High rates of sexual dissatisfaction, sexual inhibition, and sexual problems have been found across variables of gender, genital difference, specific intersex condition, or having undergone prior surgery (Kreukels et al., 2019). Studies have consistently linked prior history of clitoral surgery with decreased genital sensation and anorgasmia in comparison with intersex individuals who had not undergone clitoral surgery. With or without surgical intervention, concerns about genital appearance may affect sexual function for some intersex people (Gomez-Lobo and Amies Oelschlager, 2016; Meyer-Bahlburg et al., 2018; van der Horst and de Wall, 2017). Multiple studies have found reports of dissatisfaction with genital appearance and satisfaction with genital function among intersex adults (Kreukels et al., 2019). Overall, concerns about long-term effects on sexual function from surgery performed in infancy support arguments to delay surgical intervention until the patient can provide informed consent. Ethical and other considerations around early genital surgeries for infants with intersex traits are discussed in more detail in Chapter 12.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 319 of 438 PageID #: 2

Published studies assessing influences on sexual function among SGD populations are rare, and large gaps remain in understanding the relationship between minority stress and sexual function (Grabski and Kasparek, 2017; Grabski et al., 2018). Research on sexual function among LGBT and intersex people has been limited by the degree to which existing measures center and normalize cisgender, heterosexual, and non-intersex experiences of anatomy, desire, and sexual behavior, as well as researchers' failure to develop and use research instruments that have been validated among SGD populations (McDonagh et al., 2014; Reisner et al., 2020b). Better research tools to assess all domains of sexual health for LGBT, intersex, and other SGD people are needed (Barone et al., 2017; Sobecki-Rausch, Brown, and Gaupp, 2017). Given this lack of basic information about sexual function among SGD people, it is not surprising that no SGD-specific or SGD-inclusive interventions to improve sexual function were identified in the published literature.

Fertility and Contraception

Technological advances have greatly increased reproductive options for SGD populations. However, data on the prevalence and success rates of assisted reproduction among these populations are sparse. A systematic review of donor intrauterine insemination, in vitro fertilization, and gestational surrogacy among sexual minorities suggests that same-sex couples have higher success rates with assisted reproduction than their heterosexual counterparts (Tarin, Garcia-Perez, and Cano, 2015). However, studies have been limited by sampling bias, small sample sizes, and failure to control for influential covariates, such as age, smoking, reproductive history, and variation in intervention protocols.

Young sexual minority women, particularly bisexual women, have a higher rate of unintended pregnancy than their heterosexual peers, but there has been little study of their fertility behaviors (Ela and Budnick, 2017). In a recent longitudinal study of pregnancy risk among sexual minority women that examined possible reasons for this higher rate, which followed participants for 30 months, investigators found that sexual minority women had more partners, more sexual intercourse with men, less frequent contraceptive use, less use of a dual method of contraception (condom plus hormonal method), and more gaps in contraception use than heterosexual women. These findings highlight the importance of counseling on contraception and family planning for sexual minority women (Ela and Budnick, 2017).

Gender-affirming medical or surgical therapies for transgender individuals may result in reduced or complete lack of fertility (Cheng et al., 2019). Suppression of puberty with gonadotropin-releasing hormone

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 320 of 438 PageID #: 2

analogs can pause the maturation of germ cells and thus affect fertility potential. Testosterone therapy can suppress ovulation and alter ovarian histology, while estrogen therapy can lead to impaired spermatogenesis and testicular atrophy. The effect of hormone therapy on fertility is potentially reversible, but the extent is unclear. Gender-affirming surgery that includes oophorectomy or orchiectomy results in permanent sterility; see Chapter 12.

Research indicates that clinicians should counsel transgender patients on fertility preservation options prior to initiation of gender-affirming therapy (Cheng et al., 2019). A narrative review of fertility preservation among gender minorities found that many transgender adults want the option of fertility preservation (Rowlands and Amy, 2018). The current fertility preservation options for transgender people with ovaries and a uterus are embryo cryopreservation, oocyte cryopreservation, and ovarian tissue cryopreservation. For transgender people with testes, sperm cryopreservation, surgical sperm extraction, and testicular tissue cryopreservation are available. Transgender people face many barriers to fertility care, such as provider discrimination; lack of information; lack of insurance coverage; legal barriers, such as heterosexist and gendered requirements in state fertility coverage mandates; scarcity of fertility centers; financial burden; and emotional cost (Cheng et al., 2019). These barriers mean that all transgender people need to be informed of available fertility preservation options (De Roo et al., 2016; Knudson and De Sutter, 2017).

Data suggest that transgender men have limited access to reproductive health services and information, even if they are able to become pregnant (Cipres et al., 2017). One study of almost 200 transgender men found that many used contraception and had experienced pregnancy and abortion, even after social and hormonal gender affirmation (Light et al., 2018). Some contraceptive options may be undesirable to transgender men due to exposure to gender-incongruent hormones, like progestins or estrogens, or the requirement of pelvic exams for placement of intrauterine devices. Transgender men need gender-affirming counseling and care regarding reproductive health, and systems- and provider-level interventions are needed to create gender-affirming and inclusive reproductive health care environments and services (Hahn et al., 2019). Discrimination and other barriers to clinically appropriate and culturally responsive health care for transgender people are discussed in detail in Chapter 12.

Infertility is a common feature of some, but not all, intersex conditions (El-Maouche et al., 2017; Mooij et al., 2017). At the same time, intersex adolescents and adults who have a uterus and no or infrequent menstrual bleeding may erroneously assume that they do not need contraception and may thus be at risk for an unintended pregnancy. Unplanned pregnancies among people with intersex traits may be associated with higher rates of

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 321 of 438 PageID #: 2

spontaneous abortions, fetal malformation, and chromosomal abnormalities than among people without intersex traits. Very few data exist on the efficacy of cryopreservation in intersex individuals with viable gametes (Schleedoorn et al., 2019). Even when there has been evidence of efficacy, follow-up data are lacking. Discussion of parenting desires and options, including through adoption, donor gametes, and gestational surrogacy, is an important part of informed consent for hormonal and surgical interventions for individuals with intersex traits (Van Batavia and Kolon, 2016). Access to reproductive health specialists who are knowledgeable about intersex traits and who can discuss options for contraception, fertility preservation, and pregnancy is essential (Gomez-Lobo and Amies Oelschlager, 2016), as is further research on fertility options for intersex individuals.

VIOLENCE AND VICTIMIZATION

Numerous studies show that LGBTQ people experience high rates of violence and victimization that begin early in the life course and persist into adulthood. Specific types of violence documented against LGBTQ people include family violence (McGeough and Sterzing, 2018); intimate partner violence (Edwards, Sylaska, and Neal, 2015; Finneran and Stephenson, 2013; Peitzmeier et al., 2020); sexual violence (Chen et al., 2020; Langenderfer-Magruder et al., 2016); police violence (DeVylder et al., 2017, 2018); and structural violence, such as exclusion and discrimination in health care, employment, education, public accommodations, and other areas of everyday life (Casey et al., 2019). Hate crimes, including physical assault and other forms of bias-motivated violence, are also a serious concern for SGD people (Boynton et al., 2020; Burks et al., 2018; Coston, 2018; Cramer et al., 2018; Herek, 2008; Herek, Gillis, and Cogan, 1999; Katz-Wise and Hyde, 2012; Mills, 2019). Violence and victimization affecting people with intersex traits is an understudied issue, though interviews with families reveal that potential bullying on the basis of intersex traits is often cited by clinicians as a reason to have genital surgery in childhood (Human Rights Watch, 2017).

Evidence indicates that LGBTQ youth disproportionately encounter violence and victimization relative to heterosexual and cisgender youth (Edwards, 2018; Johns et al., 2018, 2019b; Olsen et al., 2017; Poteat et al., 2020; Rostad et al., 2019). These experiences include being bullied electronically or at school, being threatened or injured with a weapon at school, experiencing sexual or physical dating violence, and feeling unsafe at or traveling to or from school. Elevated rates of adverse childhood experiences, including physical and sexual abuse, have also been found in LGBTQ populations (Baams, 2018; Merrick et al., 2018). LGBTQ adolescents have increased rates of polyvictimization—experiencing multiple

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 322 of 438 PageID #: 2

forms of victimization—relative to their non-LGBTQ peers (Baams, 2018; Schwab-Reese et al., 2018).

SGD people may also experience unique forms of victimization, such as identity abuse (Woulfe and Goodman, 2018), in which perpetrators leverage systems of structural oppression to harm individuals. For instance, perpetrators may use aspects of transphobia, such as withholding gender affirmation or using the threat of "outing," as a form of blackmail to assert power and control over a transgender person (Peitzmeier et al., 2019). So-called "gay panic" or "transgender panic" defenses, in which defendants, typically cisgender men, leverage societal homophobia or transphobia to escape punishment in criminal cases involving the assault or murder of a gay, lesbian, bisexual, or transgender person, are also related to identity abuse (Woods, Sears, and Mallory, 2016). Few studies have characterized perpetrators of violence and victimization against LGBT people (Coston, 2018).

Drivers of Violence and Victimization

The elevated rates of violence and victimization experienced by SGD people are rooted in societal oppression, stigma, and bias against LGBT and other SGD people. There are different patterns of violence and victimization on the basis of gender (i.e., identity as male, female, or non-binary) and transgender status. For example, youth who are both LGBQ and transgender have been shown to be at highest risk of past-year intimate partner violence, indicating that stigmatized sexual orientation and gender identity interact to structure risk of exposure to violence (Walls et al., 2019). Similarly, childhood gender nonconformity (i.e., having a gender expression that differs from societal expectations for feminine or masculine appearance and behavior) is associated with greater violence and victimization, independent of sexual orientation or gender identity (Adhia et al., 2018; Baams, 2018; Gordon et al., 2018; Klemmer et al., 2019; Roberts et al., 2012a, 2013).

Violence and victimization that target people because of their sexual orientation, gender identity, or intersex status are often exacerbated by racism, sexism, and xenophobia. For instance, high homicide rates for Black transgender women reveal increased vulnerability to gender-based violence at the intersection of race and gender identity (Dinno, 2017; Wirtz et al., 2020).

Interventions to Address Violence and Victimization

A systematic review of peer-reviewed literature from 2000 to 2019 on interventions and their effectiveness in preventing or reducing violence and victimization for LGBT youth identified only one intervention, anti-bullying laws (Coulter et al., 2019). These laws have been shown to help reduce

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 323 of 438 PageID #: 2

bullying victimization, particularly for sexual minority boys (Seelman and Walker, 2018). Protective laws that specifically include sexual orientation reduce the risk of suicide attempts, forced sexual intercourse, and feeling unsafe at school or on the way to or from school among all youth, regardless of sexual orientation (Meyer et al., 2019). In a meta-analysis of 15 primary studies with 62,923 participants, gay-straight alliances were associated with significantly lower levels of self-reported homophobic victimization, safety fears, and hearing homophobic remarks (Marx and Kettrey, 2016; see also Chapter 9). A recent cluster randomized control trial that tested the efficacy of a bystander intervention to reduce violence and violence acceptance for sexual minority male and female high school students in Kentucky was effective at reducing violence for heterosexual students but was less effective for sexual minority youth, particularly sexual minority males (Coker et al., 2020). This outcome points to the need for ongoing research to develop, design, and test interventions to address violence and victimization against LGBTQ youth.

In addition to anti-bullying laws, other structural interventions at the state and federal levels have sought to address violence and victimization against LGBTQ people. As of 2020, 11 states have banned gay and transgender panic defenses (Movement Advancement Project, 2020). Legal equality in the form of state policies for same-sex partnerships, employment nondiscrimination, and hate crimes laws has been shown to decrease the incidence of hate crimes based on sexual orientation (Levy and Levy, 2017). Sexual orientation and gender identity are included in the federal hate crimes law, which provides for enhanced criminal penalties in cases of bias-motivated violence and also requires improved tracking of hate crimes perpetrated against LGBTQ people (Mattson, 2018). Hate crimes laws are controversial, however, because of their potential to be misused against defendants from poor communities or communities of color, which are already over-policed and disproportionately represented in the criminal justice system (Swiffen, 2018).

Trauma-informed interventions are critical to address violence and victimization among LGBTQ people, but these interventions remain underdeveloped (Niolon et al., 2017; Peitzmeier et al., 2020). A recent scoping review found no SGD-specific programs to prevent or address intimate partner violence in SGD people (Subirana-Malaret, Gahagan, and Parker, 2019). However, interventions to mitigate the health-related sequelae of violence for SGD people are being developed and tested. For example, an intervention for HIV-negative men who have sex with men who have history of childhood sexual abuse was developed to address HIV acquisition risk and posttraumatic stress by integrating HIV risk reduction with modified cognitive and behavioral therapy for posttraumatic stress, trauma, and self-care (CBT-TSC). A randomized study of men who have sex with men found that

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 324 of 438 PageID #: 2

those who were assigned to CBT-TSC had reduced odds of condomless sex with an HIV-positive or unknown status partner; they also had reduced odds of posttraumatic stress disorder (PTSD) and avoidance symptoms relative to those in the control condition assigned only to HIV voluntary counseling and testing (O'Cleirigh et al., 2019). Additional interventional research is needed to prevent and address violence in SGD populations.

MENTAL AND BEHAVIORAL HEALTH

Mental Health

Much of the early literature on the health of LGBT populations centered on mental health disparities and existed in tension with the misuse of mental health diagnoses to justify discrimination against and social exclusion of LGBT people. Since the release of the Institute of Medicine (2011) report, there has been a surge in research empirically evaluating determinants of and interventions for improving the mental health of LGBT and other SGD populations. Research indicates that disparities in SGD population mental health compared with the non-SGD population appear as early as adolescence and may persist even into older adulthood (Fredriksen-Goldsen et al., 2015).

Adolescence is a vulnerable time for the development of mental health symptoms. Studies have consistently found that higher rates of mood and anxiety disorders, PTSD, eating disorders, and substance use disorders emerge in adolescence for LGBT populations (Plöderi and Tremblay, 2015; Russell and Fish, 2016). Suicide is the second leading cause of death for youth aged 10 to 24 (Heron, 2019), and a recent systematic review and meta-analysis of population-based longitudinal studies found a significantly higher risk of suicide attempts for LGB youth relative to same-age heterosexual controls (Haas et al., 2011; Miranda-Mendizábal et al., 2017).

Mental health disparities that begin in adolescence can persist far into adulthood (Fredriksen-Goldsen et al., 2013). LGBT adults are at higher risk than non-LGBT adults for mental health problems, such as depression, anxiety, anorexia nervosa, and bulimia nervosa (Hottes et al., 2016; McClain and Peebles, 2016; Plöderi and Tremblay, 2015). On a spectrum of suicidality anchored at one end by suicide attempts, research has produced evidence identifying increased risk in LGBT populations of other suicidal symptoms, such as non-suicidal self-injury and suicidal ideation (Jackman, Honig, and Bockting, 2016; Liu and Mustanski, 2012). There is also some evidence that severe mental illness—defined by the requirement of extensive psychiatric treatment in inpatient and outpatient settings and resulting in significant disability in one or more major life domains (Parabiaghi et al., 2006)—may occur at higher rates among LGBT populations.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 325 of 438 PageID #: 2

Mental health risks vary among SGD groups. For instance, there is some evidence of higher rates of depression, eating disorders, and suicidality among bisexual people relative to lesbian and gay people (Plöderi and Tremblay, 2015; Pompili et al., 2014). In comparison with cisgender adults, transgender adults report elevated rates of psychiatric diagnoses, such as major depressive disorder, anxiety disorders, PTSD, and eating disorders (Connolly et al., 2016; Dhejne et al., 2016; Fredriksen-Goldsen et al., 2014; James et al., 2016; Marshall et al., 2016; Mueller, De Cuypere, and T'Sjoen, 2017). Among military veterans, there is evidence of higher rates of suicidality for both LGB and transgender people and higher rates of depression, PTSD, serious mental illness, and sexual trauma among transgender people (Blosnich, Bossarte, and Silenzio, 2012; Brown and Jones, 2015).

Less is known about the epidemiology of mental health problems among intersex populations in the United States, as no population surveys currently assess intersex status (Tamar-Mattis et al., 2018). Research is often limited to a primary variable of surgical or medical treatment with identified outcomes of gender dysphoria and general health-related quality of life (Sandberg, Gardner, and Cohen-Kettenis, 2012). When particular psychiatric and neurocognitive outcomes are evaluated, it is generally in the context of a specific intersex condition (differences of sex development [DSD]). For instance, congenital adrenal hyperplasia and Kleinfelter and Turner syndromes have been associated with attention deficit hyperactivity disorder and autism (de Vries et al., 2019).

There has been much more research into the mental health and well-being of parents of infants and children with intersex traits than for people with intersex traits themselves, and much of this research has been in the context of making decisions regarding early genital surgery (Wisniewski, 2017). The dsd-LIFE Group, a multicenter European study that looked at mental health and quality of life among people with intersex traits, is a notable exception that has no current correlate in the United States (de Vries et al., 2019). Among the 1,022 participants in the dsd-LIFE study, all males and some females with specific DSDs reported increased rates of depression and anxiety relative to country-specific reference populations.

Research regarding the mental health of SGD populations of color has yielded mixed findings. For instance, among respondents to the American College Health Association National College Health Assessment-II surveys from 2008 and 2009, there were lower rates of depression for Asian, Black, and Latinx LGB students than for white LGB students (Lytle, De Luca, and Blosnich, 2014). In contrast, relative to white students, Black and multiracial students reported significantly higher rates of suicide attempts, while Latinx students reported lower rates of suicidal ideation and attempts, though this difference was not statistically significant. The 2015 U.S. Transgender Survey (USTS) found that Black, Native American, Asian,

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 326 of 438 PageID #: 2

Latinx, Middle Eastern, and multiracial transgender adults reported higher rates of past-year and lifetime suicide attempt than white respondents, with the highest rates for Native American and multiracial respondents (James et al., 2016). An analysis of the Aging with Pride: National Health, Aging, and Sexuality/Gender Study population found decreased mental health-related quality of life for the older LGBT participants who were Black and Hispanic relative to white participants (Kim, Jen, and Fredriksen-Goldsen, 2017).

Drivers of Mental Health Disparities

Mental health disparities among LGBT and other SGD populations are consistent with stress responses to external factors, such as stigma, discrimination, and violence (Clements-Nolle et al., 2018; James et al., 2016; Nuttbrock et al., 2014; Perez-Brumer et al., 2017; Reisner et al., 2016d; Whitton et al., 2016). Bias-motivated violence, such as hate crimes based on sexual orientation or gender identity, may have particularly severe psychological consequences for LGBT people (Herek, Gillis, and Cogan, 1999). Internalized stigma and attempts to conceal one's identity to avoid stigma have been associated with psychiatric symptoms and psychological distress among LGBT populations and with suicide attempts among transgender adults (Gevonden et al., 2014; Hatzenbuehler and Pachankis, 2016). Conversion therapy that attempts to change sexual orientation or gender identity is also a mental health stressor for LGBT people: LGBT populations are at risk for exposure to conversion therapy, and exposure to conversion therapy is a risk factor for mental health problems. This topic is discussed in detail in Chapter 12.

Among LGBTQ youth, victimization on the basis of sexual orientation or gender identity is associated with worse depression, more anxiety, lower self-esteem, less school belonging, and higher prevalence of suicidality than for non-LGBTQ youth (Kosciw et al., 2018). Negative mental health symptoms, suicidal ideation and attempts, and risky behaviors among youth have been correlated with living in areas with higher rates of assault-based hate crimes against LGBT people or higher scores on composite indices of structural stigma (Hatzenbuehler and Pachankis, 2016). For example, in a population-based sample of 9th- through 12th-graders in Boston public schools, sexual minority youth residing in neighborhoods with higher rates of LGBT assault hate crimes were significantly more likely to report suicidal ideation and suicide attempts than those living in neighborhoods with lower rates of LGBT assault hate crimes (Duncan and Hatzenbuehler, 2014). No similar associations were found between LGBT assault hate crimes and either suicide ideation or attempt in heterosexual students, indicating that the results were specific to sexual minority adolescents. Furthermore, there

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 327 of 438 PageID #: 2

were no significant associations for non-LGBT crimes and suicidality in sexual minority adolescents, indicating the specificity of results to LGBT assault hate crimes.

Retrospective reports of adverse childhood experiences are also correlated with negative mental health outcomes and psychiatric illness in LGBT populations (Blosnich and Andersen, 2015; Hughes et al., 2017). A systematic review and meta-analysis of 73 studies that included more than 47,000 LGBT adults found high rates of such events, including interpersonal stigma and victimization, among LGBT participants (Schneeberger et al., 2014). Thus, exposure to higher numbers of adverse childhood experiences may contribute to the elevated rates of negative mental health outcomes found among LGBT people (McLaughlin et al., 2012; Roberts et al., 2012b).

Among SGD populations, some associations between mental health outcomes and exposure to stressors, stigma, and victimization are unique to specific groups. Bisexual women, for example, have a higher lifetime prevalence of rape and sexual assault than lesbian or heterosexual women, which may correlate with poorer mental health outcomes (Schulman and Erickson-Schroth, 2019). LGBT individuals with serious mental illness experience intersecting heterosexism and cisgenderism in psychiatric settings and ableism in LGBT spaces, which may exacerbate disparities (Kidd et al., 2016; Wong et al., 2014).

Though there are no studies of minority stress specifically among intersex populations, the dsd-LIFE study in Europe found that mediating factors for mental health disparities affecting people with intersex traits included self-esteem, openness, and shame (de Vries et al., 2019), which are consistent with experiences of minority stress. Similarly, experiences of social, sexual, and medical stigma have been found to occur among individuals with intersex traits (Ediati et al., 2017; Meyer-Bahlburg et al., 2017a, 2017b, 2018). There are as yet no studies specifically exploring the ways in which structural or interpersonal stigma or minority stressors might influence intersex health disparities.

Military service may confer both risks and benefits to mental health. There is some evidence that LGBT people may be at higher risk of victimization than non-LGBT people while serving (Goldbach and Castro, 2016), though data are limited. Of the 3 percent of 2015 USTS respondents who were on active duty military, nearly 50 percent reported support from their commanding officers in social transition, though only 36 percent reported support in medical transition (James et al., 2016). However, there may also be a benefit to feeling a sense of belonging in a military or veteran population (Matarazzo et al., 2014). Respondents in the 2015 USTS reported nearly twice the rate of prior military service as the general population (15% and 8%, respectively), and despite higher rates of unemployment, serious psychological distress, and suicide attempts relative to the general

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 328 of 438 PageID #: 2

population, all rates were lower than those reported by nonveteran respondents (James et al., 2016). These findings are consistent with data from a 2014 survey of 183 transgender older adults, for whom prior military service predicted fewer depressive symptoms and greater health-related quality of life (Hoy-Ellis et al., 2017).

SGD populations of color may also experience minority stressors and stigma on the basis of their racial or ethnic identity, which may contribute to some findings of elevated mental health risk. Among older LGBT people of color, mediators of mental health quality of life included markers of stigma and stress, such as income, education, identity affirmation, social support, and discrimination (Kim, Jen, and Fredriksen-Goldsen, 2017). Similarly, disparate rates of mental health problems among respondents of color to the USTS were mediated by victimization events (James et al., 2016).

Interventions to Address Mental Health Disparities

Emerging evidence has revealed interventions that improve mental health outcomes among SGD populations. Among adults, psychotherapies specifically created for LGBT individuals have been associated with improved mental health (Diamond et al., 2012; Hatzenbuehler and Pachankis, 2016; Lucassen et al., 2015). Additional interventional research is under way, including a transdiagnostic treatment approach to specifically address the cognitive, affective, and behavioral effects of minority stress processes for young adult sexual minority men (Pachankis et al., 2019). There are few data to guide interventions for LGBT people with serious mental illness (Evans et al., 2016). Training emphasizing cultural competency in relation to sexual orientation, gender identity, and intersex status for mental health providers and mental illness training for LGBT- and intersex-oriented service providers may be useful in improving care and outcomes, especially if such training results in LGBTI individuals feeling safe in disclosing more aspects of their identity to their providers (Kidd et al., 2016). Robust work has found that supportive home environments, affirming school climates, and laws and policies advancing marriage equality and prohibiting discrimination and bullying correlate with lower rates of suicide ideation and attempts in large, population-based analyses of LGBT youth (Hatzenbuehler and Pachankis, 2016; Raifman et al., 2017).

For transgender individuals, gender-affirming medical treatment and interventions targeted at building self-esteem and resilience through clinical care, support groups, activism, and family support have consistently been associated with improvements in mental health outcomes (Costa et al., 2015; de Vries et al., 2011, 2014; Hughto, Reisner, and Pachankis, 2015).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 329 of 438 PageID #: 2

Family support was strongly associated with lower rates of psychological distress and lifetime suicide attempt in 2015 USTS respondents (James et al., 2016). Peer support has also been associated with improved psychosocial well-being for adults with intersex traits and has been recommended as a routine and essential part of intersex care (Krege et al., 2019; Lee et al., 2016). Unfortunately, there appears to be a relative absence of research on interventions targeted specifically at improving mental health among LGBT older adults, bisexual people, LGBT military personnel and veterans, LGBT people of color, and intersex adults.

Substance Use and Behavioral Health

SGD populations are disproportionately burdened by substance use disorders across the life course, including use of tobacco, alcohol, and other drugs (Azagba, Latham, and Shan, 2019; Azagba et al., 2020; Boyd et al., 2019; Dai and Meyer, 2019; Gattamorta, Salerno, and Castro, 2019; Gonzales and Henning-Smith, 2017; Gonzales, Przedworski, and Henning-Smith, 2016; Hoffman et al., 2018; Kerridge et al., 2017; Krueger, Fish, and Upchurch, 2020; McCabe et al., 2019a, 2019b; Schuler et al., 2018). Substance use rates are consistently high for sexual minorities regardless of whether sexual orientation is measured as sexual identity, sexual attraction, or sexual behavior (Kerridge et al., 2017). There is substantial heterogeneity by gender identity and expression in substance use behaviors among the transgender population (Azagba et al., 2019; Buchting et al., 2017; Hoffman et al., 2018; Lowry et al., 2018; Newcomb et al., 2019; Watson et al., 2020). There is as yet no research on substance use among intersex populations.

Substance use disparities begin early for LGBT populations, with evidence showing that LGBT adolescents are at greater risk of substance use and misuse when compared with their heterosexual and cisgender peers (Day et al., 2017; Johns et al., 2018, 2019b; Johnson et al., 2019; Lowry et al., 2017; McCabe et al., 2013; Mereish, 2019; Phillips et al., 2019; Schuler and Collins, 2019). These substance use disparities may continue into young adulthood (Coulter et al., 2015; Jun et al., 2019) and persist well into older adulthood (Dai and Meyer, 2019).

It is important to consider subgroup differences when assessing substance use among SGD populations. For instance, prevalence and patterns of substance use behaviors, substance use disorders, and substance use morbidities are particularly heightened for bisexual people (Boyd et al., 2019; McCabe et al., 2019a, 2019b) and sexual minority women (Cochran, Björkenstam, and Mays, 2017; Fish, Hughes, and Russell, 2018; Kerridge et al., 2017; Krueger, Fish, and Upchurch, 2020; McCabe et al., 2019a, 2019b; Schuler et al., 2018).

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 330 of 438 PageID #: 2

Drivers of Substance Use and Behavioral Health Disparities

Substance use morbidity for LGBT people may result from exposure to high levels of minority stress from their disadvantaged social status; homophobic, biphobic, or transphobic bullying; or maladaptive coping to stressful life events. For example, in the 2013–2014 California Healthy Kids Survey of 316,766 students in 1,500 middle and high schools (grades 7, 9, and 11), gender- and sexuality-based harassment at school was higher for LGB youth relative to heterosexual youth, was independently associated with greater odds of substance use in every grade, and explained many disparities in substance use between LGB and heterosexual youth (Coulter et al., 2018).

In a nationally representative study using data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)-III, sexual minorities were at substantially higher risk of severe alcohol use disorder than their heterosexual counterparts, and higher levels of sexual orientation discrimination increased the odds of alcohol use disorder in sexual minorities (McCabe et al., 2019b). This finding suggests that substance abuse prevention and treatment strategies should address sexual minority-specific vulnerabilities. Another study using NESARC-III data found that sexual orientation discrimination and stressful life events each accounted for substance use disorder disparities between sexual minority subgroups and heterosexual adults (Krueger, Fish, and Upchurch, 2020). These findings also suggest that pathways to substance use disorder disparities may differ for different sexual minority subgroups. The age at which exposure to social stressors occurs is also relevant for risk of substance use disorders. A nationally representative sample of non-heterosexual adults found that discrimination based on sexual orientation was most prevalent in early young adulthood, but it increased the odds of substance use disorders only if people were exposed to discrimination at older ages (Evans-Polce et al., 2020).

Due to the lack of gender identity data in U.S. health surveillance systems, population data are limited on pathways to social stress-related substance use disparities for transgender people compared to cisgender people. In nonprobability samples of transgender people, however, social stressors such as discrimination, family rejection, a lack of gender affirmation, and bullying and violence victimization are associated with substance use (Day et al., 2017; Gamarel et al., 2016, 2020; Gilbert et al., 2018; Jannat-Khah et al., 2018; Kidd et al., 2019; Klein and Golub, 2016; Menino et al., 2018; Reisner et al., 2015).

Social norms, social networks, and social support have also been implicated in sexual orientation disparities in substance use. With regard

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 331 of 438 PageID #: 2

to social norms, in a probability study of 3,012 middle and high school students (aged 11 to 18) in a mid-sized school district in the southern United States, sexual minority adolescents had higher perceptions of others' substance use behavior and more permissive perceptions of whether a substance use behavior is approved by others than heterosexual adolescents. These perceptions partially explained disparities for sexual minority youth in both lifetime and current substance use risk (Mereish et al., 2017). The National Longitudinal Study of Adolescent to Adult Health (Add Health) study found that social network factors, including higher frequency or quantity of tobacco use and drinking to intoxication, reflected sexual orientation disparities in alcohol misuse (Hatzenbuehler, McLaughlin, and Xuan, 2015). An analysis of NESARC-III data found that functional support was associated with lower rates of alcohol use disorder for some sexual minorities, while structural support (type and frequency of kin and non-kin contact) increased the risk for other groups (Kahle et al., 2019).

Interventions to Address Substance Use and Behavioral Health Disparities

A review of LGBT substance use research between 2013 and 2017 found an emphasis on individual-level risk factors and a need for additional studies of protective factors and group differences by race and ethnicity, sex assigned at birth, sexual orientation, and gender identity (Kidd et al., 2018). Also needed are nationally representative samples and translation of findings into interventions to prevent and treat substance use for LGBT people. Research on substance abuse treatment utilization is underdeveloped and relies heavily on nonprobability samples (Flentje et al., 2015; Glynn and van den Berg, 2017). In a nationally representative study of adults, among those with any lifetime substance use disorder, some sexual minority adult groups had higher odds of lifetime substance abuse treatment utilization than others (McCabe et al., 2013). Nonetheless, many SGD persons who need substance use treatment do not access it due to stigma and other barriers to care (Allen and Mowbray, 2016) (see Chapter 12). Protective factors for reducing substance use among transgender and gender diverse youth are parent connectedness and higher levels of teacher connectedness (Gower et al., 2018).

There is a dearth of programs and treatments to prevent or intervene on substance use disparities in LGBT populations. In a systematic review of the peer-reviewed literature from 2000 to 2019 on interventions and their effectiveness in preventing or reducing substance use, mental health problems, and violence victimization in LGBT youth, only 12 interventions were identified, of which 2 were for substance use (Coulter et al.,

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 332 of 438 PageID #: 2

2019). Another review identified large research gaps in the area of tobacco prevention and cessation interventions for SGD youth and young adults (Baskerville et al., 2017). Some interventional research has addressed substance use in the context of sexual risk for HIV acquisition or transmission in gay and bisexual men (Mimiaga et al., 2019b; Parsons et al., 2014). For example, a randomized controlled trial of a tailored, culturally sensitive intervention for homeless gay and bisexual men found significant reductions in stimulant use over time for men assigned to a nurse case management plus contingency management or to a standard education plus contingency management program (Nyamathi et al., 2017). More rigorous research is needed, including studies to determine if adaptations of evidence-based interventions that include minority stress and other SGD-specific concerns are more effective than treatment as usual (Bochicchio et al., 2020). Additional interventional research is needed to understand and mitigate the substance use inequities found in LGBT populations. Research is also needed into the epidemiology, etiology, and treatment of substance use disorders among people with intersex traits.

SUMMARY AND CONCLUSIONS

The physical and mental health of SGD populations, such as lesbian, gay, bisexual, transgender, queer, and intersex people, is substantially affected by external influences that include discrimination, stigma, prejudice, and other social, political, and economic determinants of health. Thus, SGD populations experience both physical and mental health inequities.

In addition to health disparities related to sexual orientation, gender identity, and intersex status, many SGD people also experience health disparities related to intersecting aspects of identity that include but are not limited to race and ethnicity. The associations between stress, stigma, social determinants of health, and health outcomes hold across multiple health conditions. Different social and individual risks may intersect to compound adverse health effects. Cross-cutting resiliency factors appear to mitigate some of these risks and can form the basis for interventions.

CONCLUSION 11-1: Sexual and gender diverse populations experience numerous disparities in physical and mental health. These disparities are unevenly distributed in relation to such factors as race and gender.

In comparison with heterosexual and cisgender populations, SGD populations have less favorable overall health and higher rates of cardiovascular disease, certain cancers, exposure to violence, and HIV and other STIs. Among sexual minority women, lesbian and bisexual women have higher

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 333 of 438 PageID #: 2

odds of risk factors for cardiovascular disease, such as hypertension and diabetes, as well as more risk factors for breast cancer. Transgender adults may have elevated rates of cardiovascular disease and myocardial infarction compared with their cisgender counterparts.

LGBT people and people with intersex traits are at risk of violence from family members, peers, intimate partners, and strangers as a result of their sexual orientation, gender identity, or intersex status. Some of the highest risks of violence affect bisexual women and transgender people, particularly transgender women of color. Black transgender women are also disproportionately affected by HIV, as are cisgender gay and bisexual men and other men who have sex with men, who are overrepresented among people living with HIV and represent the largest proportion of new HIV diagnoses every year in the United States.

Mental health disparities in SGD populations include heightened anxiety and depressive symptoms and greater suicidality among LGBT people as compared to heterosexual or cisgender individuals. Substance use and behavioral health disparities include greater use of tobacco, alcohol, and other drugs among LGBT people than among heterosexual or cisgender individuals. Sexual minority individuals are also less likely than their heterosexual counterparts to report healthy sleep, and similar disparities may exist for transgender people.

CONCLUSION 11-2: Health disparities affecting sexual and gender diverse populations are often poorly understood due to gaps in research and data collection relevant to sexual orientation, gender identity, and intersex status.

Because both clinical and population research studies rarely include measures of sexual orientation, gender identity, and intersex status, the full scope and magnitude of physical and mental health disparities and their differential effects across and within SGD populations is not known. There is a particular lack of longitudinal research, representative population surveys, experimental trials, and quasi-experimental studies that collect, analyze, and report health-related data in the context of sexual orientation, gender identity, and intersex status.

Examples of health conditions and risks that are understudied in SGD populations include chronic diseases, such as dementia, cardiovascular disease, and cancer; health behaviors, such as diet, exercise, and sleep; suicidality; all-cause and specific mortality; quality of life; the physical, emotional, and sexual health and well-being of people with intersex traits across conditions and across the lifespan, especially among adolescents and adults who did not have genital surgery; and the physical and mental health of transgender people, including non-binary people. In many of these

Copyright National Academy of Sciences. All rights reserved.

areas, reliable instruments and scales validated for use with SGD populations have not yet been developed. There is also a relative dearth of data on intersections with other aspects of identity such as race, ethnicity, age, and disability. Groups for which research is especially lacking include Black, Indigenous, and other people of color; people with intersex traits; asexual, bisexual, and non-monosexual people; and non-binary people.

CONCLUSION 11-3: The physical and mental health disparities experienced by sexual and gender diverse populations are driven by social forces, such as stigma, prejudice, and discrimination; they are not intrinsic personal characteristics related to sexual orientation, gender identity, or intersex status. They may also be compounded by intersecting stressors, such as racism, sexism, and xenophobia.

There is no innate disorder associated with being an SGD individual. Rather, the disparities affecting SGD populations are driven by experiences of minority stress, which include both structural and interpersonal stigma, prejudice, discrimination, violence, and trauma. Minority stress exposures have many mental and physical consequences. Another important concept in relation to minority stress is resilience, which is the ability to maintain normal physical and psychological functioning when stress and trauma occur. More research is needed to elucidate the origins, pathways, and health consequences of minority stress and the factors that support resilience among SGD populations.

The consequences of minority stress are particularly severe for SGD Black, Indigenous, and other people of color, who are affected by exposure to compounded levels of racism, race-related stress, and trauma from multiple sources. They may therefore face stressors that adversely affect their health in ways that differ from and may exceed the disparities facing white SGD populations or heterosexual and cisgender populations of color. A specific focus on intersecting experiences of minority stress associated with both anti-LGBT bias and other forces of structural oppression is lacking in the minority stress literature.

CONCLUSION 11-4: Although a substantial amount of intervention research has been done in some areas of sexual and gender diverse population health (e.g., HIV among gay and bisexual men), there are notable gaps in research on interventions that address the influences of stigma, discrimination, and intersectional minority stress.

Interventional research in SGD health remains in its infancy. Evidence-based interventions are needed to prevent and address health inequities. These interventions need to address the root causes and multilevel fac-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 335 of 438 PageID #: 2

tors driving SGD health disparities. These factors include vulnerabilities uniquely experienced by SGD people, such as stigma, discrimination, and other sexual and gender minority stressors, as well as intersectional stressors experienced by SGD people living at the intersection of multiple marginalized populations (e.g., racism experienced by Black SGD people). Interventions that address individual, interpersonal, and structural determinants of health are necessary to close SGD health disparities. Developing interventions tailored for specific SGD subgroups, including those targeting risks and harmful exposures specific to those groups (e.g., biphobia, transphobia, racism), and testing whether these tailored interventions are more effective than treatment as usual can help improve SGD population health.

Methodologically rigorous approaches are needed to move interventional research forward for SGD populations. This needed work includes implementing randomized controlled trials for intervention efficacy testing, as well as less traditional methods, such as pragmatic trials, natural experiments, and community-level randomization. In addition, rigorous scientific evaluation of existing and new programs, clinical care and service delivery, and policy and legal changes can help inform future opportunities to improve SGD population health. Leveraging resilience, including building upon strategies SGD people have used to resist societal oppression, is an important part of optimizing SGD health and well-being.

REFERENCES

Adhia, A., Gordon, A.R., Roberts, A.L., Fitzmaurice, G.M., Hemenway, D., and Austin, S.B. (2018). Childhood gender nonconformity and intimate partner violence in adolescence and young adulthood. *Journal of Interpersonal Violence*. doi: 10.1177/0886260518770643.

Agénor, M., Bailey, Z., Krieger, N., Austin, S.B., and Gottlieb, B.R. (2015). Exploring the cervical cancer screening experiences of black lesbian, bisexual, and queer women: The role of patient-provider communication. *Women and Health*, *55*(6), 717–736. doi: 10.1080/03630242.2015.1039182.

Agénor, M., Pérez, A.E., Peitzmeier, S.M., Potter, J., and Borrero, S. (2018). Human papillomavirus vaccination initiation among sexual orientation identity and racial/ethnic subgroups of Black and white U.S. women and girls: An intersectional analysis. *Journal of Women's Health*, *27*(11), 1349–1358. doi: 10.1089/jwh.2017.6768.

Akerstedt, T. (2006). Psychosocial stress and impaired sleep. *Scandinavian Journal of Work Environmental Health, 32*(6), 493–501.

Allen, J.L., and Mowbray, O. (2016). Sexual orientation, treatment utilization, and barriers for alcohol related problems: Findings from a nationally representative sample. *Drug and Alcohol Dependence, 161,* 323–330. doi: 10.1016/j.drugalcdep.2016.02.025.

Alzahrani, T., Nguyen, T., Ryan, A., Dwairy, A., McCaffrey, J., Yunus, R., Forgione, J., Krepp, J., Nagy, C., Mazhari., and Reiner, J. (2019). Cardiovascular disease risk factors and myocardial infarction in the transgender population. *Cardiovascular Quality and Outcomes, 12*(4). doi: 10.1161/CIRCOUTCOMES.119.005597.

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 336 of 438 PageID #: 2

Apaydin, K.Z., Fontenot, H.B., Shtasel, D., Dale, S.K., Borba, C., Lathan, C.S., Panther, L., Mayer, K.H., and Keuroghlian, A.S. (2018). Facilitators of and barriers to HPV vaccination among sexual and gender minority patients at a Boston community health center. *Vaccine*, *36*(26), 3868–3875. doi: 10.1016/j.vaccine.2018.02.043.

Asscheman, H., Gooren, L.J.G., and Eklund, P.L.E. (1989). Mortality and morbidity in transsexual patients with cross-gender hormone treatment. *Metabolism*, *38*(9), 869–873. doi: 10.1016/0026-0495(89)90233-3.

Asscheman, H., Giltay, E.J., Megens, J.A.J., de Ronde, W.P., van Trotsenburg, M.A.A., and Gooren, L.J.G. (2011). A long-term follow-up study of mortality in transsexuals receiving treatment with cross-sex hormones. *European Journal of Endocrinology*, *164*(4), 635–642. doi: 10.1530/EJE-10-1038.

Azagba, S., Latham, K., and Shan, L. (2019). Cigarette, smokeless tobacco, and alcohol use among transgender adults in the United States. *International Journal of Drug Policy, 73*, 163–169. doi: 10.1016/j.drugpo.2019.07.024.

Azagba, S., Shan, L., Latham, K., and Qeadan, F. (2020). Disparities in adult cigarette smoking and smokeless tobacco use by sexual identity. *Drug and Alcohol Dependence, 206*. doi: 10.1016/j.drugalcdep.2019.107684.

Baams L. (2018). Disparities for LGBTQ and gender nonconforming adolescents. *Pediatrics, 141*(*5*). doi: 10.1542/peds.2017-3004.

Baker, K. E. (2019). Findings from the Behavioral Risk Factor Surveillance System on health-related quality of life among US transgender adults, 2014–2017. *JAMA Internal Medicine*. doi: 10.1001/jamainternmed.2018.7931.

Baratz, A.B., Sharp, M.K., and Sandberg, D.E. (2014). Disorders of sex development peer support. *Endocrine Development*, *27*, 99–112. doi: 10.1159/000363634.

Barone, M., Cogliandro, A., Di Stefano, N., Tambone, V., and Persichetti, P. (2017). A systematic review of patient-reported outcome measures following transsexual surgery. *Aesthetic Plastic Surgery*, *41*(3), 700–713. doi: 10.1007/s00266-017-0812-4.

Baskerville, N.B., Dash, D., Wong, K., Shuh, A., and Abramowicz, A. (2016). Perceptions toward a smoking cessation app targeting LGBTQ+ youth and young adults: A qualitative framework analysis of focus groups. *JMIR Public Health And Surveillance*, *2*(2), e165. doi: 10.2196/publichealth.6188.

Baskerville, N.B., Dash, D., Shuh, A., Wong, K., Abramowicz, A., Yessis, J., and Kennedy, R.D. (2017). Tobacco use cessation interventions for lesbian, gay, bisexual, transgender and queer youth and young adults: A scoping review. *Preventive Medicine Reports*, *6*, 53–62. doi: 10.1016/j.pmedr.2017.02.004.

Becasen, J.S., Denard, C.L., Mullins, M.M., Higa, D.H., and Sipe, T.A. (2019). Estimating the prevalence of HIV and sexual behaviors among the US transgender population: A systematic review and meta-analysis, 2006-2017. *American Journal of Public Health, 109*(1), e1–e8. doi: 10.2105/AJPH.2018.304727.

Benotsch, E.G., and Zimmerman, R.S. (2017). *Microeconomic Intervention to Reduce HIV Transmission in Economically Disadvantaged Transgender Women*. Richmond: Virginia Commonwealth University. Available: https://grantome.com/grant/NIH/R34-MH115775-02.

Berger, I., and Mooney-Somers, J. (2017). Smoking cessation programs for lesbian, gay, bisexual, transgender, and intersex people: A content-based systematic review. *Nicotine and Tobacco Research, 19*(12), 1408–1417. doi: 10.1093/ntr/ntw216.

Berger, M., and Sarnyai, Z. (2015). "More than skin deep": Stress neurobiology and mental health consequences of racial discrimination. *Stress (Amsterdam, Netherlands)*, *18*(1), 1–10. doi: 10.3109/10253890.2014.989204.

Blosnich, J.R., and Andersen, J.P. (2015). Thursday's child: The role of adverse childhood experiences in explaining mental health disparities among lesbian, gay, and bisexual US adults. *Social Psychiatry and Psychiatric Epidemiology*, *50*(2), 335–338. doi: 10.1007/s00127-014-0955-4.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 337 of 438 PageID #: 2

Blosnich, J.R., Bossarte, R.M., and Silenzio, V.M. (2012). Suicidal ideation among sexual minority veterans: Results from the 2005–2010 Massachusetts Behavioral Risk Factor Surveillance Survey. *American Journal of Public Health, 102*(S1), S44–S47.

Blosnich, J.R., Farmer, G.W., Lee, J.G.L., Silenzio, V.M.B., and Bowen, D.J. (2014). Health inequalities among sexual minority adults. *American Journal of Preventive Medicine*, *46*(4), 337–349. doi: 10.1016/j.amepre.2013.11.010.

Bochicchio, L., Reeder, K., Ivanoff, A., Pope, H., and Stefancic, A. (2020). Psychotherapeutic interventions for LGBTQ+youth: A systematic review. *Journal of LGBT Youth*, 1–28. doi: 10.1080/19361653.2020.1766393.

Boehmer, U. (2018). LGBT populations' barriers to cancer care. *Seminars in Oncology Nursing, 34*(1), 21–29. doi: 10.1016/j.soncn.2017.11.002.

Boehmer, U., Miao, X., Linkletter, C., and Clark, M.A. (2012). Adult health behaviors over the life course by sexual orientation. *American Journal of Public Health*, *102*(2), 292–300. doi: 10.2105/AJPH.2011.300334.

Borgogna, N.C., McDermott, R.C., Aita, S.L., and Kridel, M.M. (2019). Anxiety and depression across gender and sexual minorities: Implications for transgender, gender nonconforming, pansexual, demisexual, asexual, queer, and questioning individuals. *Psychology of Sexual Orientation and Gender Diversity*, *6*(1), 54–63. doi: 10.1037/sgd0000306

Bowen, D.J., Powers, D., and Greenlee, H. (2006). Effects of breast cancer risk counseling for sexual minority women. *Health Care for Women International*, *27*(1), 59–74. doi: 10.1080/07399330500377119.

Boyd, C.J., Veliz, P.T., Stephenson, R., Hughes, T.L., and McCabe, S.E. (2019). Severity of alcohol, tobacco, and drug use disorders among sexual minority individuals and their "not sure" counterparts. *LGBT Health, 6*(1), 15–22. doi: 10.1089/lgbt.2018.0122.

Boynton, M.H., Gilbert, J., Shook-Sa, B.E., and Lee, J. (2020). Perceived importance of health concerns among lesbian, gay, bisexual, and transgender adults in a national, probability-based phone survey, 2017. *Health Promotion Practice*, *21*(5), 764–768. doi: 10.1177/1524839920908226.

Braun, H., Nash, R., Tangpricha, V., Brockman, J., Ward, K., and Goodman, M. (2017). Cancer in transgender people: Evidence and methodological considerations. *Epidemiologic Reviews, 39*(1), 93–107. doi: 10.1093/epirev/mxw003.

Brave Heart, M.Y.B., and DeBruyn, L.M. (1998). The American Indian Holocaust: Healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research, 8*, 56–78.

Braveman, P., Arkin, E., Orleans, T., Proctor, D., and Plough, A. (2017). *What Is Health Equity? And What Difference Does a Definition Make?* Princeton, NJ: Robert Wood Johnson Foundation. Available: https://www.rwjf.org/en/library/research/2017/05/what-is-health-equity-.html.

Brown, G.R., and Jones, K.T. (2015). Mental health and medical health disparities in 5135 transgender veterans receiving healthcare in the Veterans Health Administration: A case-control study. *LGBT Health, 3*(2), 122–131. doi: 10.1089/lgbt.2015.0058.

Buchting, F.O., Emory, K.T., Scout, Kim, Y., Fagan, P., Vera, L.E., and Emery, S. (2017). Transgender use of cigarettes, cigars, and e-cigarettes in a national study. *American Journal of Preventive Medicine*, *53*(1), e1–e7. doi: 10.1016/j.amepre.2016.11.022.

Burks, A.C., Cramer, R.J., Henderson, C.E., Stroud, C.H., Crosby, J.W., and Graham, J. (2018). Frequency, nature, and correlates of hate crime victimization experiences in an urban sample of lesbian, gay, and bisexual community members. *Journal of Interpersonal Violence*, *33*(3), 402–420. doi: 10.1177/0886260515605298.

Buzuvis, E.E. (2016). As who they really are: Expanding opportunities for transgender athletes to participate in youth and scholastic sports. *Law and Inequality, 34*, 2. Available: https://scholarship.law.umn.edu/lawineq/vol34/iss2/2.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 338 of 438 PageID #: 2

Caceres, B.A., Brody, A., and Chyun, D. (2016). Recommendations for cardiovascular disease research with lesbian, gay and bisexual adults. *Journal of Clinical Nursing, 25*(23–24), 3728–3742. doi: 10.1111/jocn.13415.

Caceres, B.A., Veldhuis, C.B., and Hughes, T.L. (2019). Racial/ethnic differences in cardiometabolic risk in a community sample of sexual minority women. *Health Equity, 3*(1), 350–359. doi: 10.1089/heq.2019.0024.

Caceres, B.A., Brody, A., Luscombe, R.E., Primiano, J.E., Marusca, P., Sitts, E.M., and Chyun, D. (2017). A systematic review of cardiovascular disease in sexual minorities. *American Journal of Public Health, 107*(4), e13–e21. doi: 10.2105/AJPH.2016.303630a.

Caceres, B.A., Brody, A.A., Halkitis, P.N., Dorsen, C., Yu, G., and Chyun, D.A. (2018). Sexual orientation differences in modifiable risk factors for cardiovascular disease and cardiovascular disease diagnoses in men. *LGBT Health, 5*(5), 284–294. doi: 10.1089/lgbt.2017.0220.

Caceres, B.A., Jackman, K.B., Edmondson, D., and Bockting, W.O. (2019a). Assessing gender identity differences in cardiovascular disease in US adults: An analysis of data from the 2014–2017 BRFSS. *Journal of Behavioral Medicine, 43*(2), 329–338. doi: 10.1007/s10865-019-00102-8.

Caceres, B.A., Veldhuis, C.B., Hickey, K.T., and Hughes, T.L. (2019b). Lifetime trauma and cardiometabolic risk in sexual minority women. *Journal of Women's Health, 28*(9), 1200–1217. doi: 10.1089/jwh.2018.7381.

Cahill, S., Taylor, S.W., Elsesser, S.A., Mena, L., Hickson, D., and Mayer, K.H. (2017). Stigma, medical mistrust, and perceived racism may affect PrEP awareness and uptake in black compared to white gay and bisexual men in Jackson, Mississippi and Boston, Massachusetts. *AIDS Care, 29*(11), 1351–1358. doi: 10.1080/09540121.2017.1300633.

Calzo, J.P., Roberts, A.L., Corliss, H.L., Blood, E.A., Kroshus, E., and Austin, S.B. (2014). Physical activity disparities in heterosexual and sexual minority youth ages 12–22 years old: Roles of childhood gender nonconformity and athletic self-esteem. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *47*(1), 17–27. doi: 10.1007/s12160-013-9570-y.

Casey, L.S., Reisner, S.L., Findling, M.G., Blendon, R.J., Benson, J.M., Sayde, J.M., and Miller, C. (2019). Discrimination in the United States: Experiences of lesbian, gay, bisexual, transgender, and queer Americans. *Health Services Research, 54*(S2), 1454–1466. doi: 10.1111/1475-6773.13229.

Cathcart-Rake, E.J. (2018). Cancer in sexual and gender minority patients: Are we addressing their needs? *Current Oncology Reports*, *20*(11), 85. doi: 10.1007/s11912-018-0737-3.

Centers for Disease Control and Prevention. (n.d.). *Tips from Former Smokers: Overviews of Diseases/Conditions.* Available: https://www.cdc.gov/tobacco/campaign/tips/diseases/index.html?s_cid=OSH_tips_GL0006.

———. (2019). *Sexually Transmitted Disease Surveillance 2018*. Atlanta: U.S. Department of Health and Human Services. doi: 10.15620/cdc.79370.

———. (2020). Estimated HIV incidence and prevalence in the United States, 2014–2018. *HIV Surveillance Supplemental Report, 25*(1). Available: https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-25-1.pdf.

Ceres, M., Quinn, G.P., Loscalzo, M., and Rice, D. (2018). Cancer screening considerations and cancer screening uptake for lesbian, gay, bisexual, and transgender persons. *Seminars in Oncology Nursing, 34*(1), 37–51.

Chae, D.H., Wang, Y., Martz, C.D., Slopen, N., Yip, T., Adler, N.E., Fuller-Rowell, T.E., Lin, J., Matthews, K.A., Brody, G.H., Spears, E.C., Puterman, E., and Epel, E.S. (2020). Racial discrimination and telomere shortening among African Americans: The Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Health Psychology, 39*(3), 209–219. doi: 10.1037/hea0000832.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 339 of 438 PageID #: 2

Charlton, B.M., Gordon, A.R., Reisner, S.L., Sarda, V., Samnaliev, M., and Austin, S.B. (2018). Sexual orientation-related disparities in employment, health insurance, healthcare access and health-related quality of life: A cohort study of US male and female adolescents and young adults. *BMJ Open, 8*(6), e020418. doi: 10.1136/bmjopen-2017-020418.

Chen, J., Walters, M.L., Gilbert, L.K., and Patel, N. (2020). Sexual violence, stalking, and intimate partner violence by sexual orientation, United States. *Psychology of Violence, 10*(1), 110–119. doi: 10.1037/vio0000252.

Chen, J-H., and Shiu, C-S. (2017). Sexual orientation and sleep in the U.S.: A national profile. *American Journal of Preventive Medicine, 52*(4), 433–442. doi: 10.1016/j.amepre.2016.10.039.

Cheng, P.J., Pastuszak, A.W., Myers, J.B., Goodwin, I.A., and Hotaling, J.M. (2019). Fertility concerns of the transgender patient. *Translational Andrology and Urology, 8*(3), 209–218. Available: http://tau.amegroups.com/article/view/26091/24253.

Cipres, D., Seidman, D., Cloniger, C., Nova, C., O'Shea, A., and Obedin-Maliver, J. (2017). Contraceptive use and pregnancy intentions among transgender men presenting to a clinic for sex workers and their families in San Francisco. *Contraception, 95*(2), 186–189. doi: 10.1016/j.contraception.2016.09.005.

Clements-Nolle, K., Lensch, T., Baxa, A., Gay, C., Larson, S., and Yang, W. (2018). Sexual identity, adverse childhood experiences, and suicidal behaviors. *Journal of Adolescent Health*, *62*(2), 198–204. doi: 10.1016/j.jadohealth.2017.09.022.

Cochran, S.D., Björkenstam, C. and Mays, V.M. (2016). Sexual orientation and all-cause mortality among U. S. adults aged 18 to 59 years, 2001–2011. *American Journal of Public Health, 106*, 918–920.

———. (2017). Sexual orientation differences in functional limitations, disability, and mental health services use: Results from the 2013–2014 National Health Interview Survey. *Journal of Consulting and Clinical Psychology*, *85*(12), 1111–1121. doi: 10.1037/ccp0000243.

Cochran, S.D., and Mays, V.M. (2011). Sexual orientation and mortality among U.S. men aged 17 to 59 years: Results from the National Health and Nutrition Examination Survey III. *American Journal of Public Health, 101*(6), 1133–1138. doi: 10.2105/AJPH.2010.300013.

———. (2015). Mortality risks among persons reporting same-sex sexual partners: Evidence from the 2008 General Social Survey—National Death Index data set. *American Journal of Public Health, 105*(2), 358–364. doi: 10.2105/AJPH.2014.301974.

Coker, A.L., Bush, H.M., Clear, E.R., Brancato, C.J., and McCauley, H.L. (2020). Bystander program effectiveness to reduce violence and violence acceptance within sexual minority male and female high school students using a cluster RCT. *Prevention Science, 21*(3), 434–444. doi: 10.1007/s11121-019-01073-7.

Conching, A.K.S., and Thayer, Z. (2019). Biological pathways for historical trauma to affect health: A conceptual model focusing on epigenetic modifications. *Social Science and Medicine*, *230*, 74–82. doi: 10.1016/j.socscimed.2019.04.001.

Connelly, P.J., Marie Freel, E., Perry, C., Ewan, J., Touyz, R.M., Currie, G., and Delles, C. (2019). Gender-affirming hormone therapy, vascular health and cardiovascular disease in transgender adults. *Hypertension*, *74*(6), 1266–1274. doi: 10.1161/HYPERTENSIONAHA.119.13080.

Connolly, M.D., Zervos, M.J., Barone, C.J., Johnson, C.C., and Joseph, C.L. (2016). The mental health of transgender youth: Advances in understanding. *Journal of Adolescent Health, 59*(5), 489–495. doi: 10.1016/j.jadohealth.2016.06.012.

Costa, R., Dunsford, M., Skagerberg, E., Holt, V., Carmichael, P., and Colizzi, M. (2015). Psychological support, puberty suppression, and psychosocial functioning in adolescents with gender dysphoria. *Journal of Sexual Medicine, 12*(11), 2206–2214. doi: 10.1111/jsm.13034.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 340 of 438 PageID #: 2

Coston, L. (2018). Understanding characteristics of victims and perpetrators of anti-LGBT Hate crimes in the United States. *Violence and Victims, 33*(3), 453–471. doi: 10.1891/0886-6708.v33.i3.453.

Coulter, R.W.S., Kenst, K.S., Bowen, D.J., and Scout. (2014). Research funded by the National Institutes of Health on the health of lesbian, gay, bisexual, and transgender populations. *American Journal of Public Health*, *104*(2), e105–e112. doi: 10.2105/AJPH.2013.301501.

Coulter, R.W.S., Blosnich, J.R., Bukowski, L.A., Herrick, A.L., Siconolfi, D.E., and Stall, R.D. (2015). Differences in alcohol use and alcohol-related problems between transgender- and nontransgender-identified young adults. *Drug and Alcohol Dependence, 154,* 251–259. doi: 10.1016/j.drugalcdep.2015.07.006.

Coulter, R., Bersamin, M., Russell, S.T., and Mair, C. (2018). The effects of gender- and sexuality-based harassment on lesbian, gay, bisexual, and transgender substance use disparities. *Journal of Adolescent Health*, *62*(6), 688–700. doi: 10.1016/j.jadohealth.2017.10.004.

Coulter, R., Egan, J.E., Kinsky, S., Friedman, M.R., Eckstrand, K.L., Frankeberger, J., Folb, B.L., Mair, C., Markovic, N., Silvestre, A., Stall, R., and Miller, E. (2019). Mental health, drug, and violence interventions for sexual/gender minorities: A systematic review. *Pediatrics*, *144*(3), e20183367. doi: 10.1542/peds.2018-3367.

Cramer, R.J., Wright, S., Long, M.M., Kapusta, N.D., Nobles, M.R., Gemberling, T.M., and Wechsler, H.J. (2018). On hate crime victimization: Rates, types, and links with suicide risk among sexual orientation minority special interest group members. *Journal of Trauma and Dissociation*, *19*(4), 476–489. doi: 10.1080/15299732.2018.1451972.

Cunningham, G.B., Buzuvis, E., and Mosier, C. (2018). Inclusive spaces and locker rooms for transgender athletes. *Kinesiology Review*, *7*(4), 365–374.

Cunningham, T.J., Xu, F., and Town, M. (2018). Prevalence of five health-related behaviors for chronic disease prevention among sexual and gender minority adults—25 U.S. states and Guam, 2016. *Morbidity and Mortality Weekly Report*, *67*(32), 888–893. doi: 10.15585/mmwr.mm6732a4.

Dai, H., and Hao, J. (2017). Sleep deprivation and chronic health conditions among sexual minority adults. *Behavioral Sleep Medicine*, 17(3), 254–268. doi: 10.1080/15402002.2017.1342166.

Dai, H., and Meyer, I.H. (2019). A population study of health status among sexual minority older adults in select U.S. geographic regions. *Health Education and Behavior*, *46*(3), 426–435. doi: 10.1177/1090198118818240.

Davis, B., Royne Stafford, M.B., and Pullig, C. (2014). How gay-straight alliance groups mitigate the relationship between gay-bias victimization and adolescent suicide attempts. *Journal of the American Academy of Child and Adolescent Psychiatry*, *53*(12), 1271–1278.e1. doi: 10.1016/j.jaac.2014.09.010.

Davis, S.M., and Geffner, M.E. (2019). Cardiometabolic health in Turner syndrome. *American Journal of Medical Genetics. Part C, Seminars in Medical Genetics*, *181*(1), 52–58. doi: 10.1002/ajmg.c.31678.

Day, J.K., Fish, J.N., Perez-Brumer, A., Hatzenbuehler, M.L., and Russell, S.T. (2017). Transgender youth substance use disparities: Results from a population-based sample. *Journal of Adolescent Health, 61*(6), 729–735. doi: 10.1016/j.jadohealth.2017.06.024

De Roo, C., Tilleman, K., T'Sjoen, G., and De Sutter, P. (2016). Fertility options in transgender people. *International Review of Psychiatry*, 28(1), 112–119. doi: 10.3109/09540261.2015.1084275.

de Vries, A.L., Steensma, T.D., Doreleijers, T.A., and Cohen-Kettenis, P.T. (2011). Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study. *Journal of Sexual Medicine*, *8*(8), 2276–2283. doi: 10.1111/j.1743-6109.2010.01943.x.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 341 of 438 PageID #: 2

de Vries, A.L., McGuire, J.K., Steensma, T.D., Wagenaar, E.C., Doreleijers, T.A., and Cohen-Kettenis, P.T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, *134*(4), 696–704. doi: 10.1542/peds.2013-2958.

de Vries, A.L.C., Roehle, R., Marshall, L., Frisén, L., van de Grift, T.C., Kreukels, B.P.C., Bouvattier, C., Köhler, B., Thyen, U., Nordenström, A., Rapp, M., Cohen-Kettenis, P.T., and on behalf of the dsd-LIFE Group. (2019). Mental health of a large group of adults with disorders of sex development in six European countries. *Psychosomatic Medicine*, *81*(7), 629–640. doi: 10.1097/PSY.0000000000000718.

DeVylder, J.E., Oh, H.Y., Nam, B., Sharpe, T.L., Lehmann, M., and Link, B.G. (2017). Prevalence, demographic variation and psychological correlates of exposure to police victimisation in four US cities. *Epidemiology and Psychiatric Sciences*, *26*(5), 466–477. doi: 10.1017/S2045796016000810.

DeVylder, J.E., Jun, H.J., Fedina, L., Coleman, D., Anglin, D., Cogburn, C., Link, B., and Barth, R.P. (2018). Association of exposure to police violence with prevalence of mental health symptoms among urban residents in the United States. *JAMA Network Open*, *1*(7), e184945. doi: 10.1001/jamanetworkopen.2018.4945.

Dhejne, C., Lichtenstein, P., Boman, M., Johansson, A.L.V., Långström, N., and Landén, M. (2011). Long-term follow-up of transsexual persons undergoing sex reassignment surgery: Cohort study in Sweden. *PLoS One*, *6*(2). doi: 10.1371/journal.pone.0016885.

Dhejne, C., Van Vierken, R., Heylens, G., and Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry, 28*(1), 44–57. doi: 10.3109/09540261.2015.1115753.

Dhillon, N., Oliffe, J.L., Kelly, M.T., and Krist, J. (2020). Bridging barriers to cervical cancer screening in transgender men: A scoping review. *American Journal of Men's Health*, *14*(3), 1–10. doi: 10.1177/1557988320925691.

Diamond, G.M., Diamond, G.S., Levy, S., Closs, C., Ladipo, T., and Siqueland, L. (2012). Attachment-based family therapy for suicidal lesbian, gay, and bisexual adolescents: A treatment development study and open trial with preliminary findings. *Psychotherapy*, *49*(1), 62–71. doi: 10.1037/a0026247.

Dibble, S.L., and Roberts, S.A. (2003). Improving cancer screening among lesbians over 50: Results of a pilot study. *Oncology Nursing Forum*, *30*(4), E71–E79. doi: 10.1188/03.ONF.E71-E79.

Dinno, A. (2017). Homicide rates of transgender individuals in the United States: 2010-2014. *American Journal of Public Health*, *107*(9), 1441–1447. doi: 10.2105/AJPH.2017.303878.

Doan Van, E.E., Mereish, E.H., Woulfe, J.M., and Katz-Wise, S.L. (2019). Perceived discrimination, coping mechanisms, and effects on health in bisexual and other non-monosexual adults. *Archives of Sexual Behavior*, *48*(1), 159–174. doi: 10.1007/s10508-018-1254-z.

Dodge, B., Herbenick, D., Friedman, M.R., Schick, V., Fu, T.-C. (Jane), Bostwick, W., Bartelt, E., Muñoz-Laboy, M., Pletta, D., Reece, M., and Sandfort, T.G.M. (2016). Attitudes toward bisexual men and women among a nationally representative probability sample of adults in the United States. *PLoS One*, *11*(10), e0164430. doi: 10.1371/journal.pone.0164430.

Donato, B., and Ferreira, M.J. (2018). Cardiovascular risk in Turner syndrome. *Revista Portuguesa de Cariologia (Portuguese Journal of Cardiology)*, *37*(7), 607–621. doi: 10.1016/j.repc.2017.08.008.

Douall, M., Watson, R.J., Smith, A., Homma, Y., and Saewyc, E. (2018). Are we leveling the playing field? Trends and disparities in sports participation among sexual minority youth in Canada. *Journal of Sport and Health Science*, 7, 218–226.

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 342 of 438 PageID #: 2

Downing, J.M., and Przedworski, J.M. (2018). Health of transgender adults in the U.S., 2014–2016. *American Journal of Preventative Medicine, 55*(3), 336–344. doi: 10.1016/j.amepre.2018.04.045.

DuBois, L.Z., Powers, S., Everett, B.G., and Juster, R.P. (2017). Stigma and diurnal cortisol among transitioning transgender men. *Psychoneuroendocrinology, 82*, 59–66. doi: 10.1016/j.psyneuen.2017.05.008.

Dunbar, W., Labat, A., Raccurt, C., Sohler, N., Pape, J.W., Maulet, N., and Coppieters, Y. (2020). A realist systematic review of stigma reduction interventions for HIV prevention and care continuum outcomes among men who have sex with men. *International Journal of STD and AIDS*, *31*(8), 712–723. doi: 10.1177/0956462420924984.

Duncan, D.T., and Hatzenbuehler, M.L. (2014). Lesbian, gay, bisexual, and transgender hate crimes and suicidality among a population-based sample of sexual-minority adolescents in Boston. *American Journal of Public Health*, *104*(2), 272–278. doi: 10.2105/AJPH.2013.301424.

Dutra, E., Lee, J., Torbati, T., Garcia, M., Merz, C.N.B., and Shufelt, C. (2019). Cardiovascular implications of gender-affirming hormone treatment in the transgender population. *Maturitas, 129*, 45–49. doi: 10.1016/j.maturitas.2019.08.010.

Dyar, C., Taggart, T.C., Rodriguez-Seijas, C., Thompson, R.G., Elliott, J.C., Hasin, D.S., and Eaton, N.R. (2019). Physical health disparities across dimensions of sexual orientation, race/ethnicity, and sex: Evidence for increased risk among bisexual adults. *Archives of Sexual Behavior*, *48*(1), 225–242. doi: 10.1007/s10508-018-1169-8.

Dyar, C., Feinstein, B.A., Stephens, J., Zimmerman, A.R., Newcomb, M.E., and Whitton, S.W. (2020). Nonmonosexual stress and dimensions of health: Within-group variation by sexual, gender, and racial/ethnic identities. *Psychology of Sexual Orientation and Gender Diversity*, *7*(1), 12–25. doi: 10.1037/sgd0000348.

Earnshaw, V.A., Bogart, L.M., Dovidio, J.F., and Williams, D.R. (2013). Stigma and racial/ethnic HIV disparities: Moving toward resilience. *American Psychologist, 68*(4), 225–236. doi: 10.1037/a0032705.

Ediati, A., Juniarto, A.Z., Birnie, E., Okkerse, J., Wisniewski, A., Drop, S., Faradz, S.M.H., and Dessens, A. (2017). Social stigmatisation in late identified patients with disorders of sex development in Indonesia. *BMJ Paediatrics Open*, *1*(1). doi: 10.1136/bmjpo-2017-000130.

Edwards, K.M. (2018). Incidence and outcomes of dating violence victimization among high school youth: The role of gender and sexual orientation. *Journal of Interpersonal Violence, 33*(9), 1472–1490. doi: 10.1177/0886260515618943.

Edwards, K.M., Sylaska, K.M., and Neal, A.M. (2015). Intimate partner violence among sexual minority populations: A critical review of the literature and agenda for future research. *Psychology of Violence, 5*(2), 112–121. doi: 10.1037/a0038656.

Ela, E.J., and Budnick, J. (2017). Non-heterosexuality, relationships, and young women's contraceptive behavior. *Demography, 54*(3), 887–909. doi: 10.1007/s13524-017-0578-y.

Eliason, M.J., Dibble, S.L., Gordon, R., and Soliz, G.B. (2012). The last drag: An evaluation of an LGBT-specific smoking intervention. *Journal of Homosexuality*, *59*(6), 864–878. doi: 10.1080/00918369.2012.694770.

El-Maouche, D., Arlt, W., and Merke, D.P. (2017). Congenital adrenal hyperplasia. *Lancet, 390*(10108), 2194–2210. doi: 10.1016/S0140-6736(17)31431-9.

Evans, T.S., Berkman, N., Brown, C., Gaynes, B., and Weber, R.P. (2016). *Disparities within Serious Mental Illness*. Technical Brief No. 25. AHRQ Publication No. v16-EHC027-EF. Rockville, MD: Agency for Healthcare Research and Quality. Available: https://effectivehealthcare.ahrq.gov/products/mental-illness-disparities/technical-brief.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 343 of 438 PageID #: 2

Evans-Polce, R.J., Veliz, P.T., Boyd, C.J., Hughes, T.L., and McCabe, S.E. (2020). Associations between sexual orientation discrimination and substance use disorders: Differences by age in US adults. *Social Psychiatry and Psychiatric Epidemiology*, *55*(1), 101–110. doi: 10.1007/s00127-019-01694-x.

Falhammar, H., Claahsen-van der Grinten, H., Reisch, N., Slowikowska-Hilczer, J., Nordenström, A., Roehle, R., Bouvattier, C., Kreukels, B., Köhler, B., and dsd-LIFE Group. (2018). Health status in 1040 adults with disorders of sex development (DSD): A European multicenter study. *Endocrine Connections*, *7*(3), 466–478. doi: 10.1530/EC-18-0031.

Fallin, A., Neilands, T.B., Jordan, J.W., and Ling, P.M. (2015). Social branding to decrease lesbian, gay, bisexual, and transgender young adult smoking. *Nicotine and Tobacco Research*, *17*(8), 983–989. doi: 10.1093/ntr/ntu265.

Fethers, K., Marks, C., Mindel, A., and Estcourt, C.S. (2000). Sexually transmitted infections and risk behaviours in women who have sex with women. *Sexually Transmitted Infections, 76*(5), 345–349. doi: 10.1136/sti.76.5.345.

Finneran, C., and Stephenson, R. (2013). Intimate partner violence among men who have sex with men: A systematic review. *Trauma, Violence and Abuse*, *14*(2), 168–185. doi: 10.1177/1524838012470034.

Fish, J.N., Hughes, T.L., and Russell, S.T. (2018). Sexual identity differences in high-intensity binge drinking: Findings from a US national sample. *Addiction*, *113*(4), 749–758. doi: 10.1111/add.14041.

Flentje, A., Livingston, N.A., Roley, J., and Sorensen, J.L. (2015). Mental and physical health needs of lesbian, gay, and bisexual clients in substance abuse treatment. *Journal of Substance Abuse Treatment*, *58*, 78–83. doi: 10.1016/j.jsat.2015.06.022.

Flynn, K.E., Lin, L., and Weinfurt, K.P. (2017). Sexual function and satisfaction among heterosexual and sexual minority U.S. adults: A cross-sectional survey. *PLoS One*, *12*(4), e0174981. doi: 10.1371/journal.pone.0174981.

Fonner, V.A., Dalglish, S.L., Kennedy, C.E., Baggaley, R., O'Reilly, K.R., Koechlin, F.M., Rodolph, M., Hodges-Mameletzis, I., and Grant, R.M. (2016). Effectiveness and safety of oral HIV preexposure prophylaxis for all populations. *AIDS*, *30*(12), 1973–1983. doi: 10.1097/QAD.0000000000001145.

Fontenot, H.B., Fantasia, H.C., Vetters, R., and Zimet, G.D. (2016). Increasing HPV vaccination and eliminating barriers: Recommendations from young men who have sex with men. *Vaccine*, *34*(50), 6209–6216. doi: 1016/j.vaccine.2016.10.075.

Frederick, D.A., John, H.K.S., Garcia, J.R., and Lloyd, E.A. (2018). Differences in orgasm frequency among gay, lesbian, bisexual, and heterosexual men and women in a U.S. national sample. *Archives of Sexual Behavior, 24*(1), 273–288. doi: 10.1007/s10508-017-0939-z.

Fredriksen-Goldsen, K.I., Kim, H.J., Barkan, S.E., Muraco, A., and Hoy-Ellis, C.P. (2013). Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study. *American Journal of Public Health, 103*(10), 1802–1809. doi: 10.2105/ajph.2012.301110.

Fredriksen-Goldsen, K.I., Cook-Daniels, L., Kim, H.J., Erosheva, E.A., Emlet, C.A., Hoy-Ellis, C.P., Goldsen, J., and Muraco, A. (2014). Physical and mental health of transgender older adults: An at-risk and underserved population. *Gerontologist*, *54*(3), 488–500. doi: 10.1093/geront/gnt021.

Fredriksen-Goldsen, K.I., Kim, H.J., Shiu, C., Goldsen, J., and Emlet, C.A. (2015). Successful aging among LGBT older adults: Physical and mental health-related quality of life by age group. *Gerontologist*, *55*(1), 154–168. doi: 10.1093/geront/gnu081.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 344 of 438 PageID #: 2

Fredriksen-Goldsen, K.I., Kim, H.J., Bryan, A.E., Shiu, C., and Emlet, C.A. (2017). The cascading effects of marginalization and pathways of resilience in attaining good health among LGBT older adults. *Gerontologist*, *57*(Suppl 1), S72–S83. doi: 10.1093/geront/gnw170.

French, S.A., Tangney, C.C., Crane, M.M., Wang, Y., and Appelhans, B.M. (2019). Nutrition quality of food purchases varies by household income: The SHoPPER study. *BMC Public Health*, *19*(1), 231. doi: 10.1186/s12889-019-6546-2.

Frey, J.D., Poudrier, G., Chiodo, M.V., and Hazen, A. (2017). An update on genital reconstruction options for the female-to-male transgender patient: A review of the literature. *Plastic and Reconstructive Surgery, 139*(3), 728–737. doi: 10.1097/prs.0000000000003062.

Friedman, M.R., Dodge, B., Schick, V., Herbenick, D., Hubach, R., Bowling, J., Goncalves, G., Krier, S., and Reece, M. (2014). From bias to bisexual health disparities: Attitudes toward bisexual men and women in the United States. *LGBT Health*, *1*(4), 309–318. doi: 10.1089/lgbt.2014.0005.

Fung, J., Vang, S., Margolies, L.R., Li, A., Blondeau-Lecomte, E., Li, A., and Jandorf, L. (2019). Developing a culturally and linguistically targeted breast cancer educational program for a multicultural population. *Journal of Cancer Education*. doi: 10.1007/s13187-019-01643-x.

Gamarel, K.E., Mereish, E.H., Manning, D., Iwamoto, M., Operario, D., and Nemoto, T. (2016). Minority stress, smoking patterns, and cessation attempts: Findings from a community-sample of transgender women in the San Francisco Bay Area. *Nicotine and Tobacco Research, 18*(3), 306–313. doi: 10.1093/ntr/ntv066.

Gamarel, K.E., Watson, R.J., Mouzoon, R., Wheldon, C.W., Fish, J.N., and Fleischer, N.L. (2020). Family rejection and cigarette smoking among sexual and gender minority adolescents in the USA. *International Journal of Behavioral Medicine*, *27*(2), 179–187. doi: 10.1007/s12529-019-09846-8.

Garofalo, R., Kuhns, L.M., Reisner, S.L., Biello, K., and Mimiaga, M.J. (2018). Efficacy of an empowerment-based, group-delivered HIV prevention intervention for young transgender women: The Project LifeSkills randomized clinical trial. *JAMA Pediatrics*, *172*(10), 916–923. doi: 10.1001/jamapediatrics.2018.1799.

Gates, G.J. (2014, August 25). *LGBT Americans Report Lower Well-Being*. Gallup. Available: www.gallup.com/poll/175418/lgbt-americans-report-lower.aspx.

Gattamorta, K.A., Salerno, J.P., and Castro, A.J. (2019). Intersectionality and health behaviors among US high school students: Examining race/ethnicity, sexual identity, and sex. *Journal of School Health*, *89*(10), 800–808. doi: 10.1111/josh.12817.

German, D., and Latkin, C.A. (2015). HIV risk, health, and social characteristics of sexual minority female injection drug users in Baltimore. *AIDS and Behavior*, *19*(7), 1361–1365. doi: 10.1007/s10461-014-0972-z.

Getahun, D., Nash, R., Flanders, W.D., Baird, T.C., Becerra-Culqui, T.A., Cromwell, L., Hunkeler, E., Lash, T.L., Millman, A., Quinn, V.P., Robinson, B., Roblin, D., Silverberg, M.J., Safer, J., Slovis, J., Tangpricha, V., and Goodman, M. (2018). Cross-sex hormones and acute cardiovascular events in transgender persons: A cohort study. *Annals of Internal Medicine*, *169*(4), 205–213. doi: 10.7326/M17-2785.

Gevonden, M.J., Selten, J.P., Myin-Germeys, I., de Graaf, R., ten Have, M., van Dorsselaer, S., van Os, J., and Veling, W. (2014). Sexual minority status and psychotic symptoms: Findings from the Netherlands Mental Health Survey and Incidence Studies (NEMESIS). *Psychological Medicine*, *44*(2), 421–433. doi: 10.1017/S0033291713000718.

Gilbert, P.A., Pass, L.E., Keuroghlian, A.S., Greenfield, T.K., and Reisner, S.L. (2018). Alcohol research with transgender populations: A systematic review and recommendations to strengthen future studies. *Drug and Alcohol Dependence*, *186*, 138–146. doi: 10.1016/j.drugalcdep.2018.01.016.

Copyright National Academy of Sciences. All rights reserved.

Glynn, T.R., and van den Berg, J.J. (2017). A systematic review of interventions to reduce problematic substance use among transgender individuals: A call to action. *Transgender Health*, *2*(1), 45–59. doi: 10.1089/trgh.2016.0037.

Goldbach, J.T., and Castro, C.A. (2016). Lesbian, gay, bisexual, and transgender (LGBT) service members: Life after don't ask, don't tell. *Current Psychiatry Reports, 18*(6), 56. doi: 10.1007/s11920-016-0695-0.

Goldstein, Z., Martinson, T., Ramachandran, S., Lindner, R., and Safer, J.D. (2020). Improved rates of cervical cancer screening among transmasculine patients through self-collected swabs for high-risk human papillomavirus DNA testing. *Transgender Health*, *5*(1), 10–17. doi: 10.1089/trgh.2019.0019.

Golub, S.A., Fikslin, R.A., Starbuck, L., and Klein, A. (2019). High rates of PrEP eligibility but low rates of PrEP access among a national sample of transmasculine individuals. *Journal of Acquired Immune Deficiency Syndromes, 82*(1), e1–e7. doi: 10.1097/QAI.0000000000002116.

Gomez, S.L., Duffy, C., Griggs, J.J., and John, E.M. (2019). Surveillance of cancer among sexual and gender minority populations: Where are we and where do we need to go? *Cancer*, *125*(24), 4360–4362. doi: 10.1002/cncr.32384.

Gomez-Lobo, V., and Amies Oelschlager, A.M. (2016). Disorders of sexual development in adult women. *Obstetrics and Gynecology, 128*(5), 1162–1173. doi: 10.1097/AOG.0000000000001672.

Gonzales, G., and Ehrenfeld, J.M. (2018). The association between state policy environments and self-rated health disparities for sexual minorities in the United States. *International Journal of Environmental Research and Public Health*, *15*(6), 1136. doi: 10.3390/ijerph15061136.

Gonzales, G., and Henning-Smith, C. (2017). Health disparities by sexual orientation: Results and implications from the behavioral risk factor surveillance system. *Journal of Community Health*, *42*(6), 1163–1172. doi: 10.1007/s10900-017-0366-z.

Gonzales, G., Przedworski, J., and Henning-Smith, C. (2016). Comparison of health and health risk factors between lesbian, gay, and bisexual adults and heterosexual adults in the United States: Results from the National Health Interview Survey. *JAMA Internal Medicine*, *176*(9), 1344–1351. doi: 10.1001/jamainternmed.2016.3432.

Gooren, L.J., and T'Sjoen, G. (2018). Endocrine treatment of aging transgender people. *Reviews in Endocrine and Metabolic Disorders, 19*(3), 253–262. doi: 10.1007/s11154-018-9449-0.

Gordon, A.R., Conron, K.J., Calzo, J.P., White, M.T., Reisner, S.L., and Austin, S.B. (2018). Gender expression, violence, and bullying victimization: Findings from probability samples of high school students in 4 US school districts. *Journal of School Health*, *88*(4), 306–314. doi: 10.1111/josh.12606.

Gower, A.L., Rider, G.N., Brown, C., McMorris, B.J., Coleman, E., Taliaferro, L.A., and Eisenberg, M.E. (2018). Supporting transgender and gender diverse youth: Protection against emotional distress and substance use. *American Journal of Preventive Medicine, 55*(6), 787–794. doi: 10.1016/j.amepre.2018.06.030.

Grabski, B., and Kasparek, K. (2017). Sexual dysfunctions in non-heterosexual men: Literature review. *Psychiatria Polska*, *51*(1), 85–94. doi: 10.12740/PP/63768.

Grabski, B., Dora, M., Iniewicz, G., Mijas, M., and Müldner-Nieckowski, Ł. (2018). The character of sexual function of women who have sex with women. *Psychiatria Polska*, *52*(6), 1075–1085. doi: 10.12740/PP/OnlineFirst/75109.

Grady, E.S., Humfleet, G.L., Delucchi, K.L., Reus, V.I., Muñoz, R.F., and Hall, S.M. (2014). Smoking cessation outcomes among sexual and gender minority and nonminority smokers in extended smoking treatments. *Nicotine and Tobacco Research*, *16*(9), 1207–1215. doi: 10.1093/ntr/ntu050.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 346 of 438 PageID #: 2

Grandner, M.A., and Pack, A.I. (2011). Sleep disorders, public health, and public safety. *Journal of the American Medical Association*, *306*(23), 2616–2617. doi: 10.1001/jama.2011.1833.

Haas, A.P., Eliason, M., Mays, V.M., Mathy, R.M., Cochran, S.D., D'Augelli, A.R., Silverman, M.M., Fisher, P.W., Hughes, T., Rosario, M., Russell, S.T., Malley, E., Reed, J., Litts, D.A., Haller, E., Sell, R.L., Remafedi, G., Bradford, J., Beautrais, A.L., Brown, G.K., Diamond, G.M., Friedman, M.S., Garofalo, R., Turner, M.S., Hollibaugh, A., and Clayton, P.J. (2011). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: Review and recommendations. *Journal of Homosexuality*, *58*(1), 10–51. doi: 10.1080/00918369.2011.534038.

Hahn, M., Sheran, N., Weber, S., Cohan, D., and Obedin-Maliver, J. (2019). Providing patient-centered perinatal care for transgender men and gender-diverse individuals: A collaborative multidisciplinary team approach. *Obstetrics and Gynecology*, *134*(5), 959–963. doi: 10.1097/AOG.0000000000003506.

Harry-Hernandez, S., Reisner, S.L., Schrimshaw, E.W., Radix, A., Mallick, R., Callander, D., Suarez, L., Dubin, S., Khan, A., and Duncan, D.T. (2020). Gender dysphoria, mental health, and poor sleep health among transgender and gender nonbinary individuals: A qualitative study in New York City. *Transgender Health*, *5*(1), 59–68. doi: 10.1089/trgh.2019.0007.

Hatzenbuehler, M.L., and Keyes, K.M. (2013). Inclusive anti-bullying policies and reduced risk of suicide attempts in lesbian and gay youth. *Journal of Adolescent Health, 53*(1 Suppl), S21–S26. doi: 10.1016/j.jadohealth.2012.08.010.

Hatzenbuehler, M.L., and Pachankis, J.E. (2016). Stigma and minority stress as social determinants of health among lesbian, gay, bisexual, and transgender youth: Research evidence and clinical implications. *Pediatric Clinics of North America*, *63*(6), 985–997. doi: 10.1016/j.pcl.2016.07.003.

Hatzenbuehler, M.L., McLaughlin, K.A., and Slopen, N. (2013). Sexual orientation disparities in cardiovascular biomarkers among young adults. *American Journal of Preventative Medicine, 44*(6), 612–621. doi: 10.1016/j.amepre.2013.01.027.

Hatzenbuehler, M.L., McLaughlin, K.A., and Xuan, Z. (2015). Social networks and sexual orientation disparities in tobacco and alcohol use. *Journal of Studies on Alcohol and Drugs, 76*, 117–126. doi: 10.15288/jsad.2015.76.117.

Hatzenbuehler, M.L., Phelan, J.C., and Link, B.G. (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health, 103*(5), 813–821. doi: 10.2105/ajph.2012.301069.

Hatzenbuehler, M.L., Birkett, M., Van Wagenen, A., and Meyer, I.H. (2014). Protective school climates and reduced risk for suicide ideation in sexual minority youths. *American Journal of Public Health*, *104*(2), 279–286. doi: 10.2105/AJPH.2013.301508.

Heffner, J.L., Mull, K.E., Watson, N.L., McClure, J.B., and Bricker, J.B. (2020). Long-term smoking cessation outcomes for sexual minority versus nonminority smokers in a large randomized controlled trial of two web-based interventions. *Nicotine and Tobacco Research*, *22*(9), 1596–1604. doi: 10.1093/ntr/ntz112.

Henny, K.D., Wilkes, A.L., McDonald, C.M., Denson, D.J., and Neumann, M.S. (2018). A rapid review of ehealth interventions addressing the continuum of HIV care (2007–2017). *AIDS and Behavior*, *22*(1), 43–63. doi: 10.1007/s10461-017-1923-2.

Herbst, J.H., Jacobs, E.D., Finlayson, T.J., McKleroy, V.S., Neumann, M.S., Crepaz, N., and HIV/AIDS Prevention Research Synthesis Team. (2008). Estimating HIV prevalence and risk behaviors of transgender persons in the United States: A systematic review. *AIDS and Behavior*, *12*(1), 1–17. doi: 10.1007/s10461-007-9299-3.

Herek, G.M. (2002). Heterosexuals' attitudes toward bisexual men and women in the United States. *Journal of Sex Research*, 39, 264–274.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 347 of 438 PageID #: 2

———. Hate crimes and stigma-related experiences among sexual minority adults in the United States: Prevalence estimates from a national probability sample. *Journal of Interpersonal Violence*, *24*(1), 54–74. doi: 10.1177/0886260508316477.

Herek, G.M., Gillis, J.R., and Cogan, J.C. (1999). Psychological sequelae of hate crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology*, *67*, 945–951.

Heron, M. (2019). Deaths: Leading causes for 2017. *National Vital Statistics Reports, 68*(6). https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_06-508.pdf.

Hill, B.J., Motley, D.N., Rosentel, K., VandeVusse, A., Garofalo, R., Schneider, J.A., Kuhns, L.M., Kipke, M.D., Reisner, S., Rupp, B.M., Sanchez, M., McCumber, M., Renshaw, L., and Loop, M.S. (2020). An employment intervention program (Work2Prevent) for young men who have sex with men and transgender youth of color (phase 1): Protocol for determining essential intervention components using qualitative interviews and focus groups. *JMIR Research Protocols*, *9*(8), e16384. doi: 10.2196/16384.

HIV Prevention Trials Network. (n.d.). *HPTN 091*. Available: https://www.hptn.org/research/studies/hptn091.

Hoffman, L., Delahanty, J., Johnson, S.E., and Zhao, X. (2018). Sexual and gender minority cigarette smoking disparities: An analysis of 2016 Behavioral Risk Factor Surveillance System data. *Preventive Medicine*, *113*, 109–115. doi: 10.1016/j.ypmed.2018.05.014.

Hottes, T.S., Bogaert, L., Rhodes, A.E., Brennan, D.J., and Gesink, D. (2016). Lifetime prevalence of suicide attempts among sexual minority adults by study sampling strategies: A systematic review and meta-analysis. *American Journal of Public Health*, *106*(5), e1–e12. doi: 10.2105/AJPH.2016.303088.

Hoy-Ellis, C.P., Shiu, C., Sullivan, K.M., Kim, H.J., Sturges, A.M., and Fredriksen-Goldsen, K.I. (2017). Prior military service, identity stigma, and mental health among transgender older adults. *Gerontologist*, *57*(Suppl 1), S63–S71. doi: 10.1093/geront/gnw173.

Hughes, K., Bellis, M.A., Hardcastle, K.A., Sethi, D., Butchart, A., Mikton, C., Jones, L., and Dunne, M.P. (2017). The effect of multiple adverse childhood experiences on health: A systematic review and meta-analysis. *Lancet Public Health*, *2*(8), e356–e366. doi: 10.1016/S2468-2667(17)30118-4.

Hughto, J.M.W., Reisner, S.L., and Pachankis, J.E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science and Medicine, 147*, 222–231. doi: 10.1016/j.socscimed.2015.11.010.

Human Rights Watch. (2017). *"I Want to Be Like Nature Made Me": Medically Unnecessary Surgeries on Intersex Children in the US*. Available: https://www.hrw.org/sites/default/files/report_pdf/lgbtintersex0717_web_0.pdf.

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Committee on Lesbian, Gay, Bisexual, and Transgender Health Issues and Research Gaps and Opportunities. Washington, DC: The National Academies Press. Available: http://www.ncbi.nlm.nih.gov/books/NBK64806/.

Irwig, M.S. (2018). Cardiovascular health in transgender people. *Reviews in Endocrine and Metabolic Disorders*, *19*(3), 243–251. doi: 10.1007/s11154-018-9454-3.

Isasi, C.R., Parrinello, C.M., Jung, M.M., Carnethon, M.R., Birnbaum-Weitzman, O., Espinoza, R.A., Penedo, F.J., Perreira, K.M., Schneiderman, N., Sotres-Alvarez, D., Van Horn, L., and Gallo, L.C. (2015). Psychosocial stress is associated with obesity and diet quality in Hispanic/Latino adults. *Annals of Epidemiology*, *25*(2), 84–89. doi: 10.1016/j.annepidem.2014.11.002.

Jackman, K., Honig, J., and Bockting, W. (2016). Nonsuicidal self-injury among lesbian, gay, bisexual and transgender populations: An integrative review. *Journal of Clinical Nursing*, *25*(23–24), 3438–3453. doi: 10.1111/jocn.13236.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations

Jamal, A., Phillips, E., Gentzke, A.S., Homa, D.M., Babb, S.D., King, B.A., and Neff, L.J. (2018). Current cigarette smoking among adults—United States, 2016. *Morbidity and Mortality Weekly Report*, *67*(2), 53–59. doi: 15585/mmwr.mm6702a1.

James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L., and Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. Washington, DC: National Center for Transgender Equality. Available: https://www.transequality.org/sites/default/files/docs/USTS-Full-Report-FINAL.PDF.

Jannat-Khah, D.P., Dill, L.J., Reynolds, S.A., and Joseph, M.A. (2018). Stress, socializing, and other motivations for smoking among the lesbian, gay, bisexual, transgender, and queer community in New York City. *American Journal of Health Promotion*, *32*(5), 1178–1186. doi: 10.1177/0890117117694449.

Johns, M.M., Lowry, R., Rasberry, C.N., Dunville, R., Robin, L., Pampati, S., Stone, D.M., and Mercer Kollar, L.M. (2018). Violence victimization, substance use, and suicide risk among sexual minority high school students—United States, 2015–2017. *Morbidity and Mortality Weekly Report*, *67*(43), 1211–1215. doi: 10.15585/mmwr.mm6743a4.

Johns, M.M., Poteat, V.P., Horn, S.S., and Kosciw, J. (2019a). Strengthening our schools to promote resilience and health among LGBTQ youth: Emerging evidence and research priorities from The State of LGBTQ Youth Health and Wellbeing symposium. *LGBT Health*, *6*(4), 146–155. doi: 10.1089/lgbt.2018.0109.

Johns, M.M., Lowry, R., Andrzejewski, J., Barrios, L.C., Demissie, Z., McManus, T., Rasberry, C.N., Robin, L., and Underwood, J.M. (2019b). Transgender identity and experiences of violence victimization, substance use, suicide risk, and sexual risk behaviors among high school students—19 states and large urban school districts, 2017. *Morbidity and Mortality Weekly Report*, *68*(3), 67–71. doi: 10.15585/mmwr.mm6803a3.

Johnson, M.J., Nemeth, L.S., Mueller, M., Eliason, M.J., and Stuart, G.W. (2016). Qualitative study of cervical cancer screening among lesbian and bisexual women and transgender men. *Cancer Nursing*, *39*(6), 455–463. doi: 10.1097/NCC.0000000000000338.

Johnson, S.E., O'Brien, E.K., Coleman, B., Tessman, G.K., Hoffman, L., and Delahanty, J. (2019). Sexual and gender minority U.S. youth tobacco use: Population Assessment of Tobacco and Health (PATH) Study Wave 3, 2015–2016. *American Journal of Preventive Medicine*, *57*(2), 256–261. doi: 10.1016/j.amepre.2019.03.021.

Jones, B.A., Haycraft, E., Bouman, W.P., and Arcelus, J. (2018). The levels and predictors of physical activity engagement within the treatment-seeking transgender population: A matched control study. *Journal of Physical Activity and Health*, *15*(2), 99–107. doi: 10.1123/jpah.2017-0298.

Jun, H.J., Webb-Morgan, M., Felner, J.K., Wisdom, J.P., Haley, S.J., Austin, S.B., Katuska, L.M., and Corliss, H.L. (2019). Sexual orientation and gender identity disparities in substance use disorders during young adulthood in a United States longitudinal cohort. *Drug and Alcohol Dependence*, *205*, 107619. doi: 10.1016/j.drugalcdep.2019.107619.

Kahle, E.M., Veliz, P., McCabe, S.E., and Boyd, C.J. (2019). Functional and structural social support, substance use and sexual orientation from a nationally representative sample of US adults. *Addiction*, *115*(3), 546–558. doi: 10.1111/add.14819.

Kamen, C.S., Alpert, A., Margolies, L., Griggs, J.J., Darbes, L., Smith-Stoner, M., Lytle, M., Poteat, T., Scout, N., and Norton, S.A. (2019). "Treat us with dignity": A qualitative study of the experiences and recommendations of lesbian, gay, bisexual, transgender, and queer (LGBTQ) patients with cancer. *Supportive Care in Cancer*, *27*(7), 2525–2532. doi: 10.1007/s00520-018-4535-0.

Kann, L., Olsen, E.O., McManus, T., Harris, W.A., Shanklin, S.L., Flint, K.H., Queen, B., Lowry, R., Chyen, D., Whittle, L., Thornton, J., Lim, C., Yamakawa, Y., Brener, N., and Zaza, S. (2016). Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9-12—United States and selected sites, 2015. *Morbidity and Mortality Weekly Report Surveillance Summaries, 65*(9), 1–202. doi: 10.15585/mmwr.ss6509a1.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 349 of 438 PageID #: 2

Kanny, D., Jeffries, W.L., 4th, Chapin-Bardales, J., Denning, P., Cha, S., Finlayson, T., Wejnert, C., and National HIV Behavioral Surveillance Study Group. (2019). Racial/ethnic disparities in HIV preexposure prophylaxis among men who have sex with men—23 urban areas, 2017. *Morbidity and Mortality Weekly Report*, *68*(37), 801–806. doi: 10.15585/mmwr.mm6837a2.

Katz-Wise, S., and Hyde, J. (2012). Victimization experiences of lesbian, gay, and bisexual individuals: A meta-analysis. *Journal of Sex Research*, *49*(2/3), 142–167. doi: 10.1080/00224499.2011.637247.

Katz-Wise, S.L., Mereish, E.H., and Woulfe, J. (2017). Associations of bisexual-specific minority stress and health among cisgender and transgender adults with bisexual orientation. *Journal of Sex Research*, *54*(7), 899–910. doi: 10.1080/00224499.2016.1236181.

Katz-Wise, S.L., Rosario, M., and Tsappis, M. (2016). Lesbian, gay, bisexual, and transgender youth and family acceptance. *Pediatric Clinics of North America*, *63*(6), 1011–1025. doi: 10.1016/j.pcl.2016.07.005.

Kent, E.E., Wheldon, C.W., Smith, A.W., Srinivasan, S., and Geiger, A.M. (2019). Care delivery, patient experiences, and health outcomes among sexual and gender minority patients with cancer and survivors: A scoping review. *Cancer, 125*(24), 4371–4379. doi: 10.1002/cncr.32388.

Kerckhof, M.E., Kreukels, B., Nieder, T.O., Becker-Hébly, I., van de Grift, T.C., Staphorsius, A.S., Köhler, A., Heylens, G., and Elaut, E. (2019). Prevalence of sexual dysfunctions in transgender persons: Results from the ENIGI Follow-Up Study. *Journal of Sexual Medicine*, *16*(12), 2018–2029. doi: 10.1016/j.jsxm.2019.09.003.

Kerridge, B.T., Pickering, R.P., Saha, T.D., Ruan, W.J., Chou, S.P., Zhang, H., Jung, J., and Hasin, D.S. (2017). Prevalence, sociodemographic correlates and DSM-5 substance use disorders and other psychiatric disorders among sexual minorities in the United States. *Drug and Alcohol Dependence*, *170*, 82–92. doi: 10.1016/j.drugalcdep.2016.10.038.

Kidd, J.D., Jackman, K.B., Wolff, M., Veldhuis, C.B., and Hughes, T.L. (2018). Risk and protective factors for substance use among sexual and gender minority youth: A scoping review. *Current Addiction Reports*, *5*(2), 158–173. doi: 10.1007/s40429-018-0196-9.

Kidd, J.D., Levin, F.R., Dolezal, C., Hughes, T.L., and Bockting, W.O. (2019). Understanding predictors of improvement in risky drinking in a U.S. multi-site, longitudinal cohort study of transgender individuals: Implications for culturally-tailored prevention and treatment efforts. *Addictive Behaviors*, *96*, 68–75. doi: 10.1016/j.addbeh.2019.04.017.

Kidd, S.A., Howison, M., Pilling, M., Ross, L.E., and McKenzie, K. (2016). Severe mental illness in LGBT populations: A scoping review. *Psychiatric Services, 67*(7), 779–783. doi: 10.1176/appi.ps.201500209.

Kim, H.J., Jen, S., and Fredriksen-Goldsen, K.I. (2017). Race/ethnicity and health-related quality of life among LGBT older adults. *Gerontologist*, *57*(Suppl 1), S30–S39. doi: 10.1093/geront/gnw172.

Kirmayer, L.J., Gone, J.P., and Moses, J. (2014). Rethinking historical trauma. *Transcultural Psychiatry*, *51*(3), 299–319. doi: 10.1177/1363461514536358.

Klein, A., and Golub, S.A. (2016). Family rejection as a predictor of suicide attempts and substance misuse among transgender and gender nonconforming adults. *LGBT Health*, *3*(3), 193–199. doi: 10.1089/lgbt.2015.0111.

Klemmer, C.L., Rusow, J., Goldbach, J., Kattari, S.K., and Rice, E. (2019). Socially assigned gender nonconformity and school violence experience among transgender and cisgender adolescents. *Journal of Interpersonal Violence*. doi: 10.1177/0886260519844781.

Knudson, G., and De Sutter, P. (2017). Fertility options in transgender and gender diverse adolescents. *Acta Obstetricia et Gynecologica Scandinavica*, *96*(10), 1269–1272. doi: 10.1111/aogs.13188.

Kosciw, J.G., Greytak, E.A., Zongrone, A.D., Clark, C.M., and Truong, N.L. (2018). *The 2017 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual, Transgender, and Queer Youth in Our Nation's Schools*. New York: GLSEN.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 350 of 438 PageID #: 2

Krege, S., Eckoldt, F., Richter-Unruh, A., Kohler, B., Leuschner, I., Mentzel, H.J., Moss, A., Schweizer, K., Stein, R., Werner-Rosen, K., Wieacker, P., Wiesemann, C., Wünsch, L., and Richter-Appelt, H. (2019). Variations of sex development: The first German interdisciplinary consensus paper. *Journal of Pediatric Urology*, *15*(2), 114–123. doi: 10.1016/j.jpurol.2018.10.008.

Kreukels, B.P.C., Cohen-Kettenis, P.T., Roehle, R., van de Grift, T.C., Slowikowska-Hilczer, J., Claahsen van der Grinten, H., Lindén Hirschberg, A., de Vries, A., Reisch, N., Bouvattier, C., Nordenström, A., Thyen, U., Köhler, B., and on behalf of the dsd-LIFE Group. (2019). Sexuality in adults with differences/disorders of sex development (DSD): Findings from the dsd-LIFE Study. *Journal of Sex and Marital Therapy*, *45*(8), 688–705. doi: 10.1080/0092623X.2019.1610123.

Krueger, E.A., Fish, J.N., and Upchurch, D.M. (2020). Sexual orientation disparities in substance use: Investigating social stress mechanisms in a national sample. *American Journal of Preventive Medicine, 58*(1), 59–68. doi: 10.1016/j.amepre.2019.08.034.

Lagos, D. (2018). Looking at population health beyond "male" and "female": Implications of transgender identity and gender nonconformity for population health. *Demography*. doi: 10.1007/s13524-018-0714-3.

Lancet HIV. (2017). U=U taking off in 2017. *Lancet HIV*, *4*(11), e475. doi: 10.1016/S2352-3018(17)30183-2.

Langenderfer-Magruder, L., Walls, N.E., Kattari, S.K., Whitfield, D.L., and Ramos, D. (2016). Sexual victimization and subsequent police reporting by gender identity among lesbian, gay, bisexual, transgender, and queer adults. *Violence and Victims, 31*(2), 320–331. doi: 10.1891/0886-6708.VV-D-14-00082.

Laska, M.N., VanKim, N.A., Erickson, D.J., Lust, K., Eisenberg, M.E., and Rosser, B.R.S. (2015). Disparities in weight and weight behaviors by sexual orientation in college students. *American Journal of Public Health*, *105*(1), 111–121. doi: 10.2105/AJPH.2014.302094.

Lee, G.L., Griffin, G.K., and Melvin, C.L. (2009). Tobacco use among sexual minorities in the USA: 1987 to May 2007: A systematic review. *Tobacco Control, 18*, 275–282.

Lee, P.A., Nordenström, A., Houk, C.P., Ahmed, S.F., Auchus, R., Baratz Dalke, K., Liao, L-M., Lin-Su, K., Looijenga, L.H.J., Mazu, T., Meyer-Bahlburg, H.F.L., Mouriquand, P., Quigley, C.A., Sandberg, D.E, Vilain, E., Witchel, S., and the Global DSD Update Consortium. (2016). Global disorders of sex development update since 2006: Perceptions, approach and care. *Hormone Research in Paediatrics, 85*, 158–180. doi: 10.1159/000442975.

Lefevor, G.T., Boyd-Rogers, C.C., Sprague, B.M., and Janis, R.A. (2019). Health disparities between genderqueer, transgender, and cisgender individuals: An extension of minority stress theory. *Journal of Counseling Psychology*, *66*(4), 385–395. doi: 10.1037/cou0000339.

Lett, E., Dowshen, N.L., and Baker, K.E. (2020). Intersectionality and health inequities for gender minority blacks in the U.S. *American Journal of Preventive Medicine*. doi: 10.1016/j.amepre.2020.04.013.

Levy, B.L., and Levy, D.L. (2017). When love meets hate: The relationship between state policies on gay and lesbian rights and hate crime incidence. *Social Science Research*, *61*, 142–159. doi: 10.1016/j.ssresearch.2016.06.008.

Light, A., Wang, L.-F., Zeymo, A., and Gomez-Lobo, V. (2018). Family planning and contraception use in transgender men. *Contraception*, *98*(4), 266–269. doi: 10.1016/j.contraception.2018.06.006.

Lisy, K., Peters, M., Schofield, P., and Jefford, M. (2018). Experiences and unmet needs of lesbian, gay, and bisexual people with cancer care: A systematic review and meta-synthesis. *Psycho-oncology*, *27*(6), 1480–1489. doi: 10.1002/pon.4674.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 351 of 438 PageID #: 2

Liu, R.T., and Mustanski, B. (2012). Suicidal ideation and self-harm in lesbian, gay, bisexual, and transgender youth. *American Journal of Preventive Medicine, 43*(3), 221–228. doi: 10.1016/j.amepre.2011.023.

Logie, C.H., Lacombe-Duncan, A., Weaver, J., Navia, D., and Este, D. (2015). A pilot study of a group-based HIV and STI prevention intervention for lesbian, bisexual, queer, and other women who have sex with women in Canada. *AIDS Patient Care and STDs*, *29*(6), 321–328. doi: 10.1089/apc.2014.0355.

Lorimer, K., Kidd, L., Lawrence, M., McPherson, K., Cayless, S., and Cornish, F. (2013). Systematic review of reviews of behavioural HIV prevention interventions among men who have sex with men. *AIDS Care*, *25*(2), 133–150. doi: 10.1080/09540121.2012.699672.

Los, E., Quezada, E., Chen, Z., Lapidus, J., and Silberbach, M. (2016). Pilot study of blood pressure in girls with Turner syndrome: An awareness gap, clinical associations, and new hypotheses. *Hypertension*, *68*(1), 133–136. doi: 10.1161/HYPERTENSIONAHA.115.07065.

Lowry, R., Johns, M.M., Robin, L.E., and Kann, L.K. (2017). Social stress and substance use disparities by sexual orientation among high school students. *American Journal of Preventive Medicine*, *53*(4), 547–558. doi: 10.1016/j.amepre.2017.06.011.

Lowry, R., Johns, M.M., Gordon, A.R., Austin, S.B., Robin L.E., and Kann, L.K. (2018). Nonconforming gender expression and associated mental distress and substance use among high school students. *JAMA Pediatrics, 172*(11), 1020–1028. doi: 10.1001/jamapediatrics.2018.2140.

Lucassen, M.F., Merry, S.N., Hatcher, S., and Frampton, C.M. (2015). Rainbow SPARX: A novel approach to addressing depression in sexual minority youth. *Cognitive and Behavioral Practice, 22*(2), 203–216.

Lunn, M.R., Cui, W., Zack, M.M., Thompson, W.W., Blank, M.B., and Yehia, B.R. (2017). Sociodemographic characteristics and health outcomes among lesbian, gay, and bisexual U.S. adults using Healthy People 2020: Leading health indicators. *LGBT Health, 4*(4), 283–294. doi: 10.1089/lgbt.2016.0087.

Lytle, M.C., De Luca, S.M., and Blosnich, J.R. (2014). The influence of intersecting identities on self-harm, suicidal behaviors, and depression among lesbian, gay, and bisexual individuals. *Suicide and Life-Threatening Behavior*, *44*(4), 384–391.

Malone, J., Snguon, S., Dean, L.T., Adams, M.A., and Poteat, T. (2019). Breast cancer screening and care among Black sexual minority women: A scoping review of the literature from 1990 to 2017. *Journal of Women's Health*, *28*(12), 1650–1660. doi: 10.1089/jwh.2018.7127.

Margolies, L., and Goeren, B. (n.d.). *Anal Cancer, HIV and Gay/Bisexual Men*. National LGBT Cancer Network. Available: https://cancer-network.org/cancer-information/gay-men-and-cancer/anal-cancer-hiv-and-gaybisexual-men/.

Marmot, M., Friel, S., Bell, R., Houweling, T.A., and Taylor, S. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. *Lancet*, *372*(9650), 1661–1669. doi: 10.1016/S0140-6736(08)61690-6.

Marshall, E., Claes, L., Bouman, W.P., Witcomb, G.L., and Arcelus, J. (2015). Non-suicidal self-injury and suicidality in trans people: A systematic review of the literature. *International Review of Psychiatry, 28*(1), 58–69. doi: 10.3109/09540261.2015.1073143.

Marx, R.A., and Kettrey, H.H. (2016). Gay-straight alliances are associated with lower levels of school-based victimization of LGBTQ+ youth: A systematic review and meta-analysis. *Journal of Youth and Adolescence,* 45(7), 1269–1282. doi: 10.1007/s10964-016-0501-7.

Matarazzo, B.B., Barnes, S.M., Pease, J.L., Russell, L.M., Hanson, J.E., Soberay, K.A., and Gutierrez, P.M. (2014). Suicide risk among lesbian, gay, bisexual, and transgender military personnel and veterans: What does the literature tell us? *Suicide and Life-Threatening Behavior*, *44*(2), 200–217.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 352 of 438 PageID #: 2

Matsuno, E., and Israel, T. (2018). Psychological interventions promoting resilience among transgender individuals: Transgender resilience intervention model (TRIM). *Counseling Psychologist, 46*(5), 632–655. doi: 10.1177/0011000018787261.

Matthews, A.K., Steffen, A.D., Kuhns, L.M., Ruiz, R.A., Ross, N.A., Burke, L.A., Li, C.C., and King, A.C. (2019). Evaluation of a randomized clinical trial comparing the effectiveness of a culturally targeted and nontargeted smoking cessation intervention for lesbian, gay, bisexual, and transgender smokers. *Nicotine and Tobacco Research*, *21*(11), 1506–1516. doi: 10.1093/ntr/nty184.

Mattson, R.A. (2018). Hate crimes against LGBTQ communities and persons. In D. Neacsu and D.B. Hold (Eds.), *Sexual Orientation, Gender Identities, and the Law: A Research Bibliography, 2006–2016*. Getzville, NY: William S. Hein & Co.

McCabe, S.E., West, B.T., Hughes, T.L., and Boyd, C.J. (2013). Sexual orientation and substance abuse treatment utilization in the United States: Results from a national survey. *Journal of Substance Abuse Treatment, 44*(1), 4–12. doi: 10.1016/j.jsat.2012.01.007.

McCabe, S.E., Hughes, T.L., Matthews, A.K., Lee, J., West, B.T., Boyd, C.J., and Arslanian-Engoren, C. (2019a). Sexual orientation discrimination and tobacco use disparities in the United States. *Nicotine and Tobacco Research*, *21*(4), 523–531. doi: 10.1093/ntr/ntx283.

McCabe, S.E., Hughes, T.L., West, B.T., Veliz, P., and Boyd, C.J. (2019b). DSM-5 alcohol use disorder severity as a function of sexual orientation discrimination: A national study. *Alcoholism: Clinical and Experimental Research, 43*(3), 497–508. doi: 10.1111/acer.13960.

McClain, Z., and Peebles, R. (2016). Body image and eating disorders among lesbian, gay, bisexual, and transgender youth. *Pediatric Clinics of North America*, *63*(6), 1079–1090.

McDonagh, L.K., Bishop, C.J., Brockman, M., and Morrison, T.G. (2014). A systematic review of sexual dysfunction measures for gay men: How do current measures measure up? *Journal of Homosexuality*, *61*(6), 781–816. doi: 10.1080/00918369.2014.870452.

McDowell, M., Pardee, D.J., Peitzmeier, S., Reisner, S.L., Agénor, M., Alizaga, N., Bernstein, I., and Potter, J. (2017). Cervical cancer screening preferences among trans-masculine individuals: Patient-collected human papillomavirus vaginal swabs versus provider-administered pap tests. *LGBT Health*, *4*(4), 252–259. doi: 10.1089/lgbt.2016.0187.

McGeough, B.L., and Sterzing, P.R. (2018). A systematic review of family victimization experiences among sexual minority youth. *Journal of Primary Prevention, 39*(5), 491–528. doi: 10.1007/s10935-018-0523-x.

McLaughlin, K.A., Hatzenbuehler, M.L., Xuan, Z., and Conron, K.J. (2012). Disproportionate exposure to early-life adversity and sexual orientation disparities in psychiatric morbidity. *Child Abuse and Neglect, 36*(9), 645–655. doi: 10.1016/j.chiabu.2012.07.004.

McNulty, A., and Bourne, C. (2017). Transgender HIV and sexually transmissible infections. *Sexual Health*, *14*(5), 451–455. doi: 10.1071/SH17050.

Meads, C., Martin, A., Grierson, J., and Varney, J. (2018). Systematic review and meta-analysis of diabetes mellitus, cardiovascular and respiratory condition epidemiology in sexual minority women. *BMJ Open*, *8*(4), e020776. doi: 10.1136/bmjopen-2017-020776.

Meckler, G.D., Elliott, M.N., Kanouse, D.E., Beals, K.P., and Schuster, M.A. (2006). Nondisclosure of sexual orientation to a physician among a sample of gay, lesbian, and bisexual youth. *Archives of Pediatrics and Adolescent Medicine, 160*, 1248.

Medical Care Criteria Committee, and Brown, G. (2020). *Screening for Anal Dysplasia and Cancer in Patients with HIV*. Clinical Guidelines Program. Available: https://www.hivguidelines.org/hiv-care/anal-dysplasia-cancer/#tab_3.

Menino, D.D., Katz-Wise, S.L., Vetters, R., and Reisner, S.L. (2018). Associations between the length of time from transgender identity recognition to hormone initiation and smoking among transgender youth and young adults. *Transgender Health*, 3(1), 82–87. doi: 10.1089/trgh.2018.0002.

Mereish, E.H. (2019). Substance use and misuse among sexual and gender minority youth. *Current Opinion in Psychology,* 30, 123–127. doi: 10.1016/j.copsyc.2019.05.002.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 353 of 438 PageID #: 2

Mereish, E.H., and Poteat, V.P. (2015). Let's get physical: Sexual orientation disparities in physical activity, sports involvement, and obesity among a population-based sample of adolescents. *American Journal of Public Health, 105,* 1842–1848. doi: 10.2105/AJPH.2015.302682.

Mereish, E.H., Goldbach, J.T., Burgess, C., and DiBello, A.M. (2017). Sexual orientation, minority stress, social norms, and substance use among racially diverse adolescents. *Drug and Alcohol Dependence*, *178*, 49–56. doi: 10.1016/j.drugalcdep.2017.04.013.

Merrick, M.T., Ford, D.C., Ports, K.A., and Guinn, A.S. (2018). Prevalence of adverse childhood experiences from the 2011–2014 Behavioral Risk Factor Surveillance System in 23 states. *JAMA Pediatrics, 172*(11), 1038–1044. doi: 10.1001/jamapediatrics.2018.2537.

Meyer, I.H., Brown, T.N.T., Herman, J.L., Reisner, S.L., and Bockting, W.O. (2017). Demographic characteristics and health status of transgender adults in select US regions: Behavioral Risk Factor Surveillance System, 2014. *American Journal of Public Health*, e1–e8. doi: 10.2105/AJPH.2016.303648.

Meyer, I.H., Luo, F., Wilson, B.D.M., and Stone, D.M. (2019). Sexual orientation enumeration in state antibullying statutes in the United States: Associations with bullying, suicidal ideation, and suicide attempts among youth. *LGBT Health*, *6*(1), 9–14. doi: 10.1089/lgbt.2018.0194.

Meyer-Bahlburg, H.F., Reyes-Portillo, J.A., Khuri, J., Ehrhardt, A.A., and New, M.I. (2017a). Syndrome-related stigma in the general social environment as reported by women with classical congenital adrenal hyperplasia. *Archives of Sexual Behavior*, *46*(2), 341–351. doi: 10.1007/s10508-016-0862-8.

Meyer-Bahlburg, H.F.L., Khuri, J., Reyes-Portillo, J., and New, M.I. (2017b). Stigma in medical settings as reported retrospectively by women with congenital adrenal hyperplasia (CAH) for their childhood and adolescence. *Journal of Pediatric Psychology, 2*(5), 496–503. doi: 10.1093/jpepsy/jsw034.

Meyer-Bahlburg, H.F.L., Khuri, J., Reyes-Portillo, J., Ehrhardt, A.A., and New, M.I. (2018). Stigma associated with classical congenital adrenal hyperplasia in women's sexual lives. *Archives of Sexual Behavior, 47*(4), 943–951.

Mills, C.E. (2019). Gay visibility and disorganized and strained communities: A community-level analysis of anti-gay hate crime in New York City. *Journal of Interpersonal Violence*. doi: 10.1177/0886260519848784.

Mimiaga, M.J., Thomas, B., Mayer, K.H., Regenauer, K.S., Dange, A., Andres Bedoya, C., Rawat, S., Balu, V., O'Cleirigh, C., Biello, K., Anand, V., Swaminathan, S., and Safren, S.A. (2018). A randomized clinical efficacy trial of a psychosocial intervention to strengthen self-acceptance and reduce HIV risk for MSM in India: Study protocol. *BMC Public Health*, *18*(1), 890–890. doi: 10.1186/s12889-018-5838-2.

Mimiaga, M.J., Hughto, J.M.W., Biello, K.B., Santostefano, C.M., Kuhns, L.M., Reisner, S.L., and Garofalo, R. (2019a). Longitudinal analysis of syndemic psychosocial problems predicting HIV risk behavior among a multicity prospective cohort of sexually active young transgender women in the United States. *Journal of Acquired Immune Deficiency Syndromes, 81*(2), 184–192. doi: 10.1097/QAI.0000000000002009.

Mimiaga, M.J., Pantalone, D.W., Biello, K.B., Hughto, J., Frank, J., O'Cleirigh, C., Reisner, S. L., Restar, A., Mayer, K.H., and Safren, S.A. (2019b). An initial randomized controlled trial of behavioral activation for treatment of concurrent crystal methamphetamine dependence and sexual risk for HIV acquisition among men who have sex with men. *AIDS Care*, *31*(9), 1083–1095. doi: 10.1080/09540121.2019.1595518.

Miranda-Mendizábal, A., Castellví, P., Parés-Badell, O., Almenara, J., Alonso, I., Biasco, M.J., Cebrià, A., Gabilondo, A., Gili, M., Lagares, C., Piqueras, J.A., Roca, M., Rodriguez-Marin, J., Rodriquez-Jiménez, T., Soto-Sanz, V., Vilagut, G., and Alonso, J. (2017). Sexual orientation and suicidal behavior in adolescents and young adults: Systematic review and meta-analysis. *British Journal of Psychiatry, 211*(2), 77–87. doi: 10.1192/bjp.bp.116.196345.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 354 of 438 PageID #: 2

Mooij, C.F., Webb, E.A., Claahsen van der Grinten, H.L., and Krone, N. (2017). Cardiovascular health, growth and gonadal function in children and adolescents with congenital adrenal hyperplasia. *Archives of Disease in Childhood*, *102*(6), 578–584. doi: 10.1136/archdischild-2016-311910.

Morris, M., Cooper, R.L., Ramesh, A., Tabatabai, M., Arcury, T.A., Shinn, M., Im, W., Juarez, P., and Matthews-Juarez, P. (2019). Training to reduce LGBTQ-related bias among medical, nursing, and dental students and providers: A systematic review. *BMC Medical Education*, *19*(1), 325. doi: 10.1186/s12909-019-1727-3.

Movement Advancement Project. (2020). *Gay/Trans Panic Defense Laws*. Available: https://www.lgbtmap.org/img/maps/citations-panic-defense-bans.pdf.

Mueller, S.C., De Cuypere, G., and T'Sjoen, G. (2017). Transgender research in the 21st century: A selective critical review from a neurocognitive perspective. *American Journal of Psychiatry*, *174*(12), 1155–1162. doi: 10.1176/appi.ajp.2017.17060626.

Mulick, P.S., and Wright, L.W. (2011). The biphobia scale a decade later: Reflections and additions. *Journal of Bisexuality, 11*, 453–457.

Mustanski, B., Phillips, G. Ryan, D.T., Swann, G., Kuhns, L., and Garofalo, R. (2017). Prospective effects of a syndemic on HIV and STI incidence and risk behaviors in a cohort of young men who have sex with men. *AIDS and Behavior, 21*(3), 845–857. doi: 10.1007/s10461-016-1607-3.

Myers, S.C., and Safer, J.D. (2017). Increased rates of smoking cessation observed among transgender women receiving hormone treatment. *Endocrine Practice*, *23*(1), 32–36. doi: 10.4158/EP161438.OR.

Newcomb, M.E., Hill, R., Buehler, K., Ryan, D.T., Whitton, S.W., and Mustanski, B. (2019). High burden of mental health problems, substance use, violence, and related psychosocial factors in transgender, non-binary, and gender diverse youth and young adults. *Archives of Sexual Behavior.* doi: 10.1007/s10508-019-01533-9.

Nguyen, L.H., Tran, B.X., Rocha, L., Nguyen, H., Yang, C., Latkin, C.A., Thorson, A., and Strömdahl, S. (2019). A systematic review of ehealth interventions addressing HIV/STI prevention among men who have sex with men. *AIDS and Behavior*, *23*(9), 2253–2272. doi: 10.1007/s10461-019-02626-1.

Niolon, P.H., Kearns, M., Dills, J., Rambo, K., Irving, S., Armstead, T., and Gilbert, L. (2017). *Preventing Intimate Partner Violence Across the Lifespan: A Technical Package of Programs, Policies, and Practices*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Available: https://www.cdc.gov/violenceprevention/pdf/ipV-technicalpackages.pdf.

Nuttbrock, L., Bockting, W., Rosenblum, A., Hwahng, S., Mason, M., Macri, M., and Becker, J. (2014). Gender abuse, depressive symptoms, and substance use among transgender women: A 3-year prospective study. *American Journal of Public Health, 104*(11), 2199–2206. doi: 10.2105/AJPH.2014.302106.

Nuttbrock, L., Bockting, W., Rosenblum, A., Hwahng, S., Mason, M., Macri, M., and Becker, J. (2015). Gender abuse and incident HIV/STI among transgender women in New York City: Buffering effect of involvement in a transgender community. *AIDS and Behavior, 19*(8), 1446–1453. doi: 10.1007/s10461-014-0977-7.

Nyamathi, A., Reback, C.J., Shoptaw, S., Salem, B.E., Zhang, S., and Yadav, K. (2017). Impact of tailored interventions to reduce drug use and sexual risk behaviors among homeless gay and bisexual men. *American Journal of Men's Health*, *11*(2), 208–220. doi: 10.1177/1557988315590837.

O'Cleirigh, C., Safren, S.A., Taylor, S.W., Goshe, B.M., Bedoya, C.A., Marquez, S.M., Boroughs, M.S., and Shipherd, J.C. (2019). Cognitive behavioral therapy for trauma and self-care (CBT-TSC) in men who have sex with men with a history of childhood sexual abuse: A randomized controlled trial. *AIDS and Behavior*, *23*(9), 2421–2431. doi: 10.1007/s10461-019-02482-z.

Copyright National Academy of Sciences. All rights reserved.

Olsen, E.O., Vivolo-Kantor, A., and Kann, L. (2017). Physical and sexual teen dating violence victimization and sexual identity among U.S. high school students, 2015. *Journal of Interpersonal Violence*. doi: 10.1177/0886260517708757.

Operario, D., Gamarel, K.E., Grin, B.M., Lee, J.H., Kahler, C.W., Marshall, B.D., van den Berg, J., and Zaller, N.D. (2015). Sexual minority health disparities in adult men and women in the United States: National Health and Nutrition Examination Survey, 2001–2010. *American Journal of Public Health, 105*(10), e27–e34. doi: 10.2105/ajph.2015.302762.

Operario, D., Gamarel, K.E., Iwamoto, M., Suzuki, S., Suico, S., Darbes, L., and Nemoto, T. (2017). Couples-focused prevention program to reduce HIV risk among transgender women and their primary male partners: Feasibility and promise of the Couples HIV Intervention Program. *AIDS and Behavior*, *21*(8), 2452–2463. doi: 10.1007/s10461-016-1462-2.

Owen, B.N., Baggaley, R.F., Maheu-Giroux, M., Elmes, J., Adimora, A.A., Ramirez, C., Edmonds, A., Sosanya, K., Taylor, T., Plankey, M., Cederbaum, J., Seidman, D., Weber, K.M., Golub, E.T., Sheth, A.N., Bolivar, H., Konkle-Parker, D., and Boily, M.-C. (2020). Patterns and trajectories of anal intercourse practice over the life course among US women at risk of HIV. *Journal of Sexual Medicine*, *17*(9), 1629–1642. doi: 10.1016/j.jsxm.2020.06.007.

Pachankis, J.E., McConocha, E.M., Reynolds, J.S., Winston, R., Adeyinka, O., Harkness, A., Burton, C.L., Behari, K., Sullivan, T.J., Eldahan, A.I., Esserman, D.A., Hatzenbuehler, M.L., and Safren, S.A. (2019). Project ESTEEM protocol: A randomized controlled trial of an LGBTQ-affirmative treatment for young adult sexual minority men's mental and sexual health. *BMC Public Health*, *19*(1), 1086. doi: 10.1186/s12889-019-7346-4.

Parabiaghi, A., Bonetto, C., Ruggeri, M., Lasalvia, A., and Leese, M. (2006). Severe and persistent mental illness: A useful definition for prioritizing community-based mental health service interventions. *Social Psychiatry and Psychiatric Epidemiology, 41*(6), 457–463.

Parsons, J.T., Lelutiu-Weinberger, C., Botsko, M., and Golub, S.A. (2014). A randomized controlled trial utilizing motivational interviewing to reduce HIV risk and drug use in young gay and bisexual men. *Journal of Consulting and Clinical Psychology*, *82*(1), 9–18. doi: 10.1037/a0035311.

Pascoe, E.A., and Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin*, *135*(4), 531–554. doi: 10.1037/a0016059.

Patterson, C.J., and Potter, E.C. (2019). Sexual orientation and sleep difficulties: A review of research. *Sleep Health*, *5*, 227–235.

Patterson, C.J., Tate, D.P., Sumontha, J., and Xu, R. (2018). Sleep difficulties among sexual minority adults: Associations with family relationship problems. *Psychology of Sexual Orientation and Gender Diversity*, *5*, 109–116.

Peitzmeier, S.M., Hughto, J.M.W., Potter, J., Deutsch, M.B., and Reisner, S.L. (2019). Development of a novel tool to assess intimate partner violence against transgender individuals. *Journal of Interpersonal Violence, 34*(11), 2376–2397. doi: 10.1177/0886260519827660.

Peitzmeier, S.M., Malik, M., Kattari, S.K., Marrow, E., Stephenson, R., Agénor, M., and Reisner, S.L. (2020). Intimate partner violence in transgender populations: Systematic review and meta-analysis of prevalence and correlates. *American Journal of Public Health*, *110*(9), e1–e14. doi: 10.2105/AJPH.2020.305774.

Perez-Brumer, A., Day, J.K., Russell, S.T., and Hatzenbuehler, M.L. (2017). Prevalence and correlates of suicidal ideation among transgender youth in California: Findings from a representative, population-based sample of high school students. *Journal of the American Academy of Child and Adolescent Psychiatry, 56*(9), 739–746. doi: 10.1016/j.jaac.2017.06.010.

Phillips, I.G., Turner, B., Felt, D., Han, Y., Marro, R., and Beach, L.B. (2019). Trends in alcohol use behaviors by sexual identity and behavior among high school students, 2007–2017. *Journal of Adolescent Health, 65*(6), 760–768. doi: 10.1016/j.jadohealth.2019.06.007.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 356 of 438 PageID #: 2

Plöderi, M., and Tremblay, P. (2015). Mental health of sexual minorities. A systematic review. *International Review of Psychiatry*, *27*(5), 367–85. doi: 10.3109/09540261.2015.1083949.

Pompili, M., Lester, D., Forte, A., Seretti, M. E., Erbuto, D., Lamis, D. A., and Girardi, P. (2014). Bisexuality and suicide: A systematic review of the current literature. *Journal of Sexual Medicine, 11*(8), 1903–1913.

Porsch, L.M., Zhang, H., Dayananda, I., and Dean, G. (2019). Comparing receipt of cervical cancer screening and completion of human papillomavirus vaccination using a new construct of sexual orientation: A serial cross-sectional study. *LGBT Health*, *6*(4), 184–191. doi: 10.1089/lgbt.2018.0196.

Poteat, T., Scheim, A., Xavier, J., Reisner, S., and Baral, S. (2016). Global epidemiology of HIV infection and related syndemics affecting transgender people. *Journal of Acquired Immune Deficiency Syndromes*, *72*(Suppl 3), S210–S219. doi: 10.1097/QAI.0000000000001087.

Poteat, T., Malik, M., Scheim, A., and Elliott, A. (2017). HIV prevention among transgender populations: Knowledge gaps and evidence for action. *Current HIV/AIDS Reports*, *14*(4), 141–152. doi: 10.1007/s11904-017-0360-1.

Poteat, T., Wirtz, A., Malik, M., Cooney, E., Cannon, C., Hardy, W.D., Arrington-Sanders, R., Lujan, M., and Yamanis, T. (2019). A gap between willingness and uptake: Findings from mixed methods research on HIV prevention among black and Latina transgender women. *Journal of Acquired Immune Deficiency Syndrome*, *82*(2), 131–140. doi: 10.1097/qai.0000000000002112.

Poteat, V.P., Birkett, M., Turner, B., Wang, X., and Phillips, G.J. (2020). Changes in victimization risk and disparities for heterosexual and sexual minority youth: Trends from 2009 to 2017. *Journal of Adolescent Health,* 66(2), 202–209. doi: 10.1016/j.jadohealth.2019.08.009.

Poteat, V.P., Calzo, J.P., and Yoshikawa, H. (2016). Promoting youth agency through dimensions of gay-straight alliance involvement and conditions that maximize associations. *Journal of Youth and Adolescence*, *45*(7), 1438–1451. doi: 10.1007/s10964-016-0421-6.

Potter, E., and Patterson, C. (2019). Health-related quality of life among lesbian, gay and bisexual adults: The burden of health disparities in 2016 BRFSS data. *LGBT Health*, *6*, 357–369.

Pratt-Chapman, M.L., and Ward, A.R. (2020). Provider recommendations are associated with cancer screening of transgender and gender-nonconforming people: A cross-sectional urban survey. *Transgender Health*, *5*(2), 80–85. doi: 10.1089/trgh.2019.0083.

Pyle, L.C., and Nathanson, K.L. (2017). A practical guide for evaluating gonadal germ cell tumor predisposition in differences of sex development. *American Journal of Medical Genetics*, *175*(2), 304–314. doi: 10.1002/ajmg.c.31562.

Quinn, G.P., Sanchez, J.A., Sutton, S.K., Vadaparampil, S.T., Nguyen, G.T., Green, B.L., Kanetsky, P.A., and Schabath, M.B. (2015). Cancer and lesbian, gay, bisexual, transgender/ transsexual, and queer/questioning (LGBTQ) populations. *CA: A Cancer Journal for Clinicians*, *65*(5), 384–400.

Quinn, V.P., Nash, R., Hunkeler, E., Contreras, R., Cromwell, L., Becerra-Culqui, T.A., Getahun, D., Giammattei, S., Lash, T.L., Millman, A., Robinson, B., Roblin, D., Silverberg, M., Slovis, J., Tangpricha, V., Tolsma, D., Valentine, C., Ward, K., Winter, S., and Goodman, M. (2017). Cohort profile: Study of Transition, Outcomes and Gender (STRONG) to assess health status of transgender people. *BMJ Open*, *7*(12), e018121. doi: 10.1136/bmjopen-2017-018121.

Raifman, J., Moscoe, E., Austin, S.B., and McConnell, M. (2017). Difference-in-differences analysis of the association between state same-sex marriage policies and adolescent suicide attempts [Published corrections appear in *JAMA Pediatrics*, *171*(4), 399 and in *JAMA Pediatrics*, *171*(6), 602.] *JAMA Pediatrics*, *171*(4), 350–356.

Copyright National Academy of Sciences. All rights reserved.

Rapp, M., Mueller-Godeffroy, E., Lee, P., Roehle, R., Kreukels, B.P.C., Köhler, B., Nordenström, A., Bouvattier, C., and Thyen, U. (2018). Multicentre cross-sectional clinical evaluation study about quality of life in adults with disorders/differences of sex development (DSD) compared to country specific reference populations (dsd-LIFE). *Health and Quality of Life Outcomes*, *16*. doi: 10.1186/s12955-018-0881-3.

Rebchook, G., Keatley, J., Contreras, R., Perloff, J., Molano, L.F., Reback, C.J., Ducheny, K., Nemoto, T., Lin, R., Birnbaum, J., Woods, T., Xavier, J., and SPNS Transgender Women of Color Study Group. (2017). The Transgender Women of Color Initiative: Implementing and evaluating innovative interventions to enhance engagement and retention in HIV Care. *American Journal of Public Health*, *107*(2), 224–229. doi: 10.2105/AJPH.2016.303582.

Reisner, S.L., Greytak, E.A., Parsons, J.T., and Ybarra, M.L. (2015). Gender minority social stress in adolescence: Disparities in adolescent bullying and substance use by gender identity. *Journal of Sex Research*, *52*(3), 243–256. doi: 10.1080/00224499.2014.886321.

Reisner, S.L., Poteat, T., Keatley, J., Cabral, M., Mothopeng, T., Dunham, E., Holand, C.E., Max, R., and Baral, S. (2016a). Global health burden and needs of transgender populations: A review. *Lancet*, *388*, 412–436.

Reisner, S.L., White Hughto, J.M., Pardee, D., and Sevelius, J. (2016b). Syndemics and gender affirmation: HIV sexual risk in female-to-male trans masculine adults reporting sexual contact with cisgender males. *International Journal of STD and AIDS*, *27*(11), 955–966. doi: 10.1177/0956462415602418.

Reisner, S.L., Hughto, J.M., Pardee, D.J., Kuhns, L., Garofalo, R., and Mimiaga, M.J. (2016c). LifeSkills for Men (LS4M): Pilot evaluation of a gender-affirmative HIV and STI prevention intervention for young adult transgender men who have sex with men. *Journal of Urban Health, 93*(1), 189–205. doi: 10.1007/s11524-015-0011-z.

Reisner, S.L., White Hughto, J.M., Gamarel, K.E., Keuroghlian, A.S., Mizock, L., and Pachankis, J.E. (2016d). Discriminatory experiences associated with posttraumatic stress disorder symptoms among transgender adults. *Journal of Counseling Psychology*, *63*(5), 509–519.

Reisner, S.L., Deutsch, M.B., Peitzmeier, S.M., White Hughto, J.M., Cavanaugh, T.P., Pardee, D.J., McLean, S.A., Panther, L.A., Gelman, M., Mimiaga, M.J., and Potter, J.E. (2018). Test performance and acceptability of self-versus provider-collected swabs for high-risk HPV DNA testing in female-to-male trans masculine patients. *PLoS One*, *13*(3), 1–21. doi: 10.1371/journal.pone.0190172.

Reisner, S.L., Moore, C.S., Asquith, A., Pardee, D.J., Sarvet, A., Mayer, G., and Mayer, K.H. (2019). High risk and low uptake of pre-exposure prophylaxis to prevent HIV acquisition in a national online sample of transgender men who have sex with men in the United States. *Journal of the International AIDS Society*, *22*(9), e25391. doi: 10.1002/jia2.25391.

Reisner, S.L., Moore, C.S., Asquith, A., Pardee, D.J., and Mayer, K.H. (2020a). Gender non-affirmation from cisgender male partners: Development and validation of a brief stigma scale for HIV research with transgender men who have sex with men (trans msm). *AIDS and Behavior*, *24*(1), 331–343. doi: 10.1007/s10461-019-02749-5.

Reisner, S.L., Pletta, D.R., Potter, J., and Deutsch, M.B. (2020b). Initial psychometric evaluation of a brief sexual functioning screening tool for transmasculine adults: Transmasculine sexual functioning index. *Sexual Medicine*, *8*(3), 350–360. doi: 10.1016/j.esxm.2020.05.006.

Reiter, P.L., Katz, M.L., Bauermeister, J.A., Shoben, A.B., Paskett, E.D., and McRee, A.L. (2018). Increasing human papillomavirus vaccination among young gay and bisexual men: A randomized pilot trial of the outsmart HPV intervention. *LGBT Health*, *5*(5), 325–329. doi: 10.1089/lgbt.2018.0059.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 358 of 438 PageID #: 2

Rizer, A.M., Mauery, D.R., Haynes, S.G., Couser, B., and Gruman, C. (2015). Challenges in intervention research for lesbian and bisexual women. *LGBT Health*, *2*(2), 105–112. doi: 10.1089/lgbt.2014.0122.

Roberts, A.L., Rosario, M., Corliss, H.L., Koenen, K.C., and Austin, S.B. (2012a). Elevated risk of posttraumatic stress in sexual minority youths: Mediation by childhood abuse and gender nonconformity. *American Journal of Public Health, 102*(8), 1587–1593. doi: 10.2105/AJPH.2011.300530.

Roberts, A.L., Rosario, M., Corliss, H.L., Koenen, K.C., and Austin, S.B. (2012b). Childhood gender nonconformity: A risk indicator for childhood abuse and posttraumatic stress in youth. *Pediatrics, 129*(3), 410–417. doi: 10.1542/peds.2011-1804.

Roberts, A.L., Rosario, M., Slopen, N., Calzo, J.P., and Austin, S.B. (2013). Childhood gender nonconformity, bullying victimization, and depressive symptoms across adolescence and early adulthood: An 11-year longitudinal study. *Journal of the American Academy of Child and Adolescent Psychology*, *52*(2), 143–152. doi: 10.1016/j.jaac.2012.11.006.

Rosario, M., Corliss, H.L., Everett, B.G., Reisner, S.L., Austin, S.B., Buchting, F.O., and Birkett, M. (2014). Sexual orientation disparities in cancer-related risk behaviors of tobacco, alcohol, sexual behaviors, and diet and physical activity: Pooled Youth Risk Behavior Surveys. *American Journal of Public Health*, *104*(2), 245–254. doi: 10.2105/AJPH.2013.301506.

Rosengren, A., Hawken, S., Ounpuu, S., Sliwa, K., Zubaid, M., Almahmeed, W.A., Black, K., Sitthi-amorn, C., Sato, H., and Yusuf, S. (2004). Association of psychosocial risk factors with risk of acute myocardial infarction in 11119 cases and 13648 controls from 52 countries (the INTERHEART study): Case-control study. *Lancet*, *364*(9438), 953–962. doi: 10.1016/s0140-6736(04)17019-0.

Rostad, W.L., Clayton, H.B., Estefan, L.F., and Johns, M.M. (2019). Substance use and disparities in teen dating violence victimization by sexual identity among high school students. *Prevention Science*. doi: 10.1007/s11121-019-01049-7.

Rowlands, S., and Amy, J.J. (2018). Preserving the reproductive potential of transgender and intersex people. *European Journal of Contraception and Reproductive Health Care*, *23*(1), 58–63. doi: 10.1080/13625187.2017.1422240.

Russell, S.T., and Fish, J.N. (2016). Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. *Annual Review of Clinical Psychology*, *12*(1), 465–487.

Russo, S.J., Murrough, J.W., Han, M-H., Charney, D.S., and Nestler, E.J. (2012). Neurobiology of resilience. *Nature Neuroscience*, *15*(11), 1475–1484.

Saewyc, E.M., Homma, Y., Skay, C.L., Bearinger, L.H., Resnick, M.D., and Reis, E. (2009). Protective factors in the lives of bisexual adolescents in North America. *American Journal of Public Health, 99*, 110–117.

Salzano, A., Arcopinto, M., Marra, A.M., Bobbio, E., Esposito, D., Accardo, G., Giallauria, F., Bossone, E., Vigorito, C., Lenzi, A., Pasquali, D., Isidori, A., and Cittadini, A. (2016). Klinefelter syndrome, cardiovascular system, and thromboembolic disease: Review of literature and clinical perspectives. *European Journal of Endocrinology*, *175*(1), R27–40. doi: 10.1530/eje-15-1025.

Salzano, A., D'Assante, R., Heaney, L.M., Monaco, F., Rengo, G., Valente, P., Pasquali, D., Bossone, E., Gianfilli, D., Lenzi, A., Cittadini, A., Marra, A., and Napoli, R. (2018). Klinefelter syndrome, insulin resistance, metabolic syndrome, and diabetes: Review of literature and clinical perspectives. *Endocrine*, *61*(2), 194–203. doi: 10.1007/s12020-018-1584-6.

Sandberg, D.E., Gardner, M., and Cohen-Kettenis, P.T. (2012). Psychological aspects of the treatment of patients with disorders of sex development. *Seminars in Reproductive Medicine*, *30*(5), 443–452. doi: 10.1055/s-0032-1324729.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 359 of 438 PageID #: 2

Sani, A.M., Soh, K.L., Ismail, I.A., Arshad, M.M., Mungadi, I.A., Yau, S.L., and Soh, K.G. (2019). Experiences of people living with disorders of sex development and sex reassignment: Meta-ethnography of qualitative studies. *Journal of Advanced Nursing*, *75*(2), 277–290. doi: 10.1111/jan.13833.

Schabath, M.B., Blackburn, C.A., Sutter, M.E., Kanetsky, P.A., Vadaparampil, S.T., Simmons, V.N., Sanchez, J.A., Sutton, S.K., and Quinn, G.P. (2019). National survey of oncologists at National Cancer Institute-Designated Comprehensive Cancer Centers: Attitudes, knowledge, and practice behaviors about LGBTQ patients with cancer. *Journal of Clinical Oncology*, *37*(7), 547–558. doi: 10.1200/JCO.18.00551.

Schleedoorn, M.J., van der Velden, A., Braat, D.D.M., Peek, R., and Fleischer, K. (2019). To freeze or not to freeze? An update on fertility preservation in females with Turner Syndrome. *Pediatric Endocrinology Reviews*, *16*(3), 369–382. doi: 10.17458/per.vol16.2019.svb.tofreezeornot.

Schneeberger, A.R., Dietl, M.F., Muenzenmaier, K.H., Huber, C.G., and Lang, U.E. (2014). Stressful childhood experiences and health outcomes in sexual minority populations: A systematic review. *Social Psychiatry and Psychiatric Epidemiology*, *49*, 1427–1445. doi: 10.1007/s00127-014-0854-8.

Schuler, M.S., and Collins, R.L. (2019). Early alcohol and smoking initiation: A contributor to sexual minority disparities in adult use. *American Journal of Preventive Medicine*, *57*(6), 808–817. doi: 10.1016/j.amepre.2019.07.020.

Schuler, M.S., Rice, C.E., Evans-Polce, R.J., and Collins, R.L. (2018). Disparities in substance use behaviors and disorders among adult sexual minorities by age, gender, and sexual identity. *Drug and Alcohol Dependence*, *189*, 139–146. doi: 10.1016/j.drugalcdep.2018.05.008.

Schulman, J., and Erickson-Schroth, L. (2019). Mental health in sexual minority and transgender women. *Medical Clinics of North America*, *103*, 723–733. doi: 10.1016/j.mcna.2019.02.005.

Schwab-Reese, L.M., Currie, D., Mishra, A.A., and Peek-Asa, C. (2018). A comparison of violence victimization and polyvictimization experiences among sexual minority and heterosexual adolescents and young adults. *Journal of Interpersonal Violence*. doi: 10.1177/0886260518808853.

Schweizer, K., Brunner, F., Gedrose, B., Handford, C., and Richter-Appelt, H. (2017). Coping with diverse sex development: Treatment experiences and psychosocial support during childhood and adolescence and adult well-being. *Journal of Pediatric Psychology*, *42*(5), 504–519. doi: 10.1093/jpepsy/jsw058.

Seelman, K.L., and Walker, M.B. (2018). Do anti-bullying laws reduce in-school victimization, fear-based absenteeism, and suicidality for lesbian, gay, bisexual, and questioning youth? *Journal of Youth and Adolescence, 47*(11), 2301–2319. doi: 10.1007/s10964-018-0904-8.

Sevelius, J., Chakravarty, D., Neilands, T.B., Keatley, J., Shade, S.B., Johnson, M.O., and Rebchook, G. (2019). Evidence for the model of gender affirmation: The role of gender affirmation and healthcare empowerment in viral suppression among transgender women of color living with HIV. *AIDS and Behavior*. doi: 10.1007/s10461-019-02544-2.

Sevelius, J.M., Neilands, T.B., Dilworth, S., Castro, D., and Johnson, M.O. (2020b). Sheroes: Feasibility and acceptability of a community-driven, group-level HIV intervention program for transgender women. *AIDS and Behavior*, *24*(5), 1551–1559. doi: 10.1007/s10461-019-02683-6.

Sevelius, J.M., Poteat, T., Luhur, W.E., Reisner, S.L., and Meyer, I.H. (2020a). HIV testing and PrEP use in a national probability sample of sexually active transgender people in the United States. *Journal of Acquired Immune Deficiency Syndromes*, *84*(5), 437–442. doi: 10.1097/QAI.0000000000002403.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 360 of 438 PageID #: 2

Shires, D.A., and Jaffee, K.D. (2016). Structural discrimination is associated with smoking status among a national sample of transgender individuals. *Nicotine and Tobacco Research*, *18*(6), 1502–1508. doi: 10.1093/ntr/ntv221.

Sigurjonsson, H., Mollermark, C., Rinder, J., Farnebo, F., and Lundgren, T.K. (2017). Long-term sensitivity and patient-reported functionality of the neoclitoris after gender reassignment surgery. *Journal of Sexual Medicine*, *14*(2), 269–273. doi: 10.1016/j.jsxm.2016.12.003.

Silberbach, M., Roos-Hesselink, J.W., Andersen, N.H., Braverman, A.C., Brown, N., Collins, R. T., Backer, J., Eagle, K., HIratzka, L., Johnson, W., Kadian-Dodov, D., Lopez, L., Mortensen, K., Prakash, S., Ratchford, E., Saidi, A., van Hagen, I., and Young, L.T. (2018). Cardiovascular health in Turner Syndrome: A scientific statement from the American Heart Association. *Circulation, Genomic and Precision Medicine*, *11*(10), e000048. doi: 10.1161/hcg.0000000000000048.

Sinclair, V.G., and Wallston, K.A. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment*, *11*(1), 94–101. doi: 10.1177/1073191103258144.

Sobecki-Rausch, J.N., Brown, O., and Gaupp, C.L. (2017). Sexual dysfunction in lesbian women: A systematic review of the literature. *Seminars in Reproductive Medicine*, *35*(5), 448–459. doi: 10.1055/s-0037-1604455.

Solazzo, A., Brown, T.N., and Gorman, B.K. (2018). State-level climate, anti-discrimination law, and sexual minority health status: An ecological study. *Social Science and Medicine (1982)*, *196*, 158–165. doi: 10.1016/j.socscimed.2017.11.033.

Stephenson, R., Riley, E., Rogers, E., Suarez, N., Metheny, N., Senda, J., Saylor, K., and Bauermeister, J.A. (2017). The sexual health of transgender men: A scoping review. *Journal of Sex Research*, *54*(4–5), 424–445. doi: 10.1080/00224499.2016.1271863.

Streed, C.G., Jr., McCarthy, E.P., and Haas, J.S. (2017). Association between gender minority status and self-reported physical and mental health in the United States. *JAMA Internal Medicine*, *177*(8), 1210–1212. doi: 10.1001/jamainternmed.2017.1460.

Streed, C.G., Jr., Harfouch, O., Marvel, F., Blumenthal, R.S., Martin, S.S., and Mukherjee, M. (2017). Cardiovascular disease among transgender adults receiving hormone therapy: A narrative review. *Annals of Internal Medicine*, *167*(4), 256–67.

Subirana-Malaret, M., Gahagan, J., and Parker, R. (2019). Intersectionality and sex and gender-based analyses as promising approaches in addressing intimate partner violence treatment programs among LGBT couples: A scoping review. *Cogent Social Sciences, 5*(1), 1644982.

Swiffen, A. (2018). New resistance to hate crime legislation and the concept of law. *Law, Culture and the Humanities*, *14*(1), 121–139. doi: 10.1177/1743872114534017.

Takemoto, M., Menezes, M.O., Polido, C., Santos, D.S., Leonello, V.M., Magalhães, C.G., Cirelli, J.F., and Knobel, R. (2019). Prevalence of sexually transmitted infections and bacterial vaginosis among lesbian women: Systematic review and recommendations to improve care. *Cadernos de Saude Publica*, *35*(3), e00118118. doi: 10.1590/0102-311X00118118.

Tamar-Mattis, S., Gamarel, K.E., Kantor, A., Baratz, A., Tamar-Mattis, A., and Operario, D. (2018). Identifying and counting individuals with differences of sex development conditions in population health research. *LGBT Health*, *5*(5), 320–324. doi: 10.1089/lgbt.2017.0180.

Tamhane, S., Rodriguez-Gutierrez, R., Iqbal, A.M., Prokop, L.J., Bancos, I., Speiser, P.W., and Murad, M.H. (2018). Cardiovascular and metabolic outcomes in congenital adrenal hyperplasia: A systematic review and meta-analysis. *Journal of Clinical Endocrinology and Metabolism*, *103*(11), 4097–4103. doi: 10.1210/jc.2018-01862.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 361 of 438 PageID #: 2

Tarin, J.J., Garcia-Perez, M.A., and Cano, A. (2015). Deficiencies in reporting results of lesbians and gays after donor intrauterine insemination and assisted reproductive technology treatments: A review of the first emerging studies. *Reproductive Biology and Endocrinology*, *13*, 52. doi: 10.1186/s12958-015-0053-9.

Taylor, E.T., and Bryson, M.K. (2015). Cancer's margins: Trans* and gender nonconforming people's access to knowledge, experiences of cancer health, and decision-making. *LGBT Health*, *3*(1), 79–89. doi: 10.1089/lgbt.2015.0096.

Tuthill, Z., Denney, J.T., and Gorman, B. (2020). Racial disparities in health and health behaviors among gay, lesbian, bisexual and heterosexual men and women in the BRFSS-SOP. *Ethnicity and Health*, *25*(2), 177–188. doi: 10.1080/13557858.2017.1414157.

UCSF Transgender Care. (2016). *Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People* (2nd ed.). M.B. Deutsch, Ed. San Francisco, CA: Department of Family and Community Medicine, University of California San Francisco. Available: transcare.ucsf.edu/guidelines.

Valdiserri, R.O., Holtgrave, D.R., Poteat, T.C., and Beyrer, C. (2018). Unraveling health disparities among sexual and gender minorities: A commentary on the persistent impact of stigma. *Journal of Homosexuality*, 1–19. doi: 10.1080/00918369.2017.1422944.

Van Batavia, J.P., and Kolon, T.F. (2016). Fertility in disorders of sex development: A review. *Journal of Pediatric Urology*, *12*(6), 418–425. doi: 10.1016/j.jpurol.2016.09.015.

van der Horst, H.J.R., and de Wall, L.L. (2017). Hypospadias, all there is to know. *European Journal of Pediatrics*, *176*(4), 435–441. doi: 10.1007/s00431-017-2864-5.

van Kesteren, P.J.M., Asscheman, H., Megens, J.A.J., and Gooren, L.J.G. (1997). Mortality and morbidity in transsexual subjects treated with cross-sex hormones. *Clinical Endocrinology*, *47*(3), 337–343. doi: 10.1046/j.1365-2265.1997.2601068.x.

VanKim, N.A., Austin, S.B., Jun, H.-J., Hu, F.B., and Corliss, H.L. (2017). Dietary patterns during adulthood among lesbian, bisexual, and heterosexual women in the Nurses' Health Study II. *Journal of the Academy of Nutrition and Dietetics*, *117*(3), 386–395. doi: 10.1016/j.jand.2016.09.028.

Vargas, S.M., Wennerstrom, A., Alfaro, N., Belin, T., Griffith, K., Haywood, C., Jones, F., Lunn, M.R., Meyers, D., Miranda, J., Obedin-Maliver, J., Pollock, M., Sherbourne, C.D., Springgate, B.F., Sugarman, O.K., Rey, E., Williams, C., Williams, P., and Chung, B. (2019). Resilience Against Depression Disparities (RADD): A protocol for a randomised comparative effectiveness trial for depression among predominantly low-income, racial/ethnic, sexual and gender minorities. *BMJ Open*, *9*(10), e031099. doi: 10.1136/bmjopen-2019-031099.

Veenstra, G. (2013). Race, gender, class, sexuality (RGCS) and hypertension. *Social Science and Medicine*, *89*, 16–24. doi: 10.1016/j.socscimed.2013.04.014.

Vogel, E.A., Belohlavek, A., Prochaska, J.J., and Ramo, D.E. (2019). Development and acceptability testing of a Facebook smoking cessation intervention for sexual and gender minority young adults. *Internet Interventions*, *15*, 87–92. doi: 10.1016/j.invent.2019.01.002.

Wade, R.M., and Harper, G.W. (2017). Young black gay/bisexual and other men who have sex with men: A review and content analysis of health-focused research between 1988 and 2013. *American Journal of Men's Health*, *11*(5), 1388–1405. doi: 10.1177/1557988315606962.

Walker, M. (2017). *Why We Sleep*. New York: Scribner.

Walls, N.E., Atteberry-Ash, B., Kattari, S.K., Peitzmeier, S., Kattari, L., and Langenderfer-Magruder, L. (2019). Gender identity, sexual orientation, mental health, and bullying as predictors of partner violence in a representative sample of youth. *Journal of Adolescent Health*, *64*(1), 86–92. doi: 10.1016/j.jadohealth.2018.08.011.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 362 of 438 PageID #: 2

Walters, K.L., and Simoni, J.M. (2002). Reconceptualizing native women's health: An "indigenist" stress-coping model. *American Journal of Public Health*, *92*(4), 520–524. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447108.

Walters, K.L., Mohammed, S.A., Evans-Campbell, T., Beltrán, R.E., Chae, D.H., and Duran, B. (2011). Bodies don't just tell stories, they tell histories. *Du Bois Review: Social Science Research on Race*, *8*(1), 179–189. doi: 10.1017/S1742058X1100018X.

Ward, B.W., Dahlhamer, J.M., Galinsky, A.M., and Joestl, S.S. (2014). Sexual orientation and health among U.S. adults: National Health Interview Survey, 2013. *National Health Statistics Reports*, *77*, 1–10.

Washington, T.A., and Murray, J.P. (2005). Practice notes. *Journal of Gay and Lesbian Social Services, 18*(1), 89–96. doi: 10.1300/J041v18n01_07.

Watson, R.J., Fish, J.N., McKay, T., Allen, S.H., Eaton, L., and Puhl, R.M. (2020). Substance use among a national sample of sexual and gender minority adolescents: Intersections of sex assigned at birth and gender identity. *LGBT Health*, *7*(1), 37–46. doi: 10.1089/lgbt.2019.0066.

White Hughto, J.M., Reisner, S.L., and Pachankis, J.E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science and Medicine (1982)*, *147*, 222–231. doi: 10.1016/j.socscimed.2015.11.010.

Whitton, S.W., Newcomb, M.E., Messinger, A.M., Byck, G., and Mustanski, B. (2016). A longitudinal study of IPV victimization among sexual minority youth. *Journal of Interpersonal Violence*. doi: 0886260516646093.

WHO (World Health Organization). (1948). *Constitution*. Available: https://www.who.int/about/who-we-are/constitution

———. (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health: Commission on Social Determinants of Health final report*. Commission on Social Determinants of Health. Available: https://apps.who.int/iris/bitstream/handle/10665/43943/9789241563703_eng.pdf;jsessionid=C5B775B5017D7DDB8A90F893A6D4C4C2?sequence=1.

———. (2011). *Rio Political Declaration on Social Determinants of Health*. Available: https://www.who.int/sdhconference/declaration/Rio_political_declaration.pdf?ua=1.

Wiepjes, C.M., Heijer, M. den, Bremmer, M.A., Nota, N.M., Blok, C.J.M. de, Coumou, B.J.G., and Steensma, T.D. (2020). Trends in suicide death risk in transgender people: Results from the Amsterdam Cohort of Gender Dysphoria study (1972–2017). *Acta Psychiatrica Scandinavica*, *141*(6), 486–491. doi: 10.1111/acps.13164.

Williams, D.R. (2018). Stress and the mental health of populations of color: Advancing our understanding of race-related stressors. *Journal of Health and Social Behavior*, *59*(4), 466–485. doi: 10.1177/0022146518814251.

Wintemberg, J., McElroy, J.A., Ge, B., and Everett, K.D. (2017). Can smoke-free policies reduce tobacco use disparities of sexual and gender minorities in Missouri? *Nicotine and Tobacco Research*, *19*(11), 1308–1314. doi: 10.1093/ntr/ntx078.

Wirtz, A.L., Poteat, T.C., Malik, M., and Glass, N. (2020). Gender-based violence against transgender people in the United States: A call for research and programming. *Trauma Violence Abuse*, *21*(2), 227–241. doi: 10.1177/1524838018757749.

Wisniewski, A.B. (2017). Psychosocial implications of DSD treatment for parents. *Current Opinion in Urology*, *27*(1), 11–13. doi: 10.1097/MOU.0000000000000344.

Wong, Y-L.I., Stanton, M.C., and Sands, R.G. (2014). Rethinking social inclusion: Experiences of persons in recovery from mental illness. *American Journal of Orthopsychiatry*, *84*, 685–695.

Woods, J.B., Sears, B., and Mallory, C. (2016). *Model Legislation for Eliminating the Gay and Trans Panic Defenses*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Model-Legisl-Gay-Trans-Panic-Defense-Sep-2016.pdf.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 363 of 438 PageID #: 2

Worthen, M.G.F. (2018). "Gay equals white"? Racial, ethnic, and sexual identities and attitudes toward LGBT individuals among college students at a Bible Belt university. *Journal of Sex Research*, *55*(8), 995–1011. doi: 10.1080/00224499.2017.1378309.

Woulfe, J.M., and Goodman, L.A. (2018). Identity abuse as a tactic of violence in LGBTQ communities: Initial validation of the identity abuse measure. *Journal of Interpersonal Violence*. doi: 10.1177/0886260518760018.

Yang, J.P., Simoni, J.M., Dorsey, S., Lin, Z., Sun, M., Bao, M., and Lu, H. (2018). Reducing distress and promoting resilience: A preliminary trial of a CBT skills intervention among recently HIV-diagnosed MSM in China. *AIDS Care*, *30*(Supp 5), S39–S48. doi: 10.1080/09540121.2018.1497768.

Yombi, J.C., and Mertes, H. (2019). Treatment as prevention for HIV infection: Current data, challenges, and global perspectives. *AIDS Reviews*, *20*(3). doi: 10.24875/aidsrev.m18000024.

Yost, M.R., and Thomas, G.D. (2012). Gender and binegativity: Men's and women's attitudes toward male and female bisexuals. *Archives of Sexual Behavior*, *41*, 691–702.

Yule, M.A., Brotto, L.A., and Gorzalka, B.B. (2013). Mental health and interpersonal functioning in self-identified asexual men and women. *Psychology and Sexuality*, *4*(2), 136–151. doi: 10.1080/19419899.2013.774162.

Yusuf, S., Hawken, S., Ounpuu, S., Dans, T., Avezum, A., Lanas, F., Andrzej, B., Prem, P., Varios, J., and Lisheng, L. (2004). Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): Case-control study. *Lancet*, *364*(9438), 937–952. doi: 10.1016/s0140-6736(04)17018-9.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

12

Coverage, Access, and Utilization of Evidence-Based Health Care

Research indicates that access to adequate insurance coverage, culturally responsive providers, and high-quality, evidence-based health care services has the potential to significantly reduce the effects of health disparities on sexual and gender diverse (SGD) populations. This chapter first reviews the literature on access to care, insurance coverage, and health services utilization in SGD populations. It then discusses in detail three topics that are particularly critical to ensure that clinical and policy approaches to health care for SGD populations are evidence based: gender-affirming care for transgender people, conversion therapy targeting sexual orientation or gender identity, and early genital surgeries for infants with intersex traits.

The importance of grounding clinical protocols and health-related policies on a firm evidence base is a central component of providing high-quality care to SGD people and developing effective strategies to improve SGD population health. Evidence indicates that gender-affirming medical care can significantly improve the health and well-being of transgender people. Conversely, virtually all major medical authorities agree that both "conversion therapy" to change the sexual orientation or gender identity of LGBTQ people and procedures to "normalize" the sex characteristics of children with intersex traits who are too young to participate in consent lack evidence of benefit and show evidence of physical and mental health harms.

Over the past decade, the evidence regarding the importance of gender-affirming care for transgender people has grown exponentially, with increasingly robust data on improvements in mental health outcomes and overall

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 366 of 438 PageID #: 2

well-being in particular. With regard to conversion therapy and early genital surgeries on infants with intersex traits, however, the evidence base has evolved in the opposite direction, indicating that these procedures have harmful consequences for the health of SGD people.

COVERAGE, ACCESS, AND UTILIZATION

SGD people often encounter barriers to health care services. These barriers include individual factors, such as health literacy; interpersonal factors, such as individual experiences of discrimination by health care providers and insurers; and broader structural factors, such as lower rates of health insurance coverage and higher rates of poverty among lesbian, gay, bisexual, and transgender (LGBT) communities and households headed by same-sex couples, which puts health care financially out of reach for many. Another common barrier is a widespread lack of training for providers in SGD population health, which means that many individuals, particularly transgender and people with intersex traits, struggle to find culturally and clinically competent health care providers.

This section discusses insurance coverage, access to care, and utilization of health care services by SGD people. It focuses first on discrimination in access to health care and health insurance, which is an important influence on the well-being of SGD populations. It then discusses other insurance coverage issues for SGD people, followed by what is known about health services utilization in SGD populations, including considerations of care quality and health professions training.

Discrimination in Health Care and Health Insurance Coverage

Despite cultural and legal shifts such as the nationwide expansion of marriage equality for same-sex couples, discrimination against LGBT people in health care and coverage remains pervasive in the United States. A 2017 survey conducted by National Public Radio (NPR), the Harvard School of Public Health, and the Robert Wood Johnson Foundation found that 16 percent of LGBT people reported encountering discrimination on the basis of their sexual orientation or gender identity when seeking medical care (NPR, Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health, 2017). Transgender people are particularly likely to encounter discrimination in health care settings. According to the 2015 U.S. Transgender Survey (USTS), 33 percent of transgender people who had seen a health care provider in the previous year had at least one negative experience related to being transgender, such as being verbally harassed, physically assaulted, or refused treatment (James et al., 2016). A 2019 review found that, across eight studies, 27 percent (range: 19–40%)

Copyright National Academy of Sciences. All rights reserved.

of transgender people reported having been denied health care outright (Kcomt, 2019).

In health insurance, discrimination against SGD people has historically taken many forms. Some types of insurance discrimination prevent people from being able to obtain or afford a health insurance plan at all. These include denials of family coverage to same-sex couples, including legally married spouses (CCIIO, 2014), and preexisting condition exclusions targeting conditions such as cancer and HIV (CCIIO, n.d.). Those who do obtain a plan may then encounter barriers to using their coverage. For SGD people living with HIV, these barriers include adverse tiering (when insurers place certain drugs, such as HIV antiretrovirals, in high cost-sharing levels) and coverage exclusions for pre- and post-exposure prophylaxis (Jacobs and Sommers, 2015; Underhill, 2012). For other SGD people, frequent coverage barriers include difficulty accessing preventive screenings (Agénor et al., 2014; CMS, 2015; Tabaac et al., 2018) and exclusion of coverage for such services as mental and behavioral health care, infertility treatments for same-sex couples, and gender-affirming care for transgender people (American Society for Reproductive Medicine, 2013; Baker, 2017; Coursolle, 2019). Among USTS respondents with insurance, 25 percent reported insurance discrimination on the basis of their gender identity (James et al., 2016). Their experiences included being denied coverage for what are often construed as "gender-specific" services, such as mammograms, cervical cancer screenings, and prostate exams (13%); being denied coverage for care not related to gender affirmation (7%); and being denied coverage for gender-affirming surgery (55%) or hormone therapy (25%). Gender-affirming medical care for transgender people is discussed in detail below.

As described in Chapter 11, discrimination has direct negative consequences for health and well-being and exacerbates the significant health disparities that affect LGBT, intersex, and other SGD populations. Encounters with discrimination in health care settings also jeopardize health by engendering avoidance. In the NPR et al. study, 18 percent of LGBT people reported not seeking health care when they needed it for fear of discrimination; in the 2015 USTS, 23 percent of transgender respondents had not sought care they needed in the last year for fear of mistreatment (James et al., 2016; NPR, Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health, 2017). Similarly, people with intersex traits may avoid routine health care due to previous negative experiences with medical providers (Lambda Legal, 2018).

Given the health consequences of discrimination, laws and policies that prohibit discrimination are a critical intervention for protecting and improving the health and well-being of LGBT, intersex, and other SGD people. Both public and private entities have increasingly established

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 368 of 438 PageID #: 2

nondiscrimination protections that include these populations. Beginning in 2006, the U.S. Department of Health and Human Services (HHS) promulgated a number of regulations that sought to ensure that discrimination on the basis of sexual orientation or gender identity did not hinder beneficiaries' access to a wide range of programs, including Medicare's Program of All-Inclusive Care for the Elderly,[1] HHS grants and services,[2] HealthCare.gov and the state-based health insurance marketplaces,[3] Medicaid managed care plans,[4] plans covering the essential health benefits outlined in the Affordable Care Act (ACA),[5] qualified health plans,[6] and ACA-regulated health insurance plans more broadly.[7] In 2011, the Joint Commission, which accredits approximately 80 percent of U.S. hospitals, began requiring accredited entities to establish nondiscrimination policies inclusive of sexual orientation and gender identity (Joint Commission, 2011).

In 2016, HHS released a regulation outlining its enforcement of Section 1557 of the ACA.[8] This ACA provision, sometimes known as the Health Care Rights Law, prohibits discrimination on the basis of race, color, national origin, age, disability (including HIV status), or sex in any federally supported health program or activity.[9] The 2016 regulation clarified that the sex nondiscrimination protections in Section 1557 include gender identity and intersex status (as well as pregnancy status) (Baker, 2016). The department also invited complaints of sexual orientation discrimination as a form of sex stereotyping prohibited under Section 1557. In addition to requiring equal access to health care services and health insurance coverage, the regulation clarified that such actions as refusing to use a transgender person's correct name and pronoun, assigning a transgender person to a hospital room or other facility on the basis of their sex assigned at birth, or excluding coverage for all care related to gender affirmation constitute discrimination (insurance coverage for gender-affirming care is covered in more detail below). Evidence indicates that this regulation was effective in addressing numerous forms of discrimination against LGBT people in health care settings (Gruberg and Bewkes, 2018).

As this report goes to press, the Section 1557 regulation is being contested through lawsuits in federal court regarding the scope of its protec-

---

[1] 42 C.F.R. § 460.98(b)(3) and § 460.112(a).
[2] 45 C.F.R. § 75.300.
[3] 45 C.F.R. § 155.120(c)(ii) and § 155.220(j)(2).
[4] 42 C.F.R. § 438.3(d)(4), § 438.206(c)(2), and § 440.262.
[5] 45 C.F.R. § 156.125(a) and (b).
[6] 45 C.F.R. § 156.200(e) and § 156.1230(b)(3).
[7] 45 C.F.R. § 147.104(e).
[8] 45 C.F.R. Part 92.
[9] 42 U.S.C. 18116.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 369 of 438 PageID #: 2

tions for sex nondiscrimination. It is expected, however, that the Supreme Court's decision in the case of *Bostock v. Clayton County*, in which the Court ruled that the sex nondiscrimination protections in Title VII of the Civil Rights Act include gender identity and sexual orientation (see Chapter 5), will supersede contradicting interpretations of the ACA's sex nondiscrimination provision and lead to SGD populations being protected under Section 1557 (Keith, 2020). Still unresolved, however, are such issues as access to abortion and other health care services that are increasingly targeted by laws allowing health care providers to opt out of nondiscrimination requirements that they claim conflict with their religious beliefs (Keith, 2019). The impact of religious refusal laws on the health and well-being of SGD populations is a critical and understudied issue.

Health Insurance Coverage

Several factors have changed the landscape of health insurance coverage for LGBT people over the past decade. In addition to the nondiscrimination protections described above, these factors include marriage equality for same-sex couples and the implementation of coverage expansions under the ACA.

Legal relationship recognition expands the availability of health insurance coverage for same-sex couples. Prior to the 2015 Supreme Court decision legalizing marriage equality nationwide, state recognition of same-sex domestic partnerships, civil unions, or marriage was associated with narrower coverage gaps for same-sex couples and their children relative to families headed by different-sex couples (Gonzales, 2015; Gonzales and Blewett, 2013, 2014). The effects of the Supreme Court decision itself are difficult to discern given their overlap with the major expansion of coverage driven by the ACA. The ACA, which was enacted in 2010 and went into full effect in 2014, expanded the availability of coverage in two main ways. First, the law created sliding-scale tax credits intended to facilitate the purchase of health insurance coverage through new health insurance marketplaces, such as HealthCare.gov. Second, under the Supreme Court's 2012 interpretation of the ACA, states were given the choice to expand the eligible income ranges for their Medicaid programs.

Both of these mechanisms are important pathways to coverage for LGBT people, who tend to have lower incomes and higher rates of uninsurance than non-LGBT people. In the first half of 2013, prior to the full implementation of the ACA, 34 percent of a nationally representative sample of LGBT people making less than $45,000 per year (the income range eligible for health insurance marketplace subsidies) were uninsured (Baker, Durso, and Cray, 2014). Following the opening of the marketplaces in fall 2013, uninsurance among LGBT people in this income bracket dropped to

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 370 of 438 PageID #: 2

26 percent in 2014 and to 22 percent in 2017 (Baker and Durso, 2017). Data from the Urban Institute's Health Reform Monitoring Survey similarly indicate that the share of LGB adults without health insurance across all income ranges decreased from 21.7 percent in 2013 to 11.1 percent in 2015 (Karpman, Skopec, and Long, 2015). In 2015, uninsurance among transgender USTS respondents stood at 14 percent (James et al., 2016). A 2017 study based on Gallup data, however, found that the adult LGBT population as a whole remained more likely to be uninsured than the non-LGBT population—15 percent and 12 percent, respectively—though this analysis did not account for a greater proportion of young people in the LGBT group.[10]

One risk factor for uninsurance among LGB adults in the post-ACA era is being just older than 26, when coverage for young people through their parents' plans often ends (Gonzales, Driscoll, and Quinones, 2019). Living in the South or Midwest is also a risk factor for uninsurance. These regions comprise the bulk of the states that have not expanded their Medicaid programs and are home to substantial numbers of LGBT people living in poverty. Williams Institute estimates that 24 and 23 percent of LGBT people living in the South and the Midwest, respectively, have incomes below the federal poverty level (Choi, Badgett, and Wilson, 2019). An analysis of data from the 2014 Behavioral Risk Factor Surveillance System (BRFSS) indicated that a lack of Medicaid expansion is associated with higher prevalence of uninsurance among lower-income LGB adults: LGB adults with annual household incomes under $25,000 in states that did not expand Medicaid in 2014 had higher rates of uninsurance than LGB adults in states that did expand Medicaid—37.5 and 23.3 percent, respectively—though this analysis could not confirm that all of the uninsured would have been eligible for expanded Medicaid (Gonzales and Henning-Smith, 2017a).

Beyond providing coverage to low-income people, Medicaid is also particularly important for LGBT people with specific health care needs, such as people with disabilities and people living with HIV. Both population-based and purposive sampling studies indicate that the prevalence of disability is higher among LGBT people than in the general population. An analysis of Washington state BRFSS data, for instance, found that 35.5 percent of lesbians and 36.2 percent of bisexual women had a disability, compared with 25.9 percent of heterosexual women; 26.2 percent of gay men and 40.1 percent of bisexual men had a disability, compared with 22.5 percent of heterosexual men (Fredriksen-Goldsen, Kim, and Barkan, 2012). Among transgender people, 39 percent of 2015 USTS respondents reported having a disability, compared with 15 percent of the general population (James et

[10] See: https://williamsinstitute.law.ucla.edu/visualization/lgbt-stats/?topic=LGBT#economic.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 371 of 438 PageID #: 2

al., 2016). In comparison with binary-identified transgender people, nonbinary transgender adults in a pooled BRFSS sample from 30 states and Guam between 2014 and 2016 were more likely to report activity limitations due to physical, mental, or emotional problems (adjusted odds ratio [aOR]: 2.44; 95% confidence interval [CI]: 1.36, 4.34) (Streed, McCarthy, and Haas, 2018).

Though precise statistics are not available, disability for some LGBT people is related to living with HIV. To qualify for Medicaid coverage under pre-ACA eligibility rules, people living with HIV had to have both low incomes and a disability (or otherwise be categorically eligible by, for example, being a parent) (Kaiser Family Foundation, 2019). This led to situations in which people living with HIV could not afford treatment and had to allow their health to deteriorate to a disabling AIDS diagnosis before being able to access Medicaid coverage that could have kept them healthy (IOM, 2011a). The ACA resolved this problem in states that expanded their Medicaid programs. Access to care for people living with HIV is one of the many reasons that Medicaid expansion or broader health system reform, such as “Medicare for All” or another form of universal coverage, is a critical health issue for SGD populations.

Medicaid is also an important source of health insurance coverage for transgender people for both income and medical reasons. In the 2015 USTS, 29 percent of transgender respondents were living below 124 percent of the federal poverty line, which is nearly twice the rate of poverty among the general population (14%). Rates of poverty were higher among transgender respondents who were living with HIV (51%), had a disability (45%), or belonged to communities of color (43, 41, 40, and 38% among Latinx, Native American, multiracial, and Black respondents, respectively). The proportion of USTS respondents insured by Medicaid, however, was slightly smaller (13%) than the general population (15%). Barriers to Medicaid coverage for transgender people include restrictive income eligibility requirements in states that have not expanded Medicaid and the checkered history of Medicaid coverage for gender-affirming services, which is discussed in more detail in a later section of this chapter.

Health Services Utilization

Factors that can encourage or discourage care seeking include insurance coverage and benefit design; income and education; health status, including chronic conditions and acute care needs; health literacy; clinical and cultural competency among medical providers; geographic availability and physical accessibility of providers; and previous positive or negative experiences in health care settings (Committee on Health Care Utilization and Adults with Disabilities, 2018). Given the complexity of this constel-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 372 of 438 PageID #: 2

lation of factors, it is difficult to characterize or predict broad trends in care utilization among SGD populations. For instance, the establishment of new legal protections may improve SGD population health and thus lead to fewer care visits; at the same time, however, the existence of new protections may encourage SGD people to seek care instead of avoiding it for fear of discrimination, which might lead to more care visits.

Some evidence suggests that sexual minority populations have high baseline care utilization. An analysis of data from the 2003–2011 nationwide Medical Expenditure Panel Survey, adjusted for sociodemographic factors, health risk behaviors, and health conditions, found that both men and women in same-sex partnerships had 67 percent (aOR: 1.67; 95% CI: 1.04, 2.67) increased odds of past-year emergency department visits and 51 percent (aOR: 1.51; 95% CI: 1.11, 2.07) increased odds of more than three physician visits in the previous year in comparison with people in different-sex partnerships (Blosnich et al., 2016). This finding is in keeping with the minority stress model, which suggests that sexual and gender minorities have worse health related to their lower social status and thus may require more medical care than their heterosexual and cisgender peers. Also in keeping with this model, Hatzenbuehler and colleagues (2012) observed a decline in medical care visits and mental health care visits among both partnered and single sexual minority men in the 12 months following the establishment of marriage equality for same-sex couples in Massachusetts.

Among transgender people, an analysis of data from the California Health Interview Survey found that transgender respondents had lower utilization rates of both primary and specialty care than non-transgender respondents (Ehrenfeld, Zimmerman, and Gonzales, 2018). Similarly, a study of transgender Medicare beneficiaries found a decreasing trend in mental health care use between 2009 and 2014 (Progovac et al., 2019). Use of gender-affirming health care services, however, has been rising since 2000 (Canner et al., 2018). This trend is likely related to a combination of a growing transgender population in the United States, improved coding practices that make it easier to identify transgender people and gender-affirming medical services in data sources such as insurance claims, and removal of barriers to insurance coverage for these services.

Further complicating assessments of care utilization is evidence that barriers to care can persist even after coverage becomes more available. Using data from the 2013–2015 National Health Interview Survey, for instance, Hsieh and Ruther (2017) documented numerous issues facing sexual minority people seeking health care, including ongoing use of emergency departments for primary care; delayed or unmet care needs due to cost; and delayed or unmet care needs for nonfinancial reasons, such as

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 373 of 438 PageID #: 2

not being able to get an appointment with a medical provider or lacking transportation to a provider's office. Gonzales and Henning-Smith (2017b) similarly found that gender-nonconforming people in a 2014–2015 BRFSS sample from 27 states and Guam were almost twice as likely as a reference group of cisgender women to have unmet care needs due to financial issues (aOR: 1.93; 95% CI: 1.02, 3.67), and they were more than twice as likely not to have received a routine check-up in the previous year (aOR: 2.41; 95% CI: 1.41, 4.12). There is a lack of data on utilization among people with intersex traits.

Quality of Care and Health Professions Training

Common frameworks for quality improvement in health care include the six aims of safety, timeliness, effectiveness, efficiency, patient-centeredness, and equity set forth by the Institute of Medicine (2001) and the "triple aim" of improved patient experiences of care, improved population health outcomes, and reduced costs developed by the Institute for Healthcare Improvement (Berwick, Nolan, and Whittington, 2008). Scant research has explored quality of care issues, including definitions, priority outcomes, and measurement, among SGD populations. Another aspect of care quality is attention to the social determinants of health at the population level and to the social needs of individuals in health care contexts. Major negative social influences on the health of SGD populations include but are not limited to discrimination and a lack of access to culturally responsive providers; family and peer rejection and bullying; unemployment and poverty; and a dearth of feelings of community cohesion, safety, and participation (IOM, 2011b). These generate social needs such as trauma, housing insecurity, financial strain, and social isolation, particularly among groups such as SGD youth and older adults. It is important for researchers, care providers, and policy makers to develop and evaluate targeted efforts to address social determinants of health and meet social needs for SGD people. The experiences of SGD patients have also not been fully explored in the context of new care delivery models intended to improve quality, coordinate care, and restrain costs, such as accountable care organizations and patient-centered medical homes (National LGBT Health Education Center, 2016).

Regardless of how care delivery is organized, providing cultural and clinical competency training about SGD populations for the entire health workforce is critical to ensuring that SGD people can access high-quality care. Training in providing culturally responsive and clinically appropriate care for SGD people needs to begin early for medical students and other health professions trainees, including but not limited to nurses, physician assistants, and nurse practitioners (AMA, 2019; Obedin-Maliver et al., 2011; Streed et al., 2019b). The American Association of Medical Colleges

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 374 of 438 PageID #: 2

has published curriculum resources to support early clinician training in SGD health topics (Hollenbach, Eckstrand, and Dreger, 2014).[11]

Another strategy for promoting cultural responsiveness to SGD concerns in health care settings is encouraging the career development of SGD-identified health professionals. Sexual and gender diversity, alongside other forms of representation such as racial diversity, strengthens the health care workforce by bringing in new perspectives to inform the delivery of care and helping patients build trust with providers whose backgrounds mirror theirs (Tanner, 2020). Unfortunately, research indicates that SGD people remain significantly underrepresented in the scientific workforce, and many workforce diversity initiatives—such as those supported by the National Institutes of Health (NIH)—do not include SGD populations despite the designation of sexual and gender minorities as an NIH health disparity population in 2016 (Freeman, 2018).

In terms of SGD cultural responsiveness among practicing providers, a 2016 systematic review by the Agency for Healthcare Research and Quality called for clearer definitions of cultural competency for LGBT populations, clarification on the relationship between cultural competence and patient-centered care, and greater availability and assessment of training curricula (Butler et al., 2016). In 2020, the Human Rights Campaign's Healthcare Equality Index, which provides training and assesses LGBT cultural competency at hospitals and other health care organizations across the country, reported that the 765 health care facilities evaluated nationwide in the previous year had accumulated more than 150,000 hours of LGBT-specific cultural competency training (Human Rights Campaign Foundation, 2020).

Another resource related to cultural responsiveness in working with SGD patients are the federal Culturally and Linguistically Appropriate Services Standards, which include sexual orientation and gender identity among aspects of patient identity that require attention and respect from care providers (Office of Minority Health, 2013). The federal Substance Abuse and Mental Health Services Administration (SAMHSA) also promotes cultural competency training around sexual and gender diversity (SAMHSA, 2020), and the Health Resources and Services Administration (HRSA), which oversees the community health centers program and the Ryan White program, funds the National LGBT Health Education Center at Fenway Health, a federally qualified community health center located in Boston that specializes in serving LGBTQ people and people living with HIV.[12] The National LGBT Health Education Center provides a variety of downloadable resources and continuing medical education modules on

[11] See https://www.aamc.org/what-we-do/mission-areas/diversity-inclusion/lgbt-health-resources.
[12] See https://www.lgbthealtheducation.org.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 375 of 438 PageID #: 2

culturally responsive and clinically appropriate care for LGBTQ people and people with intersex traits.

In addition to the National LGBT Health Education Center, HRSA supports the Center of Excellence for Transgender Health at the University of California at San Francisco, which conducts research and publishes care guidelines and other resources about various aspects of transgender health, particularly in relation to HIV.[13] Between 2012 and 2017, HRSA partnered with the Center of Excellence and several other community-based organizations on a Special Project of National Significance that investigated strategies for engaging and retaining HIV-positive transgender women of color in high-quality care. Important factors identified in this project included providing transgender-specific cultural and clinical competency training for the health care workforce; addressing social determinants of health, such as housing, as part of the provision of health care services; and recognizing the central role that gender-affirming services and personal empowerment can play in improving care and outcomes for transgender people living with HIV, particularly transgender women of color (Health Resources and Services Administration, n.d.; Rebchook et al., 2017). Resources on serving other specific SGD populations have also been created by both public and private entities: in 2010, the federal Administration on Aging (now the Administration for Community Living) funded the creation of the National Resource Center on LGBT Aging to provide information and resources for health care personnel working with LGBT elders,[14] and organizations such as Lambda Legal have published guidelines for hospitals on establishing affirming policies for transgender people (Lambda Legal, 2016) and people with intersex traits (Lambda Legal, 2018).

Alongside cultural and clinical competency training and a diverse health professions workforce, data collection about sexual orientation, gender identity, and intersex status in health care and public health activities is a critical component of understanding and effectively addressing health disparities among SGD populations. Both *Healthy People 2020*, released in 2010, and *Healthy People 2030*, released in 2020, call for an increase in the number of population health surveys that include sexual orientation and gender identity measures,[15] and federal regulations governing incentive programs for electronic medical records require that certified systems have the capacity to collect, store, and retrieve structured data on sexual orientation and gender identity (Cahill et al., 2016). The NIH Sexual and Gender Minority Research Office also promotes research into the health of

---

[13] See https://prevention.ucsf.edu/transhealth.

[14] See https://www.lgbtagingcenter.org.

[15] See https://www.healthypeople.gov.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 376 of 438 PageID #: 2

SGD populations[16] (see Chapter 4 for a more detailed discussion of data collection).

GENDER-AFFIRMING CARE FOR TRANSGENDER PEOPLE

The first U.S. clinics providing gender-affirming care to transgender individuals opened in the 1960s and 1970s. Practice and research in the field of transgender health, however, was stymied in the 1980s and 1990s by the spread of public and private insurance exclusions for gender-affirming care. As these exclusions have begun to be removed, there has been exponential growth in evidence regarding the medical necessity of this care, and gender affirmation has emerged as a core intervention to improve the health and well-being of transgender people. This section reviews the components of and clinical and population evidence concerning gender affirmation.

Components of Gender Affirmation

Broadly speaking, gender affirmation is a process by which people who identify as transgender, non-binary, or gender diverse take steps to fully express their true gender. (An older but still common term for the process of gender affirmation is gender transition.) Gender affirmation may have social, legal, and medical components. Socially, people may use a name or pronoun different from those they were assigned at birth, or they may change aspects of their gender expression, such as hairstyle and clothing. Legal affirmation may include name or gender marker changes on identification documents—such as passports, driver's licenses, and birth certificates—which are affected by state and federal laws and policies. Gender-affirming clinical care may include psychosocial support, hormone therapy, and surgeries.

Psychosocial support for gender affirmation typically focuses on reducing emotional distress and supporting decision making regarding social, legal, and medical steps. Some young transgender people and their families opt for medication to delay the onset of puberty. Adults and some adolescents may take feminizing or masculinizing hormones to achieve gender-congruent secondary sex traits, often in conjunction with medications that suppress menses or block androgens. Many transgender adults and older adolescents undergo surgery to align the appearance of their face, chest or breasts, body shape, and genitals with their gender, and some may also pursue speech therapy or hair removal. Gender affirmation is different for every person: some people may take only social or legal steps, while others may need gender-affirming prescriptions or medical procedures. Regardless

[16] See https://dpcpsi.nih.gov/sgmro.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 377 of 438 PageID #: 2

of an individual's path in relation to gender affirmation, social support and integrated, multidisciplinary care are essential for all transgender people, especially youth, and are consistently associated with improved mental health, social involvement, and self-esteem (Rafferty, Committee on Psychosocial Aspects of Child and Family Health, and Committee on Adolescence, 2018).

Guidelines and Policies Related to Gender Affirmation

Clinicians who provide gender-affirming psychosocial and medical services in the United States are informed by expert evidence-based guidelines. In 2012, the World Professional Association for Transgender Health (WPATH) published version 7 of the *Standards of Care for the Health of Transgender, Transsexual, and Gender-Nonconforming People*, which have been continuously maintained since 1979, and revisions for version 8 are currently under way (Coleman et al., 2012). Two newer guidelines have also been published by the Endocrine Society (Hembree et al., 2017) and the Center of Excellence for Transgender Health (UCSF Transgender Care, 2016). Each set of guidelines is informed by the best available data and is intended to be flexible and holistic in application to individual people. All of the guidelines recommend psychosocial support in tandem with physical interventions and suggest timing interventions to optimize an individual's ability to give informed consent. Mental and physical health problems need not be resolved before a person can begin a process of medical gender affirmation, but they should be managed sufficiently such that they do not interfere with treatment.

A major success of these guidelines has been identifying evidence and establishing expert consensus that gender-affirming care is medically necessary and, further, that withholding this care is not a neutral option (World Professional Association for Transgender Health, 2016). A number of professional medical organizations have joined WPATH in recognizing that gender-affirming care is medically necessary for transgender people because it reduces distress and promotes well-being, while withholding care increases distress and decreases well-being (American Academy of Family Physicians, 2012; American Academy of Pediatrics, 2018; American College of Nurse Midwives, 2012; American College of Obstetricians and Gynecologists, 2011; AMA, 2008; American Psychiatric Association, 2018; American Psychological Association (APA), 2008, 2015; Endocrine Society, 2017). Accordingly, public and private insurers have expanded access to gender-affirming care; some have done so proactively, while others have been required by state and federal nondiscrimination laws to remove coverage exclusions (Baker, 2017).

Coverage requirements for gender-affirming care typically rely on an overarching principle of parity between medically necessary services for transgender and cisgender people. Treatments that are gender affirming for transgender patients are covered by public and private insurers for

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 378 of 438 PageID #: 2

intersex and cisgender people for a variety of conditions, including genital difference, endocrine disorders, cancer prevention or treatment, and reconstructive surgeries following an injury. Examples of these services include testosterone or estrogen replacement therapy after surgery or menopause, vaginoplasty after pelvic surgery or for women with vaginal agenesis in the context of an intersex condition, and phalloplasty for cisgender male service members injured in war (Baker et al., 2012; Balzano and Hudak, 2018; Spade et al., 2009).

As this report goes to press, 24 states and the District of Columbia have enacted laws or made administrative changes prohibiting transgender-specific insurance exclusions in private coverage (Movement Advancement Project, 2020a). However, Medicaid programs in 10 states continue to explicitly exclude gender-affirming care for transgender individuals, and many states do not address the issue of this coverage in Medicaid (Mallory and Tentindo, 2019). At the federal level, the Medicare program removed its exclusion for "transsexual surgery" in 2014 (HHS, 2014), though coverage decisions related to gender-affirming surgeries are still made on a case-by-case basis (CMS, 2016). As discussed above, Section 1557 of the Affordable Care Act also has substantial ramifications for coverage of gender-affirming care: the 2016 HHS regulation embraced the principle of parity and prohibited categorical exclusions of gender-affirming care under the rubric of sex nondiscrimination. This aspect of the regulation remains contested in court, but it is expected that the original regulation's specific protections for transgender people will be found to be well within the scope of federal law and the agency's authority (Keith, 2020).

In order to justify coverage for gender-affirming care, insurance providers in the United States and most other countries require a supporting diagnosis. In 2013, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), 5th edition (American Psychiatric Association, 2013) replaced the diagnosis of gender identity disorder with gender dysphoria. Whereas gender identity disorder was perceived as pathologizing a person's gender identity, gender dysphoria emphasizes the clinically significant distress and impairment that can accompany incongruence between assigned sex and gender identity (Robles et al., 2016). A person who experiences no distress or impairment due to this incongruence will not meet diagnostic criteria for gender dysphoria. More recently, the *International Classification of Diseases*, 11th revision (WHO, n.d.) has replaced transsexualism and gender identity disorder with gender incongruence and moved the diagnosis out of the mental and behavioral disorders chapter and into a new chapter on sexual health.

Many insurers and some health care providers require documentation that an individual meets guideline requirements, including diagnostic criteria for gender dysphoria, as a prerequisite for hormonal or surgical

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 379 of 438 PageID #: 2

treatment. Because of the power differential inherent in this construct, this practice has been described as "gatekeeping" and can function as a significant barrier to accessing care. In a survey of transgender adolescents, for instance, participants described distress at having to prove to a mental health provider that they were "trans enough," having to wait for approval for treatment, and perceiving that their therapist feared legal liability should a person later regret the treatment (Gridley et al., 2016). Even transgender people with insurance coverage and access to providers report difficulty in navigating diagnosis-based requirements imposed by providers and insurers (James et al., 2016). Over the past 10 years, some U.S. medical professional organizations have increasingly moved to reduce psychiatric gatekeeping by shifting toward an informed consent and shared decision-making model, especially for adults (Schulz, 2018). Some countries have further underscored that transgender identity is not a pathology by recognizing gender affirmation as fundamental to the human right to self-definition and removing requirements that transgender people seeking gender-affirming medical care present with a diagnosis such as gender dysphoria (Arístegui et al., 2017).

Outcomes of Gender-Affirming Interventions

The evidence base for gender affirmation across age groups has grown rapidly over the last decade. For transgender youth who have not yet reached puberty, social affirmation and support are primary interventions. Using data from electronic records from the Kaiser Permanente system, recent work has suggested that prepubescent transgender children experience increased rates of mental health problems, especially anxiety, depression, and attention deficit disorders, relative to cisgender children (Becerra-Culqui et al., 2018). However, research also shows that, when transgender children in this age group are socially affirmed and supported by their families, their rates of depression are much nearer to those of cisgender children (Durwood, McLaughlin, and Olson, 2017). In one study, transgender youth who were socially affirmed had elevated rates of anxiety relative to their cisgender peers, but this difference was not clinically significant and may have reflected ongoing social stigma and minority stress (Olson et al., 2016). Another study found that using transgender youths' chosen names in home and at school was associated with reduced depression, suicidal ideation, and suicidal behavior (Russell et al., 2018).

Puberty blockers, typically gonadotropin-releasing hormone analogs, have been used since at least the late 1990s to prevent development of irreversible secondary sex traits and to give youth more time to explore their gender identity (Cohen-Kettenis and Van Goozen, 1998). In 2014, a landmark paper provided longitudinal data from a cohort of youth in the Netherlands: among this group, puberty suppression, followed several years

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 380 of 438 PageID #: 2

later by gender-affirming hormones and surgery, was effective in reducing gender dysphoria and restoring well-being equal to or better than same-age cisgender young adults (de Vries et al., 2014). Though most data on puberty suppression are limited and drawn from convenience samples in European clinics, this fully reversible gender-affirming intervention appears to confer improved psychological functioning and may reduce gender dysphoria (Mahfouda et al., 2017).

There is inconsistent and limited evidence regarding risks of irreversible low bone density and infertility (Chew et al., 2018; Mahfouda et al., 2017; Rafferty, Committee on Psychosocial Aspects of Child and Family Health, and Committee on Adolescence, 2018). In recognition of these risks, guidelines recommend monitoring bone density and counseling on fertility preservation prior to treatment (Hembree et al., 2017). Of note, while evidence indicates that social affirmation and puberty suppression are low risk and effective interventions for young transgender youth, there may be a significant delay between recognition and disclosure of gender incongruence: in one cohort, participants reported identification of gender incongruence on average at age 8 and disclosure to caregivers on average at age 17 (Olson et al., 2015). Support from parents and affirmation of gender diversity are critical to creating safe opportunities for young people to access the psychosocial and medical care that they need in a timely manner.

Hormone therapy with testosterone or estrogen is a common gender-affirming treatment for transgender adults and older adolescents. Though limited by heterogeneity of methodology, regimen, and outcomes measures, systematic reviews and meta-analyses consistently find that gender-affirming hormone treatment is associated with significant reductions in gender dysphoria, psychological symptoms, and psychiatric diagnoses and with improved markers of well-being, including quality of life, interpersonal functioning, psychological adjustment, sexual function, body satisfaction, and self-esteem (Costa and Colizzi, 2016; Dhejne et al., 2016; Keo-Meier et al., 2015; Murad et al., 2010; Nguyen et al., 2018; Rowniak, Bolt, and Sharifi, 2019; White Hughto and Reisner, 2016).

Both the WPATH and Endocrine Society guidelines identify age 16 as a general starting point for gender-affirming hormones, with the recognition that some adolescents benefit from earlier treatment (Coleman et al., 2012; Hembree et al., 2017). Evidence for hormone therapy in adolescents comes largely from outside of the United States and inconsistently tracks outcomes (Chew et al., 2018; Olson-Kennedy et al., 2016). The data available suggest that hormone therapy in adolescents likely yields reductions in dysphoria and distress and improvements in well-being similar to those in adults (Mahfouda et al., 2019). Gender-affirming hormone therapy can be managed for most patients by primary care providers,

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 381 of 438 PageID #: 2

as it typically involves long-term maintenance on doses similar to those used for cisgender patients with conditions such as hypogonadism (Wylie et al., 2016).

Surgeries involving the genitals or secondary sex characteristics can also improve health and well-being among transgender people and are an important and medically necessary aspect of gender-affirming care (Bailey, Ellis, and McNeil, 2014; Castellano et al., 2015; Murad et al., 2010; Passos et al., 2020; Wernick et al., 2019). Many factors affect an individual's need for and access to gender-affirming surgeries. In the 2015 USTS, only 25 percent of respondents had undergone some form of gender-affirming surgery, such as genital reconstruction or chest reconstruction, and having surgery was correlated with higher incomes (James et al., 2016). Respondents also reported varying degrees of experience with or need for specific procedures: 97 percent of transgender men had or needed chest reconstruction surgery, and 22 percent of transgender men had or needed phalloplasty. Similarly, 95 percent of transgender women had or needed hair removal procedures, and 76 percent had or needed vaginoplasty. Non-binary individuals generally had and needed fewer surgeries than their binary-identified counterparts: 48 percent of non-binary individuals assigned female at birth had or needed chest surgery, and 12 percent of non-binary individuals assigned male at birth had or needed vaginoplasty.

Surgeries for transgender men and other trans-masculine people may include bilateral chest reconstruction, salpingo-oophrectomy (removal of the ovaries and fallopian tubes), hysterectomy, genital reconstruction (metoidioplasty or phalloplasty with or without prosthesis), and, rarely, vocal surgery. Chest reconstruction, which involves removal of breast tissue and nipple preservation, is associated with significant improvements in mental health and well-being among trans-masculine adolescents and adults (Agarwal et al., 2018; Mahfouda et al., 2019; Van Boerum et al., 2019). A systematic review of studies of genital surgeries that included metoidioplasty indicated that 93 percent of patients were satisfied with the outcome, including preserved erogenous sensitivity, despite significant rates of postoperative complications (Morrison et al., 2016). A systematic review of penile prosthetic outcomes for 792 transgender men over a mean follow-up period of three years found inconsistent reporting of sensory, urinary, satisfaction, and sexual outcomes after surgery, with 36 percent reporting prosthesis complications (Rooker et al., 2019).

Surgeries for transgender women and other trans-feminine people may include breast augmentation, facial feminization, vocal surgery, orchiectomy, and vaginoplasty. Some studies have shown improvements in quality of life and high patient satisfaction following facial feminization procedures for trans-feminine individuals, including reshaping the contours of the face and larynx (Ainsworth and Spiegel, 2010; Van Boerum et al., 2019). A

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 382 of 438 PageID #: 2

systematic review of vaginoplasty for transfeminine individuals identified 26 studies with a total of 1,563 patients; although measures used to track outcomes varied between studies, and complications were frequent, with neovaginal stenosis the most common, patients tended to report high ratings in both sexual function and satisfaction after surgery (Horbach et al., 2015).

The research regarding outcomes for surgery in youth under 18 is sparse, in part because it is generally not clinically recommended for legal minors, though there is only a small amount of low-quality evidence that supports this limitation (Hembree et al., 2017). Chest masculinization is sometimes appropriate for youth 16 or older (Coleman et al., 2012), and some surgeons perform vaginoplasty on minors under specific circumstances (Milrod and Karasic, 2017). Several studies provide positive evidence regarding the benefits of chest reconstruction in minors, with reduced depressive and anxious symptoms and improved chest dysphoria; the most common complications were changes in sensation and scar cosmesis (Mahfouda et al., 2019). There are very few data regarding genitoplasty for minors.

As noted above, available evidence generally indicates that gender-affirming medical interventions, including surgeries, are associated with improvements in gender dysphoria, mental health, and quality of life for transgender people. Evidence also suggests, however, that mental health conditions can persist after treatment: for instance, a 2011 Swedish registry study of 324 patients who had undergone gender-affirming surgeries between 1973 and 2003 found increased rates of suicide attempts and psychiatric hospitalizations relative to population controls (Dhejne et al., 2011). The study notes that surgeries did alleviate gender dysphoria, and the study was unable to determine how patients might have fared without surgery. When a more recent Swedish registry study tracked mental health treatment utilization among people with a gender incongruence diagnosis relative to people without gender incongruence between 2005 and 2015 (N = 2,679), time since gender-affirming surgery was associated with reduced need for mental health services (aOR: 0.92; 95% CI: 0.87, 0.98) (Bränström and Pachankis, 2019). A reanalysis of these data compared individuals with gender incongruence who had gender-affirming surgery with those who did not and found comparable rates of reduced need for treatment for mood disorders between the groups, but higher rates of treatment for anxiety disorders among the group who did have surgery (aOR: 1.40; 95% CI: 1.00, 1.97) (Bränström and Pachankis, 2020). The authors note that the comparator nonsurgical group is heterogeneous, including a mixture of patients who both did and did not want surgery. Furthermore, as was discussed in detail in Chapter 11, transgender people have significantly elevated rates of mental health problems due not just to the experience of

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 383 of 438 PageID #: 2

gender dysphoria but also because of minority stress and stigma. While social and medical affirmation reduce gender dysphoria and can mitigate the impact of social factors, such as discrimination and family rejection, medical affirmation may not fully resolve or protect from experiences of stigma and stress. Future studies examining outcomes of gender affirmation should assess and control for these factors. Related research needs include exploration of factors that can promote resilience in different family and community settings and across the life course (Bockting et al., 2016).

Another major limitation in research on postsurgical outcomes is the absence of patient-reported outcome measures that have been validated in transgender and non-binary post-operative patient populations (Andréasson et al., 2018; Barone et al., 2017; Dy et al., 2019). Recent data overall suggest that satisfaction after gender-affirming surgeries is high and risk of regret is very low. For example, the Center of Expertise on Gender Dysphoria at the Free University Medical Center in Amsterdam published results from 43 years of clinical care in which regret was reported in only 14 patients (0.5%) of the more than 5,300 patients who underwent gonadectomy as part of gender affirmation (Wiepjes et al., 2018). A smaller study found that only 1 of 68 patients who received chest masculinization surgery experienced regret "sometimes" (Olson-Kennedy et al., 2018), consistent with findings from older research (Gijs and Brewaeys, 2007). Similarly, a 2018 systematic review and meta-analysis of 46 articles with 3,716 cases of vaginoplasty for transgender women reported a cumulative rate of regret of 1 percent, compared with an overall satisfaction rate of 92 percent across different surgical techniques (Manrique et al., 2018). While many studies do not qualitatively assess degree and reasons for regret, in one study patients who reported regret with surgeries reported mild regret and attributed this to cosmetic or functional outcomes rather than the decision to have surgery (van de Grift et al., 2017).

Substantial progress has been made over the past decade in research on outcomes of gender-affirming interventions, and there are ample opportunities for improvement. To address the scarcity of data and difficulties extrapolating findings from relatively homogeneous European samples, a United States-based comprehensive registry that tracks patient-centered outcomes for both youth and adults could lead to valuable insights on the benefits of medically supervised gender affirmation (Kimberly et al., 2018). Much remains to be learned regarding optimal timing and risk profiles for surgeries and other medical interventions, aided by standardized and validated tools for body satisfaction, gender-related quality of life, gender dysphoria, and mental health (Olson et al., 2016). Standardized assessment and reporting of outcomes are particularly essential for helping clinicians and patients understand surgical options. In this area, too, more attention is needed to populations that tend to be invisible or underrepresented in

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 384 of 438 PageID #: 2

clinical research, especially transgender people of color and non-binary individuals. Very little is known about the experiences and options for treatment for transgender individuals with intersex traits, especially those who had irreversible treatments as children. Overall, however, the evidence indicates that gender-affirming interventions, including social affirmation, hormonal treatment, and surgeries, are medically necessary for reducing distress and improving the health and well-being of transgender people.

CONVERSION THERAPY

Efforts to change sexual orientation or gender identity, which initially gained traction in the 1960s and which are often referred to as conversion or reparative therapies, assume that non-cisgender and non-heterosexual identities are abnormal. In 2009 the APA produced a landmark report that systematically reviewed the evidence of efficacy for sexual orientation change efforts (APA, 2009). Most of this research was conducted prior to 1981, and very few studies were experimental in design. The task force found that some people sought sexual orientation change efforts due to distress over their sexual orientation but that the treatments were unable to reduce same-sex attractions or increase other-sex attractions. Furthermore, there was evidence that individuals experienced harm from these treatments, including sexual dysfunction, depression, anxiety, and suicidality. With regard to gender identity, while interest in the so-called "desistence" of transgender identity has been informed by studies suggesting that as high as 80 percent of prepubertal youth presenting to pediatric gender clinics ultimately do not identify as transgender, many of the youth included in these studies did not meet full DSM criteria for a gender incongruence diagnosis (Olson, 2009). Recent evidence supports that early social affirmation of transgender identity is associated with good outcomes (Olson et al., 2016; Durwood, McLaughlin, and Olson, 2017) and that lack of social affirmation correlates with depression, anxiety, and suicidality (de Vries et al., 2016; James et al., 2016).

Consequently, sexual orientation and gender identity conversion efforts have fallen out of favor in mainstream psychological and psychiatric practice. By the time of the 2011 Institute of Medicine report, many medical organizations had issued statements condemning sexual orientation change efforts based on the lack of efficacy and evidence of harm. Many of these organizations have since updated their positions to decry conversion therapy for both sexual orientation and gender identity (AMA and GLMA: Medical Professionals Advancing LGBTQ Equality, 2018; American Academy of Child and Adolescent Psychiatry, 2018; Rafferty, Committee on Psychosocial Aspects of Child and Family Health, and Committee on Adolescence, 2018; SAMHSA, 2015; Streed et al., 2019a).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 385 of 438 PageID #: 2

However, there is recent evidence that LGBTQ youth and adults continue to be exposed to conversion therapy. A 2019 report from Williams Institute estimated that 698,000 adults between ages 18 and 59 have undergone conversion therapy from a licensed professional or religious advisor, of whom 350,000 were adolescents when treated (Mallory, Brown, and Conron, 2019). The same study estimated that an additional 57,000 youth will receive conversion therapy from a health care or religious provider before 18 years of age. Among 25,000 LGBTQ youth respondents to a 2019 national survey, 67 percent reported that someone attempted to convince them to change their gender identity or sexual orientation (Trevor Project, 2019). A survey of 762 marriage and family therapists and members of the American Academy of Marriage and Family Therapists, which has a position statement against conversion therapy, found that 19.4 percent of respondents believed it was ethical to practice sexual orientation change therapy, and 3.5 percent of respondents had done so. This belief was associated with higher levels of negative beliefs about LGB clients than those of other therapists (McGeorge, Carlson, and Toomey, 2015).

A recent survey was among the first to evaluate the link between sexual orientation change therapy and the health of young people: among 245 white and Latinx LGBT individuals between the ages of 21 and 25, exposure to conversion efforts within or outside of their families during adolescence was associated with higher family religiosity, lower family socioeconomic status, and higher individual gender nonconformity (Ryan et al., 2018). In addition, exposure to conversion efforts during adolescence was significantly associated with increased suicidal ideation, suicide attempts, and depression, as well as diminished life satisfaction, self-esteem, social support, educational attainment, and lower income in young adulthood.

A systematic narrative review of gender identity conversion efforts found few data and a notable absence of research about their effects on both adolescents and adults (Wright, Candy, and King, 2018). However, a recent study using data from the 2015 USTS found that 14 percent of respondents had been exposed to gender identity conversion therapy during their lifetimes; exposure was associated with significantly higher rates of past-month severe psychological distress and lifetime suicide attempts compared with respondents who had not been exposed to such therapy (Turban et al., 2019). Exposure to gender identity conversion therapy before age 10 was associated with nearly twice the rate of lifetime suicide attempts.

The available evidence suggests that sexual orientation and gender identity conversion efforts are ineffective and dangerously detrimental to the health of SGD populations, especially for minors who are unable to give informed consent. As of early 2020, 20 states, the District of Columbia, Puerto Rico, and a number of municipalities had outlawed sexual orientation and gender identity conversion therapy for minors (Move-

Copyright National Academy of Sciences. All rights reserved.

ment Advancement Project, 2020b). As growing numbers of professional organizations and governments call for or legislate an end to conversion therapy, particularly for minors, it is important for clinicians working with SGD populations to understand the effects that these experiences can have on individuals, even many years later. Research on strategies for helping individuals who have experienced conversion therapy to heal and recover is essential. In order to end the practice of conversion therapy, it is not sufficient for professional organizations to recommend against conversion therapy; rather, professionals may require dedicated and specific training on the inefficacy and danger of conversion treatments, and insurance providers should consider limiting coverage for these non-evidence-based practices.

INTERSEX GENITAL SURGERY

The most expansive estimations of the prevalence of intersex traits, including any variation in any marker of sex (chromosomes, internal reproductive anatomy, external genital shape, and secondary sex traits), concludes that up to 1.7 percent of the population has an intersex trait (Fausto-Sterling, 2000). Estimates based on the number of people with clinically identifiable sexual or reproductive anatomic variations are closer to 0.5 percent (Nordenvall et al., 2014). Estimates for prevalence of infants born with obvious genital diversity, sometimes known as ambiguous genitalia, range from 0.03 percent to 0.1 percent (Blackless et al., 2000; Hughes et al., 2007; Thyen et al., 2006). Such variations can include differences in the length of the genital tubercule or glans (as in a shorter penis or longer clitoris), a narrow or absent vaginal opening, or presence of partially fused labia or a partially separated scrotum. This section focuses primarily on early genital surgery for children born with obvious genital diversity, which remains the most contentious area of clinical care—and increasingly, health law and policy—for persons with intersex traits (Dalke et al., 2020).

Genital Diversity and Early Genital Surgeries

Although some infants with genital diversity require urgent surgery to address urinary obstruction or exposed pelvic organs (Woo, Thomas, and Brock, 2010), many have no immediate medical concerns and do not require urgent medical treatment (Romao and Pippi Salle, 2017). Because the appearance of the external genitals is typically the primary datum for the sex assigned to infants at birth, genital diversity can lead to uncertainty about which sex a child with intersex traits should be assigned. Similarly, eventual gender identity cannot be readily predicted for many people with intersex traits based on the appearance of their genitals at birth (see more

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 387 of 438 PageID #: 2

detailed discussion below). Currently, clinicians and advocates alike typically recommend a binary but flexible sex assignment, informed by the balance of sex markers and the specific intersex condition the child has, which will contribute to the person's gender identity later in life.

Early genital surgeries primarily seek to align genitalia with assigned sex. Feminizing surgeries reduce the size of a clitoris, shape a vulva, or create or lengthen the vagina of a child assigned female. Masculinizing surgeries may reposition a urethra that is not located at the tip of the penis or create a phallus for a child assigned male. Early removal of gonadal tissue may also be recommended to reduce risk of malignancy or the pubertal production of hormones (and therefore secondary sex traits) that are discordant with the child's assigned sex. In the United States, many of these surgeries are performed in infancy.

In 2016, an international consensus group offered an update on genital surgery for children with obvious genital difference and identified a broad set of benefits for surgeries (Mouriquand et al., 2016). Physically, surgeries seek to promote "functional genital anatomy to allow future penetrative intercourse (as a male or a female)" (p. 141), as well as fertility, urinary function, menstruation, and the avoidance of malignancy and secondary sex traits that are discordant with assigned sex. Psychosocially, surgeries also purportedly "foster development of 'individual' and 'social identities'," reduce genital-related stigma, and support "the parents' desire to bring up a child in the best possible conditions" (p. 142). Since the early 1990s, however, intersex advocates have called attention to the physical and emotional harms of surgery, especially when performed before a child is old enough to participate in the decision. Indeed, in the absence of cloacal exstrophy (exposure of pelvic organs), urinary obstruction, or current malignancy, there is no medical urgency for such surgeries; they can be safely deferred until a child is older. At the core of the debate is a question as to what to do and when: what, if any, surgeries should be performed on very young children? This question ultimately calls for the weighing of relative physical and emotional risks, benefits, and alternatives to such surgeries.

Synthesis of the evidence base is complicated by significant heterogeneity of anatomic and medical considerations, surgical procedures, and dynamic psychosocial aspects over the life course. The available research on outcomes also has significant methodological limitations, with many outcomes reported from single surgeons or programs and inconsistency in measurement instruments, study designs, sample sizes, reported outcomes, and follow-up periods. Studies often have insufficient postsurgical follow-up to evaluate outcomes of childhood interventions on adult physical, sexual, and psychological well-being. Many studies also lack an effective comparator group, as there are no standard nonsurgical pathways for children with genital difference.

Copyright National Academy of Sciences. All rights reserved.

A review of these surgeries follows, along with an assessment of what is known about the outcomes of these interventions. The risks and benefits of each group of surgeries are discussed together, as these tend to be specific to the physical intervention itself. Some psychosocial outcomes, however, are discussed in aggregate, to reflect more limited data and overlaps in psychosocial experiences among intersex variations.

Gonadectomy

Removal of the gonads yields two potential benefits in the form of risk reduction: avoiding gonadal malignancy and undesired secondary sex traits. The risk of malignancy tends to be higher for intra-abdominal testes or atypically developed gonads, but it has to be balanced against the potential benefits of hormone-producing tissue (Pyle and Nathanson, 2017). Individuals with complete androgen insensitivity syndrome (AIS) have very low risk of testicular malignancy in childhood or adolescence, do not develop masculine secondary sex traits in puberty, and derive a high bone health benefit from endogenous hormone production; in these cases, it is generally recommended to defer gonadectomy until after puberty. Individuals with gonadal dysgenesis (in which gonads do not fully develop into ovarian or testicular tissue) have a higher risk of malignancy with little hormone production, and childhood gonadectomy is consistently recommended (Mouriquand et al., 2016). Some assigned girls with a 46,XY karyotype, testicular tissue, and full or partial androgen response, as in partial AIS or 5-alpha reductase deficiency, have moderate or low risk of malignancy and less predictable responses to hormone production at puberty. Gonadectomy is sometimes considered for these children to reduce distress and uncertainty around a "mixed" puberty (Mouriquand et al., 2016).

There are significant risks from gonadectomy. Some people with typically developed intra-abdominal testes, as in complete AIS and 5-alpha reductase deficiency, may be capable of producing mature sperm with assisted reproductive technology (Finlayson et al., 2017; Kang et al., 2014). For such people, gonadectomy can amount to sterilization. Removal of sex hormone-producing gonadal tissue can lead to low bone mass, genital changes, sexual dysfunction, and mood changes, for which individuals may require a lifetime of hormone replacement therapy. If the surgery is performed prior to puberty, people may be prescribed hormones congruent with their assigned sex rather than identified gender. Importantly, recent evidence suggests that puberty blockers may be a viable nonsurgical alternative to support gender identity exploration and allow time for informed consent, and in most cases, surgery need not be done in early childhood (Canalichio et al., 2020).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 389 of 438 PageID #: 2

Feminizing Surgeries

Feminizing surgeries include clitoral and vaginoplasty surgeries. Clitoral surgery is most often recommended for 46,XX children with congenital adrenal hyperplasia (CAH) who are assigned female, with concerns primarily about genital "ambiguity" (Mouriquand et al., 2016). In recognition of inadequacies of earlier techniques, like clitoral amputation and recession, microsurgical approaches aim to preserve clitoral nerve and vascular supply, and in some cases they "bury" rather than remove parts of the clitoris should an individual wish to reverse the surgery in the future (Mouriquand et al., 2016). Vaginoplasty may also be recommended for assigned girls whose vaginas do not connect to the perineum, thereby limiting penetrative sex and impairing fertility and outflow of menstrual blood (Mouriquand et al., 2016). For assigned girls with shorter or absent vaginas and without uteruses (as in AIS, gonadal dysgenesis, or Mullerian agenesis), vaginoplasty carries the sole benefit of allowing penetrative intercourse.

There is some evidence that 46,XX women with CAH were satisfied with feminizing genital surgeries (Mouriquand et al., 2016). Reviewers have concluded from surveys of women who had undergone feminizing genitoplasty as children that women prefer earlier timing of surgery (de Jesus, 2018). Indeed, in one survey of adult women with CAH or AIS who had genital surgeries at an average of 3.8 years, 17 out of 24 reported that surgery had been done at the proper age (Fagerholm et al., 2011). However, these surveys are small and limited. Importantly, a large systematic review and meta-analysis found that only two studies surveyed 46,XX female CAH patients' satisfaction with surgery, of which the majority were satisfied (Almasri et al., 2018).

Long-term data regarding the reversibility of and sensory and sexual outcomes from these procedures are lacking, especially for more novel microsurgical approaches. Data regarding preserved sexual function after clitoral surgery is challenged by studies revealing significant rates of long-term sexual dysfunction and anorgasmia (de Jesus, 2018). Because studies of sexual quality of life may be confounded by psychosocial issues, attempts have been made to study postsurgical sensitivity objectively with a device capable of analyzing thermal and vibratory sensation. Many patients, however, have refused to participate in such studies, which may reflect discomfort or even trauma associated with previous experiences of medical care (de Jesus, 2018). Limited data suggest unfavorable patient satisfaction with cosmesis after vaginoplasty, as well as a high incidence of postsurgical vaginal stenosis. If this occurs, patients may experience pain with intercourse and require self-dilation or repeat surgery. While there has been some evidence supporting benefit of surgery for women with CAH, multiple studies of adult women with CAH find less frequent sexual activ-

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 390 of 438 PageID #: 2

ity and lower frequency of orgasm, including among the small reported number of people with CAH who did not undergo surgery (de Jesus, 2018). Notably, there are no objective scales validated to assess sexual function in women with intersex traits. There are few data evaluating long-term urological complications after feminizing genitoplasty.

Masculinizing Surgeries

Masculinizing surgeries aim to facilitate standing urination, penetrative intercourse, and a "cosmetically pleasing appearance" (Winship, Rushton, and Pohl, 2017). These procedures include hypospadias repair and phalloplasty. Hypospadias is characterized along a spectrum from distal (urethra opening near, but not at, the tip of the penis) to proximal (urethra opening at the base of the penis). Most individuals with distal hypospadias do not have differences of sex development (DSD), so this variation is not reviewed here.

Proximal hypospadias is often associated with diversity of penile and scrotal appearance, and at least one of three children born with proximal hypospadias and an undescended gonad will have other features of a DSD, such as non-XY karyotype (Romao and Pippi Salle, 2017). Phalloplasty may be recommended for 46,XY assigned boys born with a smaller than usual, or absent, penis. Although many of these children were historically assigned female, longitudinal data have revealed higher rates of gender dysphoria for those assigned girls than those assigned boys (Meyer-Bahlburg, 2005), and there is some evidence that urologists increasingly favor male sex assignment (Diamond et al., 2011).

The primary cited benefit of proximal hypospadias repair is avoidance of distress due to difference and stigma (Bush and Snodgrass, 2017), which is accomplished through achieving decreased spraying with urination and capacity for penetrative intercourse. Although long-term outcome studies for proximal hypospadias do not consistently track lower urinary tract symptoms, some studies have reported rates of lower urinary tract symptoms as high as 100 percent after proximal hypospadias surgeries (Gong and Cheng, 2017). Multiple studies have found persistent penile curvature and dissatisfaction with cosmesis after masculinizing surgeries (Tourchi and Hoebeke, 2013), and there is no commonly used objective measure of penile appearance after surgery (Gong and Cheng, 2017). Very few outcome studies for masculinizing surgeries have evaluated erectile dysfunction, and "most pediatric urologists do not follow patients into adulthood and have little experience in sexual medicine" (Winship, Rushton, and Pohl, 2017, p. 287). One study found that more than two-thirds of adult men with proximal hypospadias reported some sexual dysfunction and decreased sexual quality of life after surgery (Chertin et

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 391 of 438 PageID #: 2

al., 2013). Reoperations and complications may contribute to urinary and sexual dysfunction, with complication rates ranging from 4 to 68 percent, and reoperation rates ranging from 23 to 52 percent (Gong and Cheng, 2017). Higher rates of reoperations and complications are associated with longer durations of follow-up, suggesting that long follow-up periods may be important elements of studies examining adverse postoperative outcomes (Gong and Cheng, 2017).

Psychosocial Outcomes after Genital Surgery

Patient Considerations

The absence of holistic and validated tools for assessment of sexual well-being and gender identity, patient satisfaction, and patient-centered surgical outcome measures present significant challenges in identifying robust conclusions regarding the psychosocial risks and benefits of early surgery. There are, however, some data regarding the outcomes of psychosocial distress and gender identity in the context of surgery.

Avoidance of distress due to social stigma and bodily difference has been offered as an indication for feminizing surgeries (de Jesus, 2018), masculinizing surgeries (Bush and Snodgrass, 2017), and gonadectomy for patients who may develop discordant secondary sex traits at puberty (Mouriquand et al., 2016). Of note, as discussed in Chapter 11, evidence indicates greater rates of psychological distress for individuals with intersex traits than the general population, but there is very little research exploring why. Rather, much of the research and clinical discourse reveals an implicit bias that genital or sexual difference is *de facto* abnormal and distressing and that "normalizing" surgery is a solution to this problem (Dalke, Baratz, and Greenberg, 2020). One series of qualitative studies suggested that 46,XX assigned and identified females with CAH experience stigma in medical, social, and sexual settings related to their genitalia and secondary sex traits; however, these studies included both women who did and did not have surgery, suggesting that surgery did not fully protect women from experiencing stigma (Meyer-Bahlburg et al., 2017a, 2017b, 2018). Of note, there are very few robust data exploring the benefits of surgery for patients with intersex traits, especially those who do not have CAH. Because standard practice has been to perform surgery early, however, there are few studies evaluating rates of psychosocial distress or satisfaction among individuals who did not undergo surgery, nor is there clear evidence that genital surgery itself reduces psychosocial stress (Roen, 2019). In a series of interviews, parents of children who did not undergo genital surgery reported that their children had attended school, had friends, and had not experienced bullying or harassment (Human Rights Watch, 2017).

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 392 of 438 PageID #: 2

There is some evidence that early genital surgery may unintentionally compound psychosocial distress. Multiple studies report that genital examinations in childhood can be experienced as intrusive, aversive, stigmatizing, and objectifying, particularly when children are not engaged in dialog with their providers (Roen, 2019). Qualitative research suggests that shame and a sense of "differentness" are correlated with both feminizing and masculinizing interventions: "going through surgery as a child might highlight bodily difference as stigmatising rather than facilitating the management of shame" (Roen, 2019, p. 517). This finding is consistent with information from intersex people themselves, who report experiences of anger, guilt, and trauma related to early surgery that was carried out without their consent, especially when they did not receive adequate information about their bodies or the procedures that were performed on them (Human Rights Watch, 2017).

Of particular interest in genital surgery is gender outcomes, particularly given the risk of developing a gender identity discordant with a sex that was assigned at birth and then surgically reinforced. Some intersex traits, such as complete AIS, complete gonadal dysgenesis, and proximal hypospadias without DSD, are associated with very low likelihood of gender dysphoria (Meyer-Bahlburg et al., 2016). Other intersex traits are associated with much higher rates, such as 46,XY individuals with cloacal exstrophy who are assigned female (Meyer-Bahlburg, 2005). A systematic review and meta-analysis found that 8 to 13 percent of 46,XX assigned female individuals with CAH did not identify as female (Almasri et al., 2018), which is much higher than the estimated 0.6 percent population prevalence of transgender identity among the general population (Flores et al., 2016). One very small, non-U.S. study found 46,XX assigned males with CAH can also experience gender dysphoria (de Jesus, Costa, and Dekermacher, 2019). Few data have been published on gender identity among individuals with partial AIS, 5-alpha reductase deficiency, or 17-beta hydroxysteroid dehydrogenase deficiency. Most studies evaluating gender identity among individuals with intersex traits have taken a binary view of gender, which could underreport rates of non-cisgender identities. Sex assignment at birth has become increasingly nuanced and focused on patient-specific recommendations (Kolesinska et al., 2014). Early and irreversible interventions may limit opportunities for gender affirmation later in life, which supports deferral of surgeries until the person's gender identity and ability to participate in the decision are established.

Parental Considerations

As is discussed in Chapter 11, much of the psychosocial research on intersex issues focuses on the mental health of parents. This work suggests that parents of children with genital difference experience stress similar to parents of children with chronic illness and, in some cases, also have de-

Copyright National Academy of Sciences. All rights reserved.

pression, anxiety, and decreased mental health quality of life (Wisniewski, 2017). Parents report fearing that their children will be teased, excluded, or stigmatized because of their genital differences (Wisniewski, 2017), and reduction of parental distress is often cited as a benefit of early genital surgery. However, there have been no studies examining experiences of bullying among children with intersex traits, and thus no evidence is available to indicate that surgery reduces the risk of bullying. Surgeons may be more likely to find a child's preoperative genital appearance unsatisfactory than parents (Nokoff et al., 2017), and this possibility raises the question of whether parents' perceptions of their child's genitals are influenced by the medical team's implicit bias. Overall, there is no evidence that genitoplasty directly targets parental distress, nor is there evidence that parental distress is intolerable or cannot be addressed in other ways (Roen, 2019).

An important consideration around parents is the process by which they make decisions about their child's health care. One ethical concern involved in this process is informed consent. Ethicists generally assume that parents can give informed consent for their child's health care as actors in the child's best interests (AMA, 2018). However, some scholars have suggested that, because the uniqueness of intersex surgery might affect a child's fundamental human rights, a court order might be required for the parent to give informed consent (Dalke et al., 2020). Evidence has also challenged the integrity of informed consent at a micro-ethics level. One study of self-identified DSD clinics found gaps in informed consent processes: more than two-thirds of the clinics did not document discussion of risks of surgery, including additional procedures, sexual dysfunction, psychosocial distress, gender uncertainty, and that interventions could be deferred until a later time (Rolston et al., 2017). Even with sufficient information, the informed consent process may not be adequate when carried out with parents of a minor child, given the distress that parents experience (Tamar-Mattis et al., 2013). Many families lack access to psychological services to assist in information processing despite multiple consensus recommendations for such services (Rolston et al., 2017). There are emerging data suggesting that the way information is framed can bias families' decision making. For instance, adopting a position of equipoise and patient-centeredness can unintentionally move families toward the surgeon's recommended course of action (Timmermans et al., 2018), and several studies have suggested that families feel as though their options are "surgery or nothing" (Roen, 2019).

Alternatives to Genital Surgery

There is very little research regarding alternatives to surgical intervention. Some doctors have suggested that gonadotropin-releasing hormone analogs can be used in place of gonadectomy for pubertal suppression in

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 394 of 438 PageID #: 2

children whose gender identity or pubertal development is uncertain and that hormonal management of CAH can reduce the size of a clitoris as an alternative to surgery (Mouriquand et al., 2016). Vaginal dilation may be an option in place of vaginoplasty for some. The contours of psychosocial support, including limiting genital exams and engaging patients and families over time to involve them in decision making, are beginning to emerge but as yet have minimal supporting data (Roen, 2019). This approach offers the possibility of helping families and young people learn to cope with and reduce the distress that surgery seeks to, but may not, avert.

In an appraisal of the literature and expert opinion, the Endocrine Society has recommended that parents be counseled on the risks and benefits of surgery and be permitted to make what they feel is the best decision for their child (Speiser et al., 2018). Timmermans and colleagues (2018) found that this approach biases families toward surgery. A growing number of consensus groups and professional medical organizations, including the American Academy of Family Physicians[17] and Physicians for Human Rights,[18] have interpreted the risk-benefit ratio as unfavorable for early genital surgery in instances where the individual is too young to participate in the consent process (Elders, Sacher, and Armona, 2017; Krege et al., 2019; Toler and GLMA Policy and Government Affairs Committee, 2016). These organizations advise the provision of psychosocial support for both parents and children and deferral of early genital surgeries until the child can participate in the decision.

Several international human rights groups have identified early surgery in the absence of informed consent as a violation of the child's human rights to autonomy and an open future, and even as a kind of medical torture (Amnesty International, 2017; Human Rights Watch, 2017; United Nations General Assembly Human Rights Council, 2013; WHO, 2014). In July 2020, Lurie Children's Hospital in Chicago, Illinois, became the first hospital in the nation to publicly acknowledge the harms of early genital surgeries and to adopt a policy that "irreversible genital procedures should not be performed until patients can participate meaningfully in making the decision for themselves, unless medically necessary" (Shanley et al., 2020). Of note, while the statement committed to pausing all genital surgeries that were not medically necessary, it did indicate that there may be a difference in approach for individuals with intersex traits who have CAH relative to people who do not.

Overall, there is mixed evidence that surgery achieves its physical goals and scant evidence that it confers psychosocial benefit. The existing research does provide strong evidence of the risk of irreversible harm from

[17] See https://www.aafp.org/about/policies/all/genital-surgeries.html.
[18] See https://phr.org/news/unnecessary-surgery-on-intersex-children-must-stop/.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 395 of 438 PageID #: 2

early genital surgery, including immediate postoperative complications and later revisions, as well as the potentially catastrophic risk of incorrect, surgically reinforced gender assignment. The absence of data on alternative affirming pathways means that there is very little evidence of benefit from deferring surgery. It also means, however, that there is very little evidence of harm from deferring surgery. Factoring in the human rights of children and evidence that individuals with diverse sexualities, bodies, and genders can and do thrive with affirmation and support from parents, peers, and communities, there is insufficient evidence of benefit to justify early genital surgery. Therefore, the deferral of surgery until a child can participate in the decision, except in scenarios with urgent medical need, such as urinary obstruction or immediate cancer risk, may optimize the benefits of informed consent, autonomy, and patients' physical, social, and emotional well-being.

SUMMARY AND CONCLUSIONS

Access to comprehensive, affirming, and high-quality health care services is a human right for all people. Ensuring access to care for SGD populations includes building supportive and protective structures at all levels, from the broad societal level to the level of individual provider practices. At the societal level, laws that guarantee access to health care services, health insurance coverage, and public health programs for all, regardless of sexual orientation, gender identity, and intersex status, are critical to the health and well-being of SGD people. Laws and policies that provide affordable, comprehensive health insurance coverage, such as Medicaid expansion by all states or some form of universal coverage, could combat health risks such as uninsurance and poverty among SGD populations.

CONCLUSION 12-1: Sexual and gender diverse populations need access to a full range of preventive, chronic, and acute health care services delivered in settings that are welcoming, affirming, and both clinically appropriate and culturally responsive.

Health services and procedures that are particularly important for the health and well-being of SGD populations include but are not limited to pre- and post-exposure prophylaxis for HIV; HIV treatment and care; abortion, fertility, and other reproductive health services; affirming mental and behavioral health care services; and gender-affirming care for transgender people. Transgender people, as well as lesbians and bisexual women, also need access to timely and anatomically appropriate preventive screenings.

Important aspects of providing culturally responsive and clinically appropriate care for SGD populations include but are not limited to creating affirming health care environments; using forms that are inclusive of diverse

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 396 of 438 PageID #: 2

identities and family structures; seeking to address social determinants of health and social needs; and requiring routine, high-quality cultural and clinical training on working with SGD populations for the health care and public health workforce. Efforts to promote quality of care and care coordination may have differential effects on populations experiencing disparities, making it important to assess the effects of these efforts on groups such as LGBT people, people with intersex traits, and intersectional groups such as LGBT people of color and people living with HIV. Entities that provide resources and guidance on affirming health care policies and environments for SGD populations include the Academy of Physician Assistants, GLMA: Health Professionals Advancing LGBTQ Equality, Association of American Medical Colleges, American Psychological Association, American Academy of Pediatrics, American Medical Association, National LGBT Health Education Center, and The Joint Commission.

CONCLUSION 12-2: Gender-affirming care, including puberty delay medications, mental health services, hormone therapy, and surgeries, is associated with improved mental and physical health for transgender people.

Gender-affirming care for transgender people, including non-binary and other gender diverse people, is an essential and medically necessary intervention to improve health and well-being. Provision of this care needs to be individualized and conducted in partnership between patients and their providers. Insurance coverage of gender-affirming services and procedures by public and private payers, according to the most updated expert standards in the field and without inappropriate age or other restrictions, is necessary to facilitate access to these services and to avoid discrimination on the basis of sex and gender identity.

CONCLUSION 12-3: Conversion therapy to change sexual orientation or gender identity and elective genital surgeries on children with intersex traits who are too young to participate in consent are dangerous to the health and well-being of sexual and gender diverse people.

Conversion therapy to change sexual orientation or gender identity can cause significant and life-long trauma. Elective genital surgeries on children with intersex traits who cannot participate in consent are similarly detrimental to health and well-being. The American Medical Association, American Academy of Family Physicians, American Academy of Pediatrics, American Psychiatric Association, American Psychological Association, GLMA: Health Professionals Advancing LGBTQ Equality, Physicians for Human Rights, the U.S. Department of Health and Human Services, and

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 397 of 438 PageID #: 2

the World Health Organization recommend that these procedures not be promoted or performed.

REFERENCES

Agarwal, C.A., Scheefer, M.F., Wright, L.N., Walzer, N.K., and Rivera, A. (2018). Quality of life improvement after chest wall masculinization in female-to-male transgender patients: A prospective study using the BREAST-Q and Body Uneasiness Test. *Journal of Plastic, Reconstructive and Aesthetic Surgery*, *71*(5), 651–657. doi: 10.1016/j.bjps.2018.01.003.

Agénor, M., Krieger, N., Austin, S.B., Haneuse, S., and Gottlieb, B.R. (2014). At the intersection of sexual orientation, race/ethnicity, and cervical cancer screening: Assessing Pap test use disparities by sex of sexual partners among Black, Latina, and white U.S. women. *Social Science and Medicine*, *116*, 110–118. doi: 10.1016/j.socscimed.2014.06.039.

Ainsworth, T.A., and Spiegel, J.H. (2010). Quality of life of individuals with and without facial feminization surgery or gender reassignment surgery. *Quality of Life Research*, *19*(7), 1019–1024. doi: 10.1007/s11136-010-9668-7.

Almasri, J., Zaiem, F., Rodriguez-Gutierrez, R., Tamhane, S.U., Iqbal, A.M., Prokop, L.J., Speiser, P., Baskin, L., Bancos, I., and Murad, M.H. (2018). Genital reconstructive surgery in females with congenital adrenal hyperplasia: A systematic review and meta-analysis. *Journal of Clinical Endorinology and Metabolism, 103*(11), 4089–4096. doi: 10.1210/jc.2018-01863.

American Academy of Child and Adolescent Psychiatry Committee on Sexual Orientation and Gender Identity Issues. (2018). *Conversion Therapy*. Available: https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx.

American Academy of Family Physicians. (2012). *Resolution No. 1004: Transgender Care*. Available: https://www.aafp.org/dam/AAFP/documents/about_us/special_constituencies/2012RCAR_Advocacy.pdf.

———. (2018). *Genital Surgeries in Intersex Children*. Available: https://www.aafp.org/about/policies/all/genital-surgeries.html.

American Academy of Pediatrics. (2018). *Ensuring Comprehensive Care and Support for Transgender and Gender-Diverse Children and Adolescents*. Available: https://pediatrics.aappublications.org/content/pediatrics/early/2018/09/13/peds.2018-2162.full.pdf.

American College of Nurse Midwives. (2012). *Transgender/Transsexual/Gender Variant Health Care*. Available: http://www.midwife.org/acnm/files/ACNMLibraryData/UPLOADFILENAME/000000000278/Transgender%20Gender%20Variant%20Position%20Statement%20December%202012.pdf.

American College of Obstetricians and Gynecologists. (2011). *Committee Opinion No. 512: Health Care for Transgender Individuals*. Available: https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2011/12/health-care-for-transgender-individuals.

American Medical Association. (2008). *Resolution H-185.950: Removing Financial Barriers to Care for Transgender Patients*. Available: https://policysearch.ama-assn.org/policyfinder/detail/financial%20barriers%20transgender?uri=%2FAMADoc%2FHOD.xml-0-1128.xml.

———. (2018). *Amendment to E-2.2.1: Pediatric Decision Making*. Available: https://www.ama-assn.org/system/files/2018-11/i18-refcomm-conby.pdf.

———. (2019). *Policy Statement H-295.878 on Eliminating Health Disparities: Promoting Awareness and Education of Lesbian, Gay, Bisexual, and Transgender (LGBT) Health Issues in Medical Education*. Available: https://policysearch.ama-assn.org/policyfinder/detail/gender%20identity?uri=%2FAMADoc%2FHOD.xml-0-2177.xml.

Copyright National Academy of Sciences. All rights reserved.

American Medical Association and GLMA: Health Professionals Advancing LGBTQ Equality. (2018). *Issue Brief: LGBTQ Change Efforts ("Conversion Therapy")*. Available: https://www.ama-assn.org/system/files/2019-03/transgender-conversion-issue-brief.pdf.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*. Washington, DC: American Psychiatric Association.

———. (2018). *Position Statement on Access to Care for Transgender and Gender Diverse Individuals*. Available: www.psychiatry.org/File%20Library/About-APA/Organization-Documents-Policies/Policies/Position-2018-Discrimination-Against-Transgender-and-Gender-Diverse-Individuals.pdf.

American Psychological Association. (2008). *Policy on Transgender, Gender Identity & Gender Expression Non-Discrimination*. Available: https://www.apa.org/about/policy/resolution-gender-identity.pdf.

———. (2009). *Report of the American Psychological Association Task Force on Appropriate Therapeutic Responses to Sexual Orientation*. Available: http://www.apa.org/pi/lgbc/publications/therapeutic-resp.html.

———. (2015). *Resolution on Gender and Sexual Orientation Diversity in Children and Adolescents in Schools*. Available: https://www.apa.org/about/policy/orientation-diversity.

American Society for Reproductive Medicine. (2013). *Access to Fertility Treatment by Gays, Lesbians, and Unmarried Persons: A Committee Opinion*. Available: https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/ethics-committee-opinions/access_to_fertility_treatment_by_gays_lesbians_and_unmarried_persons-pdfmembers.pdf.

Amnesty International. (2017). *First Do No Harm: Ensuring the Right of Children Born Intersex*. Available: https://www.amnesty.org/en/latest/campaigns/2017/05/intersex-rights.

Andréasson, M., Georgas, K., Elander, A., and Selvaggi, G. (2018). Patient-reported outcome measures used in gender confirmation surgery: A systematic review. *Plastic and Reconstructive Surgery*, *141*(4), 1026–1039. doi: 10.1097/PRS.0000000000004254.

Arístegui, I., Radusky, P.D., Zalazar, V., Romero, M., Schwartz, J., and Sued, O. (2017). Impact of the gender identity law in Argentinean transgender women. *International Journal of Transgenderism*, *18*, 446–456.

Bailey, L., Ellis, S.J., and McNeil, J. (2014). Suicide risk in the UK trans population and the role of gender transition in decreasing suicidal ideation and suicide attempt. *Mental Health Review Journal*, *19*(4), 209–220.

Baker, K.E., (2016, June 6). LGBT protections in the Affordable Care Act Section 1557. *Health Affairs Blog*. Available: http://healthaffairs.org/blog/2016/06/06/lgbt-protections-in-affordable-care-act-section-1557.

Baker, K.E., (2017). The future of transgender coverage. *New England Journal of Medicine, 376*(19), 1801–1804. doi: 10.1056/NEJMp1702427.

Baker, K.E., and Durso, L.E. (2017, March 22). Why repealing the Affordable Care Act is bad medicine for LGBT community. *Center for American Progress*. Available: https://www.americanprogress.org/issues/lgbtq-rights/news/2017/03/22/428970/repealing-affordable-care-act-bad-medicine-lgbt-communities/.

Baker, K.E., Durso, L.E., and Cray, A. (2014). *Moving the Needle: The Impact of the Affordable Care Act on LGBT Communities*. Washington, DC: Center for American Progress. Available: https://cdn.americanprogress.org/wp-content/uploads/2014/11/LGBTandACA-report.pdf.

Baker, K.E., Minter, S.P., Wertz, K., and Wood, M. (2012). A new approach to health care equality for transgender people: California's insurance gender non-discrimination act. *LGBTQ Policy Journal at the Harvard Kennedy School*, *2*, 35-43. Available: https://lgbtq.hkspublications.org/wp-content/uploads/sites/20/2015/10/LGBTQ_3_29_12.pdf.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 399 of 438 PageID #: 2

Balzano, F.L., and Hudak, S.J. (2018). Military genitourinary injuries: Past, present, future. *Translational Andrology and Urology, 7*(4), 646–652. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6127528/.

Barone, M., Cogliandro, A., Stefano, N.D., Tambone, V., and Persichetti, P. (2017). A systematic review of patient-reported outcome measures following transsexual surgery. *Aesthetic Plastic Surgery*, 1–14. doi: 10.1007/s00266-017-0812-4.

Becerra-Culqui, T.A., Liu, Y., Nash, R., Cromwell, L., Flanders, W.D., Getahun, D., Giammattei, E., Lash, T., Millman, A., Quinn, V., Robinson B., Roblin, D., Sandberg, D., Silverberg, M., Tangpricha, V., and Goodman, M. (2018). Mental health of transgender and gender nonconforming youth compared with their peers. *Pediatrics, 141*(5). doi: 10.1542/peds.2017-3845.

Berwick, D.M., Nolan, T.W., and Whittington, J. (2008). The triple aim: Care, health and cost. *Health Affairs, 27*(3), 759–769.

Blackless, M., Charuvastra, A., Derryck, A., Fausto-Sterling, A., Lauzanne, K., and Lee, E. (2000). How sexually dimorphic are we? Review and synthesis. *American Journal of Human Biology*, *12*(2), 151–166.

Blosnich, J.R., Hanmer, J., Yu, L., Matthews, D.D., and Kavalieratos, D. (2016). Health care use, health behaviors, and medical conditions among individuals in same-sex and opposite-sex partnerships: A cross-sectional observational analysis of the Medical Expenditures Panel Survey (MEPS), 2003–2011. *Medical Care*, *54*(6), 547–554. doi: 10.1097/MLR.0000000000000529.

Bockting, W., Coleman, E., Deutsch, M. B., Guillamon, A., Meyer, I., Meyer, W., Reisner, S., Sevelius, J., and Ettner, R. (2016). Adult development and quality of life of transgender and gender nonconforming people. *Current Opinion in Endocrinology, Diabetes, and Obesity*, *23*(2), 188–197. doi: 10.1097/MED.0000000000000232.

Bränström, R., and Pachankis, J.E. (2019). Reduction in mental health treatment utilization among transgender individuals after gender-affirming surgeries: A total population study. *American Journal of Psychiatry, 177*(8), 727–734. doi: 10.1176/appi.ajp.2019.19010080.

———. (2020). Toward rigorous methodologies for strengthening causal inference in the association between gender-affirming care and transgender individuals' mental health: Response to letters. *American Journal of Psychiatry, 177*(8), 769–772. doi: 10.1176/appi.ajp.2020.20050599.

Bush, N.C., and Snodgrass, W. (2017). RE: Winship BB, Rushton HG, Pohl HG: In pursuit of the perfect penis: Hypospadias repair outcomes. *Journal of Pediatric Urology, 13*(6), 652–653. doi: 10.1016/j.jpurol.2017.08.011.

Butler, M., McCreedy, E., Schwer, N., Burgess, D., Call, K., Przedworski, J., Rosser, S., Larson, S., Allen, M., Fu, S., and Kane, R.L. (2016). *Improving Cultural Competence to Reduce Health Disparities*. Comparative Effectiveness Review No. 170. Rockville, MD: Agency for Healthcare Research and Quality. Available: https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/cultural-competence_research.pdf.

Cahill, S.R., Baker, K.E., Deutsch, M.B., Keatley, J., and Makadon, H.J. (2016). Inclusion of sexual orientation and gender identity in stage 3 meaningful use guidelines: A huge step forward for LGBT health. *LGBT Health*, *3*(2), 100–102. doi: 10.1089/lgbt.2015.0136.

Canalichio, K.L., Shnorhavorian, M., Oelschlager, A.A., Ramsdell, L., Fisher, C., Adam, M.P., and Fechner, P.Y. (2020). A non-surgical approach to 46,XY differences in sex development through hormonal suppression at puberty: A single-center case series study. *Endocrine, 70*, 170–177. doi: 10.1007/s12020-020-02409-y.

Canner, J.K., Harfouch, O., Kodadek, L.M., Pelaez, D., Coon, D., Offodile, A.C., Haider, A.H., and Lau, B.D. (2018). Temporal trends in gender-affirming surgery among transgender patients in the United States. *JAMA Surgery, 153*(7), 609–616. doi: 10.1001/jamasurg.2017.6231.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 400 of 438 PageID #: 2

Castellano, E., Crespi, C., Dell'Aquila, C., Rosato, R., Catalano, C., Mineccia, V., Motta, G., Botto, E., and Manieri, C. (2015). Quality of life and hormones after sex reassignment surgery. *Journal of Endocrinological Investigation*, *38*(12), 1373–1381. doi: 10.1007/s40618-015-0398-0.

Center for Consumer Information and Insurance Oversight. (n.d.). *At Risk: Pre-Existing Conditions Could Affect 1 in 2 Americans: 129 Million People Could Be Denied Affordable Coverage without Health Reform*. Centers for Medicare & Medicaid Services. Available: https://www.cms.gov/CCIIO/Resources/Forms-Reports-and-Other-Resources/preexisting.

———. (2014). *Frequently Asked Question on Coverage of Same-Sex Spouses*. Centers for Medicare & Medicaid Services. Available: https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/frequently-asked-questions-on-coverage-of-same-sex-spouses.pdf.

Centers for Medicare & Medicaid Services. (2015). *Frequently Asked Questions about Affordable Care Act Implementation (Part XXVI)*. Available: https://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/Downloads/aca_implementation_faqs26.pdf.

———. (2016). *Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N)*. Available: https://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=282.

Chertin, B., Natsheh, A., Ben-Zion, I., Prat, D., Kocherov, S., Farkas, A., and Shenfeld, O.Z. (2013). Objective and subjective sexual outcomes in adult patients after hypospadias repair performed in childhood. *Journal of Urology*, *190*(4S), 1556–1560.

Chew, D., Anderson, J., Williams, K., May, T., and Pang, K. (2018). Hormonal treatment in young people with gender dysphoria: A systematic review. *Pediatrics*, *141*(4), e20173742.

Choi, S.K., Badgett, M.V.L., and Wilson, B.D.M. (2019). *State Profiles of LGBT Poverty in the United States*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/State-LGBT-Poverty-Dec-2019.pdf.

Cohen-Kettenis, P.T., and Van Goozen, S. (1998). Pubertal delay as an aid in diagnosis and treatment of a transsexual adolescent. *European Child and Adolescent Psychiatry*, *7*, 246–248.

Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J., Fraser, L., Green, J., Knudson, G., Meyer, W.J., Monstrey, S., Adler, R.K., Brown, G.R., Devor, A.H., Ehrbar, R., Ettner, R., Eyler, E., Garofalo, R., Karasic, D.H., Lev, A.I., Mayer, G., Meyer-Bahlburg, H.F.L., Hall, B.P., Pfäfflin, F., Rachlin, K., Robinson, B., Schechter, L.S., Tangpricha, V., van Trotsenburg, M., Vitale, A., Winter, S., Whittle, S., Wylie, K.R., and Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender-nonconforming people. *International Journal of Transgenderism*, *13*(4), 165–232. doi: 10.1080/15532739.2011.70873.

Committee on Health Care Utilization and Adults with Disabilities. (2018). Factors that affect health-care utilization. In *Health-Care Utilization as a Proxy in Disability Determination*. Washington, DC: National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division, Board on Health Care Services. Available: https://www.ncbi.nlm.nih.gov/books/NBK500097/.

Costa, R., and Colizzi, M. (2016). The effect of cross-sex hormonal treatment on gender dysphoria individuals' mental health: A systematic review. *Neuropsychiatric Disease and Treatment*, *12*, 1953–1966. doi: 10.2147/NDT.S95310.

Coursolle, A. (2019). *Protections for LGBTQ People with Behavioral Health Needs*. Available: https://healthlaw.org/resource/protections-for-lgbtq-people-with-behavioral-health-needs.

Dalke, K.B., Baratz, A.B., and Greenberg, J.A. (2020). Protecting children with intersex traits: Legal, ethical, and human rights considerations. In M. Legato (Ed.), *The Plasticity of Sex*. doi: 10.1016/B978-0-12-815968-2.00010-4.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 401 of 438 PageID #: 2

de Jesus, L.E. (2018). Feminizing genitoplasty: Where are we now? *Journal of Pediatric Urology*, *14*(5), 407–415. doi: 10.1016/j.jpurol.2018.03.020.

de Jesus, L.E., Costa, E.C., and Dekermacher, S. (2019). Gender dysphoria and XX congenital adrenal hyperplasia: How frequent is it? Is male-sex rearing a good idea? *Journal of Pediatric Surgery.* doi: 10.1016/j.jpedsurg.2019.01.062.

de Vries, A.L., McGuire, J.K., Steensma, T.D., Wagenaar, E.C., Doreleijers, T.A., and Cohen-Kettenis, P.T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics, 134*(4), 696–704. doi: 10.1542/peds.2013-2958.

de Vries, A.L., Steensma, T.D., Cohen-Kettenis, P.T., VanderLaan, D.P., and Zucker, K.J. (2016). Poor peer relations predict parent- and self-reported behavioral and emotional problems of adolescents with gender dysphoria: A cross-national, cross-clinic comparative analysis. *European Child and Adolescent Psychiatry, 25*(6), 579–588. doi: 10.1007/s00787-015-0764-7

Dhejne, C., Lichtenstein, P., Boman, M., Johansson, A.L., Langstrom, N., and Landén, M. (2011). Long-term follow-up of transsexual persons undergoing sex reassignment surgery: Cohort study in Sweden. *PLoS One, 6*(2), e16885. doi: 10.1371/journal.pone.0016885.

Dhejne, C., Van Vlerken, R., Heylens, G., and Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry, 28*(1), 44–57. doi: 10.3109/09540261.2015.1115753.

Diamond, D.A., Burns, J.P., Huang, L., Rosoklija, I., and Retik, A.B. (2011). Gender assignment for newborns with 46XY cloacal exstrophy: A 6-year followup survey of pediatric urologists. *Journal of Urology*, *186*, 1642–1648. doi: 10.1016/j.juro.2011.03.101.

Durwood, L., McLaughlin, K.A., and Olson, K.R. (2017). Mental health and self-worth in socially transitioned transgender youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *56*(2), 116–123.e2. doi: 10.1016/j.jaac.2016.10.016.

Dy, G.W., Nolan, I.T., Hotaling, J., and Myers, J.B. (2019). Patient reported outcome measures and quality of life assessment in genital gender confirming surgery. *Translational Andrology and Urology*, *8*(3), 228–240. doi: 10.21037/tau.2019.05.04.

Ehrenfeld, J.M., Zimmerman, D.R., and Gonzales, G. (2018). Healthcare utilization among transgender individuals in California. *Journal of Medical Systems*, *42*(5), 77. doi: 10.1007/s10916-018-0923-8.

Elders, J., Sacher, D., and Armona, R. (2017). *Re-Thinking Genital Surgeries on Intersex Infants*. Palm Center. Available: https://www.palmcenter.org/wp-content/uploads/2017/06/Re-Thinking-Genital-Surgeries-1.pdf.

Endocrine Society. (2017). *Transgender Health*. Available: https://www.endocrine.org/-/media/endocrine/files/advocacy/position-statement/position_statement_transgender_health-updated-august-2020.pdf.

Fagerholm, R., Santtila, P., Miettinen, P. J., Mattila, A., Rintala, R., and Taskinen, S. (2011). Sexual function and attitudes toward surgery after feminizing genitoplasty. *Journal of Urology, 185*(5), 1900–1904. doi: 10.1016/j.juro.2010.12.099.

Fausto-Sterling, A. (2000). *Sexing the Body: Gender Politics and the Construction of Sexuality*. New York: Basic Books.

Finlayson, C., Fritsch, M.K., Johnson, E.K., Rosoklija, I., Gosiengfiao, Y., Yerkes, E., Madonna, M.B., Woodruff, T., and Cheng, E. (2017). Presence of germ cells in disorders of sex development: implications for fertility potential and preservation. *Journal of Urology, 197*(3 Pt 2), 937–943.

Flores, A.R., Herman, J.L., Gates, G.J., and Brown, T.N.T. (2016). How many adults identify as transgender in the United States? Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 402 of 438 PageID #: 2

Fredriksen-Goldsen, K.I., Kim, H.-J., and Barkan, S.E. (2012). Disability among lesbian, gay, and bisexual adults: Disparities in prevalence and risk. *American Journal of Public Health*, *102*(1), e16–e21. doi: 10.2105/AJPH.2011.300379.

Freeman, J. (2018). LGBTQ scientists are still left out. *Nature*, *559*(7712), 27–28. doi: 10.1038/d41586-018-05587-y

Gijs, L., and Brewaeys, A. (2007). Surgical treatment of gender dysphoria in adults and adolescents: Recent developments, effectiveness, and challenges. *Annual Review of Sex Research, 18*(1), 178–224.

Gong, E.M., and Cheng, E.Y. (2017). Current challenges with proximal hypospadias: We have a long way to go. *Journal of Pediatric Urology, 13*(5), 457–467.

Gonzales, G. (2015). Association of the New York State marriage equality act with changes in health insurance coverage. *Journal of the American Medical Association*, *314*(7), 727–728. doi: 10.1001/jama.2015.7950.

Gonzales, G., and Blewett, L.A. (2013). Disparities in health insurance among children with same-sex parents. *Pediatrics*, *132*(4), 703–711. doi: 10.1542/peds.2013-0988.

———. (2014). National and state-specific health insurance disparities for adults in same-sex relationships. *American Journal of Public Health*, *104*(2), e95–e104. doi: 10.2105/AJPH.2013.301577.

Gonzales, G., and Henning-Smith, C. (2017a). The Affordable Care Act and health insurance coverage for lesbian, gay, and bisexual adults: Analysis of the Behavioral Risk Factor Surveillance System. *LGBT Health*, *4*(1), 62–67. doi: 10.1089/lgbt.2016.0023.

———. (2017b). Barriers to care among transgender and gender nonconforming adults. *The Milbank Quarterly*, *95*(4), 726–748. doi: 10.1111/1468-0009.12297.

Gonzales, G., Driscoll, R., and Quinones, N. (2019). Who are the remaining uninsured sexual minority adults under the Affordable Care Act? *LGBT Health*, *6*(6), 319–325. doi: 10.1089/lgbt.2019.0007.

Gridley, S.J., Crouch, J.M., Evans, Y., Eng, W., Antoon, E., Lyapustina, M., Schimmel-Bristow, A., Woodward, J., Dundon, K., Schaff, R., McCarty, C., Ahrens, K., and Breland, D.J. (2016). Youth and caregiver perspectives on barriers to gender-affirming health care for transgender youth. *Journal of Adolescent Health, 59*(3), 254–261. doi: 10.1016/j.jadohealth.2016.03.017.

Gruberg, S., and Bewkes, F.J. (2018). *The ACA's LGBTQ Nondiscrimination Regulations Prove Crucial*. Available: https://www.americanprogress.org/issues/lgbtq-rights/reports/2018/03/07/447414/acas-lgbtq-nondiscrimination-regulations-prove-crucial.

Hatzenbuehler, M.L., O'Cleirigh, C., Grasso, C., Mayer, K., Safren, S., and Bradford, J. (2012). Effect of same-sex marriage laws on health care use and expenditures in sexual minority men: A quasi-natural experiment. *American Journal of Public Health*, *102*(2), 285–291. doi: 10.2105.

Health Resources and Services Administration. (n.d.). *SPNS Initiative: Enhancing Engagement and Retention in Quality HIV Care for Transgender Women of Color, 2012-2017*. Available: https://hab.hrsa.gov/about-ryan-white-hivaids-program/spns-transgender-women-color.

Hembree, W.C., Cohen-Kettenis, P.T., Gooren, L., Hannema, S., Meyer, W., Murad, M., Rosenthal, S., Safer, J., Tangpricha, V., and T'Sjoen, G. (2017). Endocrine treatment of gender-dysphoric/gender-incongruent persons: An endocrine society clinical practice guideline. *Journal of Clinical Endocrinology and Metabolism*, *102*(11), 3869–3903.

Hollenbach, A.D., Eckstrand, K.L., and Dreger, A.D. (Eds.). (2014). *Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who Are LGBT, Gender Nonconforming, or Born with DSD: A Resource for Medical Educators*. Washington, DC: Association of American Medical Colleges.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 403 of 438 PageID #: 2

Horbach, S.E.R., Bouman, M-B., Smit, J.M., Özer, M., Buncamper, M.E., and Mullender, M.G. (2015). Outcome of vaginoplasty in male-to-female transgenders: A systematic review of surgical techniques. *Journal of Sexual Medicine, 12*, 1499–1512.

Hsieh, N., and Ruther, M. (2017). Despite increased insurance coverage, nonwhite sexual minorities still experience disparities in access to care. *Health Affairs*, *36*(10), 1786–1794. doi: 10.1377/hlthaff.2017.0455.

Hughes, I.A., Nihoul-Fékété, C., Thomas, B., and Cohen-Kettenis, P.T. (2007). Consequences of the ESPE/LWPES guidelines for diagnosis and treatment of disorders of sex development. *Best Practice and Research: Clinical Endocrinology and Metabolism*, *21*(3), 351.

Human Rights Campaign Foundation. (2020). *Healthcare Equality Index 2020*. Washington, DC: Human Rights Campaign Foundation. Available: https://hrc-prod-requests.s3-us-west-2.amazonaws.com/resources/HEI-2020-FinalReport.pdf.

Human Rights Watch. (2017). *"I Want to be Like Nature Made Me": Medically Unnecessary Surgeries on Intersex Children in the US*. New York: Human Rights Watch. Available: https://www.hrw.org/sites/default/files/report_pdf/lgbtintersex0717_web_0.pdf.

Institute of Medicine. (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century.* Washington, DC: The National Academies Press. doi: 10.17226/10027.

———. (2011a). *HIV Screening and Access to Care: Exploring the Impact of Policies on Access and Provision of HIV Care*. Washington, DC: The National Academies Press. doi: 10.17226/13057.

———. (2011b). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

Jacobs, D.B., and Sommers, B.D. (2015). Using drugs to discriminate—Adverse selection in the insurance marketplace. *New England Journal of Medicine*, *372*(5), 397–399.

James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L., and Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. Washington, DC: National Center for Transgender Equality. Available: https://www.transequality.org/sites/default/files/docs/USTS-Full-Report-FINAL.PDF.

Joint Commission. (2011). *Advancing Effective Communication, Cultural Competence, and Patient- and Family Centered Care for the Lesbian, Gay, Bisexual, and Transgender (LGBT) Community: A Field Guide*. Oak Brook, IL: The Joint Commission. Available: www.jointcommission.org/assets/1/18/LGBTFieldGuide.pdf.

Kaiser Family Foundation. (2019). *Medicaid and HIV*. Available: https://www.kff.org/hivaids/fact-sheet/medicaid-and-hiv/#.

Kang, H.J., Imperato-McGinley, J., Zhu, Y.S., and Rosenwaks, Z. (2014). The effect of 5alpha-reductase-2 deficiency on human fertility. *Fertility and Sterility*, *101*(2), 310–316. doi: 10.1016/j.fertnstert.2013.11.128.

Karpman, M., Skopec, L., and Long, S.K. (2015, April 16). QuickTake: Uninsurance rate nearly halved for lesbian, gay, and bisexual adults since mid-2013. *Urban Institute Health Policy Center.* Available: http://hrms.urban.org/quicktakes/Uninsurance-Rate-Nearly-Halved-for-Lesbian-Gay-and-Bisexual-Adults-since-Mid-2013.html.

Kcomt, L. (2019). Profound health-care discrimination experienced by transgender people: Rapid systematic review. *Social Work in Health Care, 58*(2), 201–219. doi: 10.1080/00981389.2018.1532941.

Keith, K. (2019). Trump administration finalizes broad religious and moral exemptions for health care workers. *Health Affairs Blog*. Available: https://www.healthaffairs.org/do/10.1377/hblog20190503.960127/abs/.

———. (2020). Supreme court finds LGBT people are protected from employment discrimination: Implications for the ACA. *Health Affairs Blog*. Available: https://www.healthaffairs.org/do/10.1377/hblog20200615.475537/full/.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 404 of 438 PageID #: 2

Keo-Meier, C.L., Herman, L.I., Reisner, S.L., Pardo, S.T., Sharp, C., and Babcock, J.C. (2015). Testosterone treatment and MMPI–2 improvement in transgender men: A prospective controlled study. *Journal of Consulting and Clinical Psychology*, *83*(1), 143–156.

Kimberly, L.L., Folkers, K.M., Friesen, P., Sultan, D., Quinn, G.P., Bateman-House, A., Parent, B., Konnoth, C., Janssen, A., Shah, L.D., Bluebond-Langner, R., and Sales-Humara, C. (2018). Ethical issues in gender-affirming care for youth. *Pediatrics*, *142*(6), e20181537.

Kolesinska, Z., Ahmed, S.F., Niedziela, M., Bryce, J., Molinska-Glura, M., Rodie, M., Jiang, J., Sinnott, R., Hughes, I, Darendeliler, F., Hiort, O., van der Zwan, Y., Cools, M., Guran, T., Holterhus, P., Bertelloni, S., Lisa, L., Arlt, W., Krone, N., Ellaithi, M., Balsamo, A., Mazen, I., Nordenstrom, A., Lachlan, K., Alkhawari, M., Chatelain, P., and Weintrob, N. (2014). Changes over time in sex assignment for disorders of sex development. *Pediatrics*, *134*(3), e710–e715.

Krege, S., Eckoldt, F., Richter-Unruh, A., Kohler, B., Leuschner, I., Mentzel, H.J., Moss, A., Schweizer, K., Stein, R., Werner-Rosen, K., Wieacker, P., Wiesemann, C., Wünsch, L., and Richter-Appelt, H. (2019). Variations of sex development: The first German interdisciplinary consensus paper. *Journal of Pediatric Urology*, *15*(2), 114–123. doi: 10.1016/j.jpurol.2018.10.008.

Lambda Legal. (2016). *Creating Equal Access to Quality Health Care for Transgender Patients: Transgender-Affirming Hospital Policies*. New York: Lambda Legal. Available: https://www.lambdalegal.org/know-your-rights/article/trans-affirming-hospital-policies.

———. (2018). *Intersex-Affirming Hospital Policy Guide: Providing Ethical and Compassionate Health Care to Intersex Patients*. New York: Lambda Legal. Available: https://www.lambdalegal.org/sites/default/files/publications/downloads/resource_20180731_hospital-policies-intersex.pdf.

Mahfouda, S., Moore, J.K., Siafarikas, A., Zepf, F.D., and Lin, A. (2017). Puberty suppression in transgender children and adolescents. *Lancet Diabetes and Endocrinology*, *5*(10), 816–826.

Mahfouda, S., Moore, J.K., Siafarikas, A., Hewitt, T., Ganti, U., Lin, A., and Zepf, F.D. (2019). Gender-affirming hormones and surgery in transgender children and adolescents. *Lancet Diabetes and Endocrinology*, *7*(6), 484–498.

Mallory, C., and Tentindo, W. (2019). *Medicaid Coverage for Gender-Affirming Care*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Medicaid-Gender-Care-Oct-2019.pdf.

Mallory, C., Brown, T.N.T., and Conron, K.J. (2019). *Conversion Therapy and LGBT Youth Update*. Los Angeles, CA: Williams Institute, UCLA School of Law. Available: https://williamsinstitute.law.ucla.edu/wp-content/uploads/Conversion-Therapy-Update-Jun-2019.pdf.

Manrique, O.J., Adabi, K., Martinez-Jorge, J., Ciudad, P., Nicoli, F., and Kiranantawat, K. (2018). Complications and patient-reported outcomes in male-to-female vaginoplasty—Where we are today: A systematic review and meta-analysis. *Annals of Plastic Surgery*, *80*(6), 684–691. doi: 10.1097/SAP.0000000000001393.

McGeorge, C.R., Carlson, T.S., and Toomey, R.B. (2015). An exploration of family therapists' beliefs about the ethics of conversion therapy: The influence of negative beliefs and clinical competence with lesbian, gay, and bisexual clients. *Journal of Marital and Family Therapy*, *41*(1), 42–56. doi: 10.1111/jmft.12040.

Meyer-Bahlburg, H.F.L. (2005). Gender identity outcome in female-raised 46,XY persons with penile agenesis, cloacal exstrophy of the bladder, or penile ablation. *Archives of Sexual Behavior*, *34*(4), 423–438.

Meyer-Bahlburg, H.F.L., Dalke, K.B., Berenbaum, S.A., Cohen-Kettenis, P.T., Hines, M., and Schober, J.M. (2016). Gender assignment, reassignment and outcome in disorders of sex development: Update of the 2005 Consensus Conference. *Hormone Research in Paediatrics*, *85*, 112–118. doi: 10.1159/000442386.

Copyright National Academy of Sciences. All rights reserved.

Meyer-Bahlburg, H.F.L., Khuri, J., Reyes-Portillo, J., and New, M.I. (2017a). Stigma in medical settings as reported retrospectively by women with congenital adrenal hyperplasia (CAH) for their childhood and adolescence. *Journal of Pediatric Psychology*, (5), 496–503. doi: 10.1093/jpepsy/jsw034.

Meyer-Bahlburg, H.F., Reyes-Portillo, J.A., Khuri, J., Ehrhardt, A.A., and New, M.I. (2017b). Syndrome-related stigma in the general social environment as reported by women with classical congenital adrenal hyperplasia. *Archives of Sexual Behavior*, *46*(2), 341–351. doi: 10.1007/s10508-016-0862-8.

Meyer-Bahlburg, H., Khuri, J., Reyes-Portillo, J., Ehrhardt, A.A., and New, M.I. (2018). Stigma associated with classical congenital adrenal hyperplasia in women's sexual lives. *Archives of Sexual Behavior*, *47*(4), 943–951. doi: 10.1007/s10508-017-1003-8.

Milrod, C., and Karasic, D.H. (2017). Age is just a number: WPATH-affiliated surgeons' experiences and attitudes toward vaginoplasty in transgender females under 18 years of age in the United States. *Journal of Sexual Medicine*, *14*(4), 624–634.

Morrison, S.D., Shakir, A., Vyas, K.S., Kirby, J., Crane, C.N., and Lee, G.K. (2016). Phalloplasty: A review of techniques and outcomes. *Plastic and Reconstructive Surgery*, *138*(3), 594–615. doi: 10.1097/PRS.0000000000002518.

Mouriquand, P.D., Gorduza, D.B., Gay, C.L., Meyer-Bahlburg, H.F., Baker, L., and Baskin, L.S. (2016). Surgery in disorders of sex development (DSD) with a gender issue: If (why), when, and how? *Journal of Pediatric Urology*, *12*(3), 139–149. doi: 10.1016/j.jpurol.2016.04.001.

Movement Advancement Project. (2020a). *Equality Maps: Healthcare Laws and Policies*. Available: https://www.lgbtmap.org/equality-maps/healthcare_laws_and_policies.

———. (2020b). *Equality Maps: Conversion "Therapy" Laws*. Available: https://www.lgbtmap.org/equality-maps/conversion_therapy.

Murad, M.H., Elamin, M.B., Garcia, M.Z., Mullan, R.J., Murad, A., Erwin, P.J., and Montori, V.M. (2010). Hormonal therapy and sex reassignment: A systematic review and meta-analysis of quality of life and psychosocial outcomes. *Clinical Endocrinology, 72*(2), 214–31. doi: 10.1111/j.1365-2265.2009.03625.x.

National LGBT Health Education Center. (2016). *Building Patient-Centered Medical Homes for Lesbian, Gay, Bisexual, and Transgender Patients and Families*. Boston, MA: National LGBT Health Education Center. Available: https://www.lgbthealtheducation.org/wp-content/uploads/Building-PCMH-for-LGBT-Patients-and-Families.pdf.

Nguyen, H.B., Chavez, A.M., Lipner, E., Hantsoo, L., Kornfield, S.L., Davies, R.D, and Epperson, C.N. (2018). Gender-affirming hormone use in transgender individuals: Impact on behavioral health and cognition. *Current Psychiatry Reports*, *20*(12), 110. doi: 10.1007/s11920-018-0973-0.

Nokoff, N.J., Palmer, B., Mullins, A.J., Aston, C.E., Austin, P., Baskin, L., Bernabé, K., Chan, Y., Cheng, E., Diamond, D., Fried, A., Frimberger, D., Galan, D., Gonzalez, L., Greenfield, S., Kolon T., Kropp, B., Lakshmanan, Y., Meyer, S., Meyer, T., Mullins, L., Paradis, A., Poppas, D., Reddy, P., Schulte, M., Scott Reyes, K., Swartz, J., Wolfe-Christensen, C., Yerkes, E., and Wisniewski, A. (2017). Prospective assessment of cosmesis before and after genital surgery. *Journal of Pediatric Urology*, *13*(1), 28.e1–28.e6. doi: 10.1016/j.jpurol.2016.08.017.

Nordenvall, A.S., Frisen, L., Nordenstrom, A., and Lichtenstein, N.A. (2014). Population based nationwide study of hypospadias in Sweden, 1973 to 2009: Incidence and risk factors. *Journal of Urology, 191*, 783–789.

National Public Radio, Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health. (2017). *Discrimination in America: Experiences and Views of LGBTQ Americans*. Available: https://www.npr.org/documents/2017/nov/npr-discrimination-lgbtq-final.pdf.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 406 of 438 PageID #: 2

Obedin-Maliver, J., Goldsmith, E.S., Stewart, L., White, W., Tran, E., Brenman, S., Wells, M., Fetterman, D.M., Garcia, G., and Lunn, M.R. (2011). Lesbian, gay, bisexual, and transgender–related content in undergraduate medical education. *Journal of the American Medical Association*, *306*(9), 971–977. doi: 10.1001/jama.2011.1255.

Office of Minority Health. (2013). *National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care: A Blueprint for Advancing and Sustaining CLAS Policy and Practice*. Rockville, MD: Author. Available: https://thinkculturalhealth.hhs.gov/assets/pdfs/EnhancedCLASStandardsBlueprint.pdf.

Olson, C.L. (2009). Transgender foster youth: A forced identity. *Texas Journal of Women and the Law, 19*(1), 25–57.

Olson, J., Schrager, S.M., Belzer, M., Simons, L.K., and Clark, L.F. (2015). Baseline physiologic and psychosocial characteristics of transgender youth seeking care for gender dysphoria. *Journal of Adolescent Health, 57*(4), 374–380. doi: 10.1016/j.jadohealth.2015.04.027.

Olson, K.R., Durwood, L., DeMeules, M., and McLaughlin, K.A. (2016). Mental health of transgender children who are supported in their identities. *Pediatrics*, *137*(3), e20153223.

Olson-Kennedy, J., Cohen-Kettenis, P.T., Kreukels, B.P., Meyer-Bahlburg, H.F., Garofalo, R., Meyer, W., and Rosenthal, S.M. (2016). Research priorities for gender nonconforming/transgender youth: Gender identity development and biopsychosocial outcomes. *Current Opinion in Endocrinology, Diabetes, and Obesity*, *23*(2), 172.

Olson-Kennedy, J., Warus, J., Okonta, V., Belzer, M., and Clark, L.F. (2018). Chest reconstruction and chest dysphoria in transmasculine minors and young adults: Comparisons of nonsurgical and postsurgical cohorts. *JAMA Pediatrics, 172*(5), 431–436. doi: 10.1001/jamapediatrics.2017.5440.

Passos, T.S., Teixeira, M.S., and Almeida-Santos, M.A. (2020). Quality of life after gender affirmation surgery: A systematic review and network meta-analysis. *Sexuality Research and Social Policy*, *17*(2), 252–262. doi: 10.1007/s13178-019-00394-0.

Physicians for Human Rights. (2017). *Unnecessary Surgery on Intersex Children Must Stop*. Available: https://phr.org/news/unnecessary-surgery-on-intersex-children-must-stop/.

Progovac, A.M., Mullin, B.O., Creedon, T.B., McDowell, A., Sanchez-Roman, M.J., Hatfield, L.A., Schuster, M.A., and Cook, B.L. (2019). Trends in mental health care use in Medicare from 2009 to 2014 by gender minority and disability status. *LGBT Health, 6*(6), 297–305. doi: 10.1089/lgbt.2018.0221.

Pyle, L.C., and Nathanson, K.L. (2017). A practical guide for evaluating gonadal germ cell tumor predisposition in differences of sex development. *American Journal of Medical Genetics*, *175*(2), 304–314. doi: 10.1002/ajmg.c.31562.

Rafferty, J., Committee on Psychosocial Aspects of Child and Family Health, and Committee on Adolescence. (2018). Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics*, *142*(4). doi: 10.1542/peds.2018-2162.

Rebchook, G., Keatley, J., Contreras, R., Perloff, J., Molano, L.F., Reback, C.J., Ducheny, K., Nemoto, T., Lin, R., Birnbaum, J., Woods, T., Xavier, J., and SPNS Transgender Women of Color Study Group. (2017). The Transgender Women of Color Initiative: Implementing and evaluating innovative interventions to enhance engagement and retention in HIV Care. *American Journal of Public Health*, *107*(2), 224–229. doi: 10.2105/AJPH.2016.303582.

Robles, R., Fresán, A., Vega-Ramírez, H., Cruz-Islas, J., Rodríguez-Pérez, V., Domínguez-Martínez, T., and Reed, G. (2016). Removing transgender identity from the classification of mental disorders: A Mexican field study for ICD-11. *Lancet Psychiatry*, *3*, 850–859.

Roen, K. (2019). Intersex or diverse sex development: Critical review of psychosocial health care research and indications for practice. *Journal of Sex Research*, *56*(4-5), 511–528.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 407 of 438 PageID #: 2

Rolston, A.M., Gardner, M., van Leeuwen, K., Mohnach, L., Keegan, C., Délot, E., Vilain, E., Sandberg, D.E, and members of the DSD-TRN Advocacy, Advisory Network Accord Alliance. (2017). Disorders of sex development (DSD): Clinical service delivery in the United States. *American Journal of Medical Genetics Party C Seminars in Medical Genetics*, *175*(2), 268–278. doi: 10.1002/ajmg.c.31558.

Romao, R.L.P., and Pippi Salle, J.L. (2017). Update on the surgical approach for reconstruction of the male genitalia. *Seminars in Perinatology, 41*(4), 218–226. doi: 10.1053/j.semperi.2017.03.015.

Rooker, S.A., Vyas, K.S., DiFilippo, E.C., Nolan, I.T., Morrison, S.D., and Santucci, R.A. (2019). The rise of the neophallus: A systematic review of penile prosthetic outcomes and complications in gender-affirming surgery. *Journal of Sexual Medicine*, (5), 661–672. doi: 10.1016/j.jsxm.2019.03.009.

Rowniak, S., Bolt, L., and Sharifi, C. (2019). Effect of cross-sex hormones on the quality of life, depression and anxiety of transgender individuals: A quantitative systematic review. *JBI Database of Systematic Reviews and Implementation Reports*, *17*(9), 1826–1854. doi: 10.11124/JBISRIR-2017-003869.

Russell, S.T., Pollitt, A.M., Li, G., and Grossman, A.H. (2018). Chosen name use is linked to reduced depressive symptoms, suicidal ideation, and suicidal behavior among transgender youth. *Journal of Adolescent Health*. doi: 10.1016/j.jadohealth.2018.02.003.

Ryan, C., Toomey, R.B., Diaz, R.M., and Russell, S.T. (2018). Parent-initiated sexual orientation change efforts with LGBT adolescents: Implications for young adult mental health and adjustment. *Journal of Homosexuality*, 1–15. doi: 10.1080/00918369.2018.1538407.

Substance Abuse and Mental Health Services Administration. (2015). *Ending Conversion Therapy: Supporting and Affirming LGBTQ Youth*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

———. (2020). *LGBT Training Curricula for Behavioral Health and Primary Care Practitioners*. Available: https://www.samhsa.gov/behavioral-health-equity/lgbt/curricula.

Schulz, S.L. (2018). The informed consent model of transgender care: An alternative to the diagnosis of gender dysphoria. *Journal Humanistic Psychology*, *58*, 72–92.

Shanley, T., Wheeler, D., Cheng, E., and Garofalo, R. (2020). *Intersex Care at Lurie Children's and Our Sex Development Clinic*. Available: https://www.luriechildrens.org/en/blog/intersex-care-at-lurie-childrens-and-our-sex-development-clinic.

Spade, D., Arkles, G., Duran, P., and Gehi, P. (2009). Medicaid policy and gender-confirming healthcare for trans people: An interview with advocates. *Seattle Journal for Social Justice, 8*(1), 497–514. Available: https://digitalcommons.law.seattleu.edu/sjsj/vol8/iss2/4.

Speiser, P.W., Arlt, W., Auchus, R.J., Baskin, L.S., Conway, G.S., Merke, D.P., Meyer-Bahlburg, H., Miller, W., Murad, M., OBerfield, S., and White, P.C. (2018). Congenital adrenal hyperplasia due to steroid 21-hydroxylase deficiency: An Endocrine Society Clinical Practice Guideline. *Journal of Clinical Endocrinology and Metabolism*, *103*(11), 4043–4088.

Streed, C.G., McCarthy, E.P., and Haas, J.S. (2018). Self-reported physical and mental health of gender nonconforming transgender adults in the United States. *LGBT Health*, *5*(7), 443–448. doi: 10.1089/lgbt.2017.0275.

Streed, C.G., Anderson, J.S., Babits, C., and Ferguson, M.A. (2019a). Changing medical practice, not patients: Putting an end to conversion therapy. *New England Journal of Medicine*, *381*(6), 500.

Streed, C.G., Hedian, H.F., Bertram, A., and Sisson, S.D. (2019b). Assessment of internal medicine resident preparedness to care for lesbian, gay, bisexual, transgender, and queer/questioning patients. *Journal of General Internal Medicine*, *34*(6), 893–898. doi: 10.1007/s11606-019-04855-5.

Tabaac, A.R., Sutter, M.E., Wall, C.S.J., and Baker, K.E. (2018). Gender identity disparities in cancer screening behaviors. *American Journal of Preventive Medicine*, *54*(3), 385–393. doi: 10.1016/j.amepre.2017.11.009.

Copyright National Academy of Sciences. All rights reserved.

Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 408 of 438 PageID #: 2

Tamar-Mattis, A., Baratz, A., Baratz Dalke, K., and Karkazis, K. (2013). Emotionally and cognitively informed consent for clinical care for differences of sex development. *Psychology and Sexuality*, *5*(1), 44–55.

Tanner, L. (2020). U.S. medical schools boost LGBTQ students, doctor training. *Associated Press*. Available: https://apnews.com/985d50d0a7b1b593acd0dd791e8c3118.

Thyen, U., Lanz, K., Holterhus, P.M, and Hiort, E. (2006). Epidemiology and initial management of ambiguous genitalia at birth in Germany. *Hormone Research*, *66*(4), 195–203.

Timmermans, S., Yang, A., Gardner, M., Keegan, C.E., Yashar, B.M., Fechner, P.Y., Shnorhavorian, M., Vilain, E., and Sandberg, D.E. (2018). Does patient-centered care change genital surgery decisions? The strategic use of clinical uncertainty in disorders of sex development clinics. *Journal of Health and Social Behavior*, *59*(4), 520–535. doi: 10.1177/0022146518802460.

Toler, J., and GLMA Policy and Government Affairs Committee. (2016). *Medical and Surgical Intervention of Patients with Differences in Sex Development*. Available: http://glma.org/index.cfm?fuseaction=document.viewdocument&ID=CEB9FEE4B8DD8B7F4F7575376BD476C3A433379DD853BEA17913AFCCB8270299C0731320B03D2F5E1022F1C15602FBEA.

Tourchi, A., and Hoebeke, P. (2013). Long-term outcome of male genital reconstruction in childhood. *Journal of Pediatric Urology*, *9*(6), 980–989.

Trevor Project. (2019). *National Survey on LGBTQ Mental Health*. Available: https://www.thetrevorproject.org/wp-content/uploads/2019/06/The-Trevor-Project-National-Survey-Results-2019.pdf.

Turban, J.L., Beckwith, N., Reisner, S.L., and Keuroghlian, A.S. (2019). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry*, 1–9. doi: 10.1001/jamapsychiatry.2019.2285.

UCSF Transgender Care. (2016). *Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People* (2nd ed.). M.B. Deutsch (Ed.). San Francisco, CA: Department of Family and Community Medicine, University of California San Francisco. Available: transcare.ucsf.edu/guidelines.

Underhill, K. (2012). Paying for prevention: Challenges to health insurance coverage for biomedical HIV prevention in the United States. *American Journal of Law and Medicine*, *38*(4), 607–666. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4041033.

United Nations General Assembly Human Rights Council. (2013). *Report of the Special Rapporteur on Torture and other Cruel, Inhuman or Degrading Treatment or Punishment*. Available: http://www.ohchr.org/Documents/HRBodies/HRCouncil/RegularSession/Session22/A.HRC.22.53_English.pdf.

U.S. Department of Health and Human Services. (2014). *NCD 140.3, Transsexual Surgery. Docket No. A-13-87, Decision No. 2576*. Available: https://www.hhs.gov/sites/default/files/static/dab/decisions/board-decisions/2014/dab2576.pdf.

van de Grift, T.C., Elaut, E., Cerwenka, S.C., Cohen-Kettenis, P.T., and Kreukels, B.P.C. (2017). Surgical satisfaction, quality of life, and their association after gender-affirming surgery: A follow-up study. *Journal of Sex and Marital Therapy, 44*(2), 138–148. doi: 10.1080/0092623X.2017.1326190.

Van Boerum, M.S., Salibian, A.A., Bluebond-Langner, R., and Agarwal, C. (2019). Chest and facial surgery for the transgender patient. *Translational Andrology and Urology*, *8*(3), 219–227. doi: 10.21037/tau.2019.06.18.

Wernick, J.A., Busa, S., Matouk, K., Nicholson, J., and Janssen, A. (2019). A systematic review of the psychological benefits of gender-affirming surgery. *Urologic Clinics of North America*, *46*(4), 475–486. doi: 10.1016/j.ucl.2019.07.002.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 409 of 438 PageID #: 2

White Hughto, J.M., and Reisner, S.L. (2016). A systematic review of the effects of hormone therapy on psychological functioning and quality of life in transgender individuals. *Transgender Health*, *1*(1), 21–31. doi: 10.1089/trgh.2015.0008.

Wiepjes, C.M., Nota, N.M., de Blok, C.J.M., Klaver, M., de Vries, A.L.C., Wensing-Kruger, S.A., de Jongh, R.T., Bouman, M.B., Steensma, T.D., Cohen-Kettenis, P., Gooren, L.J.G., Kreukels, B.P.C., and den Heijer, M. (2018). The Amsterdam Cohort of Gender Dysphoria study (1972–2015): Trends in prevalence, treatment, and regrets. *Journal of Sexual Medicine, 15*(4), 582–590. doi: 10.1016/j.jsxm.2018.01.016.

Winship, B.B., Rushton, H.G., and Pohl, H.G. (2017). In pursuit of the perfect penis: hypospadias repair outcomes. *Journal of Pediatric Urology*, *13*(3), 285–288.

Wisniewski, A.B. (2017). Psychosocial implications of DSD treatment for parents. *Current Opinion in Urology*, *27*(1), 11–13. doi: 10.1097/MOU.0000000000000344.

Woo, L.L., Thomas, J.C., and Brock, J.W. (2010). Cloacal exstrophy: A comprehensive review of an uncommon problem. *Journal of Pediatric Urology*, *6*(2), 102–111.

World Health Organization. (n.d.). *Brief—Transgender Health in the Context of ICD-11*. Available: http://www.euro.who.int/en/health-topics/health-determinants/gender/gender-definitions/whoeurope-brief-transgender-health-in-the-context-of-icd-11.

———. (2014). *Eliminating Forced, Coercive and Otherwise Involuntary Sterilization: An Interagency Statement*. Available: http://www.who.int/reproductivehealth/publications/gender_rights/eliminating-forced-sterilization/en.

World Professional Association for Transgender Health. (2016). Position Statement on Medical Necessity of Treatment, Sex Reassignment, and Insurance Coverage in the U.S.A. Available: https://www.wpath.org/media/cms/Documents/Web%20Transfer/Policies/WPATH-Position-on-Medical-Necessity-12-21-2016.pdf.

Wright, T., Candy, B., and King, M. (2018). Conversion therapies and access to transition-related healthcare in transgender people: A narrative systematic review. *BMJ Open*, *8*(12), e022425. doi: 10.1136/bmjopen-2018-022425.

Wylie, K., Knudson, G., Khan, S.I., Bonierbale, M., Watanyusakul, S., and Baral, S. (2016). Serving transgender people: Clinical care considerations and service delivery models in transgender health. *Lancet, 388*, 401–411.

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 411 of 438 PageID #: 2

Part IV

Research Needs

Copyright National Academy of Sciences. All rights reserved.

Copyright National Academy of Sciences. All rights reserved.

13

Recommendations

Sexual and gender diverse (SGD) populations are dynamic, rapidly growing, and continually evolving. In recent years, trends in data collection have shifted, creating new opportunities to study sexual orientation, gender identity, intersex status, and other relevant components of SGD identities, such as sexual attraction and sexual behavior. However, the existing data and the research methodologies behind current study measures are not sufficient to capture and convey the richness of SGD communities or to capture the varied effects that unique and intersecting identities have on health and well-being outcomes for SGD people.

As discussed in Chapter 4, existing sexual orientation and gender identity questions are presented inconsistently across data collection tools, often separated from other demographic measures, and frequently use binary assessments of gender, which do not effectively describe gender diversity. Furthermore, research efforts to date have focused on lesbian women and gay men; although there has been increased attention in recent years to bisexual and transgender people, intersex populations (also known as those with differences of sex development) have been almost wholly ignored. The committee emphasizes that there is an urgent need for robust scientific evidence that includes not just lesbian, gay, bisexual, and transgender people, but also intersex people, people with same-sex or same-gender attractions or behaviors, and people who identify as asexual, Two Spirit, queer, or other terms under the SGD umbrella.

In the wake of social change and ongoing legal developments regarding protections for SGD people in employment, health care, military service, family formation, and other key areas of life, it is increasingly important

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
Case 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 414 of 438 PageID #: 2

to understand how the provision or the denial of access to opportunities and resources effects SGD people over the entire life course. There is also a critical need to collect and analyze data that seek to understand how experiences differ within SGD populations according to such factors as gender, race, and ethnicity. A varied, comprehensive, and inclusive research infrastructure for SGD populations is essential in understanding the unique and shared challenges these individuals and communities face and for guiding actions to improve their well-being across all domains of life, including social justice and legal equality, health and health care, employment, education, and housing.

The report of the Institute of Medicine (2011) on the LGBT population noted that LGBT populations are often considered a single monolithic group, which obscures important differences among individuals and communities. While the report did not include specific reference to people with intersex traits and other SGD groups, it noted that an essential step in understanding and addressing the needs of LGBT communities is collecting more and better demographic data about sexual orientation and gender identity. The 2011 report recommended that these data be collected in federally funded surveys administered by the U.S. Department of Health and Human Services and in other relevant population surveys, as well as in research studies funded by the National Institutes of Health and in electronic health records.

This current committee finds that collecting data on the identities and experiences of SGD people is an essential step toward understanding the ways in which outcomes for SGD groups differ from those of heterosexual and cisgender populations. Effectively addressing disparities related to sexual orientation, gender identity, and intersex status will require collaborative and coordinated efforts among federal, state, and private stakeholders. In addition, it will be important to involve SGD communities themselves, including SGD people of color, in all aspects of the research process. Meaningful community participation is a critical way that SGD population research can be accountable and accurately reflect the lives and experiences of the communities being studied.

In the past decade there has been significant progress in the development of metrics that measure sexual orientation and gender identity. Validated and standardized versions of questions about sexual orientation, sexual behavior, and sexual attraction are increasingly used in population surveys, but there is much room for improvement. For example, the Census Bureau's American Community Survey and Current Population Survey allow identification of same-sex couples, which is a useful though imperfect proxy for sexual orientation, but the surveys do not ask about gender identity or intersex status. Several important surveys used in research on health, housing, wages, employment, and education outcomes do not include questions on sexual orientation, gender identity, or intersex status.

Copyright National Academy of Sciences. All rights reserved.

Other surveys measure gender identity using a single-item design (e.g., "are you male, female, or transgender?"), which has been shown to substantially undercount transgender and other gender diverse people in comparison with a two-step question that asks about both current gender identity and sex assigned at birth. Intersex status questions still need to be developed, field-tested, and validated for use in population surveys.

The health and well-being of SGD populations across the Unites States could be improved by the addition of sexual orientation, gender identity, and intersex status measures to publicly and privately sponsored data collection activities at national, state, county, municipal, school district, and tribal levels. Types of data collection activities in which these data could be collected include survey research; nonsurvey research, such as clinical trials and program evaluations; and administrative data systems, including intake forms and applications for federal and state programs. It is also essential to collect these data in electronic health records and other clinical records.

It is important to use a variety of methodological approaches when studying SGD populations, including but not limited to quasi-experimental designs, longitudinal cohort studies, and ethnographic and historical research. Study designs that allow for causal inference about associations between exposures, such as discrimination, and outcomes, such as depression, are also critical. Using context-rich research designs that respect and elevate the multifaceted identities and lived experiences of SGD people is another key component of understanding the needs of these communities. In all research activities, SGD communities should be treated as partners rather than solely as research subjects, and all data need to be collected and analyzed in ways that ensure respondent privacy and confidentiality and provide robust protections from discrimination.

The growing and dynamic nature of SGD populations challenges researchers and policy makers to collect more and better data and to consider the degree to which research reflects the most pressing needs of these populations and the multiple contemporary challenges they face. There are a number of data system reforms that could help advance knowledge related to how laws, political institutions, and public policies shape the well-being of SGD populations. A key need is developing systems and methods that identify geographic indicators for SGD respondents and remove barriers in access to, or use of, such indicators in datasets. Improving research infrastructure will facilitate the generation of high-quality scientific evidence that can inform evidence-based interventions in a variety of sectors to promote the well-being of SGD people; optimize the social, political, and economic determinants of their health; and promote their resilience and well-being.

The committee's recommendations aim to identify opportunities to advance understanding of how individuals experience sexuality and gender

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 416 of 438 PageID #: 2

and how sexual orientation, gender identity, and intersex status affect SGD people over the life course. Our recommendations are in five categories: (1) population data; (2) measurement challenges related to understanding SGD populations; (3) critical data gaps; (4) improvement of the research community's ability to use these data; and (5) the use of data for the development of high-quality, evidence-based interventions and programs. In each category, the committee makes efforts to identify the specific actors that are best positioned to respond to particular aspects of the research landscape. The committee has concluded that investing in research infrastructure and in a robust and comprehensive program of research in the ways described below will support the development of stronger, evidence-based policies and practices in the areas addressed in this report.

POPULATION DATA

In order to make valid claims about the status of SGD populations in the United States, researchers, policy makers, and practitioners need accurate and representative population-level data that describe SGD populations in all their complexity. Researchers have worked for decades to develop sound approaches for the collection of data about sexual orientation and gender identity, but such data are not collected consistently or completely across surveys, and population-level data for certain groups (e.g., people with intersex traits) do not exist.

Addressing the challenges highlighted in this report will require collaboration by a coalition of actors. In addressing national population data needs, the committee considers the following stakeholders central to implementing these recommendations:

- entities throughout the federal statistical system, particularly the Census Bureau at the Department of Commerce; the Bureau of Labor Statistics at the Department of Labor; the National Center for Education Statistics at the Department of Education; the National Agricultural Statistics Service and the Economic Research Service at the Department of Agriculture; the National Center for Health Statistics at the Department of Health and Human Services; the Bureau of Justice Statistics at the Department of Justice; the National Center for Science and Engineering Statistics at the National Science Foundation; the Statistics of Income Division at the Internal Revenue Service; and the Office of Research, Evaluation, and Statistics at the Social Security Administration;
- other federal agencies and entities that collect demographic data on individuals and populations, including but not limited to the National Institutes of Health, the Centers for Disease Control and

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 417 of 438 PageID #: 2

Prevention, and the Agency for Healthcare Research and Quality at the Department of Health and Human Services and the Departments of Defense, Homeland Security, Housing and Urban Development, State, and Veterans Affairs;

- state, local, and tribal statistical agencies, offices, and other entities (e.g., state health departments, school districts); and
- surveys and research conducted or sponsored by universities and private foundations, such as NORC at the University of Chicago, the Gallup Daily Tracking Survey, and the Understanding America Study at the University of Southern California.

RECOMMENDATION 1: Entities throughout the federal statistical system; other federal agencies; state, local, and tribal departments and agencies; private entities; and other relevant stakeholders should consider adding measures of sexual orientation, gender identity, and intersex status to all data collection efforts and instruments, such as population-based surveys, administrative records, clinical records, and forms used to collect demographic data.

At the national level, a federal interagency working group at the U.S. Office of Management and Budget (OMB) has played a key role in assessing the status of data collection on sexual orientation and gender identity across the federal statistical agencies. OMB has the ability to create standards for demographic data collection that must be used by all entities within the federal statistical system. The absence of that authoritative federal role has had consequences for both the availability and accuracy of LGBTQI+ population-level data in the United States.

As part of implementing Recommendation 1, OMB should reconvene the Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys and charge it with developing government-wide standards for the collection of data on sexual orientation, gender identity, and intersex status. An OMB standard for collecting these data would give the federal agencies necessary guidance while also allowing certain modifications to ensure these data are being collected in an accurate and appropriate manner for different populations and types of data collection activities. These data can be used to identify disparities and evaluate efforts to address them by tracking population-level trends in such areas as employment, educational attainment, health status, and access to care. They can also be used to measure, track, and improve person-level outcomes and to ensure compliance with relevant civil rights and other nondiscrimination laws.

The establishment of measurement standards for sexual orientation, gender identity, and intersex status could bolster high-priority data col-

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 418 of 438 PageID #: 2

lection activities in federal, state, local, and tribal health agencies, and nongovernmental health entities, including but not limited to hospitals, health plan providers, and physician practices. It could also prompt the Census Bureau and the Bureau of Labor Statistics to expand important data collection activities to include measures that capture a fuller range of sexual and gender diversity in the population, starting with adding established measures of sexual orientation and gender identity to surveys, especially including the American Community Survey, the Current Population Survey, and the American Time Use Survey. Finally, measurement standards would aid federal statistical agencies in providing support to state and local entities in the collection of population data specific to their local contexts. For example, the National Center for Education Statistics could assist education researchers in collecting data that capture sexual orientation, gender identity, and intersex status in studies of students and school personnel.

MEASUREMENT CHALLENGES

There are considerable challenges in the collection of data that capture diverse, complex characteristics of SGD populations. Because of the complicated ways that race, class, sex, gender identity, sexual orientation, and other factors interact in people's experiences, current measures do not always sufficiently reflect the lived experiences of these populations. Research stakeholders have a role to play in helping to address methodological challenges associated with collecting accurate and complete data about SGD communities.

RECOMMENDATION 2: Federal statistical agencies, state, local, and tribal departments and agencies; private entities; and other relevant stakeholders should fund and conduct methodological research to develop, improve, and expand measures that capture the full range of sexual and gender diversity in the population—including but not limited to intersex status and emerging sexual and gender identities, sexual behaviors, and intersecting identities—as well as determinants of well-being for sexual and gender diverse populations.

OMB's role as a coordinating body would have particular value for this effort by working with the federal statistical agencies to standardize measures for gender identity and sexual orientation identity, behavior, and attraction, as well as to develop and validate measures relevant to people with intersex traits. OMB could support the consistent use of reliable, validated assessment tools with large representative samples of SGD populations, as well as with other important research. The routine inclu-

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 419 of 438 PageID #: 2

sion of sexual orientation, gender identity, and intersex status questions on federally supported surveys and in other research could also advance the generation and use of measures that help researchers understand how such factors as stigma and disclosure affect the health and well-being of SGD populations across the life course.

As an example of what this kind of investment might look like in one policy sphere, the National Center for Education Statistics and other federal and state agencies would be able to assess their funded surveys and data collection instruments for inclusion of measures that permit analysis of the experiences of SGD students and education personnel in educational settings. Measures that evaluate the implementation of policies and practices known to be associated with positive educational environments for SGD students and staff could also be included in this work. By funding research on priority areas of need based on these assessments, federal agencies would be better able to implement policies that have the potential to improve education environments for SGD students.

CRITICAL DATA GAPS

Not all topics can be explored efficiently or effectively through the use of data drawn from representative samples of a population; when focusing on underrepresented groups, it is sometimes necessary to use different methods that capture adequate samples of the population in question for effective study. In addition to data from representative samples, the committee identified additional needs for data in a variety of topical areas; some gaps could be addressed through observational studies of specific populations, while others might require experimental studies that randomly assign participants to different treatment groups, qualitative explorations of specific topics, or other methods. Data needs of this kind are particularly important for the study of small groups, such as transgender women of color, Native American Two Spirit people, and people with intersex traits. For decades, SGD organizations have published written works that highlight social and cultural advancements within their communities. These works and other ethnographies have shaped contemporary studies and social movements and could also be used to inform the creation of community-based and culturally sensitive qualitative data collection methods.

RECOMMENDATION 3: Public and private funders should support and researchers should conduct studies using a variety of methods and sampling techniques—driven by the questions under study—in order to examine family and other social relationships, community, health, education, economic, and legal issues that will enhance understanding of sexual and gender diverse populations.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 420 of 438 PageID #: 2

DATA USE

Once comprehensive, accurate data are collected, it is critical that researchers have the ability to access these data to address emerging research questions. Currently, many sources of available data across populations and levels of government are not linked. This lack significantly impairs the ability of the researchers to develop scientific evidence to help address critical policy, social, and economic concerns relevant to SGD populations. By improving researchers' ability to access, link, and use existing data, stakeholders could substantially advance the relevance and impact of research.

RECOMMENDATION 4: The U.S. Office of Management and Budget should convene federal, state, and private funders, as well as other relevant stakeholders, to address significant problems in linking data from different datasets to facilitate research on the health status and well-being of sexual and gender diverse people. These stakeholders will differ by content area but could include researchers, legal advocacy groups, research institutions and centers, think tanks, policy-tracking groups, health, and surveillance organizations.

The goal of this recommendation is to allow data that have been housed in only one or a few agencies or industries to be linked in ways that provide the research community a more complete picture of the prevalence, distribution, and lived experiences of SGD populations. The results of the recommended convenings could include the following:

- developing systems and methods that permit the linkage of datasets—such as matching individual Social Security records that capture name and gender marker changes with administrative records of earnings and occupational attainment—to advance understanding of determinants of SGD well-being;
- developing systems and methods that identify geographic indicators for SGD respondents (e.g., state or city of residence) and remove barriers in appropriate access to, and use of, such indicators in datasets; and
- prioritizing individuals' privacy and confidentiality by establishing guidelines for working with and sharing potentially identifiable personal data among researchers and practitioners who are bound by professional and legal obligations to maintain data confidentiality and security.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 421 of 438 PageID #: 2

EVIDENCE-BASED PROGRAMMING AND INTERVENTIONS

The charge for this report was to review available data and assess future data needs for SGD populations, but the committee is cognizant that work does not stop once data are collected or even when they are analyzed. Although the urgent task for the research community at large is to develop metrics that will lead to enhanced understanding of SGD populations, the ultimate goal of collecting more accurate and relevant data should be to enhance understanding of the mediating factors that can highlight the positive differences and close the disparities that exist between SGD and heterosexual or cisgender populations. Comprehensive and accurate population-level data can play a critical role in the development, implementation, and evaluation of programs, services, and interventions that support the health and well-being of SGD populations. The data deficits described throughout this report have contributed to a relative dearth of programming to address the specific needs of these populations, as well as an absence of evidence-based processes to evaluate programs.

As discussed in Chapter 7, an increase in the prevalence and visibility of SGD populations in recent years prompted community-based health organizations to respond by offering increased support for SGD patients. Reactions such as those to notable shifts in SGD populations could be supported through the timely collection of relevant empirical SGD population data. Placing scientific evidence at the forefront of program planning will allow researchers, policy makers, and public and private stakeholders to develop services and interventions that can benefit SGD communities.

RECOMMENDATION 5: Public and private research funders, together with federal statistical agencies, should prioritize research into the development, implementation, and evaluation of evidence-based services, programs, and interventions that promote the well-being of sexual and gender diverse populations.

The recommended activities could include, but are not limited to, the following:

- evaluations of social service programs in federal agencies—such as the Department of Health and Human Services, Department of Housing and Urban Development, Department of Education, and Department of Labor—to ensure the absence of bias and other barriers in service acquisition and delivery processes for members of SGD populations;

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 422 of 438 PageID #: 2

- evaluations of public and private social service agencies and programs—such as those for food and housing assistance, runaway and homeless youth, family and youth services, and workforce development—to increase inclusivity and reduce disparities for SGD people;
- increased evidence-based support for existing SGD community-based organizations and health centers, including federally qualified community health centers;
- development of programs, policies, and practices relevant to systems in which SGD populations are involved—such as family courts, criminal justice, immigration, and child welfare—that enhance cultural competency and reduce disparities in treatment of SGD populations;
- development of programs, policies, and practices that reduce stigma and discrimination against members of SGD populations in all the domains discussed in this report; and
- implementation of policies, programs, and practices known to be associated with positive environments for SGD populations, including educational, workplace, health care settings, and places of public accommodation.

CONCLUSION

The increase in prevalence and visibility of SGD populations illuminates the need for greater understanding of the ways in which current laws, systems, and programs affect their well-being. Individuals who identify as lesbian, gay, bisexual, asexual, transgender, non-binary, queer, or intersex and those who express same-sex or same-gender attractions or behaviors will have experiences across their life course that differ from those of cisgender and heterosexual individuals. Characteristics such as age, race and ethnicity, and geographic location intersect to play a distinct role in the challenges and opportunities SGD people face. This report underscores the need for researchers to seek to understand disparities and advance equity both within and across SGD population groups.

REFERENCE

Institute of Medicine. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: The National Academies Press. doi: 10.17226/13128.

Copyright National Academy of Sciences. All rights reserved.

Appendix A

Summary of Prior Related National Academies Reports and Activities

LESBIAN HEALTH: CURRENT ASSESSMENT AND DIRECTIONS FOR THE FUTURE (1999)

The Institute of Medicine (IOM) report *Lesbian Health: Current Assessment and Directions for the Future* was the first IOM report to focus on the health of a sexually diverse population. The committee noted several important reasons for future research to focus on lesbian health issues, and it argued in favor of situating the health of lesbian women within larger social contexts in order to understand the role that discrimination and the stigmatization of homosexuality play in generating health disparities for this population. The report said there was no evidence that lesbian women are at higher risk for any specific health problem as a function of their sexual orientation, although that finding was due in part to the limited amount of available data comparing the health of lesbian women with that of heterosexual women. The report did note, however, that lesbians faced differential risks due to differences in the prevalence of risk and protective factors and because of diminished access to health care services.

The report recommended that researchers routinely consider including questions about sexual orientation on data collection forms in behavioral and biomedical sciences and that significant efforts should be made to protect the confidentiality and privacy of the study population. In addition, the report recommended that federal agencies should make long-term commitments to funding research on lesbian health and to organizing multidisciplinary conferences at which the research could be presented and its findings disseminated to health care providers, researchers, and the public.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 424 of 438 PageID #: 2

THE HEALTH OF LESBIAN, GAY, BISEXUAL, AND TRANSGENDER PEOPLE: BUILDING A FOUNDATION FOR BETTER UNDERSTANDING (2011)

This IOM report identified three key issues that made studying lesbian, gay, bisexual, and transgender (LGBT) populations challenging: difficulties in assessment of sexual orientation and gender identity; reluctance of research participants to identify as LGBT or to answer questions about their sexual orientation or gender identity due to stigma; and the rarity of these populations in the general population. Moreover, much of the limited available research on LGBT populations focused on lesbian women and gay men, with the health of bisexual and transgender persons largely unexamined. The report said little was known about LGBT children, elder LGBT persons, or about racial and ethnic LGBT groups.

The report did describe several key findings about the health of LGBT populations, including that LGBT people are frequently targets of stigma, discrimination, and violence, and that these have negative effects on health. The report recommended that the National Institutes of Health (NIH), the sponsor of the study that produced the report, focus its future research agenda on five key areas to provide better understanding of the health of LGBT populations: studies of demographic issues, social influences on the lives of LGBT people, inequities in the health care system, interventions to improve LGBT health, and transgender-specific health care. The report also recommended that federally funded surveys and electronic health records should collect data on sexual orientation and gender identity. To aid this process, the report recommended that NIH fund research to develop valid, standardized measures of sexual orientation and gender identity.

SEXUAL ORIENTATION AND GENDER IDENTITY DATA COLLECTION IN ELECTRONIC HEALTH RECORDS: WORKSHOP SUMMARY (2013)

At this workshop, presenters described steps that federal agencies had taken to begin collecting sexual orientation information in electronic health records. They noted that the 2010 Affordable Care Act and the 2009 Health Information Technology for Economic and Clinical Health Act encouraged the federal government to develop and expand sexual orientation and gender identity data collection in federal health surveys and electronic health records as part of an effort to reduce health disparities.

Participants agreed that sexual orientation can be seen as having three facets: sexual behavior, sexual attraction, and sexual identity. Considering

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 425 of 438 PageID #: 2

these facets separately may be important in the context of health surveys and medical records. For example, sexual behavior may be more relevant than sexual identity when evaluating a patient's risk for sexually transmitted diseases, such as HIV. However, in assessing risk for depression or suicide among adolescents and young adults, sexual attraction or identity may be more relevant than sexual behavior. Thus, assessment procedures should be tailored to fit specific research aims.

Several presenters noted that knowing a transgender person's gender identity is not sufficient for medical providers to provide adequate care. Furthermore, if patients' current gender identity as recorded in their electronic health record does not match their sex at birth, billing systems will often reject requests for sex-specific testing or procedures for these patients. For these reasons, several presenters proposed using a two-step sequence that collects both current gender identity and sex assigned at birth. Participants noted that, in addition to increasing reporting of transgender status, using the two-step method and learning and using patients' preferred name and pronouns help them feel empowered.

PLANNING MEETING ON THE DEMOGRAPHY OF SEXUAL AND GENDER MINORITIES (2018)

This planning meeting, hosted by the Committee on Population (CPOP) and sponsored by NIH, laid the foundation for the consensus study that produced this report. The meeting highlighted data gaps and research opportunities centered around sexual and gender minority (SGM) populations, the term then used. Participants discussed how such characteristics as sexuality and gender, race and ethnicity, and socioeconomic class can affect individuals' outcomes differently across the life course. Experts discussed topics related to family formation and planning, as well as social stratification and mobility. They emphasized the linkages between health, well-being, and policy, noting how structural discrimination can affect the social and behavioral pathways associated with positive health outcomes.

Participants agreed that the well-being of SGM populations spans a broad range of dimensions, including social, civic, economic, and health. Although SGM people are often categorized as a single subpopulation, there is significant diversity among them. Patterns of intersectionality by race, ethnicity, socioeconomic status, and other characteristics are also complex. While progress is being made with regard to measuring and collecting data on SGM populations, many complex issues have yet to be addressed. Participants identified key measurement needs focused around improved research design and methodological considerations for measuring SGM populations.

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 426 of 438 PageID #: 2

EXPERT MEETING ON THE DEMOGRAPHY OF SEXUAL AND GENDER MINORITIES (2019)

Building on knowledge exchanged at the 2018 planning meeting, this meeting, also hosted by CPOP and sponsored by NIH, focused on understanding the effects of intersectionality on sexual and gender minorities and helped to illuminate the less-thought-of nuances that add a unique layer of complexity to collection of data about SGM populations.

Participants discussed how stigmatization occurs at multiple levels—the personal level (perceived racism or homophobia), the service level (lack of cultural sensitivity among health providers), and the system level (state and federal law, health coverage)—and can cause isolation from health resources. They also noted that a person's needs also do not remain static throughout the life course: for example, there is a different configuration of risks for older SGM populations than for younger SGM populations.

Race, ethnicity, gender, and sexuality are some of the intersections that are often considered, but gender expression, which can vary greatly within LGBT subgroups, can affect an individual's experience in many systems. There is also a significant overrepresentation of certain SGM subgroups in some systems, such as juvenile justice and foster care. Suicide rates vary widely across sexuality and gender identities.

Participants noted that operationalizing intersectionality is difficult, especially in the context of SGM data collection, since the population is small relative to the overall population. Presenters underscored the need to use qualitative work and individuals' reports of their own experiences to guide quantitative data collection. They also discussed tapping into community resources (not just legal and scientific institutions) to better support the SGM community and learn how to care for the whole person.

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 427 of 438 PageID #: 2

Appendix B

Agenda: Public Seminar on Amplifying Visibility and Increasing Capacity for Sexual and Gender Diverse Populations

Monday, August 5, 2019
9 am – 4 pm
Keck Center of the National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW, Washington, DC
Room 100

Amplifying Visibility

9:00 am **Welcome and Introduction**
Monica Feit, *Deputy Director, Division of Behavioral and Social Sciences and Education*
Charlotte Patterson, *Consensus Study Cochair*

9:15 am **Culture, Representation, and Community Frameworks**
Two Spirit American Indian/Alaska Native Health
Jane Simoni, *University of Washington*

Trans Queer Resistance: Building with LGBT Migrant Communities
Dagoberto Bailon, *Trans Queer Pueblo*

Promoting Safe Spaces for Black Transwomen of Color
Charmaine Eccles, *Casa Ruby*

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 428 of 438 PageID #: 2

#MuslimAnd Queer, Young, & Powerful: Lessons from the Muslim Youth Leadership Council
Khadija Khan, *Muslim Youth Leadership Council of Advocates for Youth*

10:30 am **Break**

10:40 am **Intersex Individuals and Families—Panel Discussion**
Moderator – Katharine Dalke, *Committee Member*
Discussants:
Alesdair Ittelson, *interACT Advocates*
Sean Saifa Wall, *Intersex Justice Project*
Eric and Stephani Lohman, authors, *"Raising Rosie"*
Arlene Baratz, *University of Pittsburgh Medical Center/ interACT Advocates*

11:40 am *Non-Binary and Plurisexual Identities*
Is Seeing Believing? The Contradictions of Bisexual In/ Visibility
Wendy Bostwick, *University of Illinois at Chicago*

Transgender Health: Disparities and Protective Factors
Jae Sevelius, *University of California, San Francisco*

Two Spirit/Indigenous LGBTQ Healing, Activism, HIV, and Complex Traumas
Gabriel Estrada, *California State University Long Beach*

12:30 pm **Lunch**

Building Capacity

1:30 pm **Sexual and Gender Diversity Law and Policy**
Data and Design: LGBTQ Cyberharassment Case Study
Ari Waldman, *Innovation Center for Law and Technology, New York University Law School (via Zoom)*

Physician Leadership in Support of LGBTQ Health and Health Equity
Jesse Ehrenfeld, *American Medical Association; Vanderbilt University*

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 429 of 438 PageID #: 2

	Policy Barriers and Solutions for Transgender Patients Harper Jean Tobin, *National Center for Transgender Equality*
2:30 pm	**Break**
2:45 pm	**Civic Engagement—Panel Discussion** Moderator – Andrew Flores, *Committee Member* Discussants: Todd Snovel, *Pennsylvania Commission on LGBTQ Affairs* Earl Fowlkes, *Center for Black Equity, LGBT Chair, Democratic National Committee* Nancy Bates, *U.S. Census Bureau* Mary Anne Adams, *Zami NOBLA*
3:45 pm	**Wrap-Up; Committee's Next Steps** Mark Hatzenbuehler, *Committee Member*
4:00 pm	**Adjourn**

Copyright National Academy of Sciences. All rights reserved.

e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 430 of 438 PageID #: 2

Copyright National Academy of Sciences. All rights reserved.

Appendix C

Biographical Sketches of Committee Members and Staff

CHARLOTTE J. PATTERSON (*Cochair*) is professor of psychology in the Psychology Department at the University of Virginia. Her research focuses on the role of sexual orientation in human development and family lives, particularly the study of child development in lesbian- and gay-parented families. She is a coeditor of the *Handbook of Psychology and Sexual Orientation*. She is a fellow of the American Psychological Association (APA) and the Association for Psychological Science (APS). She is the recipient of APA's Distinguished Contributions to Research in Public Policy Award, Distinguished Scientific Contribution Award from APA's Society for the Psychology of Sexual Orientation and Gender Diversity, Outstanding Achievement Award from APA's Committee on Lesbian, Gay, and Bisexual Concerns, and the Carolyn Attneave Diversity Award from APA's Society for Couple and Family Psychology. Patterson's Ph.D. in psychology is from Stanford University.

MARTÍN-JOSÉ SEPÚLVEDA (*Cochair*) is an IBM fellow and serves as a senior executive advisor to IBM and to five health technology start-up companies. He is also CEO of CLARALUZ LLC, a health, data, technology, and analytics consulting firm. He previously served as IBM vice president of integrated health services, and led health policy and strategy, health benefits innovation and purchasing, occupational health, and well-being services for IBM globally. He is a member of the National Academy of Medicine, the Florida Academy of Science Engineering and Medicine, and the Connecticut Academy of Science and Technology. He serves on the Council on Health Research for Development, the University of Iowa College of Public Health

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 432 of 438 PageID #: 2

Board of Advisors, and the University of Pennsylvania Board of Overseers. He has an M.P.H. and an M.D. from Harvard University and a Doctor of Science from the University of Iowa.

M.V. LEE BADGETT is professor of economics at the University of Massachusetts, Amherst and serves on the faculty of the School of Public Policy. She is also a distinguished scholar at the Williams Institute at the University of California, Los Angeles. Her current research focuses on poverty in the LGBT community, employment discrimination against LGBT people in the United States, and the cost of homophobia and transphobia in global economies. She has published many journal articles and reports on economic and policy issues for LGBT people, including her most recent book, *The Economic Case for LGBT Equality: Why Fair and Equal Treatment Benefits Us All*. Her other books analyze the positive U.S. and European experiences with marriage equality for gay couples and debunks economic myths about LGBT people. She has a Ph.D. in economics from the University of California, Berkeley.

MARLON M. BAILEY is associate professor of women and gender studies, African and African American studies, and faculty coordinator of the LGBT Studies Certificate Program in the School of Social Transformation at Arizona State University. Bailey is a former visiting professor with the Center for AIDS Prevention Studies at the University of California, San Francisco. His book, *Butch Queens Up in Pumps: Gender, Performance, and Ballroom Culture in Detroit* was awarded the Alan Bray Memorial Book Prize by the GL/Q Caucus of the Modern Language Association. His work has appeared in numerous publications, including *American Quarterly*; *Gay and Lesbian Quarterly*; *Signs*, *Feminist Studies*, *Souls*, *Gender, Place, and Culture*; *The Journal of Gay and Lesbian Social Services*; *AIDS Patient Care & STDs*; *LGBT Health;* and in several book collections. He is also the recipient of the Joan Heller Bernard fellowship from the CLAGS Center for LGBT Studies in New York City. He has a Ph.D. in African American studies with a designated emphasis in women, gender, and sexuality from the University of California, Berkeley.

KELLAN BAKER (*Project Consultant*) is the centennial scholar and a Robert Wood Johnson health policy research scholar in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health, where his research focuses on evaluation of insurance reforms affecting the transgender population. Previously, he was a senior fellow at the Center for American Progress in Washington, D.C., where he worked on health equity and data collection policy. He was also a founding steering committee member of Out2Enroll, a nationwide campaign in

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 433 of 438 PageID #: 2

partnership with the White House and the U.S. Department of Health and Human Services to connect low-income LGBT populations with coverage under the Affordable Care Act. He is the board chair of the Equality Federation, a training and advocacy organization supporting LGBT equality organizations that is active in 44 states, and he has consulted on health equity issues with a range of organizations. He has a B.A. with high honors from Swarthmore College, an M.P.H. from the George Washington University, and an M.A. in international development from the Elliott School of International Affairs at the George Washington University.

TARA BECKER is a program officer for the Committee on National Statistics and the Committee on Population in the Division of Behavioral and Social Sciences and Education at the National Academies. In addition to this study, she serves as the study director for a study examining the older workforce and employment at older ages and as a program officer for a study investigating the recent rise in midlife mortality in the United States. Previously, she was a senior public administration analyst and senior statistician for the California Health Interview Survey at the Center for Health Policy Research at the University of California, Los Angeles, where she conducted research on disparities in health insurance coverage and access to health care, as well as on survey data quality and methodology. She was a postdoctoral fellow in the Department of Health Policy and Management at the University of California, Los Angeles and a biostatistician at the University of Wisconsin–Madison Department of Biostatistics and Medical Informatics. She has a B.A. in sociology and mathematics, an M.S. in sociology, an M.S. in statistics, and a Ph.D. in sociology from the University of Wisconsin–Madison.

KATHARINE B. DALKE is a psychiatrist at the Pennsylvania Psychiatric Institute in Harrisburg, with a clinical focus on the psychiatric care and support of LGBTQ and intersex adolescents and adults. Dalke is also an assistant professor in the departments of Psychiatry and Behavioral Health and Humanities, and the director of the Office for Culturally Responsive Health Care Education at Penn State College of Medicine. Her academic efforts center on LGBTQ and intersex mental health, medical education, and cultural competency within an intersectional framework. She is a longtime advocate for people with intersex conditions/differences of sex development, and she has been recognized with an appointment to the Pennsylvania Commission on LGBTQ Affairs. She has an M.D. and an M.A. in Bioethics from the Perelman School of Medicine at the University of Pennsylvania. She trained in psychiatry at the Hospital of the University of Pennsylvania, with additional clinical training in transgender health at the Children's Hospital of Philadelphia.

Copyright National Academy of Sciences. All rights reserved.

KENNE DIBNER is a senior program officer with the Board on Science Education at the National Academies. She has served as study director for *Reopening K-12 Schools During the COVID-19 Pandemic: Prioritizing Health, Equity, and Communities* and *Science Literacy: Concepts, Contexts, and Consequences,* as well as a recently completed assessment of NASA's Science Mission Directorate's education portfolio. Prior to this position, she worked as a research associate at Policy Studies Associates, Inc., where she conducted evaluations of education policies and programs for government agencies, foundations, and school districts, and as a research consultant with the Center on Education Policy. She has a B.A. in English literature from Skidmore College and a Ph.D. in education policy from Michigan State University.

ANDREW R. FLORES is assistant professor of government in the School of Public Affairs at American University and affiliated scholar at the Williams Institute at the University of California, Los Angeles. His research focuses on attitude formation and change about marginalized groups, particularly LGBT and the implementation of LGBTQ-related policies as a result of such attitudes. He also studies the political behavior of LGBT people with a central focus on the role of linked fate in LGBTQ politics. His work has also examined the demography of LGBT people, and he has published estimates of the number of adults who identify as transgender in the United States. He has also documented the experiences of LGBT people when interacting with state institutions and the effect of LGBTQ-related public policies and elections on LGBTQ people and the general public. His research has been published widely, including in *Science Advances*; *Proceedings of the National Academy of Sciences*; *American Journal of Public Health*; *Public Opinion Quarterly*; and *Political Psychology*. He has a Ph.D. in political science from the University of California, Riverside.

GARY J. GATES was the Blachford-Cooper distinguished scholar and research director at the Williams Institute at the University of California, Los Angeles. He also previously served as a senior researcher at Gallup and as a research associate at the Urban Institute in Washington, D.C. He has published extensively on the demographic and economic characteristics of the LGBT population, and he coauthored *The Gay and Lesbian Atlas*. As a recognized expert on the geography and demography of the LGBT population, he provided expert witness testimony in one of the four cases challenging state bans on marriage for same-gender couples heard by the U.S. Supreme Court as part of the case that led to the decision that same-gender couples have a constitutional right to marriage. He has a Ph.D. in public policy and management from the Heinz College at Carnegie Mellon University.

Copyright National Academy of Sciences. All rights reserved.

MARY GHITELMAN is a senior program assistant for the Committee on Population in the Division of Behavioral and Social Sciences and Education. She has been with the National Academies since 2015, working on reports including *The Integration of Immigrants into American Society*; *Valuing Climate Damages*; *Transforming the Financing of Early Care and Education*; and *The Promise of Adolescence*. She received her B.A. in psychology from Beloit College and studied abroad in Copenhagen, Denmark, with a focus in cross-cultural psychology.

ANGELIQUE C. HARRIS is the director of faculty development at Boston University Medical Campus and director of faculty development and diversity in the Department of Medicine at the Boston University School of Medicine. Harris works to design, implement, and lead innovative programs and initiatives aimed at providing and promoting more equitable learning and working environments for faculty, staff, and students. An applied medical sociologist, her research examines health, wellness, and resilience within marginalized communities and her areas of research expertise are in race and ethnicity, gender and sexualities, health and illness, social movements, cultural studies, and urban studies. More specifically, her research studies how groups construct health issues and how the marginalization and stigmatization they experience impact their access to resources. Harris has authored and co-authored dozens of books, articles, and essays, including the books *Queer People of Color: Connected but Not Comfortable* and the *Intersections of Race and Sexuality* book series. She has a Ph.D. in sociology from the Graduate Center at the City University of New York.

MARK L. HATZENBUEHLER is the John L. Loeb associate professor of the social sciences in the Department of Psychology at Harvard University. His research examines the role of stigma in shaping population health inequalities, with a particular focus on the mental health consequences of structural and systemic forms of stigma. He has published widely, including in *Proceedings of the National Academy of Sciences*; *Psychological Bulletin*; *American Psychologist*; *American Journal of Public Health*; *JAMA Pediatrics*; and *JAMA Psychiatry*. He is a recipient of the Louise Kidder Early Career Award from the Society for the Psychological Study of Social Issues, the Early Career Award for Distinguished Contributions to Psychology in the Public Interest from the American Psychological Association (APA), the Janet Taylor Spence Award for Transformational Early Career Contributions from the Association for Psychological Science, and the Distinguished Scientific Contribution Award from APA's Society for the Psychology of Sexual Orientation and Gender Diversity. He is an elected fellow of the Academy of Behavioral Medicine Research, the premier hon-

Copyright National Academy of Sciences. All rights reserved.

orary organization for scientists working at the interface of behavior and medicine. He has a Ph.D. in clinical psychology from Yale University.

NAN D. HUNTER is the Scott K. Ginsburg professor of law at Georgetown University Law Center. Her scholarship spans multiple fields, including sexuality and gender law; social movements and law; feminist legal theory; and health law. She is coauthor of *Sexuality, Gender, and the Law* (4th ed.), the first law school textbook to conceptualize sexuality and gender as a mutually dynamic relationship for purposes of state regulation. Her current project is a book on civil rights movements, law, and culture. Prior to teaching, she specialized in constitutional and civil rights law for the American Civil Liberties Union, where she founded the LGBT Rights Project. She also previously served as deputy general counsel at the U.S. Department of Health and Human Services and as associate dean at Georgetown University Law Center. She is a fellow of the New York Academy of Medicine. Her awards include the Pioneer of Courage award from the American Foundation for AIDS Research, the inaugural Dan Bradley award from the LGBT Bar Association, and the Edie Windsor Lifetime Achievement Award from Equality Florida. She has a B.A. from Northwestern University and a J.D. from Georgetown University.

MALAY K. MAJMUNDAR directs the Committee on Population (CPOP). He is currently overseeing projects on mid-life mortality and socioeconomic disparities, forced migration and refugee movements, sexual and gender diverse populations, the workplace and aging, and family planning and women's empowerment. He is also developing a future research portfolio for CPOP. While at the National Academies, he has worked on studies on demography, criminal justice, immigration enforcement and statistics, and the federal budget. He has a B.A. in political science from Duke University, a J.D. from Yale University, and a Ph.D. in public policy from the University of Chicago.

TONIA C. POTEAT is assistant professor in the Department of Social Medicine at the University of North Carolina, Chapel Hill and a core faculty member in the university's Center for Health Equity Research. She is also a certified physician assistant who provides care for people living with HIV at the university's Infectious Disease Clinic. Her research, teaching, and clinical practice focus on LGBTQ health and HIV, with particular attention to the role of stigma in driving health disparities. She has published widely on the health of transgender adults and serves as associate editor for the journal *LGBT Health*. She recently served on the Sexual and Gender Minority Working Group for the Sexual and Gender Minority Research Office of the National Institutes of Health. She has a Ph.D. in international

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 437 of 438 PageID #: 2

health/social and behavioral interventions from the John Hopkins Bloomberg School of Public Health.

SARI L. REISNER is assistant professor in the Department of Medicine at Harvard Medical School, based in the Division of Endocrinology, Diabetes and Hypertension at Brigham and Women's Hospital. He is also assistant professor in the Department of Epidemiology at the Harvard T.H. Chan School of Public Health and director of transgender health research at the Fenway Institute at Fenway Health. His research addresses health disparities in sexual and gender minority populations, with specialization in transgender health and in adolescent and young adult health. Reisner is an investigator of multiple LGBTQ health studies funded domestically and internationally, including a project to enroll and follow physical and mental health outcomes in a cohort of 4,500 transgender and gender diverse patients in Boston and New York City. He has coauthored many articles in LGBTQ health and was profiled in *The Lancet* as a global leader in transgender health. He has a Sc.D. in social and psychiatric epidemiology from the Harvard T.H. Chan School of Public Health.

STEPHEN T. RUSSELL is the Priscilla Pond Flawn regents professor in child development in the Department of Human Development and Family Sciences and a faculty member in the Population Research Center, both at the University of Texas at Austin. He studies adolescent development, with an emphasis on adolescent sexuality, LGBT youth, and parent–adolescent relationships. Using data from the National Longitudinal Study of Adolescent to Adult Health, he published a series of papers that were the first to document significant health risks among sexual minority adolescents. He also studies health risk and resilience among this population, with an emphasis on gender and cultural differences, and he serves as an expert in the role of school policies, programs, and practices in supporting adolescent adjustment, achievement, and health. His community work has included serving as human relations commissioner in Durham, North Carolina; Davis, California; and Tucson, Arizona. He has served as president of the Society for Research on Adolescence, and on the governing boards of the Society for Research in Child Development, the National Council on Family Relations, and SIECUS: Sex Ed for Social Change. He has a Ph.D. in sociology from Duke University.

DEBRA J. UMBERSON is Centennial professor of liberal arts and director of the Center on Aging and Population Sciences at the University of Texas at Austin. Her research focuses on social determinants of health across the life course, with attention to social ties, health disparities, and the use of blended research methods. Much of her recent work considers how spouses

Copyright National Academy of Sciences. All rights reserved.

Understanding the Well-Being of LGBTQI+ Populations
e 2:21-cv-00316 Document 321-5 Filed 05/12/22 Page 438 of 438 PageID #: 2

influence each other's health-related behavior, mental health, and health care, and how these processes vary across gay, lesbian, and heterosexual unions. Her work also documents racial and ethnic differences in exposure to the death of family members over the life course and implications for health. She is an elected fellow of the Gerontological Society of America. Her awards from the American Sociological Association include the 2015 Matilda White Riley Distinguished Scholar Award for research on aging, the 2016 Leonard I. Pearlin Award for Distinguished Contributions to the Sociological Study of Mental Health, the 2020 Leo G. Reeder Award for career contributions to medical sociology, and the 2020 Distinguished Career Award for research on families. She has a Ph.D. in sociology from Vanderbilt University.

JORDYN WHITE (*Study Director*) is a program officer in the Division on Behavioral and Social Sciences and Education at the National Academies of Sciences, Engineering, and Medicine. In addition to this study, she is directing a study on sustainability partnerships in the U.S.–Mexico Drylands Region, which is a binational collaboration between the U.S. National Academies and the Mexican Academy of Sciences, Academy of Engineering, and National Academy of Medicine. Her previous projects include a study on the National Assessment of Educational Progress and workshops on estimating human trafficking in the United States and on principles and practices of federal program evaluation. Previously, at the U.S. Census Bureau, she worked on methodology, implementation, and nonresponse follow-up design for the American Community Survey and the 2020 census. She is a member of the D.C. Mayor's Advisory Committee to the Office of LGBTQ Affairs. She has a B.S. in psychology from the University of Pittsburgh and an M.S. in criminal justice from St. Joseph's University.

Copyright National Academy of Sciences. All rights reserved.

Exhibit F

Endocrine Treatment of Gender-Dysphoric/ Gender-Incongruent Persons: An Endocrine Society* Clinical Practice Guideline

Wylie C. Hembree,[1] Peggy T. Cohen-Kettenis,[2] Louis Gooren,[3] Sabine E. Hannema,[4] Walter J. Meyer,[5] M. Hassan Murad,[6] Stephen M. Rosenthal,[7] Joshua D. Safer,[8] Vin Tangpricha,[9] and Guy G. T'Sjoen[10]

[1]New York Presbyterian Hospital, Columbia University Medical Center, New York, New York 10032 (Retired); [2]VU University Medical Center, 1007 MB Amsterdam, Netherlands (Retired); [3]VU University Medical Center, 1007 MB Amsterdam, Netherlands (Retired); [4]Leiden University Medical Center, 2300 RC Leiden, Netherlands; [5]University of Texas Medical Branch, Galveston, Texas 77555; [6]Mayo Clinic Evidence-Based Practice Center, Rochester, Minnesota 55905; [7]University of California San Francisco, Benioff Children's Hospital, San Francisco, California 94143; [8]Boston University School of Medicine, Boston, Massachusetts 02118; [9]Emory University School of Medicine and the Atlanta VA Medical Center, Atlanta, Georgia 30322; and [10]Ghent University Hospital, 9000 Ghent, Belgium

*__Cosponsoring Associations:__ American Association of Clinical Endocrinologists, American Society of Andrology, European Society for Pediatric Endocrinology, European Society of Endocrinology, Pediatric Endocrine Society, and World Professional Association for Transgender Health.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Objective: To update the "Endocrine Treatment of Transsexual Persons: An Endocrine Society Clinical Practice Guideline," published by the Endocrine Society in 2009.

Participants: The participants include an Endocrine Society–appointed task force of nine experts, a methodologist, and a medical writer.

Evidence: This evidence-based guideline was developed using the Grading of Recommendations, Assessment, Development, and Evaluation approach to describe the strength of recommendations and the quality of evidence. The task force commissioned two systematic reviews and used the best available evidence from other published systematic reviews and individual studies.

Consensus Process: Group meetings, conference calls, and e-mail communications enabled consensus. Endocrine Society committees, members and cosponsoring organizations reviewed and commented on preliminary drafts of the guidelines.

Conclusion: Gender affirmation is multidisciplinary treatment in which endocrinologists play an important role. Gender-dysphoric/gender-incongruent persons seek and/or are referred to endocrinologists to develop the physical characteristics of the affirmed gender. They require a safe and effective hormone regimen that will (1) suppress endogenous sex hormone secretion determined by the person's genetic/gonadal sex and (2) maintain sex hormone levels within the normal range for the person's affirmed gender. Hormone treatment is not recommended for prepubertal gender-dysphoric/gender-incongruent persons. Those clinicians who recommend gender-affirming endocrine treatments—appropriately trained diagnosing clinicians (required), a mental health provider for adolescents (required) and mental health

ISSN Print 0021-972X ISSN Online 1945-7197
Printed in USA
Copyright © 2017 Endocrine Society
Received 24 July 2017. Accepted 24 August 2017.
First Published Online 13 September 2017

Abbreviations: BMD, bone mineral density; DSD, disorder/difference of sex development; DSM, Diagnostic and Statistical Manual of Mental Disorders; GD, gender dysphoria; GnRH, gonadotropin-releasing hormone; ICD, International Statistical Classification of Diseases and Related Health Problems; MHP, mental health professional; VTE, venous thromboembolism.

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 3 of 36 PageID #: 22790

professional for adults (recommended)—should be knowledgeable about the diagnostic criteria and criteria for gender-affirming treatment, have sufficient training and experience in assessing psychopathology, and be willing to participate in the ongoing care throughout the endocrine transition. We recommend treating gender-dysphoric/gender-incongruent adolescents who have entered puberty at Tanner Stage G2/B2 by suppression with gonadotropin-releasing hormone agonists. Clinicians may add gender-affirming hormones after a multidisciplinary team has confirmed the persistence of gender dysphoria/gender incongruence and sufficient mental capacity to give informed consent to this partially irreversible treatment. Most adolescents have this capacity by age 16 years old. We recognize that there may be compelling reasons to initiate sex hormone treatment prior to age 16 years, although there is minimal published experience treating prior to 13.5 to 14 years of age. For the care of peripubertal youths and older adolescents, we recommend that an expert multidisciplinary team comprised of medical professionals and mental health professionals manage this treatment. The treating physician must confirm the criteria for treatment used by the referring mental health practitioner and collaborate with them in decisions about gender-affirming surgery in older adolescents. For adult gender-dysphoric/gender-incongruent persons, the treating clinicians (collectively) should have expertise in transgender-specific diagnostic criteria, mental health, primary care, hormone treatment, and surgery, as needed by the patient. We suggest maintaining physiologic levels of gender-appropriate hormones and monitoring for known risks and complications. When high doses of sex steroids are required to suppress endogenous sex steroids and/or in advanced age, clinicians may consider surgically removing natal gonads along with reducing sex steroid treatment. Clinicians should monitor both transgender males (female to male) and transgender females (male to female) for reproductive organ cancer risk when surgical removal is incomplete. Additionally, clinicians should persistently monitor adverse effects of sex steroids. For gender-affirming surgeries in adults, the treating physician must collaborate with and confirm the criteria for treatment used by the referring physician. Clinicians should avoid harming individuals (via hormone treatment) who have conditions other than gender dysphoria/gender incongruence and who may not benefit from the physical changes associated with this treatment. **(*J Clin Endocrinol Metab* 102: 3869–3903, 2017)**

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Summary of Recommendations

1.0 Evaluation of youth and adults

1.1. We advise that only trained mental health professionals (MHPs) who meet the following criteria should diagnose gender dysphoria (GD)/gender incongruence in adults: (1) competence in using the Diagnostic and Statistical Manual of Mental Disorders (DSM) and/or the International Statistical Classification of Diseases and Related Health Problems (ICD) for diagnostic purposes, (2) the ability to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) training in diagnosing psychiatric conditions, (4) the ability to undertake or refer for appropriate treatment, (5) the ability to psychosocially assess the person's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) a practice of regularly attending relevant professional meetings. (Ungraded Good Practice Statement)

1.2. We advise that only MHPs who meet the following criteria should diagnose GD/gender incongruence in children and adolescents: (1) training in child and adolescent developmental psychology and psychopathology, (2) competence in using the DSM and/or the ICD for diagnostic purposes, (3) the ability to make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (4) training in diagnosing psychiatric conditions, (5) the ability to undertake or refer for appropriate treatment, (6) the ability to psychosocially assess the person's understanding and social conditions that can impact gender-affirming hormone therapy, (7) a practice of regularly attending relevant professional meetings, and (8) knowledge of the criteria for puberty blocking and gender-affirming hormone treatment in adolescents. (Ungraded Good Practice Statement)

1.3. We advise that decisions regarding the social transition of prepubertal youths with GD/gender incongruence are made with the assistance of an MHP or another experienced professional. (Ungraded Good Practice Statement).

doi: 10.1210/jc.2017-01658

1.4. We recommend against puberty blocking and gender-affirming hormone treatment in prepubertal children with GD/gender incongruence. (1 |⊕⊕○○)

1.5. We recommend that clinicians inform and counsel all individuals seeking gender-affirming medical treatment regarding options for fertility preservation prior to initiating puberty suppression in adolescents and prior to treating with hormonal therapy of the affirmed gender in both adolescents and adults. (1 |⊕⊕⊕○)

2.0 Treatment of adolescents

2.1. We suggest that adolescents who meet diagnostic criteria for GD/gender incongruence, fulfill criteria for treatment, and are requesting treatment should initially undergo treatment to suppress pubertal development. (2 |⊕⊕○○)

2.2. We suggest that clinicians begin pubertal hormone suppression after girls and boys first exhibit physical changes of puberty. (2 |⊕⊕○○)

2.3. We recommend that, where indicated, GnRH analogues are used to suppress pubertal hormones. (1 |⊕⊕○○)

2.4. In adolescents who request sex hormone treatment (given this is a partly irreversible treatment), we recommend initiating treatment using a gradually increasing dose schedule after a multidisciplinary team of medical and MHPs has confirmed the persistence of GD/gender incongruence and sufficient mental capacity to give informed consent, which most adolescents have by age 16 years. (1 |⊕⊕○○).

2.5. We recognize that there may be compelling reasons to initiate sex hormone treatment prior to the age of 16 years in some adolescents with GD/gender incongruence, even though there are minimal published studies of gender-affirming hormone treatments administered before age 13.5 to 14 years. As with the care of adolescents ≥16 years of age, we recommend that an expert multidisciplinary team of medical and MHPs manage this treatment. (1 |⊕○○○)

2.6. We suggest monitoring clinical pubertal development every 3 to 6 months and laboratory parameters every 6 to 12 months during sex hormone treatment. (2 |⊕⊕○○)

3.0 Hormonal therapy for transgender adults

3.1. We recommend that clinicians confirm the diagnostic criteria of GD/gender incongruence and the criteria for the endocrine phase of gender transition before beginning treatment. (1 |⊕⊕⊕○)

3.2. We recommend that clinicians evaluate and address medical conditions that can be exacerbated by hormone depletion and treatment with sex hormones of the affirmed gender before beginning treatment. (1 |⊕⊕⊕○)

3.3. We suggest that clinicians measure hormone levels during treatment to ensure that endogenous sex steroids are suppressed and administered sex steroids are maintained in the normal physiologic range for the affirmed gender. (2 |⊕⊕○○)

3.4. We suggest that endocrinologists provide education to transgender individuals undergoing treatment about the onset and time course of physical changes induced by sex hormone treatment. (2 |⊕○○○)

4.0 Adverse outcome prevention and long-term care

4.1. We suggest regular clinical evaluation for physical changes and potential adverse changes in response to sex steroid hormones and laboratory monitoring of sex steroid hormone levels every 3 months during the first year of hormone therapy for transgender males and females and then once or twice yearly. (2 |⊕⊕○○)

4.2. We suggest periodically monitoring prolactin levels in transgender females treated with estrogens. (2 |⊕⊕○○)

4.3. We suggest that clinicians evaluate transgender persons treated with hormones for cardiovascular risk factors using fasting lipid profiles, diabetes screening, and/or other diagnostic tools. (2 |⊕⊕○○)

4.4. We recommend that clinicians obtain bone mineral density (BMD) measurements when risk factors for osteoporosis exist, specifically in those who stop sex hormone therapy after gonadectomy. (1 |⊕⊕○○)

4.5. We suggest that transgender females with no known increased risk of breast cancer follow breast-screening guidelines recommended for non-transgender females. (2 |⊕⊕○○)

4.6. We suggest that transgender females treated with estrogens follow individualized screening according to personal risk for prostatic disease and prostate cancer. (2 |⊕○○○)

4.7. We advise that clinicians determine the medical necessity of including a total hysterectomy and oophorectomy as part of gender-affirming surgery. (Ungraded Good Practice Statement)

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 5 of 36 PageID #: 22792

5.0 Surgery for sex reassignment and gender confirmation

5.1. We recommend that a patient pursue genital gender-affirming surgery only after the MHP and the clinician responsible for endocrine transition therapy both agree that surgery is medically necessary and would benefit the patient's overall health and/or well-being. (1 |⊕⊕○○)

5.2. We advise that clinicians approve genital gender-affirming surgery only after completion of at least 1 year of consistent and compliant hormone treatment, unless hormone therapy is not desired or medically contraindicated. (Ungraded Good Practice Statement)

5.3. We advise that the clinician responsible for endocrine treatment and the primary care provider ensure appropriate medical clearance of transgender individuals for genital gender-affirming surgery and collaborate with the surgeon regarding hormone use during and after surgery. (Ungraded Good Practice Statement)

5.4. We recommend that clinicians refer hormone-treated transgender individuals for genital surgery when: (1) the individual has had a satisfactory social role change, (2) the individual is satisfied about the hormonal effects, and (3) the individual desires definitive surgical changes. (1 |⊕○○○)

5.5. We suggest that clinicians delay gender-affirming genital surgery involving gonadectomy and/or hysterectomy until the patient is at least 18 years old or legal age of majority in his or her country. (2 |⊕⊕○○).

5.6. We suggest that clinicians determine the timing of breast surgery for transgender males based upon the physical and mental health status of the individual. There is insufficient evidence to recommend a specific age requirement. (2 |⊕○○○)

Changes Since the Previous Guideline

Both the current guideline and the one published in 2009 contain similar sections. Listed here are the sections contained in the current guideline and the corresponding number of recommendations: Introduction, Evaluation of Youth and Adults (5), Treatment of Adolescents (6), Hormonal Therapy for Transgender Adults (4), Adverse Outcomes Prevention and Long-term Care (7), and Surgery for Sex Reassignment and Gender Confirmation (6). The current introduction updates the diagnostic classification of "gender dysphoria/gender incongruence." It also reviews the development of "gender identity" and summarizes its natural development. The section on clinical evaluation of both youth and adults, defines in detail the professional qualifications required of those who diagnose and treat both adolescents and adults. We advise that decisions regarding the social transition of prepubertal youth are made with the assistance of a mental health professional or similarly experienced professional. We recommend against puberty blocking followed by gender-affirming hormone treatment of prepubertal children. Clinicians should inform pubertal children, adolescents, and adults seeking gender-confirming treatment of their options for fertility preservation. Prior to treatment, clinicians should evaluate the presence of medical conditions that may be worsened by hormone depletion and/or treatment. A multidisciplinary team, preferably composed of medical and mental health professionals, should monitor treatments. Clinicians evaluating transgender adults for endocrine treatment should confirm the diagnosis of persistent gender dysphoria/gender incongruence. Physicians should educate transgender persons regarding the time course of steroid-induced physical changes. Treatment should include periodic monitoring of hormone levels and metabolic parameters, as well as assessments of bone density and the impact upon prostate, gonads, and uterus. We also make recommendations for transgender persons who plan genital gender-affirming surgery.

Method of Development of Evidence-Based Clinical Practice Guidelines

The Clinical Guidelines Subcommittee (CGS) of the Endocrine Society deemed the diagnosis and treatment of individuals with GD/gender incongruence a priority area for revision and appointed a task force to formulate evidence-based recommendations. The task force followed the approach recommended by the Grading of Recommendations, Assessment, Development, and Evaluation group, an international group with expertise in the development and implementation of evidence-based guidelines (1). A detailed description of the grading scheme has been published elsewhere (2). The task force used the best available research evidence to develop the recommendations. The task force also used consistent language and graphical descriptions of both the strength of a recommendation and the quality of evidence. In terms of the strength of the recommendation, strong recommendations use the phrase "we recommend" and the number 1, and weak recommendations use the phrase "we suggest" and the number 2. Cross-filled circles indicate the quality of the evidence, such that ⊕○○○ denotes very low–quality evidence; ⊕⊕○○, low quality; ⊕⊕⊕○, moderate quality; and ⊕⊕⊕⊕, high quality. The task force has confidence that persons who receive care according to the strong recommendations will derive, on average, more benefit than harm. Weak recommendations require more careful consideration of the person's circumstances, values, and preferences to determine the best course of action. Linked to each recommendation is a description of the evidence and the

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

values that the task force considered in making the recommendation. In some instances, there are remarks in which the task force offers technical suggestions for testing conditions, dosing, and monitoring. These technical comments reflect the best available evidence applied to a typical person being treated. Often this evidence comes from the unsystematic observations of the task force and their preferences; therefore, one should consider these remarks as suggestions.

In this guideline, the task force made several statements to emphasize the importance of shared decision-making, general preventive care measures, and basic principles of the treatment of transgender persons. They labeled these "Ungraded Good Practice Statement." Direct evidence for these statements was either unavailable or not systematically appraised and considered out of the scope of this guideline. The intention of these statements is to draw attention to these principles.

The Endocrine Society maintains a rigorous conflict-of-interest review process for developing clinical practice guidelines. All task force members must declare any potential conflicts of interest by completing a conflict-of-interest form. The CGS reviews all conflicts of interest before the Society's Council approves the members to participate on the task force and periodically during the development of the guideline. All others participating in the guideline's development must also disclose any conflicts of interest in the matter under study, and most of these participants must be without any conflicts of interest. The CGS and the task force have reviewed all disclosures for this guideline and resolved or managed all identified conflicts of interest.

Conflicts of interest are defined as remuneration in any amount from commercial interests; grants; research support; consulting fees; salary; ownership interests [*e.g.*, stocks and stock options (excluding diversified mutual funds)]; honoraria and other payments for participation in speakers' bureaus, advisory boards, or boards of directors; and all other financial benefits. Completed forms are available through the Endocrine Society office.

The Endocrine Society provided the funding for this guideline; the task force received no funding or remuneration from commercial or other entities.

Commissioned Systematic Review

The task force commissioned two systematic reviews to support this guideline. The first one aimed to summarize the available evidence on the effect of sex steroid use in transgender individuals on lipids and cardiovascular outcomes. The review identified 29 eligible studies at moderate risk of bias. In transgender males (female to male), sex steroid therapy was associated with a statistically significant increase in serum triglycerides and low-density lipoprotein cholesterol levels. High-density lipoprotein cholesterol levels decreased significantly across all follow-up time periods. In transgender females (male to female), serum triglycerides were significantly higher without any changes in other parameters. Few myocardial infarction, stroke, venous thromboembolism (VTE), and death events were reported. These events were more frequent in transgender females. However, the quality of the evidence was low. The second review summarized the available evidence regarding the effect of sex steroids on bone health in transgender individuals and identified 13 studies. In transgender males, there was no statistically significant difference in the lumbar spine, femoral neck, or total hip BMD at 12 and 24 months compared with baseline values before initiating masculinizing hormone therapy. In transgender females, there was a statistically significant increase in lumbar spine BMD at 12 months and 24 months compared with baseline values before initiation of feminizing hormone therapy. There was minimal information on fracture rates. The quality of evidence was also low.

Introduction

Throughout recorded history (in the absence of an endocrine disorder) some men and women have experienced confusion and anguish resulting from rigid, forced conformity to sexual dimorphism. In modern history, there have been numerous ongoing biological, psychological, cultural, political, and sociological debates over various aspects of gender variance. The 20th century marked the emergence of a social awakening for men and women with the belief that they are "trapped" in the wrong body (3). Magnus Hirschfeld and Harry Benjamin, among others, pioneered the medical responses to those who sought relief from and a resolution to their profound discomfort. Although the term transsexual became widely known after Benjamin wrote "The Transsexual Phenomenon" (4), it was Hirschfeld who coined the term "transsexual" in 1923 to describe people who want to live a life that corresponds with their experienced gender vs their designated gender (5). Magnus Hirschfeld (6) and others (4, 7) have described other types of trans phenomena besides transsexualism. These early researchers proposed that the gender identity of these people was located somewhere along a unidimensional continuum. This continuum ranged from all male through "something in between" to all female. Yet such a classification does not take into account that people may have gender identities outside this continuum. For instance, some experience themselves as having both a male and female gender identity, whereas others completely renounce any gender classification (8, 9). There are also reports of individuals experiencing a continuous and rapid involuntary alternation between a male and female identity (10) or men who do not experience themselves as men but do not want to live as women (11, 12). In some countries, (*e.g.*, Nepal, Bangladesh, and Australia), these nonmale or nonfemale genders are officially recognized (13). Specific treatment protocols, however, have not yet been developed for these groups.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Instead of the term transsexualism, the current classification system of the American Psychiatric Association uses the term gender dysphoria in its diagnosis of persons who are not satisfied with their designated gender (14). The current version of the World Health Organization's ICD-10 still uses the term transsexualism when diagnosing adolescents and adults. However, for the ICD-11, the World Health Organization has proposed using the term "gender incongruence" (15).

Treating persons with GD/gender incongruence (15) was previously limited to relatively ineffective elixirs or creams. However, more effective endocrinology-based treatments became possible with the availability of testosterone in 1935 and diethylstilbestrol in 1938. Reports of individuals with GD/gender incongruence who were treated with hormones and gender-affirming surgery appeared in the press during the second half of the 20th century. The Harry Benjamin International Gender Dysphoria Association was founded in September 1979 and is now called the World Professional Association for Transgender Health (WPATH). WPATH published its first Standards of Care in 1979. These standards have since been regularly updated, providing guidance for treating persons with GD/gender incongruence (16).

Prior to 1975, few peer-reviewed articles were published concerning endocrine treatment of transgender persons. Since then, more than two thousand articles about various aspects of transgender care have appeared.

It is the purpose of this guideline to make detailed recommendations and suggestions, based on existing medical literature and clinical experience, that will enable treating physicians to maximize benefit and minimize risk when caring for individuals diagnosed with GD/gender incongruence.

In the future, we need more rigorous evaluations of the effectiveness and safety of endocrine and surgical protocols. Specifically, endocrine treatment protocols for GD/gender incongruence should include the careful assessment of the following: (1) the effects of prolonged delay of puberty in adolescents on bone health, gonadal function, and the brain (including effects on cognitive, emotional, social, and sexual development); (2) the effects of treatment in adults on sex hormone levels; (3) the requirement for and the effects of progestins and other agents used to suppress endogenous sex steroids during treatment; and (4) the risks and benefits of gender-affirming hormone treatment in older transgender people.

To successfully establish and enact these protocols, a commitment of mental health and endocrine investigators is required to collaborate in long-term, large-scale studies across countries that use the same diagnostic and inclusion criteria, medications, assay methods, and response assessment tools (*e.g.*, the European Network for the Investigation of Gender Incongruence) (17, 18).

Terminology and its use vary and continue to evolve. Table 1 contains the definitions of terms as they are used throughout this guideline.

Biological Determinants of Gender Identity Development

One's self-awareness as male or female changes gradually during infant life and childhood. This process of cognitive and affective learning evolves with interactions with parents, peers, and environment. A fairly accurate timetable exists outlining the steps in this process (19). Normative psychological literature, however, does not address if and when gender identity becomes crystallized and what factors contribute to the development of a gender identity that is not congruent with the gender of rearing. Results of studies from a variety of biomedical disciplines—genetic, endocrine, and neuroanatomic—support the concept that gender identity and/or gender expression (20) likely reflect a complex interplay of biological, environmental, and cultural factors (21, 22).

With respect to endocrine considerations, studies have failed to find differences in circulating levels of sex steroids between transgender and nontransgender individuals (23). However, studies in individuals with a disorder/difference of sex development (DSD) have informed our understanding of the role that hormones may play in gender identity outcome, even though most persons with GD/gender incongruence do not have a DSD. For example, although most 46,XX adult individuals with virilizing congenital adrenal hyperplasia caused by mutations in *CYP21A2* reported a female gender identity, the prevalence of GD/gender incongruence was much greater in this group than in the general population without a DSD. This supports the concept that there is a role for prenatal/postnatal androgens in gender development (24–26), although some studies indicate that prenatal androgens are more likely to affect gender behavior and sexual orientation rather than gender identity *per se* (27, 28).

Researchers have made similar observations regarding the potential role of androgens in the development of gender identity in other individuals with DSD. For example, a review of two groups of 46,XY persons, each with androgen synthesis deficiencies and female raised, reported transgender male (female-to-male) gender role changes in 56% to 63% and 39% to 64% of patients, respectively (29). Also, in 46,XY female-raised individuals with cloacal

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 8 of 36 PageID #: 22795

Table 1. Definitions of Terms Used in This Guideline

Biological sex, biological male or female: These terms refer to physical aspects of maleness and femaleness. As these may not be in line with each other (*e.g.*, a person with XY chromosomes may have female-appearing genitalia), the terms biological sex and biological male or female are imprecise and should be avoided.
Cisgender: This means not transgender. An alternative way to describe individuals who are not transgender is "non-transgender people."
Gender-affirming (hormone) treatment: See "gender reassignment"
Gender dysphoria: This is the distress and unease experienced if gender identity and designated gender are not completely congruent (see Table 2). In 2013, the American Psychiatric Association released the fifth edition of the DSM-5, which replaced "gender identity disorder" with "gender dysphoria" and changed the criteria for diagnosis.
Gender expression: This refers to external manifestations of gender, expressed through one's name, pronouns, clothing, haircut, behavior, voice, or body characteristics. Typically, transgender people seek to make their gender expression align with their gender identity, rather than their designated gender.
Gender identity/experienced gender: This refers to one's internal, deeply held sense of gender. For transgender people, their gender identity does not match their sex designated at birth. Most people have a gender identity of man or woman (or boy or girl). For some people, their gender identity does not fit neatly into one of those two choices. Unlike gender expression (see below), gender identity is not visible to others.
Gender identity disorder: This is the term used for GD/gender incongruence in previous versions of DSM (see "gender dysphoria"). The ICD-10 still uses the term for diagnosing child diagnoses, but the upcoming ICD-11 has proposed using "gender incongruence of childhood."
Gender incongruence: This is an umbrella term used when the gender identity and/or gender expression differs from what is typically associated with the designated gender. Gender incongruence is also the proposed name of the gender identity–related diagnoses in ICD-11. Not all individuals with gender incongruence have gender dysphoria or seek treatment.
Gender variance: See "gender incongruence"
Gender reassignment: This refers to the treatment procedure for those who want to adapt their bodies to the experienced gender by means of hormones and/or surgery. This is also called gender-confirming or gender-affirming treatment.
Gender-reassignment surgery (gender-confirming/gender-affirming surgery): These terms refer only to the surgical part of gender-confirming/gender-affirming treatment.
Gender role: This refers to behaviors, attitudes, and personality traits that a society (in a given culture and historical period) designates as masculine or feminine and/or that society associates with or considers typical of the social role of men or women.
Sex designated at birth: This refers to sex assigned at birth, usually based on genital anatomy.
Sex: This refers to attributes that characterize biological maleness or femaleness. The best known attributes include the sex-determining genes, the sex chromosomes, the H-Y antigen, the gonads, sex hormones, internal and external genitalia, and secondary sex characteristics.
Sexual orientation: This term describes an individual's enduring physical and emotional attraction to another person. Gender identity and sexual orientation are not the same. Irrespective of their gender identity, transgender people may be attracted to women (gynephilic), attracted to men (androphilic), bisexual, asexual, or queer.
Transgender: This is an umbrella term for people whose gender identity and/or gender expression differs from what is typically associated with their sex designated at birth. Not all transgender individuals seek treatment.
Transgender male (also: trans man, female-to-male, transgender male): This refers to individuals assigned female at birth but who identify and live as men.
Transgender woman (also: trans woman, male-to female, transgender female): This refers to individuals assigned male at birth but who identify and live as women.
Transition: This refers to the process during which transgender persons change their physical, social, and/or legal characteristics consistent with the affirmed gender identity. Prepubertal children may choose to transition socially.
Transsexual: This is an older term that originated in the medical and psychological communities to refer to individuals who have permanently transitioned through medical interventions or desired to do so.

exstrophy and penile agenesis, the occurrence of transgender male changes was significantly more prevalent than in the general population (30, 31). However, the fact that a high percentage of individuals with the same conditions did not change gender suggests that cultural factors may play a role as well.

With respect to genetics and gender identity, several studies have suggested heritability of GD/gender incongruence (32, 33). In particular, a study by Heylens *et al.* (33) demonstrated a 39.1% concordance rate for gender identity disorder (based on the DSM-IV criteria) in 23 monozygotic twin pairs but no concordance in 21 same-sex dizygotic or seven opposite-sex twin pairs. Although numerous investigators have sought to identify specific genes associated with GD/gender incongruence, such studies have been inconsistent and without strong statistical significance (34–38).

Studies focusing on brain structure suggest that the brain phenotypes of people with GD/gender incongruence differ in various ways from control males and females, but that there is not a complete sex reversal in brain structures (39).

In summary, although there is much that is still unknown with respect to gender identity and its expression, compelling studies support the concept that biologic factors, in addition to environmental factors, contribute to this fundamental aspect of human development.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Natural History of Children With GD/Gender Incongruence

With current knowledge, we cannot predict the psychosexual outcome for any specific child. Prospective follow-up studies show that childhood GD/gender incongruence does not invariably persist into adolescence and adulthood (so-called "desisters"). Combining all outcome studies to date, the GD/gender incongruence of a minority of prepubertal children appears to persist in adolescence (20, 40). In adolescence, a significant number of these desisters identify as homosexual or bisexual. It may be that children who only showed some gender nonconforming characteristics have been included in the follow-up studies, because the DSM-IV text revision criteria for a diagnosis were rather broad. However, the persistence of GD/gender incongruence into adolescence is more likely if it had been extreme in childhood (41, 42). With the newer, stricter criteria of the DSM-5 (Table 2), persistence rates may well be different in future studies.

1.0 Evaluation of Youth and Adults

Gender-affirming treatment is a multidisciplinary effort. After evaluation, education, and diagnosis, treatment may include mental health care, hormone therapy, and/or surgical therapy. Together with an MHP, hormone-prescribing clinicians should examine the psychosocial impact of the potential changes on people's lives, including mental health, friends, family, jobs, and their role in society. Transgender individuals should be encouraged to experience living in the new gender role and assess whether this improves their quality of life. Although the focus of this guideline is gender-affirming hormone therapy, collaboration with appropriate professionals responsible for each aspect of treatment maximizes a successful outcome.

Diagnostic assessment and mental health care

GD/gender incongruence may be accompanied with psychological or psychiatric problems (43–51). It is therefore necessary that clinicians who prescribe hormones and are involved in diagnosis and psychosocial assessment meet the following criteria: (1) are competent in using the DSM and/or the ICD for diagnostic purposes, (2) are able to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) are trained in diagnosing psychiatric conditions, (4) undertake or refer for appropriate treatment, (5) are able to do a psychosocial assessment of the patient's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) regularly attend relevant professional meetings.

Because of the psychological vulnerability of many individuals with GD/gender incongruence, it is important that mental health care is available before, during, and sometimes also after transitioning. For children and adolescents, an MHP who has training/experience in child and adolescent gender development (as well as child and adolescent psychopathology) should make the diagnosis, because assessing GD/gender incongruence in children and adolescents is often extremely complex.

During assessment, the clinician obtains information from the individual seeking gender-affirming treatment. In the case

Table 2. DSM-5 Criteria for Gender Dysphoria in Adolescents and Adults

A. A marked incongruence between one's experienced/expressed gender and natal gender of at least 6 mo in duration, as manifested by at least two of the following:
1. A marked incongruence between one's experienced/expressed gender and primary and/or secondary sex characteristics (or in young adolescents, the anticipated secondary sex characteristics)
2. A strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (or in young adolescents, a desire to prevent the development of the anticipated secondary sex characteristics)
3. A strong desire for the primary and/or secondary sex characteristics of the other gender
4. A strong desire to be of the other gender (or some alternative gender different from one's designated gender)
5. A strong desire to be treated as the other gender (or some alternative gender different from one's designated gender)
6. A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one's designated gender)

B. The condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:
1. The condition exists with a disorder of sex development.
2. The condition is posttransitional, in that the individual has transitioned to full-time living in the desired gender (with or without legalization of gender change) and has undergone (or is preparing to have) at least one sex-related medical procedure or treatment regimen—namely, regular sex hormone treatment or gender reassignment surgery confirming the desired gender (*e.g.*, penectomy, vaginoplasty in natal males; mastectomy or phalloplasty in natal females).

Reference: American Psychiatric Association (14).

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

of adolescents, the clinician also obtains information from the parents or guardians regarding various aspects of the child's general and psychosexual development and current functioning. On the basis of this information, the clinician:

- decides whether the individual fulfills criteria for treatment (see Tables 2 and 3) for GD/gender incongruence (DSM-5) or transsexualism (DSM-5 and/or ICD-10);
- informs the individual about the possibilities and limitations of various kinds of treatment (hormonal/surgical and nonhormonal), and if medical treatment is desired, provides correct information to prevent unrealistically high expectations;
- assesses whether medical interventions may result in unfavorable psychological and social outcomes.

In cases in which severe psychopathology, circumstances, or both seriously interfere with the diagnostic work or make satisfactory treatment unlikely, clinicians should assist the adolescent in managing these other issues. Literature on postoperative regret suggests that besides poor quality of surgery, severe psychiatric comorbidity and lack of support may interfere with positive outcomes (52–56).

For adolescents, the diagnostic procedure usually includes a complete psychodiagnostic assessment (57) and an assessment of the decision-making capability of the youth. An evaluation to assess the family's ability to endure stress, give support, and deal with the complexities of the adolescent's situation should be part of the diagnostic phase (58).

Social transitioning

A change in gender expression and role (which may involve living part time or full time in another gender role that is consistent with one's gender identity) may test the person's resolve, the capacity to function in the affirmed gender, and the adequacy of social, economic, and psychological supports. It assists both the individual and the clinician in their judgments about how to proceed (16). During social transitioning, the person's feelings about the social transformation (including coping with the responses of others) is a major focus of the counseling. The optimal timing for social transitioning may differ between individuals. Sometimes people wait until they start gender-affirming hormone treatment to make social transitioning easier, but individuals increasingly start social transitioning long before they receive medically supervised, gender-affirming hormone treatment.

Criteria

Adolescents and adults seeking gender-affirming hormone treatment and surgery should satisfy certain criteria before proceeding (16). Criteria for gender-affirming hormone therapy for adults are in Table 4, and criteria for gender-affirming hormone therapy for adolescents are in Table 5. Follow-up studies in adults meeting these criteria indicate a high satisfaction rate with treatment (59). However, the quality of evidence is usually low. A few follow-up studies on adolescents who fulfilled these criteria also indicated good treatment results (60–63).

Recommendations for Those Involved in the Gender-Affirming Hormone Treatment of Individuals With GD/Gender Incongruence

1.1. We advise that only trained MHPs who meet the following criteria should diagnose GD/gender incongruence in adults: (1) competence in using the DSM and/or the ICD for diagnostic purposes, (2) the ability to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) training in diagnosing psychiatric conditions, (4) the ability to undertake or refer for appropriate treatment, (5) the ability to psychosocially assess the person's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) a practice of regularly attending relevant professional meetings. (Ungraded Good Practice Statement)

1.2. We advise that only MHPs who meet the following criteria should diagnose GD/gender incongruence in children and adolescents: (1) training in child and adolescent developmental psychology and psychopathology, (2) competence in using the DSM and/or ICD for diagnostic

Table 3. ICD-10 Criteria for Transsexualism

Transsexualism (F64.0) has three criteria:
1. The desire to live and be accepted as a member of the opposite sex, usually accompanied by the wish to make his or her body as congruent as possible with the preferred sex through surgery and hormone treatments.
2. The transsexual identity has been present persistently for at least 2 y.
3. The disorder is not a symptom of another mental disorder or a genetic, DSD, or chromosomal abnormality.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 11 of 36 PageID #: 22798

Table 4. Criteria for Gender-Affirming Hormone Therapy for Adults

1. Persistent, well-documented gender dysphoria/gender incongruence
2. The capacity to make a fully informed decision and to consent for treatment
3. The age of majority in a given country (if younger, follow the criteria for adolescents)
4. Mental health concerns, if present, must be reasonably well controlled

Reproduced from World Professional Association for Transgender Health (16).

purposes, (3) the ability to make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (4) training in diagnosing psychiatric conditions, (5) the ability to undertake or refer for appropriate treatment, (6) the ability to psychosocially assess the person's understanding and social conditions that can impact gender-affirming hormone therapy, (7) a practice of regularly attending relevant professional meetings, and (8) knowledge of the criteria for puberty blocking and gender-affirming hormone treatment in adolescents. (Ungraded Good Practice Statement)

Evidence

Individuals with gender identity issues may have psychological or psychiatric problems (43–48, 50, 51, 64, 65). It is therefore necessary that clinicians making the diagnosis are able to make a distinction between GD/gender incongruence and conditions that have similar features. Examples of conditions with similar features are body dysmorphic disorder, body identity integrity disorder (a condition in which individuals have a sense that their anatomical configuration as an able-bodied person is somehow wrong or inappropriate) (66), or certain forms of eunuchism (in which a person is preoccupied with or engages in castration and/or penectomy for

Table 5. Criteria for Gender-Affirming Hormone Therapy for Adolescents

Adolescents are eligible for GnRH agonist treatment if:

1. A qualified MHP has confirmed that:
 - the adolescent has demonstrated a long-lasting and intense pattern of gender nonconformity or gender dysphoria (whether suppressed or expressed),
 - gender dysphoria worsened with the onset of puberty,
 - any coexisting psychological, medical, or social problems that could interfere with treatment (*e.g.*, that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start treatment,
 - the adolescent has sufficient mental capacity to give informed consent to this (reversible) treatment,
2. And the adolescent:
 - has been informed of the effects and side effects of treatment (including potential loss of fertility if the individual subsequently continues with sex hormone treatment) and options to preserve fertility,
 - has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process,
3. And a pediatric endocrinologist or other clinician experienced in pubertal assessment
 - agrees with the indication for GnRH agonist treatment,
 - has confirmed that puberty has started in the adolescent (Tanner stage ≥G2/B2),
 - has confirmed that there are no medical contraindications to GnRH agonist treatment.

Adolescents are eligible for subsequent sex hormone treatment if:

1. A qualified MHP has confirmed:
 - the persistence of gender dysphoria,
 - any coexisting psychological, medical, or social problems that could interfere with treatment (*e.g.*, that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start sex hormone treatment,
 - the adolescent has sufficient mental capacity (which most adolescents have by age 16 years) to estimate the consequences of this (partly) irreversible treatment, weigh the benefits and risks, and give informed consent to this (partly) irreversible treatment,
2. And the adolescent:
 - has been informed of the (irreversible) effects and side effects of treatment (including potential loss of fertility and options to preserve fertility),
 - has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process,
3. And a pediatric endocrinologist or other clinician experienced in pubertal induction:
 - agrees with the indication for sex hormone treatment,
 - has confirmed that there are no medical contraindications to sex hormone treatment.

Reproduced from World Professional Association for Transgender Health (16).

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

reasons that are not gender identity related) (11). Clinicians should also be able to diagnose psychiatric conditions accurately and ensure that these conditions are treated appropriately, particularly when the conditions may complicate treatment, affect the outcome of gender-affirming treatment, or be affected by hormone use.

Values and preferences

The task force placed a very high value on avoiding harm from hormone treatment in individuals who have conditions other than GD/gender incongruence and who may not benefit from the physical changes associated with this treatment and placed a low value on any potential benefit these persons believe they may derive from hormone treatment. This justifies the good practice statement.

1.3. We advise that decisions regarding the social transition of prepubertal youths with GD/gender incongruence are made with the assistance of an MHP or another experienced professional. (Ungraded Good Practice Statement).

1.4. We recommend against puberty blocking and gender-affirming hormone treatment in prepubertal children with GD/gender incongruence. (1 |⊕⊕○○)

Evidence

In most children diagnosed with GD/gender incongruence, it did not persist into adolescence. The percentages differed among studies, probably dependent on which version of the DSM clinicians used, the patient's age, the recruitment criteria, and perhaps cultural factors. However, the large majority (about 85%) of prepubertal children with a childhood diagnosis did not remain GD/gender incongruent in adolescence (20). If children have completely socially transitioned, they may have great difficulty in returning to the original gender role upon entering puberty (40). Social transition is associated with the persistence of GD/gender incongruence as a child progresses into adolescence. It may be that the presence of GD/gender incongruence in prepubertal children is the earliest sign that a child is destined to be transgender as an adolescent/adult (20). However, social transition (in addition to GD/gender incongruence) has been found to contribute to the likelihood of persistence.

This recommendation, however, does not imply that children should be discouraged from showing gender-variant behaviors or should be punished for exhibiting such behaviors. In individual cases, an early complete social transition may result in a more favorable outcome, but there are currently no criteria to identify the GD/gender-incongruent children to whom this applies. At the present time, clinical experience suggests that persistence of GD/gender incongruence can only be reliably assessed after the first signs of puberty.

Values and preferences

The task force placed a high value on avoiding harm with gender-affirming hormone therapy in prepubertal children with GD/gender incongruence. This justifies the strong recommendation in the face of low-quality evidence.

1.5. We recommend that clinicians inform and counsel all individuals seeking gender-affirming medical treatment regarding options for fertility preservation prior to initiating puberty suppression in adolescents and prior to treating with hormonal therapy of the affirmed gender in both adolescents and adults. (1 |⊕⊕⊕○)

Remarks

Persons considering hormone use for gender affirmation need adequate information about this treatment in general and about fertility effects of hormone treatment in particular to make an informed and balanced decision (67, 68). Because young adolescents may not feel qualified to make decisions about fertility and may not fully understand the potential effects of hormonal interventions, consent and protocol education should include parents, the referring MHP(s), and other members of the adolescent's support group. To our knowledge, there are no formally evaluated decision aids available to assist in the discussion and decision regarding the future fertility of adolescents or adults beginning gender-affirming treatment.

Treating early pubertal youth with GnRH analogs will temporarily impair spermatogenesis and oocyte maturation. Given that an increasing number of transgender youth want to preserve fertility potential, delaying or temporarily discontinuing GnRH analogs to promote gamete maturation is an option. This option is often not preferred, because mature sperm production is associated with later stages of puberty and with the significant development of secondary sex characteristics.

For those designated male at birth with GD/gender incongruence and who are in early puberty, sperm production and the development of the reproductive tract are insufficient for the cryopreservation of sperm. However, prolonged pubertal suppression using GnRH analogs is reversible and clinicians should inform these individuals that sperm production can be initiated following prolonged gonadotropin suppression. This can be accomplished by spontaneous gonadotropin recovery after

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

cessation of GnRH analogs or by gonadotropin treatment and will probably be associated with physical manifestations of testosterone production, as stated above. Note that there are no data in this population concerning the time required for sufficient spermatogenesis to collect enough sperm for later fertility. In males treated for precocious puberty, spermarche was reported 0.7 to 3 years after cessation of GnRH analogs (69). In adult men with gonadotropin deficiency, sperm are noted in seminal fluid by 6 to 12 months of gonadotropin treatment. However, sperm numbers when partners of these patients conceive are far below the "normal range" (70, 71).

In girls, no studies have reported long-term, adverse effects of pubertal suppression on ovarian function after treatment cessation (72, 73). Clinicians should inform adolescents that no data are available regarding either time to spontaneous ovulation after cessation of GnRH analogs or the response to ovulation induction following prolonged gonadotropin suppression.

In males with GD/gender incongruence, when medical treatment is started in a later phase of puberty or in adulthood, spermatogenesis is sufficient for cryopreservation and storage of sperm. *In vitro* spermatogenesis is currently under investigation. Restoration of spermatogenesis after prolonged estrogen treatment has not been studied.

In females with GD/gender incongruence, the effect of prolonged treatment with exogenous testosterone on ovarian function is uncertain. There have been reports of an increased incidence of polycystic ovaries in transgender males, both prior to and as a result of androgen treatment (74–77), although these reports were not confirmed by others (78). Pregnancy has been reported in transgender males who have had prolonged androgen treatment and have discontinued testosterone but have not had genital surgery (79, 80). A reproductive endocrine gynecologist can counsel patients before gender-affirming hormone treatment or surgery regarding potential fertility options (81). Techniques for cryopreservation of oocytes, embryos, and ovarian tissue continue to improve, and oocyte maturation of immature tissue is being studied (82).

2.0 Treatment of Adolescents

During the past decade, clinicians have progressively acknowledged the suffering of young adolescents with GD/gender incongruence. In some forms of GD/gender incongruence, psychological interventions may be useful and sufficient. However, for many adolescents with GD/gender incongruence, the pubertal physical changes are unbearable. As early medical intervention may prevent psychological harm, various clinics have decided to start treating young adolescents with GD/gender incongruence with puberty-suppressing medication (a GnRH analog). As compared with starting gender-affirming treatment long after the first phases of puberty, a benefit of pubertal suppression at early puberty may be a better psychological and physical outcome.

In girls, the first physical sign of puberty is the budding of the breasts followed by an increase in breast and fat tissue. Breast development is also associated with the pubertal growth spurt, and menarche occurs ~2 years later. In boys, the first physical change is testicular growth. A testicular volume ≥4 mL is seen as consistent with the initiation of physical puberty. At the beginning of puberty, estradiol and testosterone levels are still low and are best measured in the early morning with an ultrasensitive assay. From a testicular volume of 10 mL, daytime testosterone levels increase, leading to virilization (83). Note that pubic hair and/or axillary hair/odor may not reflect the onset of gonadarche; instead, it may reflect adrenarche alone.

2.1. We suggest that adolescents who meet diagnostic criteria for GD/gender incongruence, fulfill criteria for treatment (Table 5), and are requesting treatment should initially undergo treatment to suppress pubertal development. (2 |⊕⊕○○)

2.2. We suggest that clinicians begin pubertal hormone suppression after girls and boys first exhibit physical changes of puberty (Tanner stages G2/B2). (2 |⊕⊕○○)

Evidence

Pubertal suppression can expand the diagnostic phase by a long period, giving the subject more time to explore options and to live in the experienced gender before making a decision to proceed with gender-affirming sex hormone treatments and/or surgery, some of which is irreversible (84, 85). Pubertal suppression is fully reversible, enabling full pubertal development in the natal gender, after cessation of treatment, if appropriate. The experience of full endogenous puberty is an undesirable condition for the GD/gender-incongruent individual and may seriously interfere with healthy psychological functioning and well-being. Treating GD/gender-incongruent adolescents entering puberty with GnRH analogs has been shown to improve psychological functioning in several domains (86).

Another reason to start blocking pubertal hormones early in puberty is that the physical outcome is improved compared with initiating physical transition after puberty has been completed (60, 62). Looking like a man or woman when living as the opposite sex creates difficult

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 14 of 36 PageID #: 22801

barriers with enormous life-long disadvantages. We therefore advise starting suppression in early puberty to prevent the irreversible development of undesirable secondary sex characteristics. However, adolescents with GD/gender incongruence should experience the first changes of their endogenous spontaneous puberty, because their emotional reaction to these first physical changes has diagnostic value in establishing the persistence of GD/gender incongruence (85). Thus, Tanner stage 2 is the optimal time to start pubertal suppression. However, pubertal suppression treatment in early puberty will limit the growth of the penis and scrotum, which will have a potential effect on future surgical treatments (87).

Clinicians can also use pubertal suppression in adolescents in later pubertal stages to stop menses in transgender males and prevent facial hair growth in transgender females. However, in contrast to the effects in early pubertal adolescents, physical sex characteristics (such as more advanced breast development in transgender boys and lowering of the voice and outgrowth of the jaw and brow in transgender girls) are not reversible.

Values and preferences

These recommendations place a high value on avoiding an unsatisfactory physical outcome when secondary sex characteristics have become manifest and irreversible, a higher value on psychological well-being, and a lower value on avoiding potential harm from early pubertal suppression.

Remarks

Table 6 lists the Tanner stages of breast and male genital development. Careful documentation of hallmarks of pubertal development will ensure precise timing when initiating pubertal suppression once puberty has started. Clinicians can use pubertal LH and sex steroid levels to confirm that puberty has progressed sufficiently before starting pubertal suppression (88). Reference ranges for sex steroids by Tanner stage may vary depending on the assay used. Ultrasensitive sex steroid and gonadotropin assays will help clinicians document early pubertal changes.

Irreversible and, for GD/gender-incongruent adolescents, undesirable sex characteristics in female puberty are breasts, female body habitus, and, in some cases, relative short stature. In male puberty, they are a prominent Adam's apple; low voice; male bone configuration, such as a large jaw, big feet and hands, and tall stature; and male hair pattern on the face and extremities.

2.3. We recommend that, where indicated, GnRH analogues are used to suppress pubertal hormones. (1 |⊕⊕○○)

Evidence

Clinicians can suppress pubertal development and gonadal function most effectively via gonadotropin suppression using GnRH analogs. GnRH analogs are long-acting agonists that suppress gonadotropins by GnRH receptor desensitization after an initial increase of gonadotropins during ~10 days after the first and (to a lesser degree) the second injection (89). Antagonists immediately suppress pituitary gonadotropin secretion (90, 91). Long-acting GnRH analogs are the currently preferred treatment option. Clinicians may consider long-acting GnRH antagonists when evidence on their safety and efficacy in adolescents becomes available.

During GnRH analog treatment, slight development of secondary sex characteristics may regress, and in a later phase of pubertal development, it will stop. In girls, breast tissue will become atrophic, and menses will stop. In boys, virilization will stop, and testicular volume may decrease (92).

An advantage of using GnRH analogs is the reversibility of the intervention. If, after extensive exploration of his/her transition wish, the individual no longer desires transition, they can discontinue pubertal suppression. In subjects with

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Table 6. Tanner Stages of Breast Development and Male External Genitalia

The description of Tanner stages for breast development:
1. Prepubertal
2. Breast and papilla elevated as small mound; areolar diameter increased
3. Breast and areola enlarged, no contour separation
4. Areola and papilla form secondary mound
5. Mature; nipple projects, areola part of general breast contour

For penis and testes:
1. Prepubertal, testicular volume <4 mL
2. Slight enlargement of penis; enlarged scrotum, pink, texture altered, testes 4–6 mL
3. Penis longer, testes larger (8–12 mL)
4. Penis and glans larger, including increase in breadth; testes larger (12–15 mL), scrotum dark
5. Penis adult size; testicular volume > 15 ml

Adapted from Lawrence (56).

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 15 of 36 PageID #: 22802

precocious puberty, spontaneous pubertal development has been shown to resume after patients discontinue taking GnRH analogs (93).

Recommendations 2.1 to 2.3 are supported by a prospective follow-up study from The Netherlands. This report assessed mental health outcomes in 55 transgender adolescents/young adults (22 transgender females and 33 transgender males) at three time points: (1) before the start of GnRH agonist (average age of 14.8 years at start of treatment), (2) at initiation of gender-affirming hormones (average age of 16.7 years at start of treatment), and (3) 1 year after "gender-reassignment surgery" (average age of 20.7 years) (63). Despite a decrease in depression and an improvement in general mental health functioning, GD/gender incongruence persisted through pubertal suppression, as previously reported (86). However, following sex hormone treatment and gender-reassignment surgery, GD/gender incongruence was resolved and psychological functioning steadily improved (63). Furthermore, well-being was similar to or better than that reported by age-matched young adults from the general population, and none of the study participants regretted treatment. This study represents the first long-term follow-up of individuals managed according to currently existing clinical practice guidelines for transgender youth, and it underscores the benefit of the multidisciplinary approach pioneered in The Netherlands; however, further studies are needed.

Side effects

The primary risks of pubertal suppression in GD/gender-incongruent adolescents may include adverse effects on bone mineralization (which can theoretically be reversed with sex hormone treatment), compromised fertility if the person subsequently is treated with sex hormones, and unknown effects on brain development. Few data are available on the effect of GnRH analogs on BMD in adolescents with GD/gender incongruence. Initial data in GD/gender-incongruent subjects demonstrated no change of absolute areal BMD during 2 years of GnRH analog therapy but a decrease in BMD *z* scores (85). A recent study also suggested suboptimal bone mineral accrual during GnRH analog treatment. The study reported a decrease in areal BMD *z* scores and of bone mineral apparent density *z* scores (which takes the size of the bone into account) in 19 transgender males treated with GnRH analogs from a mean age of 15.0 years (standard deviation = 2.0 years) for a median duration of 1.5 years (0.3 to 5.2 years) and in 15 transgender females treated from 14.9 (±1.9) years for 1.3 years (0.5 to 3.8 years), although not all changes were statistically significant (94). There was incomplete catch-up at age 22 years after sex hormone treatment from age 16.6 (±1.4) years for a median duration of 5.8 years (3.0 to 8.0 years) in transgender females and from age 16.4 (±2.3) years for 5.4 years (2.8 to 7.8 years) in transgender males. Little is known about more prolonged use of GnRH analogs. Researchers reported normal BMD *z* scores at age 35 years in one individual who used GnRH analogs from age 13.7 years until age 18.6 years before initiating sex hormone treatment (65).

Additional data are available from individuals with late puberty or GnRH analog treatment of other indications. Some studies reported that men with constitutionally delayed puberty have decreased BMD in adulthood (95). However, other studies reported that these men have normal BMD (96, 97). Treating adults with GnRH analogs results in a decrease of BMD (98). In children with central precocious puberty, treatment with GnRH analogs has been found to result in a decrease of BMD during treatment by some (99) but not others (100). Studies have reported normal BMD after discontinuing therapy (69, 72, 73, 101, 102). In adolescents treated with growth hormone who are small for gestational age and have normal pubertal timing, 2-year GnRH analog treatments did not adversely affect BMD (103). Calcium supplementation may be beneficial in optimizing bone health in GnRH analog–treated individuals (104). There are no studies of vitamin D supplementation in this context, but clinicians should offer supplements to vitamin D–deficient adolescents. Physical activity, especially during growth, is important for bone mass in healthy individuals (103) and is therefore likely to be beneficial for bone health in GnRH analog–treated subjects.

GnRH analogs did not induce a change in body mass index standard deviation score in GD/gender-incongruent adolescents (94) but caused an increase in fat mass and decrease in lean body mass percentage (92). Studies in girls treated for precocious puberty also reported a stable body mass index standard deviation score during treatment (72) and body mass index and body composition comparable to controls after treatment (73).

Arterial hypertension has been reported as an adverse effect in a few girls treated with GnRH analogs for precocious/early puberty (105, 106). Blood pressure monitoring before and during treatment is recommended.

Individuals may also experience hot flashes, fatigue, and mood alterations as a consequence of pubertal suppression. There is no consensus on treatment of these side effects in this context.

It is recommended that any use of pubertal blockers (and subsequent use of sex hormones, as detailed below) include a discussion about implications for fertility (see recommendation 1.3). Transgender adolescents may

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

want to preserve fertility, which may be otherwise compromised if puberty is suppressed at an early stage and the individual completes phenotypic transition with the use of sex hormones.

Limited data are available regarding the effects of GnRH analogs on brain development. A single cross-sectional study demonstrated no compromise of executive function (107), but animal data suggest there may be an effect of GnRH analogs on cognitive function (108).

Values and preferences

Our recommendation of GnRH analogs places a higher value on the superior efficacy, safety, and reversibility of the pubertal hormone suppression achieved (as compared with the alternatives) and a relatively lower value on limiting the cost of therapy. Of the available alternatives, depot and oral progestin preparations are effective. Experience with this treatment dates back prior to the emergence of GnRH analogs for treating precocious puberty in papers from the 1960s and early 1970s (109–112). These compounds are usually safe, but some side effects have been reported (113–115). Only two recent studies involved transgender youth (116, 117). One of these studies described the use of oral lynestrenol monotherapy followed by the addition of testosterone treatment in transgender boys who were at Tanner stage B4 or further at the start of treatment (117). They found lynestrenol safe, but gonadotropins were not fully suppressed. The study reported metrorrhagia in approximately half of the individuals, mainly in the first 6 months. Acne, headache, hot flashes, and fatigue were other frequent side effects. Another progestin that has been studied in the United States is medroxyprogesterone. This agent is not as effective as GnRH analogs in lowering endogenous sex hormones either and may be associated with other side effects (116). Progestin preparations may be an acceptable treatment for persons without access to GnRH analogs or with a needle phobia. If GnRH analog treatment is not available (insurance denial, prohibitive cost, or other reasons), postpubertal, transgender female adolescents may be treated with an antiandrogen that directly suppresses androgen synthesis or action (see adult section).

Remarks

Measurements of gonadotropin and sex steroid levels give precise information about gonadal axis suppression, although there is insufficient evidence for any specific short-term monitoring scheme in children treated with GnRH analogs (88). If the gonadal axis is not completely suppressed—as evidenced by (for example) menses, erections, or progressive hair growth—the interval of GnRH analog treatment can be shortened or the dose increased. During treatment, adolescents should be monitored for negative effects of delaying puberty, including a halted growth spurt and impaired bone mineral accretion. Table 7 illustrates a suggested clinical protocol.

Anthropometric measurements and X-rays of the left hand to monitor bone age are informative for evaluating growth. To assess BMD, clinicians can perform dual-energy X-ray absorptiometry scans.

2.4. In adolescents who request sex hormone treatment (given this is a partly irreversible treatment), we recommend initiating treatment using a gradually increasing dose schedule (see Table 8) after a multidisciplinary team of medical and MHPs has confirmed the persistence of GD/gender incongruence and sufficient mental capacity to give informed consent, which most adolescents have by age 16 years (Table 5). (1 |⊕⊕○○)

2.5. We recognize that there may be compelling reasons to initiate sex hormone treatment prior to the age of 16 years in some adolescents with GD/gender incongruence, even though there are minimal published studies of gender-affirming hormone treatments administered before age 13.5 to 14 years. As with the care of adolescents ≥16 years of age, we recommend that an expert multidisciplinary team of medical and MHPs manage this treatment. (1 |⊕○○○)

2.6. We suggest monitoring clinical pubertal development every 3 to 6 months and laboratory parameters every 6 to 12 months during sex hormone treatment (Table 9). (2 |⊕⊕○○)

Table 7. Baseline and Follow-Up Protocol During Suppression of Puberty

Every 3–6 mo
Anthropometry: height, weight, sitting height, blood pressure, Tanner stages
Every 6–12 mo
Laboratory: LH, FSH, E2/T, 25OH vitamin D
Every 1–2 y
Bone density using DXA
Bone age on X-ray of the left hand (if clinically indicated)

Adapted from Hembree *et al.* (118).

Abbreviations: DXA, dual-energy X-ray absorptiometry; E2, estradiol; FSH, follicle stimulating hormone; LH, luteinizing hormone; T, testosterone;

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Table 8. Protocol Induction of Puberty

Induction of female puberty with oral 17β-estradiol, increasing the dose every 6 mo:
- 5 μg/kg/d
- 10 μg/kg/d
- 15 μg/kg/d
- 20 μg/kg/d
- Adult dose = 2–6 mg/d
- *In postpubertal transgender female adolescents, the dose of 17β-estradiol can be increased more rapidly:*
  - 1 mg/d for 6 mo
  - 2 mg/d

Induction of female puberty with transdermal 17β-estradiol, increasing the dose every 6 mo (new patch is placed every 3.5 d):
- 6.25–12.5 μg/24 h (cut 25-μg patch into quarters, then halves)
- 25 μg/24 h
- 37.5 μg/24 h
- Adult dose = 50–200 μg/24 h
- *For alternatives once at adult dose, see Table 11.*
- *Adjust maintenance dose to mimic physiological estradiol levels (see Table 15).*

Induction of male puberty with testosterone esters increasing the dose every 6 mo (IM or SC):
- 25 mg/m^2/2 wk (or alternatively, half this dose weekly, or double the dose every 4 wk)
- 50 mg/m^2/2 wk
- 75 mg/m^2/2 wk
- 100 mg/m^2/2 wk
- Adult dose = 100–200 mg every 2 wk
- *In postpubertal transgender male adolescents the dose of testosterone esters can be increased more rapidly:*
  - 75 mg/2 wk for 6 mo
  - 125 mg/2 wk
- *For alternatives once at adult dose, see Table 11.*
- *Adjust maintenance dose to mimic physiological testosterone levels (see Table 14).*

Adapted from Hembree *et al.* (118).

Abbreviations: IM, intramuscularly; SC, subcutaneously.

Evidence

Adolescents develop competence in decision making at their own pace. Ideally, the supervising medical professionals should individually assess this competence, although no objective tools to make such an assessment are currently available.

Many adolescents have achieved a reasonable level of competence by age 15 to 16 years (119), and in many countries 16-year-olds are legally competent with regard to medical decision making (120). However, others believe that although some capacities are generally achieved before age 16 years, other abilities (such as good risk assessment) do not develop until well after 18 years (121). They suggest that health care procedures should be divided along a matrix of relative risk, so that younger adolescents can be allowed to decide about low-risk procedures, such as most diagnostic tests and common therapies, but not about high-risk procedures, such as most surgical procedures (121).

Currently available data from transgender adolescents support treatment with sex hormones starting at age 16 years (63, 122). However, some patients may incur potential risks by waiting until age 16 years. These include the potential risk to bone health if puberty is suppressed

Table 9. Baseline and Follow-up Protocol During Induction of Puberty

Every 3–6 mo
- Anthropometry: height, weight, sitting height, blood pressure, Tanner stages

Every 6–12 mo
- In transgender males: hemoglobin/hematocrit, lipids, testosterone, 25OH vitamin D
- In transgender females: prolactin, estradiol, 25OH vitamin D

Every 1–2 y
- BMD using DXA
- Bone age on X-ray of the left hand (if clinically indicated)

BMD should be monitored into adulthood (until the age of 25–30 y or until peak bone mass has been reached).
For recommendations on monitoring once pubertal induction has been completed, see Tables 14 and 15.

Adapted from Hembree *et al.* (118).

Abbreviation: DXA, dual-energy X-ray absorptiometry.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 18 of 36 PageID #: 22805

for 6 to 7 years before initiating sex hormones (*e.g.*, if someone reached Tanner stage 2 at age 9-10 years old). Additionally, there may be concerns about inappropriate height and potential harm to mental health (emotional and social isolation) if initiation of secondary sex characteristics must wait until the person has reached 16 years of age. However, only minimal data supporting earlier use of gender-affirming hormones in transgender adolescents currently exist (63). Clearly, long-term studies are needed to determine the optimal age of sex hormone treatment in GD/gender-incongruent adolescents.

The MHP who has followed the adolescent during GnRH analog treatment plays an essential role in assessing whether the adolescent is eligible to start sex hormone therapy and capable of consenting to this treatment (Table 5). Support of the family/environment is essential. Prior to the start of sex hormones, clinicians should discuss the implications for fertility (see recommendation 1.5). Throughout pubertal induction, an MHP and a pediatric endocrinologist (or other clinician competent in the evaluation and induction of pubertal development) should monitor the adolescent. In addition to monitoring therapy, it is also important to pay attention to general adolescent health issues, including healthy life style choices, such as not smoking, contraception, and appropriate vaccinations (*e.g.*, human papillomavirus).

For the induction of puberty, clinicians can use a similar dose scheme for hypogonadal adolescents with GD/gender incongruence as they use in other individuals with hypogonadism, carefully monitoring for desired and undesired effects (Table 8). In transgender female adolescents, transdermal 17β-estradiol may be an alternative for oral 17β-estradiol. It is increasingly used for pubertal induction in hypogonadal females. However, the absence of low-dose estrogen patches may be a problem. As a result, individuals may need to cut patches to size themselves to achieve appropriate dosing (123). In transgender male adolescents, clinicians can give testosterone injections intramuscularly or subcutaneously (124, 125).

When puberty is initiated with a gradually increasing schedule of sex steroid doses, the initial levels will not be high enough to suppress endogenous sex steroid secretion. Gonadotropin secretion and endogenous production of testosterone may resume and interfere with the effectiveness of estrogen treatment, in transgender female adolescents (126, 127). Therefore, continuation of GnRH analog treatment is advised until gonadectomy. Given that GD/gender-incongruent adolescents may opt not to have gonadectomy, long-term studies are necessary to examine the potential risks of prolonged GnRH analog treatment. Alternatively, in transgender male adolescents, GnRH analog treatment can be discontinued once an adult dose of testosterone has been reached and the individual is well virilized. If uterine bleeding occurs, a progestin can be added. However, the combined use of a GnRH analog (for ovarian suppression) and testosterone may enable phenotypic transition with a lower dose of testosterone in comparison with testosterone alone. If there is a wish or need to discontinue GnRH analog treatment in transgender female adolescents, they may be treated with an antiandrogen that directly suppresses androgen synthesis or action (see section 3.0 "Hormonal Therapy for Transgender Adults").

Values and preferences

The recommendation to initiate pubertal induction only when the individual has sufficient mental capacity (roughly age 16 years) to give informed consent for this partly irreversible treatment places a higher value on the ability of the adolescent to fully understand and oversee the partially irreversible consequences of sex hormone treatment and to give informed consent. It places a lower value on the possible negative effects of delayed puberty. We may not currently have the means to weigh adequately the potential benefits of waiting until around age 16 years to initiate sex hormones vs the potential risks/harm to BMD and the sense of social isolation from having the timing of puberty be so out of sync with peers (128).

Remarks

Before starting sex hormone treatment, effects on fertility and options for fertility preservation should be discussed. Adult height may be a concern in transgender adolescents. In a transgender female adolescent, clinicians may consider higher doses of estrogen or a more rapid tempo of dose escalation during pubertal induction. There are no established treatments yet to augment adult height in a transgender male adolescent with open epiphyses during pubertal induction. It is not uncommon for transgender adolescents to present for clinical services after having completed or nearly completed puberty. In such cases, induction of puberty with sex hormones can be done more rapidly (see Table 8). Additionally, an adult dose of testosterone in transgender male adolescents may suffice to suppress the gonadal axis without the need to use a separate agent. At the appropriate time, the multidisciplinary team should adequately prepare the adolescent for transition to adult care.

3.0 Hormonal Therapy for Transgender Adults

The two major goals of hormonal therapy are (1) to reduce endogenous sex hormone levels, and thus reduce

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 19 of 36 PageID #: 22806

the secondary sex characteristics of the individual's designated gender, and (2) to replace endogenous sex hormone levels consistent with the individual's gender identity by using the principles of hormone replacement treatment of hypogonadal patients. The timing of these two goals and the age at which to begin treatment with the sex hormones of the chosen gender is codetermined in collaboration with both the person pursuing transition and the health care providers. The treatment team should include a medical provider knowledgeable in transgender hormone therapy, an MHP knowledgeable in GD/gender incongruence and the mental health concerns of transition, and a primary care provider able to provide care appropriate for transgender individuals. The physical changes induced by this sex hormone transition are usually accompanied by an improvement in mental well-being (129, 130).

3.1. We recommend that clinicians confirm the diagnostic criteria of GD/gender incongruence and the criteria for the endocrine phase of gender transition before beginning treatment. (1 |⊕⊕⊕○)

3.2. We recommend that clinicians evaluate and address medical conditions that can be exacerbated by hormone depletion and treatment with sex hormones of the affirmed gender before beginning treatment (Table 10). (1 |⊕⊕⊕○)

3.3. We suggest that clinicians measure hormone levels during treatment to ensure that endogenous sex steroids are suppressed and administered sex steroids are maintained in the normal physiologic range for the affirmed gender. (2 |⊕⊕○○)

Evidence

It is the responsibility of the treating clinician to confirm that the person fulfills criteria for treatment. The treating clinician should become familiar with the terms and criteria presented in Tables 1–5 and take a thorough history from the patient in collaboration with the other members of the treatment team. The treating clinician must ensure that the desire for transition is appropriate; the consequences, risks, and benefits of treatment are well understood; and the desire for transition persists. They also need to discuss fertility preservation options (see recommendation 1.3) (67, 68).

Transgender males

Clinical studies have demonstrated the efficacy of several different androgen preparations to induce masculinization in transgender males (Appendix A) (113, 114, 131–134). Regimens to change secondary sex characteristics follow the general principle of hormone replacement treatment of male hypogonadism (135). Clinicians can use either parenteral or transdermal preparations to achieve testosterone values in the normal male range (this is dependent on the specific assay, but is typically 320 to 1000 ng/dL) (Table 11) (136). Sustained supraphysiologic levels of testosterone increase the risk of adverse reactions (see section 4.0 "Adverse Outcome Prevention and Long-Term Care") and should be avoided.

Similar to androgen therapy in hypogonadal men, testosterone treatment in transgender males results in increased muscle mass and decreased fat mass, increased facial hair and acne, male pattern baldness in those genetically predisposed, and increased sexual desire (137).

Table 10. Medical Risks Associated With Sex Hormone Therapy

Transgender female: estrogen
- Very high risk of adverse outcomes:
  - Thromboembolic disease
- Moderate risk of adverse outcomes:
  - Macroprolactinoma
  - Breast cancer
  - Coronary artery disease
  - Cerebrovascular disease
  - Cholelithiasis
  - Hypertriglyceridemia

Transgender male: testosterone
- Very high risk of adverse outcomes:
  - Erythrocytosis (hematocrit > 50%)
- Moderate risk of adverse outcomes:
  - Severe liver dysfunction (transaminases > threefold upper limit of normal)
  - Coronary artery disease
  - Cerebrovascular disease
  - Hypertension
  - Breast or uterine cancer

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

Table 11. Hormone Regimens in Transgender Persons

Transgender females[a]	
Estrogen	
Oral	
Estradiol	2.0–6.0 mg/d
Transdermal	
Estradiol transdermal patch (New patch placed every 3–5 d)	0.025–0.2 mg/d
Parenteral	
Estradiol valerate or cypionate	5–30 mg IM every 2 wk 2–10 mg IM every week
Anti-androgens	
Spironolactone	100–300 mg/d
Cyproterone acetate[b]	25–50 mg/d
GnRH agonist	3.75 mg SQ (SC) monthly 11.25 mg SQ (SC) 3-monthly
Transgender males	
Testosterone	
Parenteral testosterone	
Testosterone enanthate or cypionate	100–200 mg SQ (IM) every 2 wk or SQ (SC) 50% per week
Testosterone undecanoate[c]	1000 mg every 12 wk
Transdermal testosterone	
Testosterone gel 1.6%[d]	50–100 mg/d
Testosterone transdermal patch	2.5–7.5 mg/d

Abbreviations: IM, intramuscularly; SQ, sequentially; SC, subcutaneously.

[a]Estrogens used with or without antiandrogens or GnRH agonist.

[b]Not available in the United States.

[c]One thousand milligrams initially followed by an injection at 6 wk then at 12-wk intervals.

[d]Avoid cutaneous transfer to other individuals.

In transgender males, testosterone will result in clitoromegaly, temporary or permanent decreased fertility, deepening of the voice, cessation of menses (usually), and a significant increase in body hair, particularly on the face, chest, and abdomen. Cessation of menses may occur within a few months with testosterone treatment alone, although high doses of testosterone may be required. If uterine bleeding continues, clinicians may consider the addition of a progestational agent or endometrial ablation (138). Clinicians may also administer GnRH analogs or depot medroxyprogesterone to stop menses prior to testosterone treatment.

Transgender females

The hormone regimen for transgender females is more complex than the transgender male regimen (Appendix B). Treatment with physiologic doses of estrogen alone is insufficient to suppress testosterone levels into the normal range for females (139). Most published clinical studies report the need for adjunctive therapy to achieve testosterone levels in the female range (21, 113, 114, 132–134, 139, 140).

Multiple adjunctive medications are available, such as progestins with antiandrogen activity and GnRH agonists (141). Spironolactone works by directly blocking androgens during their interaction with the androgen receptor (114, 133, 142). It may also have estrogenic activity (143). Cyproterone acetate, a progestational compound with antiandrogenic properties (113, 132, 144), is widely used in Europe. 5α-Reductase inhibitors do not reduce testosterone levels and have adverse effects (145).

Dittrich *et al.* (141) reported that monthly doses of the GnRH agonist goserelin acetate in combination with estrogen were effective in reducing testosterone levels with a low incidence of adverse reactions in 60 transgender females. Leuprolide and transdermal estrogen were as effective as cyproterone and transdermal estrogen in a comparative retrospective study (146).

Patients can take estrogen as oral conjugated estrogens, oral 17β-estradiol, or transdermal 17β-estradiol. Among estrogen options, the increased risk of thromboembolic events associated with estrogens in general seems most concerning with ethinyl estradiol specifically (134, 140, 141), which is why we specifically suggest that it not be used in any transgender treatment plan. Data distinguishing among other estrogen options are less well established although there is some thought that oral routes of administration are more thrombogenic due to the "first pass effect" than are transdermal and parenteral routes, and that the risk of thromboembolic events is dose-dependent. Injectable estrogen and sublingual

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

estrogen may benefit from avoiding the first pass effect, but they can result in more rapid peaks with greater overall periodicity and thus are more difficult to monitor (147, 148). However, there are no data demonstrating that increased periodicity is harmful otherwise.

Clinicians can use serum estradiol levels to monitor oral, transdermal, and intramuscular estradiol. Blood tests cannot monitor conjugated estrogens or synthetic estrogen use. Clinicians should measure serum estradiol and serum testosterone and maintain them at the level for premenopausal females (100 to 200 pg/mL and <50 ng/dL, respectively). The transdermal preparations and injectable estradiol cypionate or valerate preparations may confer an advantage in older transgender females who may be at higher risk for thromboembolic disease (149).

Values

Our recommendation to maintain levels of gender-affirming hormones in the normal adult range places a high value on the avoidance of the long-term complications of pharmacologic doses. Those patients receiving endocrine treatment who have relative contraindications to hormones should have an in-depth discussion with their physician to balance the risks and benefits of therapy.

Remarks

Clinicians should inform all endocrine-treated individuals of all risks and benefits of gender-affirming hormones prior to initiating therapy. Clinicians should strongly encourage tobacco use cessation in transgender females to avoid increased risk of VTE and cardiovascular complications. We strongly discourage the unsupervised use of hormone therapy (150).

Not all individuals with GD/gender incongruence seek treatment as described (*e.g.*, male-to-eunuchs and individuals seeking partial transition). Tailoring current protocols to the individual may be done within the context of accepted safety guidelines using a multidisciplinary approach including mental health. No evidence-based protocols are available for these groups (151). We need prospective studies to better understand treatment options for these persons.

3.4. We suggest that endocrinologists provide education to transgender individuals undergoing treatment about the onset and time course of physical changes induced by sex hormone treatment. (2 |⊕○○○)

Evidence

Transgender males

Physical changes that are expected to occur during the first 1 to 6 months of testosterone therapy include cessation of menses, increased sexual desire, increased facial and body hair, increased oiliness of skin, increased muscle, and redistribution of fat mass. Changes that occur within the first year of testosterone therapy include deepening of the voice (152, 153), clitoromegaly, and male pattern hair loss (in some cases) (114, 144, 154, 155) (Table 12).

Transgender females

Physical changes that may occur in transgender females in the first 3 to 12 months of estrogen and anti-androgen therapy include decreased sexual desire, decreased spontaneous erections, decreased facial and body hair (usually mild), decreased oiliness of skin, increased breast tissue growth, and redistribution of fat mass (114, 139, 149, 154, 155, 161) (Table 13). Breast development is generally maximal at 2 years after initiating hormones (114, 139, 149, 155). Over a long period of time, the prostate gland and testicles will undergo atrophy.

Although the time course of breast development in transgender females has been studied (150), precise information about other changes induced by sex hormones is lacking (141). There is a great deal of variability among individuals, as evidenced during pubertal development. We all know that a major concern for transgender females is breast development. If we work with estrogens, the result will be often not what the transgender female expects.

Alternatively, there are transgender females who report an anecdotal improved breast development, mood, or sexual desire with the use of progestogens. However, there have been no well-designed studies of the role of progestogens in feminizing hormone regimens, so the question is still open.

Our knowledge concerning the natural history and effects of different cross-sex hormone therapies on breast

Table 12. Masculinizing Effects in Transgender Males

Effect	Onset	Maximum
Skin oiliness/acne	1–6 mo	1–2 y
Facial/body hair growth	6–12 mo	4–5 y
Scalp hair loss	6–12 mo	—[a]
Increased muscle mass/strength	6–12 mo	2–5 y
Fat redistribution	1–6 mo	2–5 y
Cessation of menses	1–6 mo	—[b]
Clitoral enlargement	1–6 mo	1–2 y
Vaginal atrophy	1–6 mo	1–2 y
Deepening of voice	6–12 mo	1–2 y

Estimates represent clinical observations: Toorians *et al.* (149), Asscheman *et al.* (156), Gooren *et al.* (157), Wierckx *et al.* (158).

[a]Prevention and treatment as recommended for biological men.

[b]Menorrhagia requires diagnosis and treatment by a gynecologist.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 22 of 36 PageID #: 22809

Table 13. Feminizing Effects in Transgender Females

Effect	Onset	Maximum
Redistribution of body fat	3–6 mo	2–3 y
Decrease in muscle mass and strength	3–6 mo	1–2 y
Softening of skin/decreased oiliness	3–6 mo	Unknown
Decreased sexual desire	1–3 mo	3–6 mo
Decreased spontaneous erections	1–3 mo	3–6 mo
Male sexual dysfunction	Variable	Variable
Breast growth	3–6 mo	2–3 y
Decreased testicular volume	3–6 mo	2–3 y
Decreased sperm production	Unknown	>3 y
Decreased terminal hair growth	6–12 mo	>3 y[a]
Scalp hair	Variable	—[b]
Voice changes	None	—[c]

Estimates represent clinical observations: Toorians *et al.* (149), Asscheman *et al.* (156), Gooren *et al.* (157).

[a]Complete removal of male sexual hair requires electrolysis or laser treatment or both.

[b]Familial scalp hair loss may occur if estrogens are stopped.

[c]Treatment by speech pathologists for voice training is most effective.

development in transgender females is extremely sparse and based on the low quality of evidence. Current evidence does not indicate that progestogens enhance breast development in transgender females, nor does evidence prove the absence of such an effect. This prevents us from drawing any firm conclusion at this moment and demonstrates the need for further research to clarify these important clinical questions (162).

Values and preferences

Transgender persons have very high expectations regarding the physical changes of hormone treatment and are aware that body changes can be enhanced by surgical procedures (*e.g.*, breast, face, and body habitus). Clear expectations for the extent and timing of sex hormone–induced changes may prevent the potential harm and expense of unnecessary procedures.

4.0 Adverse Outcome Prevention and Long-Term Care

Hormone therapy for transgender males and females confers many of the same risks associated with sex hormone replacement therapy in nontransgender persons. The risks arise from and are worsened by inadvertent or intentional use of supraphysiologic doses of sex hormones, as well as use of inadequate doses of sex hormones to maintain normal physiology (131, 139).

4.1. We suggest regular clinical evaluation for physical changes and potential adverse changes in response to sex steroid hormones and laboratory monitoring of sex steroid hormone levels every 3 months during the first year of hormone therapy for transgender males and females and then once or twice yearly. (2 |⊕⊕○○)

Evidence

Pretreatment screening and appropriate regular medical monitoring are recommended for both transgender males and females during the endocrine transition and periodically thereafter (26, 155). Clinicians should monitor weight and blood pressure, conduct physical exams, and assess routine health questions, such as tobacco use, symptoms of depression, and risk of adverse events such as deep vein thrombosis/pulmonary embolism and other adverse effects of sex steroids.

Transgender males

Table 14 contains a standard monitoring plan for transgender males on testosterone therapy (154, 159). Key issues include maintaining testosterone levels in the physiologic normal male range and avoiding adverse events resulting from excess testosterone therapy, particularly erythrocytosis, sleep apnea, hypertension, excessive weight gain, salt retention, lipid changes, and excessive or cystic acne (135).

Because oral 17-alkylated testosterone is not recommended, serious hepatic toxicity is not anticipated with parenteral or transdermal testosterone use (163, 164). Past concerns regarding liver toxicity with testosterone have been alleviated with subsequent reports that indicate the risk of serious liver disease is minimal (144, 165, 166).

Transgender females

Table 15 contains a standard monitoring plan for transgender females on estrogens, gonadotropin suppression, or antiandrogens (160). Key issues include avoiding supraphysiologic doses or blood levels of estrogen that may lead to increased risk for thromboembolic disease, liver dysfunction, and hypertension. Clinicians should monitor serum estradiol levels using laboratories participating in external quality control, as measurements of estradiol in blood can be very challenging (167).

VTE may be a serious complication. A study reported a 20-fold increase in venous thromboembolic disease in a large cohort of Dutch transgender subjects (161). This increase may have been associated with the use of the synthetic estrogen, ethinyl estradiol (149). The incidence decreased when clinicians stopped administering ethinyl estradiol (161). Thus, the use of synthetic estrogens and conjugated estrogens is undesirable because of the inability to regulate doses by measuring serum levels and the risk of thromboembolic disease. In a German gender clinic, deep vein thrombosis occurred in 1 of 60 of transgender females treated with a GnRH analog and oral

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Table 14. Monitoring of Transgender Persons on Gender-Affirming Hormone Therapy: Transgender Male

1. Evaluate patient every 3 mo in the first year and then one to two times per year to monitor for appropriate signs of virilization and for development of adverse reactions.
2. Measure serum testosterone every 3 mo until levels are in the normal physiologic male range:[a]
   a. For testosterone enanthate/cypionate injections, the testosterone level should be measured midway between injections. The target level is 400–700 ng/dL to 400 ng/dL. Alternatively, measure peak and trough levels to ensure levels remain in the normal male range.
   b. For parenteral testosterone undecanoate, testosterone should be measured just before the following injection. If the level is <400 ng/dL, adjust dosing interval.
   c. For transdermal testosterone, the testosterone level can be measured no sooner than after 1 wk of daily application (at least 2 h after application).
3. Measure hematocrit or hemoglobin at baseline and every 3 mo for the first year and then one to two times a year. Monitor weight, blood pressure, and lipids at regular intervals.
4. Screening for osteoporosis should be conducted in those who stop testosterone treatment, are not compliant with hormone therapy, or who develop risks for bone loss.
5. If cervical tissue is present, monitoring as recommended by the American College of Obstetricians and Gynecologists.
6. Ovariectomy can be considered after completion of hormone transition.
7. Conduct sub- and periareolar annual breast examinations if mastectomy performed. If mastectomy is not performed, then consider mammograms as recommended by the American Cancer Society.

[a]Adapted from Lapauw *et al.* (154) and Ott *et al.* (159).

estradiol (141). The patient who developed a deep vein thrombosis was found to have a homozygous C677 T mutation in the methylenetetrahydrofolate reductase gene. In an Austrian gender clinic, administering gender-affirming hormones to 162 transgender females and 89 transgender males was not associated with VTE, despite an 8.0% and 5.6% incidence of thrombophilia (159). A more recent multinational study reported only 10 cases of VTE from a cohort of 1073 subjects (168). Thrombophilia screening of transgender persons initiating hormone treatment should be restricted to those with a personal or family history of VTE (159). Monitoring D-dimer levels during treatment is not recommended (169).

4.2. We suggest periodically monitoring prolactin levels in transgender females treated with estrogens. (2 |⊕⊕○○)

Evidence

Estrogen therapy can increase the growth of pituitary lactrotroph cells. There have been several reports of prolactinomas occurring after long-term, high-dose estrogen therapy (170–173). Up to 20% of transgender females treated with estrogens may have elevations in prolactin levels associated with enlargement of the pituitary gland (156). In most cases, the serum prolactin levels will return to the normal range with a reduction or discontinuation of the estrogen therapy or discontinuation of cyproterone acetate (157, 174, 175).

The onset and time course of hyperprolactinemia during estrogen treatment are not known. Clinicians should measure prolactin levels at baseline and then at least annually during the transition period and every 2 years thereafter. Given that only a few case studies reported prolactinomas, and prolactinomas were not reported in large cohorts of estrogen-treated persons, the risk is likely to be very low. Because the major presenting findings of microprolactinomas (hypogonadism and sometimes gynecomastia) are not apparent in transgender females, clinicians may perform radiologic examinations of the pituitary in those patients whose prolactin levels persistently increase despite stable or reduced estrogen levels. Some transgender individuals receive psychotropic medications that can increase prolactin levels (174).

Table 15. Monitoring of Transgender Persons on Gender-Affirming Hormone Therapy: Transgender Female

1. Evaluate patient every 3 mo in the first year and then one to two times per year to monitor for appropriate signs of feminization and for development of adverse reactions.
2. Measure serum testosterone and estradiol every 3 mo.
   a. Serum testosterone levels should be <50 ng/dL.
   b. Serum estradiol should not exceed the peak physiologic range: 100–200 pg/mL.
3. For individuals on spironolactone, serum electrolytes, particularly potassium, should be monitored every 3 mo in the first year and annually thereafter.
4. Routine cancer screening is recommended, as in nontransgender individuals (all tissues present).
5. Consider BMD testing at baseline (160). In individuals at low risk, screening for osteoporosis should be conducted at age 60 years or in those who are not compliant with hormone therapy.

This table presents strong recommendations and does not include lower level recommendations.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

4.3. We suggest that clinicians evaluate transgender persons treated with hormones for cardiovascular risk factors using fasting lipid profiles, diabetes screening, and/or other diagnostic tools. (2 |⊕⊕○○)

Evidence

Transgender males

Administering testosterone to transgender males results in a more atherogenic lipid profile with lowered high-density lipoprotein cholesterol and higher triglyceride and low-density lipoprotein cholesterol values (176–179). Studies of the effect of testosterone on insulin sensitivity have mixed results (178, 180). A randomized, open-label uncontrolled safety study of transgender males treated with testosterone undecanoate demonstrated no insulin resistance after 1 year (181, 182). Numerous studies have demonstrated the effects of sex hormone treatment on the cardiovascular system (160, 179, 183, 184). Long-term studies from The Netherlands found no increased risk for cardiovascular mortality (161). Likewise, a meta-analysis of 19 randomized trials in nontransgender males on testosterone replacement showed no increased incidence of cardiovascular events (185). A systematic review of the literature found that data were insufficient (due to very low–quality evidence) to allow a meaningful assessment of patient-important outcomes, such as death, stroke, myocardial infarction, or VTE in transgender males (176). Future research is needed to ascertain the potential harm of hormonal therapies (176). Clinicians should manage cardiovascular risk factors as they emerge according to established guidelines (186).

Transgender females

A prospective study of transgender females found favorable changes in lipid parameters with increased high-density lipoprotein and decreased low-density lipoprotein concentrations (178). However, increased weight, blood pressure, and markers of insulin resistance attenuated these favorable lipid changes. In a meta-analysis, only serum triglycerides were higher at ≥24 months without changes in other parameters (187). The largest cohort of transgender females (mean age 41 years, followed for a mean of 10 years) showed no increase in cardiovascular mortality despite a 32% rate of tobacco use (161).

Thus, there is limited evidence to determine whether estrogen is protective or detrimental on lipid and glucose metabolism in transgender females (176). With aging, there is usually an increase of body weight. Therefore, as with nontransgender individuals, clinicians should monitor and manage glucose and lipid metabolism and blood pressure regularly according to established guidelines (186).

4.4. We recommend that clinicians obtain BMD measurements when risk factors for osteoporosis exist, specifically in those who stop sex hormone therapy after gonadectomy. (1 |⊕⊕○○)

Evidence

Transgender males

Baseline bone mineral measurements in transgender males are generally in the expected range for their pretreatment gender (188). However, adequate dosing of testosterone is important to maintain bone mass in transgender males (189, 190). In one study (190), serum LH levels were inversely related to BMD, suggesting that low levels of sex hormones were associated with bone loss. Thus, LH levels in the normal range may serve as an indicator of the adequacy of sex steroid administration to preserve bone mass. The protective effect of testosterone may be mediated by peripheral conversion to estradiol, both systemically and locally in the bone.

Transgender females

A baseline study of BMD reported T scores less than −2.5 in 16% of transgender females (191). In aging males, studies suggest that serum estradiol more positively correlates with BMD than does testosterone (192, 193) and is more important for peak bone mass (194). Estrogen preserves BMD in transgender females who continue on estrogen and antiandrogen therapies (188, 190, 191, 195, 196).

Fracture data in transgender males and females are not available. Transgender persons who have undergone gonadectomy may choose not to continue consistent sex steroid treatment after hormonal and surgical sex reassignment, thereby becoming at risk for bone loss. There have been no studies to determine whether clinicians should use the sex assigned at birth or affirmed gender for assessing osteoporosis (*e.g.*, when using the FRAX tool). Although some researchers use the sex assigned at birth (with the assumption that bone mass has usually peaked for transgender people who initiate hormones in early adulthood), this should be assessed on a case-by-case basis until there are more data available. This assumption will be further complicated by the increasing prevalence of transgender people who undergo hormonal transition at a pubertal age or soon after puberty. Sex for comparison within risk assessment tools may be based on the age at which hormones were initiated and the length of exposure to hormones. In some cases, it may be

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

reasonable to assess risk using both the male and female calculators and using an intermediate value. Because all subjects underwent normal pubertal development, with known effects on bone size, reference values for birth sex were used for all participants (154).

4.5. We suggest that transgender females with no known increased risk of breast cancer follow breast-screening guidelines recommended for those designated female at birth. (2 |⊕⊕○○)

4.6. We suggest that transgender females treated with estrogens follow individualized screening according to personal risk for prostatic disease and prostate cancer. (2 |⊕○○○)

Evidence

Studies have reported a few cases of breast cancer in transgender females (197–200). A Dutch study of 1800 transgender females followed for a mean of 15 years (range of 1 30 years) found one case of breast cancer. The Women's Health Initiative study reported that females taking conjugated equine estrogen without progesterone for 7 years did not have an increased risk of breast cancer as compared with females taking placebo (137).

In transgender males, a large retrospective study conducted at the U.S. Veterans Affairs medical health system identified seven breast cancers (194). The authors reported that this was not above the expected rate of breast cancers in cisgender females in this cohort. Furthermore, they did report one breast cancer that developed in a transgender male patient after mastectomy, supporting the fact that breast cancer can occur even after mastectomy. Indeed, there have been case reports of breast cancer developing in subareolar tissue in transgender males, which occurred after mastectomy (201, 202).

Women with primary hypogonadism (Turner syndrome) treated with estrogen replacement exhibited a significantly decreased incidence of breast cancer as compared with national standardized incidence ratios (203, 204). These studies suggest that estrogen therapy does not increase the risk of breast cancer in the short term (<20 to 30 years). We need long-term studies to determine the actual risk, as well as the role of screening mammograms. Regular examinations and gynecologic advice should determine monitoring for breast cancer.

Prostate cancer is very rare before the age of 40, especially with androgen deprivation therapy (205). Childhood or pubertal castration results in regression of the prostate and adult castration reverses benign prostate hypertrophy (206). Although van Kesteren *et al.* (207) reported that estrogen therapy does not induce hypertrophy or premalignant changes in the prostates of transgender females, studies have reported cases of benign prostatic hyperplasia in transgender females treated with estrogens for 20 to 25 years (208, 209). Studies have also reported a few cases of prostate carcinoma in transgender females (210–214).

Transgender females may feel uncomfortable scheduling regular prostate examinations. Gynecologists are not trained to screen for prostate cancer or to monitor prostate growth. Thus, it may be reasonable for transgender females who transitioned after age 20 years to have annual screening digital rectal examinations after age 50 years and prostate-specific antigen tests consistent with U.S. Preventive Services Task Force Guidelines (215).

4.7. We advise that clinicians determine the medical necessity of including a total hysterectomy and oophorectomy as part of gender-affirming surgery. (Ungraded Good Practice Statement)

Evidence

Although aromatization of testosterone to estradiol in transgender males has been suggested as a risk factor for endometrial cancer (216), no cases have been reported. When transgender males undergo hysterectomy, the uterus is small and there is endometrial atrophy (217, 218). Studies have reported cases of ovarian cancer (219, 220). Although there is limited evidence for increased risk of reproductive tract cancers in transgender males, health care providers should determine the medical necessity of a laparoscopic total hysterectomy as part of a gender-affirming surgery to prevent reproductive tract cancer (221).

Values

Given the discomfort that transgender males experience accessing gynecologic care, our recommendation for the medical necessity of total hysterectomy and oophorectomy places a high value on eliminating the risks of female reproductive tract disease and cancer and a lower value on avoiding the risks of these surgical procedures (related to the surgery and to the potential undesirable health consequences of oophorectomy) and their associated costs.

Remarks

The sexual orientation and type of sexual practices will determine the need and types of gynecologic care required following transition. Additionally, in certain countries, the approval required to change the sex in a birth certificate for transgender males may be dependent on having a complete hysterectomy. Clinicians should help patients research nonmedical administrative criteria and

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 26 of 36 PageID #: 22813

provide counseling. If individuals decide not to undergo hysterectomy, screening for cervical cancer is the same as all other females.

5.0 Surgery for Sex Reassignment and Gender Confirmation

For many transgender adults, genital gender-affirming surgery may be the necessary step toward achieving their ultimate goal of living successfully in their desired gender role. The type of surgery falls into two main categories: (1) those that directly affect fertility and (2) those that do not. Those that change fertility (previously called sex reassignment surgery) include genital surgery to remove the penis and gonads in the male and removal of the uterus and gonads in the female. The surgeries that effect fertility are often governed by the legal system of the state or country in which they are performed. Other gender-conforming surgeries that do not directly affect fertility are not so tightly governed.

Gender-affirming surgical techniques have improved markedly during the past 10 years. Reconstructive genital surgery that preserves neurologic sensation is now the standard. The satisfaction rate with surgical reassignment of sex is now very high (187). Additionally, the mental health of the individual seems to be improved by participating in a treatment program that defines a pathway of gender-affirming treatment that includes hormones and surgery (130, 144) (Table 16).

Surgery that affects fertility is irreversible. The World Professional Association for Transgender Health Standards of Care (222) emphasizes that the "threshold of 18 should not be seen as an indication in itself for active intervention." If the social transition has not been satisfactory, if the person is not satisfied with or is ambivalent about the effects of sex hormone treatment, or if the person is ambivalent about surgery then the individual should not be referred for surgery (223, 224).

Gender-affirming genital surgeries for transgender females that affect fertility include gonadectomy, penectomy, and creation of a neovagina (225, 226). Surgeons often invert the skin of the penis to form the wall of the vagina, and several literatures reviews have reported on outcomes (227). Sometimes there is inadequate tissue to form a full neovagina, so clinicians have revisited using intestine and found it to be successful (87, 228, 229). Some newer vaginoplasty techniques may involve autologuous oral epithelial cells (230, 231).

The scrotum becomes the labia majora. Surgeons use reconstructive surgery to fashion the clitoris and its hood, preserving the neurovascular bundle at the tip of the penis as the neurosensory supply to the clitoris. Some surgeons are also creating a sensate pedicled-spot adding a G spot to the neovagina to increase sensation (232). Most recently, plastic surgeons have developed techniques to fashion labia minora. To further complete the feminization, uterine transplants have been proposed and even attempted (233).

Neovaginal prolapse, rectovaginal fistula, delayed healing, vaginal stenosis, and other complications do sometimes occur (234, 235). Clinicians should strongly remind the transgender person to use their dilators to maintain the depth and width of the vagina throughout the postoperative period. Genital sexual responsivity and other aspects of sexual function are usually preserved following genital gender-affirming surgery (236, 237).

Ancillary surgeries for more feminine or masculine appearance are not within the scope of this guideline. Voice therapy by a speech language pathologist is available to transform speech patterns to the affirmed gender (148). Spontaneous voice deepening occurs during testosterone treatment of transgender males (152, 238). No studies have compared the effectiveness of speech therapy, laryngeal surgery, or combined treatment.

Breast surgery is a good example of gender-confirming surgery that does not affect fertility. In all females, breast size exhibits a very broad spectrum. For transgender females to make the best informed decision, clinicians should delay breast augmentation surgery until the patient has completed at least 2 years of estrogen therapy, because the breasts continue to grow during that time (141, 155).

Another major procedure is the removal of facial and masculine-appearing body hair using either electrolysis or

Table 16. Criteria for Gender-Affirming Surgery, Which Affects Fertility

1. Persistent, well-documented gender dysphoria
2. Legal age of majority in the given country
3. Having continuously and responsibly used gender-affirming hormones for 12 mo (if there is no medical contraindication to receiving such therapy)
4. Successful continuous full-time living in the new gender role for 12 mo
5. If significant medical or mental health concerns are present, they must be well controlled
6. Demonstrable knowledge of all practical aspects of surgery (*e.g.*, cost, required lengths of hospitalizations, likely complications, postsurgical rehabilitation)

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 27 of 36 PageID #: 22814

laser treatments. Other feminizing surgeries, such as that to feminize the face, are now becoming more popular (239–241).

In transgender males, clinicians usually delay gender-affirming genital surgeries until after a few years of androgen therapy. Those surgeries that affect fertility in this group include oophorectomy, vaginectomy, and complete hysterectomy. Surgeons can safely perform them vaginally with laparoscopy. These are sometimes done in conjunction with the creation of a neopenis. The cosmetic appearance of a neopenis is now very good, but the surgery is multistage and very expensive (242, 243). Radial forearm flap seems to be the most satisfactory procedure (228, 244). Other flaps also exist (245). Surgeons can make neopenile erections possible by reinervation of the flap and subsequent contraction of the muscle, leading to stiffening of the neopenis (246, 247), but results are inconsistent (248). Surgeons can also stiffen the penis by imbedding some mechanical device (*e.g.*, a rod or some inflatable apparatus) (249, 250). Because of these limitations, the creation of a neopenis has often been less than satisfactory. Recently, penis transplants are being proposed (233).

In fact, most transgender males do not have any external genital surgery because of the lack of access, high cost, and significant potential complications. Some choose a metaoidioplasty that brings forward the clitoris, thereby allowing them to void in a standing position without wetting themselves (251, 252). Surgeons can create the scrotum from the labia majora with good cosmetic effect and can implant testicular prostheses (253).

The most important masculinizing surgery for the transgender male is mastectomy, and it does not affect fertility. Breast size only partially regresses with androgen therapy (155). In adults, discussions about mastectomy usually take place after androgen therapy has started. Because some transgender male adolescents present after significant breast development has occurred, they may also consider mastectomy 2 years after they begin androgen therapy and before age 18 years. Clinicians should individualize treatment based on the physical and mental health status of the individual. There are now newer approaches to mastectomy with better outcomes (254, 255). These often involve chest contouring (256). Mastectomy is often necessary for living comfortably in the new gender (256).

5.1. We recommend that a patient pursue genital gender-affirming surgery only after the MHP and the clinician responsible for endocrine transition therapy both agree that surgery is medically necessary and would benefit the patient's overall health and/or well-being. (1 |⊕⊕○○)

5.2. We advise that clinicians approve genital gender-affirming surgery only after completion of at least 1 year of consistent and compliant hormone treatment, unless hormone therapy is not desired or medically contraindicated. (Ungraded Good Practice Statement)

5.3. We advise that the clinician responsible for endocrine treatment and the primary care provider ensure appropriate medical clearance of transgender individuals for genital gender-affirming surgery and collaborate with the surgeon regarding hormone use during and after surgery. (Ungraded Good Practice Statement)

5.4. We recommend that clinicians refer hormone-treated transgender individuals for genital surgery when: (1) the individual has had a satisfactory social role change, (2) the individual is satisfied about the hormonal effects, and (3) the individual desires definitive surgical changes. (1 |⊕○○○)

5.5. We suggest that clinicians delay gender-affirming genital surgery involving gonadectomy and/or hysterectomy until the patient is at least 18 years old or legal age of majority in his or her country. (2 |⊕⊕○○).

5.6. We suggest that clinicians determine the timing of breast surgery for transgender males based upon the physical and mental health status of the individual. There is insufficient evidence to recommend a specific age requirement. (2 |⊕○○○)

Evidence

Owing to the lack of controlled studies, incomplete follow-up, and lack of valid assessment measures, evaluating various surgical approaches and techniques is difficult. However, one systematic review including a large numbers of studies reported satisfactory cosmetic and functional results for vaginoplasty/neovagina construction (257). For transgender males, the outcomes are less certain. However, the problems are now better understood (258). Several postoperative studies report significant long-term psychological and psychiatric pathology (259–261). One study showed satisfaction with breasts, genitals, and femininity increased significantly and showed the importance of surgical treatment as a key therapeutic option for transgender females (262). Another analysis demonstrated that, despite the young average age at death following surgery and the relatively larger number of individuals with somatic morbidity, the study does not allow for determination of

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 28 of 36 PageID #: 22815

causal relationships between, for example, specific types of hormonal or surgical treatment received and somatic morbidity and mortality (263). Reversal surgery in regretful male-to-female transsexuals after sexual reassignment surgery represents a complex, multistage procedure with satisfactory outcomes. Further insight into the characteristics of persons who regret their decision postoperatively would facilitate better future selection of applicants eligible for sexual reassignment surgery. We need more studies with appropriate controls that examine long-term quality of life, psychosocial outcomes, and psychiatric outcomes to determine the long-term benefits of surgical treatment.

When a transgender individual decides to have gender-affirming surgery, both the hormone prescribing clinician and the MHP must certify that the patient satisfies criteria for gender-affirming surgery (Table 16).

There is some concern that estrogen therapy may cause an increased risk for venous thrombosis during or following surgery (176). For this reason, the surgeon and the hormone-prescribing clinician should collaborate in making a decision about the use of hormones before and following surgery. One study suggests that preoperative factors (such as compliance) are less important for patient satisfaction than are the physical postoperative results (56). However, other studies and clinical experience dictate that individuals who do not follow medical instructions and do not work with their physicians toward a common goal do not achieve treatment goals (264) and experience higher rates of postoperative infections and other complications (265, 266). It is also important that the person requesting surgery feels comfortable with the anatomical changes that have occurred during hormone therapy. Dissatisfaction with social and physical outcomes during the hormone transition may be a contraindication to surgery (223).

An endocrinologist or experienced medical provider should monitor transgender individuals after surgery. Those who undergo gonadectomy will require hormone replacement therapy, surveillance, or both to prevent adverse effects of chronic hormone deficiency.

Financial Disclosures of the Task Force*

Wylie C. Hembree (chair)—financial or business/organizational interests: none declared, significant financial interest or leadership position: none declared. **Peggy T. Cohen-Kettenis**—financial or business/organizational interests: none declared, significant financial interest or leadership position: none declared. **Louis Gooren**—financial or business/organizational interests: none declared, significant financial interest or leadership position: none declared. **Sabine E. Hannema**—financial or business/organizational interests: none declared, significant financial interest or leadership position: Ferring Pharmaceuticals Inc. (lecture/conference), Pfizer (lecture). **Walter J. Meyer**—financial or business/organizational interests: none declared, significant financial interest or leadership position: none declared. **M. Hassan Murad****—financial or business/organizational interests: Mayo Clinic, Evidence-based Practice Center, significant financial interest or leadership position: none declared. **Stephen M. Rosenthal**—financial or business/organizational interests: AbbVie (consultant), National Institutes of Health (grantee), significant financial interest or leadership position: Pediatric Endocrine Society (immediate past president). **Joshua D. Safer, FACP**—financial or business/organizational interests: none declared, significant financial interest or leadership position: none declared. **Vin Tangpricha**—financial or business/organizational interests: Cystic Fibrosis Foundation (grantee), National Institutes of Health (grantee), significant financial interest or leadership position, Elsevier *Journal of Clinical and Translational Endocrinology* (editor). **Guy G. T'Sjoen**—financial or business/organizational interests: none declared, significant financial interest or leadership position: none declared.* Financial, business, and organizational disclosures of the task force cover the year prior to publication. Disclosures prior to this time period are archived.**Evidence-based reviews for this guideline were prepared under contract with the Endocrine Society.

Acknowledgments

Correspondence and Reprint Requests: The Endocrine Society, 2055 L Street NW, Suite 600, Washington, DC 20036. E-mail: publications@endocrine.org; Phone: 202971-3636.

Disclosure Summary: See Financial Disclosures.

Disclaimer: The Endocrine Society's clinical practice guidelines are developed to be of assistance to endocrinologists by providing guidance and recommendations for particular areas of practice. The guidelines should not be considered inclusive of all proper approaches or methods, or exclusive of others. The guidelines cannot guarantee any specific outcome, nor do they establish a standard of care. The guidelines are not intended to dictate the treatment of a particular patient. Treatment decisions must be made based on the independent judgement of healthcare providers and each patient's individual circumstances.

The Endocrine Society makes no warranty, express or implied, regarding the guidelines and specifically excludes any warranties of merchantability and fitness for a particular use or purpose. The Society shall not be liable for direct, indirect,

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 29 of 36 PageID #: 22816

special, incidental, or consequential damages related to the use of the information contained herein.

References

1. Atkins D, Best D, Briss PA, Eccles M, Falck-Ytter Y, Flottorp S, Guyatt GH, Harbour RT, Haugh MC, Henry D, Hill S, Jaeschke R, Leng G, Liberati A, Magrini N, Mason J, Middleton P, Mrukowicz J, O'Connell D, Oxman AD, Phillips B, Schünemann HJ, Edejer T, Varonen H, Vist GE, Williams JW, Jr, Zaza S; GRADE Working Group. Grading quality of evidence and strength of recommendations. *BMJ*. 2004;**328**(7454):1490.
2. Swiglo BA, Murad MH, Schünemann HJ, Kunz R, Vigersky RA, Guyatt GH, Montori VM. A case for clarity, consistency, and helpfulness: state-of-the-art clinical practice guidelines in endocrinology using the grading of recommendations, assessment, development, and evaluation system. *J Clin Endocrinol Metab*. 2008;**93**(3):666–673.
3. Bullough VL. Transsexualism in history. *Arch Sex Behav*. 1975; **4**(5):561–571.
4. Benjamin H. The transsexual phenomenon. *Trans N Y Acad Sci*. 1967;**29**(4):428–430.
5. Meyerowitz J. *How Sex Changed: A History of Transsexuality in the United States*. Cambridge, MA: Harvard University Press; 2002.
6. Hirschfeld M. *Was muss das Volk vom Dritten Geschlecht wissen*. Verlag Max Spohr, Leipzig; 1901.
7. Fisk NM. Editorial: Gender dysphoria syndrome—the conceptualization that liberalizes indications for total gender reorientation and implies a broadly based multi-dimensional rehabilitative regimen. *West J Med*. 1974;**120**(5):386–391.
8. Diamond L. Transgender experience and identity. In: Schwartz SJ, Luyckx K, Vignoles VL, eds. *Handbook of Identity Theory and Research*. New York, NY: Springer; 2011:629–647.
9. Queen C, Schimel L, eds. *PoMoSexuals: Challenging Assumptions About Gender and Sexuality*. San Francisco, CA: Cleis Press; 1997.
10. Case LK, Ramachandran VS. Alternating gender incongruity: a new neuropsychiatric syndrome providing insight into the dynamic plasticity of brain-sex. *Med Hypotheses*. 2012;**78**(5): 626–631.
11. Johnson TW, Wassersug RJ. Gender identity disorder outside the binary: when gender identity disorder-not otherwise specified is not good enough. *Arch Sex Behav*. 2010;**39**(3):597–598.
12. Wibowo E, Wassersug R, Warkentin K, Walker L, Robinson J, Brotto L, Johnson T. Impact of androgen deprivation therapy on sexual function: a response. *Asian J Androl*. 2012;**14**(5):793–794.
13. Pasquesoone V. 7 countries giving transgender people fundamental rights the U.S. still won't. 2014. Available at: https://mic.com/articles/87149/7-countries-giving-transgender-people-fundamental-rights-the-u-s-still-won-t. Accessed 26 August 2016.
14. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Association Publishing.
15. Drescher J, Cohen-Kettenis P, Winter S. Minding the body: situating gender identity diagnoses in the ICD-11. *Int Rev Psychiatry*. 2012;**24**(6):568–577.
16. World Professional Association for Transgender Health. Standards of care for the health of transsexual, transgender, and gender nonconforming people. Available at: http://www.wpath.org/site_page.cfm?pk_association_webpage_menu=1351&pk_association_webpage=3926. Accessed 1 September 2017.
17. Kreukels BP, Haraldsen IR, De Cuypere G, Richter-Appelt H, Gijs L, Cohen-Kettenis PT. A European network for the investigation of gender incongruence: the ENIGI initiative. *Eur Psychiatry*. 2012;**27**(6):445–450.
18. Dekker MJ, Wierckx K, Van Caenegem E, Klaver M, Kreukels BP, Elaut E, Fisher AD, van Trotsenburg MA, Schreiner T, den Heijer M, T'Sjoen G. A European network for the investigation of gender incongruence: endocrine part. *J Sex Med*. 2016;**13**(6):994–999.
19. Ruble DN, Martin CL, Berenbaum SA. Gender development. In: Damon WL, Lerner RM, Eisenberg N, eds. *Handbook of Child Psychology: Social, Emotional, and Personality Development*. **Vol. 3**. 6th ed. New York, NY: Wiley; 2006;858–931.
20. Steensma TD, Kreukels BP, de Vries AL, Cohen-Kettenis PT. Gender identity development in adolescence. *Horm Behav*. 2013; **64**(2):288–297.
21. Rosenthal SM. Approach to the patient: transgender youth: endocrine considerations. *J Clin Endocrinol Metab*. 2014;**99**(12): 4379–4389.
22. Saraswat A, Weinand JD, Safer JD. Evidence supporting the biologic nature of gender identity. *Endocr Pract*. 2015;**21**(2): 199–204.
23. Gooren L. The biology of human psychosexual differentiation. *Horm Behav*. 2006;**50**(4):589–601.
24. Berenbaum SA, Meyer-Bahlburg HF. Gender development and sexuality in disorders of sex development. *Horm Metab Res*. 2015; **47**(5):361–366.
25. Dessens AB, Slijper FME, Drop SLS. Gender dysphoria and gender change in chromosomal females with congenital adrenal hyperplasia. *Arch Sex Behav*. 2005;**34**(4):389–397.
26. Meyer-Bahlburg HFL, Dolezal C, Baker SW, Ehrhardt AA, New MI. Gender development in women with congenital adrenal hyperplasia as a function of disorder severity. *Arch Sex Behav*. 2006; **35**(6):667–684.
27. Frisén L, Nordenström A, Falhammar H, Filipsson H, Holmdahl G, Janson PO, Thorén M, Hagenfeldt K, Möller A, Nordenskjöld A. Gender role behavior, sexuality, and psychosocial adaptation in women with congenital adrenal hyperplasia due to CYP21A2 deficiency. *J Clin Endocrinol Metab*. 2009;**94**(9):3432–3439.
28. Meyer-Bahlburg HFL, Dolezal C, Baker SW, Carlson AD, Obeid JS, New MI. Prenatal androgenization affects gender-related behavior but not gender identity in 5–12-year-old girls with congenital adrenal hyperplasia. *Arch Sex Behav*. 2004;**33**(2):97–104.
29. Cohen-Kettenis PT. Gender change in 46,XY persons with 5α-reductase-2 deficiency and 17β-hydroxysteroid dehydrogenase-3 deficiency. *Arch Sex Behav*. 2005;**34**(4):399–410.
30. Reiner WG, Gearhart JP. Discordant sexual identity in some genetic males with cloacal exstrophy assigned to female sex at birth. *N Engl J Med*. 2004;**350**(4):333–341.
31. Meyer-Bahlburg HFL. Gender identity outcome in female-raised 46,XY persons with penile agenesis, cloacal exstrophy of the bladder, or penile ablation. *Arch Sex Behav*. 2005;**34**(4):423–438.
32. Coolidge FL, Thede LL, Young SE. The heritability of gender identity disorder in a child and adolescent twin sample. *Behav Genet*. 2002;**32**(4):251–257.
33. Heylens G, De Cuypere G, Zucker KJ, Schelfaut C, Elaut E, Vanden Bossche H, De Baere E, T'Sjoen G. Gender identity disorder in twins: a review of the case report literature. *J Sex Med*. 2012;**9**(3):751–757.
34. Fernández R, Esteva I, Gómez-Gil E, Rumbo T, Almaraz MC, Roda E, Haro-Mora J-J, Guillamón A, Pásaro E. Association study of ERβ, AR, and CYP19A1 genes and MtF transsexualism. *J Sex Med*. 2014;**11**(12):2986–2994.
35. Henningsson S, Westberg L, Nilsson S, Lundström B, Ekselius L, Bodlund O, Lindström E, Hellstrand M, Rosmond R, Eriksson E, Landén M. Sex steroid-related genes and male-to-female transsexualism. *Psychoneuroendocrinology*. 2005;**30**(7):657–664.
36. Hare L, Bernard P, Sánchez FJ, Baird PN, Vilain E, Kennedy T, Harley VR. Androgen receptor repeat length polymorphism associated with male-to-female transsexualism. *Biol Psychiatry*. 2009;**65**(1):93–96.
37. Lombardo F, Toselli L, Grassetti D, Paoli D, Masciandaro P, Valentini F, Lenzi A, Gandini L. Hormone and genetic study in

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 30 of 36 PageID #: 22817

male to female transsexual patients. *J Endocrinol Invest*. 2013; **36**(8):550–557.
38. Ujike H, Otani K, Nakatsuka M, Ishii K, Sasaki A, Oishi T, Sato T, Okahisa Y, Matsumoto Y, Namba Y, Kimata Y, Kuroda S. Association study of gender identity disorder and sex hormone-related genes. *Prog Neuropsychopharmacol Biol Psychiatry*. 2009;**33**(7):1241–1244.
39. Kreukels BP, Guillamon A. Neuroimaging studies in people with gender incongruence. *Int Rev Psychiatry*. 2016;**28**(1): 120–128.
40. Steensma TD, Biemond R, de Boer F, Cohen-Kettenis PT. Desisting and persisting gender dysphoria after childhood: a qualitative follow-up study. *Clin Child Psychol Psychiatry*. 2011;**16**(4):499–516.
41. Wallien MSC, Cohen-Kettenis PT. Psychosexual outcome of gender-dysphoric children. *J Am Acad Child Adolesc Psychiatry*. 2008;**47**(12):1413–1423.
42. Steensma TD, McGuire JK, Kreukels BPC, Beekman AJ, Cohen-Kettenis PT. Factors associated with desistence and persistence of childhood gender dysphoria: a quantitative follow-up study. *J Am Acad Child Adolesc Psychiatry*. 2013;**52**(6):582–590.
43. Cohen-Kettenis PT, Owen A, Kaijser VG, Bradley SJ, Zucker KJ. Demographic characteristics, social competence, and behavior problems in children with gender identity disorder: a cross-national, cross-clinic comparative analysis. *J Abnorm Child Psychol*. 2003;**31**(1):41–53.
44. Dhejne C, Van Vlerken R, Heylens G, Arcelus J. Mental health and gender dysphoria: a review of the literature. *Int Rev Psychiatry*. 2016;**28**(1):44–57.
45. Pasterski V, Gilligan L, Curtis R. Traits of autism spectrum disorders in adults with gender dysphoria. *Arch Sex Behav*. 2014; **43**(2):387–393.
46. Spack NP, Edwards-Leeper L, Feldman HA, Leibowitz S, Mandel F, Diamond DA, Vance SR. Children and adolescents with gender identity disorder referred to a pediatric medical center. *Pediatrics*. 2012;**129**(3):418–425.
47. Terada S, Matsumoto Y, Sato T, Okabe N, Kishimoto Y, Uchitomi Y. Factors predicting psychiatric co-morbidity in gender-dysphoric adults. *Psychiatry Res*. 2012;**200**(2-3):469–474.
48. VanderLaan DP, Leef JH, Wood H, Hughes SK, Zucker KJ. Autism spectrum disorder risk factors and autistic traits in gender dysphoric children. *J Autism Dev Disord*. 2015;**45**(6):1742–1750.
49. de Vries ALC, Doreleijers TAH, Steensma TD, Cohen-Kettenis PT. Psychiatric comorbidity in gender dysphoric adolescents. *J Child Psychol Psychiatry*. 2011;**52**(11):1195–1202.
50. de Vries ALC, Noens ILJ, Cohen-Kettenis PT, van Berckelaer-Onnes IA, Doreleijers TA. Autism spectrum disorders in gender dysphoric children and adolescents. *J Autism Dev Disord*. 2010; **40**(8):930–936.
51. Wallien MSC, Swaab H, Cohen-Kettenis PT. Psychiatric comorbidity among children with gender identity disorder. *J Am Acad Child Adolesc Psychiatry*. 2007;**46**(10):1307–1314.
52. Kuiper AJ, Cohen-Kettenis PT. Gender role reversal among postoperative transsexuals. Available at: https://www.atria.nl/ezines/web/IJT/97-03/numbers/symposion/ijtc0502.htm. Accessed 26 August 2016.
53. Landén M, Wålinder J, Hambert G, Lundström B. Factors predictive of regret in sex reassignment. *Acta Psychiatr Scand*. 1998; **97**(4):284–289.
54. Olsson S-E, Möller A. Regret after sex reassignment surgery in a male-to-female transsexual: a long-term follow-up. *Arch Sex Behav*. 2006;**35**(4):501–506.
55. Pfäfflin F, Junge A, eds. *Geschlechtsumwandlung: Abhandlungen zur Transsexualität*. Stuttgart, Germany: Schattauer; 1992.
56. Lawrence AA. Factors associated with satisfaction or regret following male-to-female sex reassignment surgery. *Arch Sex Behav*. 2003;**32**(4):299–315.
57. Cohen-Kettenis PT, Pfäfflin F. *Transgenderism and Intersexuality in Childhood and Adolescence: Making Choices*. Thousand Oaks, CA: SAGE Publications; 2003.
58. Di Ceglie D, Freedman D, McPherson S, Richardson P. Children and adolescents referred to a specialist gender identity development service: clinical features and demographic characteristics. Available at: https://www.researchgate.net/publication/276061306_Children_and_Adolescents_Referred_to_a_Specialist_Gender_Identity_Development_Service_Clinical_Features_and_Demographic_Characteristics. Accessed 20 July 2017.
59. Gijs L, Brewaeys A. Surgical treatment of gender dysphoria in adults and adolescents: recent developments, effectiveness, and challenges. *Annu Rev Sex Res*. 2007;**18**:178–224.
60. Cohen-Kettenis PT, van Goozen SHM. Sex reassignment of adolescent transsexuals: a follow-up study. *J Am Acad Child Adolesc Psychiatry*. 1997;**36**(2):263–271.
61. Smith YLS, van Goozen SHM, Cohen-Kettenis PT. Adolescents with gender identity disorder who were accepted or rejected for sex reassignment surgery: a prospective follow-up study. *J Am Acad Child Adolesc Psychiatry*. 2001;**40**(4):472–481.
62. Smith YLS, Van Goozen SHM, Kuiper AJ, Cohen-Kettenis PT. Sex reassignment: outcomes and predictors of treatment for adolescent and adult transsexuals. *Psychol Med*. 2005;**35**(1):89–99.
63. de Vries ALC, McGuire JK, Steensma TD, Wagenaar ECF, Doreleijers TAH, Cohen-Kettenis PT. Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*. 2014;**134**(4):696–704.
64. Cole CM, O'Boyle M, Emory LE, Meyer WJ III. Comorbidity of gender dysphoria and other major psychiatric diagnoses. *Arch Sex Behav*. 1997;**26**(1):13–26.
65. Cohen-Kettenis PT, Schagen SEE, Steensma TD, de Vries ALC, Delemarre-van de Waal HA. Puberty suppression in a gender-dysphoric adolescent: a 22-year follow-up. *Arch Sex Behav*. 2011; **40**(4):843–847.
66. First MB. Desire for amputation of a limb: paraphilia, psychosis, or a new type of identity disorder. *Psychol Med*. 2005;**35**(6): 919–928.
67. Wierckx K, Van Caenegem E, Pennings G, Elaut E, Dedecker D, Van de Peer F, Weyers S, De Sutter P, T'Sjoen G. Reproductive wish in transsexual men. *Hum Reprod*. 2012;**27**(2):483–487.
68. Wierckx K, Stuyver I, Weyers S, Hamada A, Agarwal A, De Sutter P, T'Sjoen G. Sperm freezing in transsexual women. *Arch Sex Behav*. 2012;**41**(5):1069–1071.
69. Bertelloni S, Baroncelli GI, Ferdeghini M, Menchini-Fabris F, Saggese G. Final height, gonadal function and bone mineral density of adolescent males with central precocious puberty after therapy with gonadotropin-releasing hormone analogues. *Eur J Pediatr*. 2000;**159**(5):369–374.
70. Büchter D, Behre HM, Kliesch S, Nieschlag E. Pulsatile GnRH or human chorionic gonadotropin/human menopausal gonadotropin as effective treatment for men with hypogonadotropic hypogonadism: a review of 42 cases. *Eur J Endocrinol*. 1998; **139**(3):298–303.
71. Liu PY, Turner L, Rushford D, McDonald J, Baker HW, Conway AJ, Handelsman DJ. Efficacy and safety of recombinant human follicle stimulating hormone (Gonal-F) with urinary human chorionic gonadotrophin for induction of spermatogenesis and fertility in gonadotrophin-deficient men. *Hum Reprod*. 1999; **14**(6):1540–1545.
72. Pasquino AM, Pucarelli I, Accardo F, Demiraj V, Segni M, Di Nardo R. Long-term observation of 87 girls with idiopathic central precocious puberty treated with gonadotropin-releasing hormone analogs: impact on adult height, body mass index, bone mineral content, and reproductive function. *J Clin Endocrinol Metab*. 2008;**93**(1):190–195.
73. Magiakou MA, Manousaki D, Papadaki M, Hadjidakis D, Levidou G, Vakaki M, Papaefstathiou A, Lalioti N, Kanaka-Gantenbein C, Piaditis G, Chrousos GP, Dacou-Voutetakis C. The

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 31 of 36 PageID #: 22818

efficacy and safety of gonadotropin-releasing hormone analog treatment in childhood and adolescence: a single center, long-term follow-up study. *J Clin Endocrinol Metab*. 2010;**95**(1):109–117.

74. Baba T, Endo T, Honnma H, Kitajima Y, Hayashi T, Ikeda H, Masumori N, Kamiya H, Moriwaka O, Saito T. Association between polycystic ovary syndrome and female-to-male transsexuality. *Hum Reprod*. 2007;**22**(4):1011–1016.
75. Spinder T, Spijkstra JJ, van den Tweel JG, Burger CW, van Kessel H, Hompes PGA, Gooren LJG. The effects of long term testosterone administration on pulsatile luteinizing hormone secretion and on ovarian histology in eugonadal female to male transsexual subjects. *J Clin Endocrinol Metab*. 1989;**69**(1):151–157.
76. Baba T, Endo T, Ikeda K, Shimizu A, Honnma H, Ikeda H, Masumori N, Ohmura T, Kiya T, Fujimoto T, Koizumi M, Saito T. Distinctive features of female-to-male transsexualism and prevalence of gender identity disorder in Japan. *J Sex Med*. 2011; **8**(6):1686–1693.
77. Vujovic S, Popovic S, Sbutega-Milosevic G, Djordjevic M, Gooren L. Transsexualism in Serbia: a twenty-year follow-up study. *J Sex Med*. 2009;**6**(4):1018–1023.
78. Ikeda K, Baba T, Noguchi H, Nagasawa K, Endo T, Kiya T, Saito T. Excessive androgen exposure in female-to-male transsexual persons of reproductive age induces hyperplasia of the ovarian cortex and stroma but not polycystic ovary morphology. *Hum Reprod*. 2013;**28**(2):453–461.
79. Trebay G. He's pregnant. You're speechles. New York Times. 22 June 2008.
80. Light AD, Obedin-Maliver J, Sevelius JM, Kerns JL. Transgender men who experienced pregnancy after female-to-male gender transitioning. *Obstet Gynecol*. 2014;**124**(6):1120–1127.
81. De Sutter P. Donor inseminations in partners of female-to-male transsexuals: should the question be asked? *Reprod Biomed Online*. 2003;**6**(3):382, author reply 282–283.
82. De Roo C, Tilleman K, T'Sjoen G, De Sutter P. Fertility options in transgender people. *Int Rev Psychiatry*. 2016;**28**(1):112–119.
83. Wennink JMB, Delemarre-van de Waal HA, Schoemaker R, Schoemaker H, Schoemaker J. Luteinizing hormone and follicle stimulating hormone secretion patterns in boys throughout puberty measured using highly sensitive immunoradiometric assays. *Clin Endocrinol (Oxf)*. 1989;**31**(5):551–564.
84. Cohen-Kettenis PT, Delemarre-van de Waal HA, Gooren LJG. The treatment of adolescent transsexuals: changing insights. *J Sex Med*. 2008;**5**(8):1892–1897.
85. Delemarre-van de Waal HA, Cohen-Kettenis PT. Clinical management of gender identity disorder in adolescents: a protocol on psychological and paediatric endocrinology aspects. *Eur J Endocrinol*. 2006;**155**:S131–S137.
86. de Vries ALC, Steensma TD, Doreleijers TAH, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study. *J Sex Med*. 2011;**8**(8):2276–2283.
87. Bouman MB, van Zeijl MCT, Buncamper ME, Meijerink WJHJ, van Bodegraven AA, Mullender MG. Intestinal vaginoplasty revisited: a review of surgical techniques, complications, and sexual function. *J Sex Med*. 2014;**11**(7):1835–1847.
88. Carel JC, Eugster EA, Rogol A, Ghizzoni L, Palmert MR, Antoniazzi F, Berenbaum S, Bourguignon JP, Chrousos GP, Coste J, Deal S, de Vries L, Foster C, Heger S, Holland J, Jahnukainen K, Juul A, Kaplowitz P, Lahlou N, Lee MM, Lee P, Merke DP, Neely EK, Oostdijk W, Phillip M, Rosenfield RL, Shulman D, Styne D, Tauber M, Wit JM; ESPE-LWPES GnRH Analogs Consensus Conference Group. Consensus statement on the use of gonadotropin-releasing hormone analogs in children. *Pediatrics*. 2009;**123**(4):e752–e762.
89. Roth CL, Brendel L, Rückert C, Hartmann K. Antagonistic and agonistic GnRH analogue treatment of precocious puberty: tracking gonadotropin concentrations in urine. *Horm Res*. 2005; **63**(5):257–262.
90. Roth C. Therapeutic potential of GnRH antagonists in the treatment of precocious puberty. *Expert Opin Investig Drugs*. 2002;**11**(9):1253–1259.
91. Tuvemo T. Treatment of central precocious puberty. *Expert Opin Investig Drugs*. 2006;**15**(5):495–505.
92. Schagen SE, Cohen-Kettenis PT, Delemarre-van de Waal HA, Hannema SE. Efficacy and safety of gonadotropin-releasing hormone agonist treatment to suppress puberty in gender dysphoric adolescents. *J Sex Med*. 2016;**13**(7):1125–1132.
93. Manasco PK, Pescovitz OH, Feuillan PP, Hench KD, Barnes KM, Jones J, Hill SC, Loriaux DL, Cutler GB, Jr. Resumption of puberty after long term luteinizing hormone-releasing hormone agonist treatment of central precocious puberty. *J Clin Endocrinol Metab*. 1988;**67**(2):368–372.
94. Klink D, Caris M, Heijboer A, van Trotsenburg M, Rotteveel J. Bone mass in young adulthood following gonadotropin-releasing hormone analog treatment and cross-sex hormone treatment in adolescents with gender dysphoria. *J Clin Endocrinol Metab*. 2015;**100**(2):E270–E275.
95. Finkelstein JS, Klibanski A, Neer RM. A longitudinal evaluation of bone mineral density in adult men with histories of delayed puberty. *J Clin Endocrinol Metab*. 1996;**81**(3):1152–1155.
96. Bertelloni S, Baroncelli GI, Ferdeghini M, Perri G, Saggese G. Normal volumetric bone mineral density and bone turnover in young men with histories of constitutional delay of puberty. *J Clin Endocrinol Metab*. 1998;**83**(12):4280–4283.
97. Darelid A, Ohlsson C, Nilsson M, Kindblom JM, Mellström D, Lorentzon M. Catch up in bone acquisition in young adult men with late normal puberty. *J Bone Miner Res*. 2012;**27**(10): 2198–2207.
98. Mittan D, Lee S, Miller E, Perez RC, Basler JW, Bruder JM. Bone loss following hypogonadism in men with prostate cancer treated with GnRH analogs. *J Clin Endocrinol Metab*. 2002;**87**(8): 3656–3661.
99. Saggese G, Bertelloni S, Baroncelli GI, Battini R, Franchi G. Reduction of bone density: an effect of gonadotropin releasing hormone analogue treatment in central precocious puberty. *Eur J Pediatr*. 1993;**152**(9):717–720.
100. Neely EK, Bachrach LK, Hintz RL, Habiby RL, Slemenda CW, Feezle L, Pescovitz OH. Bone mineral density during treatment of central precocious puberty. *J Pediatr*. 1995;**127**(5):819–822.
101. Bertelloni S, Baroncelli GI, Sorrentino MC, Perri G, Saggese G. Effect of central precocious puberty and gonadotropin-releasing hormone analogue treatment on peak bone mass and final height in females. *Eur J Pediatr*. 1998;**157**(5):363–367.
102. Thornton P, Silverman LA, Geffner ME, Neely EK, Gould E, Danoff TM. Review of outcomes after cessation of gonadotropin-releasing hormone agonist treatment of girls with precocious puberty. *Pediatr Endocrinol Rev*. 2014;**11**(3):306–317.
103. Lem AJ, van der Kaay DC, Hokken-Koelega AC. Bone mineral density and body composition in short children born SGA during growth hormone and gonadotropin releasing hormone analog treatment. *J Clin Endocrinol Metab*. 2013;**98**(1):77–86.
104. Antoniazzi F, Zamboni G, Bertoldo F, Lauriola S, Mengarda F, Pietrobelli A, Tatò L. Bone mass at final height in precocious puberty after gonadotropin-releasing hormone agonist with and without calcium supplementation. *J Clin Endocrinol Metab*. 2003;**88**(3):1096–1101.
105. Calcaterra V, Mannarino S, Corana G, Codazzi AC, Mazzola A, Brambilla P, Larizza D. Hypertension during therapy with triptorelin in a girl with precocious puberty. *Indian J Pediatr*. 2013; **80**(10):884–885.
106. Siomou E, Kosmeri C, Pavlou M, Vlahos AP, Argyropoulou MI, Siamopoulou A. Arterial hypertension during treatment with triptorelin in a child with Williams-Beuren syndrome. *Pediatr Nephrol*. 2014;**29**(9):1633–1636.
107. Staphorsius AS, Kreukels BPC, Cohen-Kettenis PT, Veltman DJ, Burke SM, Schagen SEE, Wouters FM, Delemarre-van de Waal

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 32 of 36 PageID #: 22819

HA, Bakker J. Puberty suppression and executive functioning: an fMRI-study in adolescents with gender dysphoria. *Psychoneuroendocrinology*. 2015;**56**:190–199.

108. Hough D, Bellingham M, Haraldsen IR, McLaughlin M, Rennie M, Robinson JE, Solbakk AK, Evans NP. Spatial memory is impaired by peripubertal GnRH agonist treatment and testosterone replacement in sheep. *Psychoneuroendocrinology*. 2017; **75**:173–182.
109. Collipp PJ, Kaplan SA, Boyle DC, Plachte F, Kogut MD. Constitutional Isosexual Precocious Puberty. *Am J Dis Child*. 1964; **108**:399–405.
110. Hahn HB, Jr, Hayles AB, Albert A. Medroxyprogesterone and constitutional precocious puberty. *Mayo Clin Proc*. 1964;**39**: 182–190.
111. Kaplan SA, Ling SM, Irani NG. Idiopathic isosexual precocity. *Am J Dis Child*. 1968;**116**(6):591–598.
112. Schoen EJ. Treatment of idiopathic precocious puberty in boys. *J Clin Endocrinol Metab*. 1966;**26**(4):363–370.
113. Gooren L. Hormone treatment of the adult transsexual patient. *Horm Res*. 2005;**64**(Suppl 2):31–36.
114. Moore E, Wisniewski A, Dobs A. Endocrine treatment of transsexual people: a review of treatment regimens, outcomes, and adverse effects. *J Clin Endocrinol Metab*. 2003;**88**(8):3467–3473.
115. Krueger RB, Hembree W, Hill M. Prescription of medroxyprogesterone acetate to a patient with pedophilia, resulting in Cushing's syndrome and adrenal insufficiency. *Sex Abuse*. 2006; **18**(2):227–228.
116. Lynch MM, Khandheria MM, Meyer WJ. Retrospective study of the management of childhood and adolescent gender identity disorder using medroxyprogesterone acetate. *Int J Transgenderism*. 2015;**16**:201–208.
117. Tack LJW, Craen M, Dhondt K, Vanden Bossche H, Laridaen J, Cools M. Consecutive lynestrenol and cross-sex hormone treatment in biological female adolescents with gender dysphoria: a retrospective analysis. *Biol Sex Differ*. 2016;**7**:14.
118. Hembree WC, Cohen-Kettenis P, Delemarre-van de Waal HA, Gooren LJ, Meyer WJ 3rd, Spack NP, Tangpricha V, Montori VM; Endocrine Society. Endocrine treatment of transsexual persons: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2009;**94**(9):3132–3154.
119. Mann L, Harmoni R, Power C. Adolescent decision-making: the development of competence. *J Adolesc*. 1989;**12**(3):265–278.
120. Stultiëns L, Goffin T, Borry P, Dierickx K, Nys H. Minors and informed consent: a comparative approach. *Eur J Health Law*. 2007;**14**(1):21–46.
121. Arshagouni P. "But I'm an adult now … sort of". Adolescent consent in health care decision-making and the adolescent brain. Available at: http://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1124&context=jhclp. Accessed 25 June 2017.
122. NHS. Prescribing of cross-sex hormones as part of the gender identity development service for children and adolescents. Available at: https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2016/08/clinical-com-pol-16046p.pdf. Accessed 14 June 2017.
123. Ankarberg-Lindgren C, Kriström B, Norjavaara E. Physiological estrogen replacement therapy for puberty induction in girls: a clinical observational study. *Horm Res Paediatr*. 2014;**81**(4): 239–244.
124. Olson J, Schrager SM, Clark LF, Dunlap SL, Belzer M. Subcutaneous testosterone: an effective delivery mechanism for masculinizing young transgender men. *LGBT Health*. 2014;**1**(3): 165–167.
125. Spratt DI, Stewart I, Savage C, Craig W, Spack NP, Chandler DW, Spratt LV, Eimicke T, Olshan JS. Subcutaneous injection of testosterone is an effective and preferred alternative to intramuscular injection: demonstration in female-to-male transgender patients. *J Clin Endocrinol Metab*. 2017. doi:10.1210/jc.2017-00359
126. Eisenegger C, von Eckardstein A, Fehr E, von Eckardstein S. Pharmacokinetics of testosterone and estradiol gel preparations in healthy young men. *Psychoneuroendocrinology*. 2013;**38**(2): 171–178.
127. de Ronde W, ten Kulve J, Woerdeman J, Kaufman J-M, de Jong FH. Effects of oestradiol on gonadotrophin levels in normal and castrated men. *Clin Endocrinol (Oxf)*. 2009;**71**(6):874–879.
128. Money J, Ehrhardt A. Man & woman, boy & girl: differentiation and dimorphism of gender identity from conception to maturity. Baltimore, MD: Johns Hopkins University Press; 1972:202–206.
129. Heylens G, Verroken C, De Cock S, T'Sjoen G, De Cuypere G. Effects of different steps in gender reassignment therapy on psychopathology: a prospective study of persons with a gender identity disorder. *J Sex Med*. 2014;**11**(1):119–126.
130. Costa R, Colizzi M. The effect of cross-sex hormonal treatment on gender dysphoria individuals' mental health: a systematic review. *Neuropsychiatr Dis Treat*. 2016;**12**:1953–1966.
131. Gooren LJG, Giltay EJ. Review of studies of androgen treatment of female-to-male transsexuals: effects and risks of administration of androgens to females. *J Sex Med*. 2008;**5**(4):765–776.
132. Levy A, Crown A, Reid R. Endocrine intervention for transsexuals. *Clin Endocrinol (Oxf)*. 2003;**59**(4):409–418.
133. Tangpricha V, Ducharme SH, Barber TW, Chipkin SR. Endocrinologic treatment of gender identity disorders. *Endocr Pract*. 2003;**9**(1):12–21.
134. Meriggiola MC, Gava G. Endocrine care of transpeople part I. A review of cross-sex hormonal treatments, outcomes and adverse effects in transmen. *Clin Endocrinol (Oxf)*. 2015;**83**(5):597–606.
135. Bhasin S, Cunningham GR, Hayes FJ, Matsumoto AM, Snyder PJ, Swerdloff RS, Montori VM. Testosterone therapy in adult men with androgen deficiency syndromes: an endocrine society clinical practice guideline. *J Clin Endocrinol Metab*. 2006;**91**(6): 1995–2010.
136. Pelusi C, Costantino A, Martelli V, Lambertini M, Bazzocchi A, Ponti F, Battista G, Venturoli S, Meriggiola MC. Effects of three different testosterone formulations in female-to-male transsexual persons. *J Sex Med*. 2014;**11**(12):3002–3011.
137. Anderson GL, Limacher M, Assaf AR, Bassford T, Beresford SA, Black H, Bonds D, Brunner R, Brzyski R, Caan B, Chlebowski R, Curb D, Gass M, Hays J, Heiss G, Hendrix S, Howard BV, Hsia J, Hubbell A, Jackson R, Johnson KC, Judd H, Kotchen JM, Kuller L, LaCroix AZ, Lane D, Langer RD, Lasser N, Lewis CE, Manson J, Margolis K, Ockene J, O'Sullivan MJ, Phillips L, Prentice RL, Ritenbaugh C, Robbins J, Rossouw JE, Sarto G, Stefanick ML, Van Horn L, Wactawski-Wende J, Wallace R, Wassertheil-Smoller S; Women's Health Initiative Steering Committee. Effects of conjugated equine estrogen in postmenopausal women with hysterectomy: the Women's Health Initiative randomized controlled trial. *JAMA*. 2004;**291**(14):1701–1712.
138. Dickersin K, Munro MG, Clark M, Langenberg P, Scherer R, Frick K, Zhu Q, Hallock L, Nichols J, Yalcinkaya TM; Surgical Treatments Outcomes Project for Dysfunctional Uterine Bleeding (STOP-DUB) Research Group. Hysterectomy compared with endometrial ablation for dysfunctional uterine bleeding: a randomized controlled trial. *Obstet Gynecol*. 2007;**110**(6): 1279–1289.
139. Gooren LJ, Giltay EJ, Bunck MC. Long-term treatment of transsexuals with cross-sex hormones: extensive personal experience. *J Clin Endocrinol Metab*. 2008;**93**(1):19–25.
140. Prior JC, Vigna YM, Watson D. Spironolactone with physiological female steroids for presurgical therapy of male-to-female transsexualism. *Arch Sex Behav*. 1989;**18**(1):49–57.
141. Dittrich R, Binder H, Cupisti S, Hoffmann I, Beckmann MW, Mueller A. Endocrine treatment of male-to-female transsexuals using gonadotropin-releasing hormone agonist. *Exp Clin Endocrinol Diabetes*. 2005;**113**(10):586–592.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 33 of 36 PageID #: 22820

142. Stripp B, Taylor AA, Bartter FC, Gillette JR, Loriaux DL, Easley R, Menard RH. Effect of spironolactone on sex hormones in man. *J Clin Endocrinol Metab*. 1975;**41**(4):777–781.
143. Levy J, Burshell A, Marbach M, Afllalo L, Glick SM. Interaction of spironolactone with oestradiol receptors in cytosol. *J Endocrinol*. 1980;**84**(3):371–379.
144. Wierckx K, Elaut E, Van Hoorde B, Heylens G, De Cuypere G, Monstrey S, Weyers S, Hoebeke P, T'Sjoen G. Sexual desire in trans persons: associations with sex reassignment treatment. *J Sex Med*. 2014;**11**(1):107–118.
145. Chiriacò G, Cauci S, Mazzon G, Trombetta C. An observational retrospective evaluation of 79 young men with long-term adverse effects after use of finasteride against androgenetic alopecia. *Andrology*. 2016;**4**(2):245–250.
146. Gava G, Cerpolini S, Martelli V, Battista G, Seracchioli R, Meriggiola MC. Cyproterone acetate vs leuprolide acetate in combination with transdermal oestradiol in transwomen: a comparison of safety and effectiveness. *Clin Endocrinol (Oxf)*. 2016; **85**(2):239–246.
147. Casper RF, Yen SS. Rapid absorption of micronized estradiol-17 beta following sublingual administration. *Obstet Gynecol*. 1981; **57**(1):62–64.
148. Price TM, Blauer KL, Hansen M, Stanczyk F, Lobo R, Bates GW. Single-dose pharmacokinetics of sublingual versus oral administration of micronized 17β-estradiol. *Obstet Gynecol*. 1997;**89**(3): 340–345.
149. Toorians AWFT, Thomassen MCLGD, Zweegman S, Magdeleyns EJP, Tans G, Gooren LJG, Rosing J. Venous thrombosis and changes of hemostatic variables during cross-sex hormone treatment in transsexual people. *J Clin Endocrinol Metab*. 2003;**88**(12): 5723–5729.
150. Mepham N, Bouman WP, Arcelus J, Hayter M, Wylie KR. People with gender dysphoria who self-prescribe cross-sex hormones: prevalence, sources, and side effects knowledge. *J Sex Med*. 2014; **11**(12):2995–3001.
151. Richards C, Bouman WP, Seal L, Barker MJ, Nieder TO, T'Sjoen G. Non-binary or genderqueer genders. *Int Rev Psychiatry*. 2016; **28**(1):95–102.
152. Cosyns M, Van Borsel J, Wierckx K, Dedecker D, Van de Peer F, Daelman T, Laenen S, T'Sjoen G. Voice in female-to-male transsexual persons after long-term androgen therapy. *Laryngoscope*. 2014;**124**(6):1409–1414.
153. Deuster D, Matulat P, Knief A, Zitzmann M, Rosslau K, Szukaj M, am Zehnhoff-Dinnesen A, Schmidt CM. Voice deepening under testosterone treatment in female-to-male gender dysphoric individuals. *Eur Arch Otorhinolaryngol*. 2016;**273**(4):959–965.
154. Lapauw B, Taes Y, Simoens S, Van Caenegem E, Weyers S, Goemaere S, Toye K, Kaufman J-M, T'Sjoen GG. Body composition, volumetric and areal bone parameters in male-to-female transsexual persons. *Bone*. 2008;**43**(6):1016–1021.
155. Meyer III WJ, Webb A, Stuart CA, Finkelstein JW, Lawrence B, Walker PA. Physical and hormonal evaluation of transsexual patients: a longitudinal study. *Arch Sex Behav*. 1986;**15**(2): 121–138.
156. Asscheman H, Gooren LJ, Assies J, Smits JP, de Slegte R. Prolactin levels and pituitary enlargement in hormone-treated male-to-female transsexuals. *Clin Endocrinol (Oxf)*. 1988;**28**(6):583–588.
157. Gooren LJ, Harmsen-Louman W, van Kessel H. Follow-up of prolactin levels in long-term oestrogen-treated male-to-female transsexuals with regard to prolactinoma induction. *Clin Endocrinol (Oxf)*. 1985;**22**(2):201–207.
158. Wierckx K, Van Caenegem E, Schreiner T, Haraldsen I, Fisher AD, Toye K, Kaufman JM, T'Sjoen G. Cross-sex hormone therapy in trans persons is safe and effective at short-time follow-up: results from the European network for the investigation of gender incongruence. *J Sex Med*. 2014;**11**(8):1999–2011.
159. Ott J, Kaufmann U, Bentz EK, Huber JC, Tempfer CB. Incidence of thrombophilia and venous thrombosis in transsexuals under cross-sex hormone therapy. *Fertil Steril*. 2010;**93**(4):1267–1272.
160. Giltay EJ, Hoogeveen EK, Elbers JMH, Gooren LJG, Asscheman H, Stehouwer CDA. Effects of sex steroids on plasma total homocysteine levels: a study in transsexual males and females. *J Clin Endocrinol Metab*. 1998;**83**(2):550–553.
161. van Kesteren PJM, Asscheman H, Megens JAJ, Gooren LJG. Mortality and morbidity in transsexual subjects treated with cross-sex hormones. *Clin Endocrinol (Oxf)*. 1997;**47**(3): 337–343.
162. Wierckx K, Gooren L, T'Sjoen G. Clinical review: breast development in trans women receiving cross-sex hormones. *J Sex Med*. 2014;**11**(5):1240–1247.
163. Bird D, Vowles K, Anthony PP. Spontaneous rupture of a liver cell adenoma after long term methyltestosterone: report of a case successfully treated by emergency right hepatic lobectomy. *Br J Surg*. 1979;**66**(3):212–213.
164. Westaby D, Ogle SJ, Paradinas FJ, Randell JB, Murray-Lyon IM. Liver damage from long-term methyltestosterone. *Lancet*. 1977; **2**(8032):262–263.
165. Weinand JD, Safer JD. Hormone therapy in transgender adults is safe with provider supervision; a review of hormone therapy sequelae for transgender individuals. *J Clin Transl Endocrinol*. 2015;**2**(2):55–60.
166. Roberts TK, Kraft CS, French D, Ji W, Wu AH, Tangpricha V, Fantz CR. Interpreting laboratory results in transgender patients on hormone therapy. *Am J Med*. 2014;**127**(2):159–162.
167. Vesper HW, Botelho JC, Wang Y. Challenges and improvements in testosterone and estradiol testing. *Asian J Androl*. 2014;**16**(2): 178–184.
168. Asscheman H, T'Sjoen G, Lemaire A, Mas M, Meriggiola MC, Mueller A, Kuhn A, Dhejne C, Morel-Journel N, Gooren LJ. Venous thrombo-embolism as a complication of cross-sex hormone treatment of male-to-female transsexual subjects: a review. *Andrologia*. 2014;**46**(7):791–795.
169. Righini M, Perrier A, De Moerloose P, Bounameaux H. D-dimer for venous thromboembolism diagnosis: 20 years later. *J Thromb Haemost*. 2008;**6**(7):1059–1071.
170. Gooren LJ, Assies J, Asscheman H, de Slegte R, van Kessel H. Estrogen-induced prolactinoma in a man. *J Clin Endocrinol Metab*. 1988;**66**(2):444–446.
171. Kovacs K, Stefaneanu L, Ezzat S, Smyth HS. Prolactin-producing pituitary adenoma in a male-to-female transsexual patient with protracted estrogen administration. A morphologic study. *Arch Pathol Lab Med*. 1994;**118**(5):562–565.
172. Serri O, Noiseux D, Robert F, Hardy J. Lactotroph hyperplasia in an estrogen treated male-to-female transsexual patient. *J Clin Endocrinol Metab*. 1996;**81**(9):3177–3179.
173. Cunha FS, Domenice S, Câmara VL, Sircili MH, Gooren LJ, Mendonça BB, Costa EM. Diagnosis of prolactinoma in two male-to-female transsexual subjects following high-dose cross-sex hormone therapy. *Andrologia*. 2015;**47**(6):680–684.
174. Nota NM, Dekker MJHJ, Klaver M, Wiepjes CM, van Trotsenburg MA, Heijboer AC, den Heijer M. Prolactin levels during short- and long-term cross-sex hormone treatment: an observational study in transgender persons. *Andrologia*. 2017;**49**(6).
175. Bunck MC, Debono M, Giltay EJ, Verheijen AT, Diamant M, Gooren LJ. Autonomous prolactin secretion in two male-to-female transgender patients using conventional oestrogen dosages. *BMJ Case Rep*. 2009;**2009**:bcr0220091589.
176. Elamin MB, Garcia MZ, Murad MH, Erwin PJ, Montori VM. Effect of sex steroid use on cardiovascular risk in transsexual individuals: a systematic review and meta-analyses. *Clin Endocrinol (Oxf)*. 2010;**72**(1):1–10.
177. Berra M, Armillotta F, D'Emidio L, Costantino A, Martorana G, Pelusi G, Meriggiola MC. Testosterone decreases adiponectin

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 34 of 36 PageID #: 22821

levels in female to male transsexuals. *Asian J Androl*. 2006;**8**(6): 725–729.

178. Elbers JMH, Giltay EJ, Teerlink T, Scheffer PG, Asscheman H, Seidell JC, Gooren LJG. Effects of sex steroids on components of the insulin resistance syndrome in transsexual subjects. *Clin Endocrinol (Oxf)*. 2003;**58**(5):562–571.
179. Giltay EJ, Lambert J, Gooren LJG, Elbers JMH, Steyn M, Stehouwer CDA. Sex steroids, insulin, and arterial stiffness in women and men. *Hypertension*. 1999;**34**(4 Pt 1):590–597.
180. Polderman KH, Gooren LJ, Asscheman H, Bakker A, Heine RJ. Induction of insulin resistance by androgens and estrogens. *J Clin Endocrinol Metab*. 1994;**79**(1):265–271.
181. Maraka S. Effect of sex steroids on lipids, venous thromboembolism, cardiovascular disease and mortality in transgender individuals: a systematic review and meta-analysis. Available at: http://press.endocrine.org/doi/abs/10.1210/endo-meetings.2016.RE.15.FRI-136. Accessed 3 July 2017.
182. Meriggiola MC, Armillotta F, Costantino A, Altieri P, Saad F, Kalhorn T, Perrone AM, Ghi T, Pelusi C, Pelusi G. Effects of testosterone undecanoate administered alone or in combination with letrozole or dutasteride in female to male transsexuals. *J Sex Med*. 2008;**5**(10):2442–2453.
183. Giltay EJ, Toorians AW, Sarabdjitsingh AR, de Vries NA, Gooren LJ. Established risk factors for coronary heart disease are unrelated to androgen-induced baldness in female-to-male transsexuals. *J Endocrinol*. 2004;**180**(1):107–112.
184. Giltay EJ, Verhoef P, Gooren LJG, Geleijnse JM, Schouten EG, Stehouwer CDA. Oral and transdermal estrogens both lower plasma total homocysteine in male-to-female transsexuals. *Atherosclerosis*. 2003;**168**(1):139–146.
185. Calof OM, Singh AB, Lee ML, Kenny AM, Urban RJ, Tenover JL, Bhasin S. Adverse events associated with testosterone replacement in middle-aged and older men: a meta-analysis of randomized, placebo-controlled trials. *J Gerontol A Biol Sci Med Sci*. 2005; **60**(11):1451–1457.
186. Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Executive summary of the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). *JAMA*. 2001;**285**(19):2486–2497.
187. Murad MH, Elamin MB, Garcia MZ, Mullan RJ, Murad A, Erwin PJ, Montori VM. Hormonal therapy and sex reassignment: a systematic review and meta-analysis of quality of life and psychosocial outcomes. *Clin Endocrinol (Oxf)*. 2010;**72**(2): 214–231.
188. Van Caenegem E, Wierckx K, Taes Y, Schreiner T, Vandewalle S, Toye K, Lapauw B, Kaufman JM, T'Sjoen G. Body composition, bone turnover, and bone mass in trans men during testosterone treatment: 1-year follow-up data from a prospective case-controlled study (ENIGI). *Eur J Endocrinol*. 2015;**172**(2): 163–171.
189. Turner A, Chen TC, Barber TW, Malabanan AO, Holick MF, Tangpricha V. Testosterone increases bone mineral density in female-to-male transsexuals: a case series of 15 subjects. *Clin Endocrinol (Oxf)*. 2004;**61**(5):560–566.
190. van Kesteren P, Lips P, Gooren LJG, Asscheman H, Megens J. Long-term follow-up of bone mineral density and bone metabolism in transsexuals treated with cross-sex hormones. *Clin Endocrinol (Oxf)*. 1998;**48**(3):347–354.
191. Van Caenegem E, Taes Y, Wierckx K, Vandewalle S, Toye K, Kaufman JM, Schreiner T, Haraldsen I, T'Sjoen G. Low bone mass is prevalent in male-to-female transsexual persons before the start of cross-sex hormonal therapy and gonadectomy. *Bone*. 2013;**54**(1):92–97.
192. Amin S, Zhang Y, Sawin CT, Evans SR, Hannan MT, Kiel DP, Wilson PW, Felson DT. Association of hypogonadism and estradiol levels with bone mineral density in elderly men from the Framingham study. *Ann Intern Med*. 2000;**133**(12):951–963.
193. Gennari L, Khosla S, Bilezikian JP. Estrogen and fracture risk in men. *J Bone Miner Res*. 2008;**23**(10):1548–1551.
194. Khosla S, Melton LJ III, Atkinson EJ, O'Fallon WM, Klee GG, Riggs BL. Relationship of serum sex steroid levels and bone turnover markers with bone mineral density in men and women: a key role for bioavailable estrogen. *J Clin Endocrinol Metab*. 1998;**83**(7):2266–2274.
195. Mueller A, Dittrich R, Binder H, Kuehnel W, Maltaris T, Hoffmann I, Beckmann MW. High dose estrogen treatment increases bone mineral density in male-to-female transsexuals receiving gonadotropin-releasing hormone agonist in the absence of testosterone. *Eur J Endocrinol*. 2005;**153**(1):107–113.
196. Ruetsche AG, Kneubuehl R, Birkhaeuser MH, Lippuner K. Cortical and trabecular bone mineral density in transsexuals after long-term cross-sex hormonal treatment: a cross-sectional study. *Osteoporos Int*. 2005;**16**(7):791–798.
197. Ganly I, Taylor EW. Breast cancer in a trans-sexual man receiving hormone replacement therapy. *Br J Surg*. 1995;**82**(3):341.
198. Pritchard TJ, Pankowsky DA, Crowe JP, Abdul-Karim FW. Breast cancer in a male-to-female transsexual. A case report. *JAMA*. 1988;**259**(15):2278–2280.
199. Symmers WS. Carcinoma of breast in trans-sexual individuals after surgical and hormonal interference with the primary and secondary sex characteristics. *BMJ*. 1968;**2**(5597):83–85.
200. Brown GR. Breast cancer in transgender veterans: a ten-case series. *LGBT Health*. 2015;**2**(1):77–80.
201. Shao T, Grossbard ML, Klein P. Breast cancer in female-to-male transsexuals: two cases with a review of physiology and management. *Clin Breast Cancer*. 2011;**11**(6):417–419.
202. Nikolic DV, Djordjevic ML, Granic M, Nikolic AT, Stanimirovic VV, Zdravkovic D, Jelic S. Importance of revealing a rare case of breast cancer in a female to male transsexual after bilateral mastectomy. *World J Surg Oncol*. 2012;**10**:280.
203. Bösze P, Tóth A, Török M. Hormone replacement and the risk of breast cancer in Turner's syndrome. *N Engl J Med*. 2006;**355**(24): 2599–2600.
204. Schoemaker MJ, Swerdlow AJ, Higgins CD, Wright AF, Jacobs PA; UK Clinical Cytogenetics Group. Cancer incidence in women with Turner syndrome in Great Britain: a national cohort study. *Lancet Oncol*. 2008;**9**(3):239–246.
205. Smith RA, Cokkinides V, Eyre HJ. American Cancer Society guidelines for the early detection of cancer, 2006. *CA Cancer J Clin*. 2006;**56**(1):11–25, quiz 49–50.
206. Wilson JD, Roehrborn C. Long-term consequences of castration in men: lessons from the Skoptzy and the eunuchs of the Chinese and Ottoman courts. *J Clin Endocrinol Metab*. 1999;**84**(12): 4324–4331.
207. van Kesteren P, Meinhardt W, van der Valk P, Geldof A, Megens J, Gooren L. Effects of estrogens only on the prostates of aging men. *J Urol*. 1996;**156**(4):1349–1353.
208. Brown JA, Wilson TM. Benign prostatic hyperplasia requiring transurethral resection of the prostate in a 60-year-old male-to-female transsexual. *Br J Urol*. 1997;**80**(6):956–957.
209. Casella R, Bubendorf L, Schaefer DJ, Bachmann A, Gasser TC, Sulser T. Does the prostate really need androgens to grow? Transurethral resection of the prostate in a male-to-female transsexual 25 years after sex-changing operation. *Urol Int*. 2005;**75**(3):288–290.
210. Dorff TB, Shazer RL, Nepomuceno EM, Tucker SJ. Successful treatment of metastatic androgen-independent prostate carcinoma in a transsexual patient. *Clin Genitourin Cancer*. 2007;**5**(5): 344–346.
211. Thurston AV. Carcinoma of the prostate in a transsexual. *Br J Urol*. 1994;**73**(2):217.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Case 2:21-cv-00316 Document 321-6 Filed 05/12/22 Page 35 of 36 PageID #: 22822

212. van Harst EP, Newling DW, Gooren LJ, Asscheman H, Prenger DM. Metastatic prostatic carcinoma in a male-to-female transsexual. *BJU Int*. 1998;**81**:776.
213. Turo R, Jallad S, Prescott S, Cross WR. Metastatic prostate cancer in transsexual diagnosed after three decades of estrogen therapy. *Can Urol Assoc J*. 2013;**7**(7–8):E544–E546.
214. Miksad RA, Bubley G, Church P, Sanda M, Rofsky N, Kaplan I, Cooper A. Prostate cancer in a transgender woman 41 years after initiation of feminization. *JAMA*. 2006;**296**(19):2316–2317.
215. Moyer VA; U.S. Preventive Services Task Force. Screening for prostate cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2012;**157**(2):120–134.
216. Futterweit W. Endocrine therapy of transsexualism and potential complications of long-term treatment. *Arch Sex Behav*. 1998; **27**(2):209–226.
217. Miller N, Bédard YC, Cooter NB, Shaul DL. Histological changes in the genital tract in transsexual women following androgen therapy. *Histopathology*. 1986;**10**(7):661–669.
218. O'Hanlan KA, Dibble SL, Young-Spint M. Total laparoscopic hysterectomy for female-to-male transsexuals. *Obstet Gynecol*. 2007;**110**(5):1096–1101.
219. Dizon DS, Tejada-Berges T, Koelliker S, Steinhoff M, Granai CO. Ovarian cancer associated with testosterone supplementation in a female-to-male transsexual patient. *Gynecol Obstet Invest*. 2006; **62**(4):226–228.
220. Hage JJ, Dekker JJML, Karim RB, Verheijen RHM, Bloemena E. Ovarian cancer in female-to-male transsexuals: report of two cases. *Gynecol Oncol*. 2000;**76**(3):413–415.
221. Mueller A, Gooren L. Hormone-related tumors in transsexuals receiving treatment with cross-sex hormones. *Eur J Endocrinol*. 2008;**159**(3):197–202.
222. Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J, Fraser L, Green J, Knudson G, Meyer WJ, Monstrey S, Adler RK, Brown GR, Devor AH, Ehrbar R, Ettner R, Eyler E, Garofalo R, Karasic DH, Lev AI, Mayer G, Meyer-Bahlburg H, Hall BP, Pfaefflin F, Rachlin K, Robinson B, Schechter LS, Tangpricha V, van Trotsenburg M, Vitale A, Winter S, Whittle S, Wylie KR, Zucker K. Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *Int J Transgenderism*. 2012;**13**:165–232.
223. Colebunders B, D'Arpa S, Weijers S, Lumen N, Hoebeke P, Monstrey S. Female-to-male gender reassignment surgery. In: Ettner R, Monstrey S, Coleman E, eds. *Principles of Transgender Medicine and Surgery*. 2nd ed. New York, NY: Routledge Taylor & Francis Group; 2016:279–317.
224. Monstrey S, Hoebeke P, Dhont M, De Cuypere G, Rubens R, Moerman M, Hamdi M, Van Landuyt K, Blondeel P. Surgical therapy in transsexual patients: a multi-disciplinary approach. *Acta Chir Belg*. 2001;**101**(5):200–209.
225. Selvaggi G, Ceulemans P, De Cuypere G, VanLanduyt K, Blondeel P, Hamdi M, Bowman C, Monstrey S. Gender identity disorder: general overview and surgical treatment for vaginoplasty in male-to-female transsexuals. *Plast Reconstr Surg*. 2005;**116**(6): 135e–145e.
226. Tugnet N, Goddard JC, Vickery RM, Khoosal D, Terry TR. Current management of male-to-female gender identity disorder in the UK. *Postgrad Med J*. 2007;**83**(984):638–642.
227. Horbach SER, Bouman M-B, Smit JM, Özer M, Buncamper ME, Mullender MG. Outcome of vaginoplasty in male-to-female transgenders: a systematic review of surgical techniques. *J Sex Med*. 2015;**12**(6):1499–1512.
228. Wroblewski P, Gustafsson J, Selvaggi G. Sex reassignment surgery for transsexuals. *Curr Opin Endocrinol Diabetes Obes*. 2013; **20**(6):570–574.
229. Morrison SD, Satterwhite T, Grant DW, Kirby J, Laub DR, Sr, VanMaasdam J. Long-term outcomes of rectosigmoid neocolporrhaphy in male-to-female gender reassignment surgery. *Plast Reconstr Surg*. 2015;**136**(2):386–394.
230. Dessy LA, Mazzocchi M, Corrias F, Ceccarelli S, Marchese C, Scuderi N. The use of cultured autologous oral epithelial cells for vaginoplasty in male-to-female transsexuals: a feasibility, safety, and advantageousness clinical pilot study. *Plast Reconstr Surg*. 2014;**133**(1):158–161.
231. Li FY, Xu YS, Zhou CD, Zhou Y, Li SK, Li Q. Long-term outcomes of vaginoplasty with autologous buccal micromucosa. *Obstet Gynecol*. 2014;**123**(5):951–956.
232. Kanhai RC. Sensate vagina pedicled-spot for male-to-female transsexuals: the experience in the first 50 patients. *Aesthetic Plast Surg*. 2016;**40**(2):284–287.
233. Straayer C. Transplants for transsexuals? Ambitions, concerns, ideology. Paper presented at: Trans*Studies: An International Transdisciplinary Conference on Gender, Embodiment, and Sexuality; 7–10 September 2016; University of Arizona, Tucson, AZ.
234. Bucci S, Mazzon G, Liguori G, Napoli R, Pavan N, Bormioli S, Ollandini G, De Concilio B, Trombetta C. Neovaginal prolapse in male-to-female transsexuals: an 18-year-long experience. *Biomed Res Int*. 2014;**2014**:240761.
235. Raigosa M, Avvedimento S, Yoon TS, Cruz-Gimeno J, Rodriguez G, Fontdevila J. Male-to-female genital reassignment surgery: a retrospective review of surgical technique and complications in 60 patients. *J Sex Med*. 2015;**12**(8):1837–1845.
236. Green R. Sexual functioning in post-operative transsexuals: male-to-female and female-to-male. *Int J Impot Res*. 1998;**10**(Suppl 1): S22–S24.
237. Hess J, Rossi Neto R, Panic L, Rübben H, Senf W. Satisfaction with male-to-female gender reassignment surgery. *Dtsch Arztebl Int*. 2014;**111**(47):795–801.
238. Nygren U, Nordenskjold A, Arver S, Sodersten M. Effects on voice fundamental frequency and satisfaction with voice in trans men during testosterone treatment—a longitudinal study. *J Voice*. 2016;**30**(6):766.e23-766.e34.
239. Becking AG, Tuinzing DB, Hage JJ, Gooren LJG. Transgender feminization of the facial skeleton. *Clin Plast Surg*. 2007;**34**(3): 557–564.
240. Giraldo F, Esteva I, Bergero T, Cano G, González C, Salinas P, Rivada E, Lara JS, Soriguer F; Andalusia Gender Team. Corona glans clitoroplasty and urethropreputial vestibuloplasty in male-to-female transsexuals: the vulval aesthetic refinement by the Andalusia Gender Team. *Plast Reconstr Surg*. 2004;**114**(6): 1543–1550.
241. Goddard JC, Vickery RM, Terry TR. Development of feminizing genitoplasty for gender dysphoria. *J Sex Med*. 2007;**4**(4 Pt 1): 981–989.
242. Hage JJ, de Graaf FH, Bouman FG, Bloem JJAM. Sculpturing the glans in phalloplasty. *Plast Reconstr Surg*. 1993;**92**(1):157–161, discussion 162.
243. Thiagaraj D, Gunasegaram R, Loganath A, Peh KL, Kottegoda SR, Ratnam SS. Histopathology of the testes from male transsexuals on oestrogen therapy. *Ann Acad Med Singapore*. 1987; **16**(2):347–348.
244. Monstrey SJ, Ceulemans P, Hoebeke P. Sex reassignment surgery in the female-to-male transsexual. *Semin Plast Surg*. 2011;**25**(3): 229–244.
245. Perovic SV, Djinovic R, Bumbasirevic M, Djordjevic M, Vukovic P. Total phalloplasty using a musculocutaneous latissimus dorsi flap. *BJU Int*. 2007;**100**(4):899–905, discussion 905.
246. Vesely J, Hyza P, Ranno R, Cigna E, Monni N, Stupka I, Justan I, Dvorak Z, Novak P, Ranno S. New technique of total phalloplasty with reinnervated latissimus dorsi myocutaneous free flap in female-to-male transsexuals. *Ann Plast Surg*. 2007;**58**(5): 544–550.
247. Ranno R, Veselý J, Hýza P, Stupka I, Justan I, Dvorák Z, Monni N, Novák P, Ranno S. Neo-phalloplasty with re-innervated latissimus dorsi free flap: a functional study of a novel technique. *Acta Chir Plast*. 2007;**49**(1):3–7.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

doi: 10.1210/jc.2017-01658

248. Garcia MM, Christopher NA, De Luca F, Spilotros M, Ralph DJ. Overall satisfaction, sexual function, and the durability of neophallus dimensions following staged female to male genital gender confirming surgery: the Institute of Urology, London U.K. experience. *Transl Androl Urol*. 2014;**3**(2):156–162.
249. Chen H-C, Gedebou TM, Yazar S, Tang Y-B. Prefabrication of the free fibula osteocutaneous flap to create a functional human penis using a controlled fistula method. *J Reconstr Microsurg*. 2007; **23**(3):151–154.
250. Hoebeke PB, Decaestecker K, Beysens M, Opdenakker Y, Lumen N, Monstrey SM. Erectile implants in female-to-male transsexuals: our experience in 129 patients. *Eur Urol*. 2010;**57**(2): 334–341.
251. Hage JJ. Metaidoioplasty: an alternative phalloplasty technique in transsexuals. *Plast Reconstr Surg*. 1996;**97**(1):161–167.
252. Cohanzad S. Extensive metoidioplasty as a technique capable of creating a compatible analogue to a natural penis in female transsexuals. *Aesthetic Plast Surg*. 2016;**40**(1):130–138.
253. Selvaggi G, Hoebeke P, Ceulemans P, Hamdi M, Van Landuyt K, Blondeel P, De Cuypere G, Monstrey S. Scrotal reconstruction in female-to-male transsexuals: a novel scrotoplasty. *Plast Reconstr Surg*. 2009;**123**(6):1710–1718.
254. Bjerrome Ahlin H, Kölby L, Elander A, Selvaggi G. Improved results after implementation of the Ghent algorithm for subcutaneous mastectomy in female-to-male transsexuals. *J Plast Surg Hand Surg*. 2014;**48**(6):362–367.
255. Wolter A, Diedrichson J, Scholz T, Arens-Landwehr A, Liebau J. Sexual reassignment surgery in female-to-male transsexuals: an algorithm for subcutaneous mastectomy. *J Plast Reconstr Aesthet Surg*. 2015;**68**(2):184–191.
256. Richards C, Barrett J. The case for bilateral mastectomy and male chest contouring for the female-to-male transsexual. *Ann R Coll Surg Engl*. 2013;**95**(2):93–95.
257. Sutcliffe PA, Dixon S, Akehurst RL, Wilkinson A, Shippam A, White S, Richards R, Caddy CM. Evaluation of surgical procedures for sex reassignment: a systematic review. *J Plast Reconstr Aesthet Surg*. 2009;**62**(3):294–306, discussion 306–308.
258. Selvaggi G, Elander A. Penile reconstruction/formation. *Curr Opin Urol*. 2008;**18**(6):589–597.
259. Dhejne C, Lichtenstein P, Boman M, Johansson ALV, Långström N, Landén M. Long-term follow-up of transsexual persons undergoing sex reassignment surgery: cohort study in Sweden. *PLoS One*. 2011;**6**(2):e16885.
260. Kuhn A, Bodmer C, Stadlmayr W, Kuhn P, Mueller MD, Birkhäuser M. Quality of life 15 years after sex reassignment surgery for transsexualism. *Fertil Steril*. 2009;**92**(5):1685–1689.e3.
261. Papadopulos NA, Lellé JD, Zavlin D, Herschbach P, Henrich G, Kovacs L, Ehrenberger B, Kluger AK, Machens HG, Schaff J. Quality of life and patient satisfaction following male-to-female sex reassignment surgery. *J Sex Med*. 2017;**14**(5):721–730.
262. Simonsen RK, Hald GM, Kristensen E, Giraldi A. Long-term follow-up of individuals undergoing sex-reassignment surgery: somatic morbidity and cause of death. *Sex Med*. 2016;**4**(1): e60–e68.
263. Djordjevic ML, Bizic MR, Duisin D, Bouman MB, Buncamper M. Reversal Surgery in regretful male-to-female transsexuals after sex reassignment surgery. *J Sex Med*. 2016;**13**(6):1000–1007.
264. Liberopoulos EN, Florentin M, Mikhailidis DP, Elisaf MS. Compliance with lipid-lowering therapy and its impact on cardiovascular morbidity and mortality. *Expert Opin Drug Saf*. 2008;**7**(6):717–725.
265. Forbes SS, Stephen WJ, Harper WL, Loeb M, Smith R, Christoffersen EP, McLean RF. Implementation of evidence-based practices for surgical site infection prophylaxis: results of a pre- and postintervention study. *J Am Coll Surg*. 2008;**207**(3): 336–341.
266. Davis PJ, Spady D, de Gara C, Forgie SE. Practices and attitudes of surgeons toward the prevention of surgical site infections: a provincial survey in Alberta, Canada. *Infect Control Hosp Epidemiol*. 2008;**29**(12):1164–1166.

Downloaded from https://academic.oup.com/jcem/article/102/11/3869/4157558 by guest on 11 May 2022

Exhibit G

Sexology Today!

News and commentary from the fascinating science of sex, by Dr. James Cantor.

11 January 2016

Do trans- kids stay trans- when they grow up?

Following the closure of the CAMH Gender Identity Clinic for children, I have been receiving requests for what the science says. Do kids grow out of wanting to change sex, or does it continue when they are adults?

In total, there have been three large scale follow-up studies and a handful of smaller ones. I have listed all of them below, together with their results. (In the table, "cis-" means non-transsexual.) Despite the differences in country, culture, decade, and follow-up length and method, all the studies have come to a remarkably similar conclusion: Only very few trans- kids still want to transition by the time they are adults. Instead, they generally turn out to be regular gay or lesbian folks. The exact number varies by study, but roughly 60–90% of trans- kids turn out no longer to be trans by adulthood.

Count Group	Study
2/16 gay 4/16 trans-/crossdress 10/16 straight/uncertain	Lebovitz, P. S. (1972). Feminine behavior in boys: Aspects of its outcome. *American Journal of Psychiatry, 128,* 1283–1289.
2/16 trans- 2/16 uncertain 12/16 gay	Zuger, B. (1978). Effeminate behavior present in boys from childhood: Ten additional years of follow-up. *Comprehensive Psychiatry, 19,* 363–369.
0/5 trans- 5/5 gay	Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow-up. *Journal of Pediatric Psychology, 4,* 29–41.
2/45 trans-/crossdress 10/45 uncertain 33/45 gay	Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172,* 90–97.
1/10 trans- 2/10 gay 3/10 uncertain 4/10 straight	Davenport, C. W. (1986). A follow-up study of 10 feminine boys. *Archives of Sexual Behavior, 15,* 511–517.
1/44 trans- 43/44 cis-	Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality*. New Haven, CT: Yale University Press.
0/8 trans- 8/8 cis-	Kosky, R. J. (1987). Gender-disordered children: Does inpatient treatment help? *Medical Journal of Australia, 146,* 565–569.
21/54 trans- 33/54 cis-	Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 1413–1423.
3/25 trans- 6/25 lesbian/bi- 16/25 straight	Drummond, K. D., Bradley, S. J., Badali-Peterson, M., & Zucker, K. J. (2008). A follow-up study of girls with

Welcome to *Sexology Today!*

Sexology Today! brings to readers new research findings in the fascinating science of sex, translating the often technical language of science into plain-language summaries. The Internet has no shortage of political opinion about sexuality, but very little scientific opinion. Despite the enormous public interest in our work, professional scientists often stick to publishing in technical journals in technical language, and with publishing houses charging $35 and more per download, the general public has little opportunity to be exposed to new scientific findings in sex research. I hope Sexology Today helps to bridge that gap.

Topics

- Asexuality
- Diagnosis
- Fetishes
- Hebephilia
- Homosexuality
- Hypersexuality ("sex addiction")
- Letters
- Paraphilia
- Pedophilia
- Sex offenders
- Sexology
- Students
- Transgender

Author

James M. Cantor, PhD

Dr. Cantor is a sexual behavior scientist, studying and teaching sexology, especially atypical sexualities, for over 25 years. His research has been published in *Psychological Bulletin,* the *Journal of Abnormal Psychology,* and [illegible] *Consulting and Clinical Psy*[illegible] as Editor-in-Chief of *Sexual* [illegible] *Research and Treatment.* He [illegible] discuss sexological issues o[illegible] *New York Times,* and Dan S[illegible]

Exhibit 0048

	gender identity disorder. *Developmental Psychology, 44*, 34–45.
17/139 trans- 122/139 cis-	Singh, D. (2012). *A follow-up study of boys with gender identity disorder*. Unpublished doctoral dissertation, University of Toronto.
47/127 trans- 80/127 cis-	Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52,* 582–590.

*For brevity, the list uses "gay" for "gay and cis-", "straight" for "straight and cis-", etc.

40 comments:

Jennie Blakney 11 January 2016 at 10:26

Thank you. This is a wonderful resource.

Reply

Anonymous 11 January 2016 at 11:03

Thanks for posting the evidence. What a shame identity politics trumps science.

Ray Hames

Reply

Replies

SPSM 13 January 2016 at 13:06

Evidence? I'd prefer to see the studies and their methodologies. My understanding is that these were studies of gender non-conforming children, most of which wouldn't be trans anyway. That there as large a percentage of these kids who do turn out to be trans should be an indicator that the issue is real and deserves to be taken seriously.

Anonymous 14 January 2017 at 12:39

Are you really saying that only kids who don't desist should be included in a study of how many kids desist? I cannot imagine how (or why) you would do such a study, but it would obviously prove nothing if you did.

The burden of proof is on the trans-affirmative approach. Where are the longitudinal studies that show its outcomes?

Unknown 31 August 2017 at 21:15

The whole point of full references is to enable you to see the studies and their methodologies. Go for it, but don't complain that a short article for average people doesn't do all the work for you.

Reply

Martin 12 January 2016 at 08:44

Thanks for the nice info at a glance

Reply

Sian 12 January 2016 at 12:09

Hello Dr Cantor, Could you provide any links to the studies so that we can have a more in-depth understanding of the data collection and analysis? Many thanks

Summaries of his research and other projects are available at JamesCantor.org.

Top Posts

Do trans- kids stay trans- when they grow up?

Statistics faulty on how many trans- kids grow up to stay trans-?

Open Letter of Resignation from the Society for the Scientific Study of Sexuality (SSSS)

American Academy of Pediatrics policy and trans- kids:
Fact-checking

On Russo's *Is there something unique about the transgender brain?* Well, yes and no.

Currently, on twitter...

Tweets by @JamesCantorPhD

Dr. James Cantor @JamesCantorPhD

Oy vey.

If you're only going to promote the science that supports your politics, you're not promoting science at all. #ScienceOverSlogans https://twitter.com/Sex_Science/status/1504806857914916868

4h

Dr. James Cantor @JamesCantorPhD

Medicine can either be evidence-based or rely on an "inner sense." Not both.

4h

Dr. James Cantor @JamesCantorPhD

Liberalism has been replaced with

Embed View on Twitter

Reply

Replies

Anonymous 9 June 2017 at 07:36

You can just google the titles,

https://www.ncbi.nlm.nih.gov/pubmed/18981931

https://www.ncbi.nlm.nih.gov/pubmed/18194003

etc

Reply

Anonymous 12 January 2016 at 12:11

Hello Dr Cantor, I was wondering if you could provide any links to the entire studies? I'm interested to find out more. Many thanks, Sian

Reply

Anonymous 12 January 2016 at 15:40

Without access to the original data, informed analysis is of course impossible.But I can't help thinking of the long-standing received wisdom that virtually all homosexual males are "effeminate" as children, two thirds of them losing those attributes by adulthood--but NOT changing their homosexual orientation. The first thought that this brings to mind, then, is that (in today's constant blather over such things) that many children who find their traits on one side of the gender-spread may leap to the conclusion that they are trans--only to discover the error in later years. Perhaps at least a partial explanation?
F. Christensen
Professor Emeritus

Reply

Replies

Anonymous 18 December 2017 at 06:28

I don't know what "long-standing received wisdom" you are talking about, but no social science study has ever shown all homosexual males to be effeminate as children. Only a minority are.

Unknown 3 January 2018 at 01:09

The original data isn't inaccessible. If you Google the titles they're all within means. Here it took me about three or four minutes but I've got the address to every study listed.

https://www.ncbi.nlm.nih.gov/pubmed/23702447

https://www.ncbi.nlm.nih.gov/pubmed/18194003

https://www.ncbi.nlm.nih.gov/pubmed/19586166

https://www.researchgate.net/publication/23449293_Psychosexual_Outcome_of_Gender-Dysphoric_Children

http://europepmc.org/abstract/med/3614045

http://psycnet.apa.org/record/1987-97006-000

https://link.springer.com/article/10.1007/BF01542316

https://www.ncbi.nlm.nih.gov/pubmed/6693867

http://psycnet.apa.org/record/1979-33886-001

http://www.comppsychjournal.com/article/0010-440X(78)90019-6/references

https://ajp.psychiatryonline.org/doi/abs/10.1176/ajp.128.10.1283

There now you can make an informed analysis.

Reply

margotdarby 12 January 2016 at 22:01

These are studies of GNC children, not 'trans.' This is the kind of thing that got Zucker in trouble.

Reply

Replies

Anonymous 13 January 2016 at 13:33

The five most recent studies make reference to gender identity disorder/gender dysphoria in their titles, so I don't think the subjects were simply GNC children.

Reply

Anonymous 13 January 2016 at 13:36

If you look at the actual studies, they were done with gender-nonconforming children, not children who expressed that they actually were the other gender. This article is no more than clickbait trying to mislead people for political gain.

Reply

Replies

Anonymous 27 April 2017 at 16:43

This is a lie. Which I've seen repeated often by the way, whenever people referenced these studies.

In the Singh 2012 study of 139 subjects (link to full PDF below), 88 children fulfilled the *complete* diagnostic criterion of Gender Identity Disorder, which includes strong cross-sex identification.

Of those, 12 persisted. That's 13.6% persistence rate and 86.3% desistance rate. And that's among those who completely fulfill the criteria / have strong cross-sex identification.

From the 51 children who partially met the GID criterion (some of whom nevertheless had significant cross-sex identification as mentioned in the study), 5 persisted. That's 9.8% persistence rate, 90.2% desistence rate.

The study:
https://tspace.library.utoronto.ca/bitstream/1807/34926/1/Singh_Devita_201211_PhD_Thesis.pdf

Cynthia Yockey 31 January 2018 at 15:58

Dr. Cantor, are you the author of the above comment, dated 27 April 2017 at 16:43, beginning with , "This is a lie."? I need to know for correct attribution. Thank you.

James M. Cantor, PhD 6 February 2018 at 10:02

No, my replies appear under my own name.

Michael David Collins-Frias de Jehle Romanov 2 September 2018 at 12:29

Anyone who writes comments as not identifiable should not be considered valid.
Transgender can be identified.
Either child born with birth abnormality of penis and vagina or in reverse of identifiable abnormality. Penis on top with vagina below. Vaginal cavity with penis growth below skin. Very painful in adult hood. Not visible to naked eye. Ultra sound might detect however series of issues arise.
Breast growth upon males as aging occurs might indicate vaginal cavity closed as infant cause menstrual issues much later. Few study this field of abnormalities.
I have seen conditions personally.
Most have no idea severity or medical concerns which can arise from complications later. Transgender sciences are at infancy
It was common for medical doctors to close any vaginal cavity upon infants who were not ideal born.
Birth sex chosen by doctor.
Some had vaginal cavity with very small penis.
Amephrodites occur stigmatized and hatred wrought upon them for being different.
Cause parents who fail to check if sexual partner is relative.
If first cousin higher the chance of abnornailty.
If direct relative of sibling greater magnitude of abnormality.
Males with 4 breats.
Female appearence and breasts with penis but no vagina.
DNA could prevent much disorder and identify the one you want to have children with is your sister but your father slept with her mother on that sales trip you never knew about.
Face facts.
My DNA matches 854 persons across globe so far.
My family screwed like bunnies.
Anywhere or anyone.
Do not think this is minimal.

It is everywhere.
People simply do not talk about these factors.
My DNA published was published on ancestry.com to identify family.
My book is listed everywhere.
Songs of Frost by Michael Collins
It is not poetry for light hearted. Truthful hard reality of life.

Reply

Anonymous 13 January 2016 at 17:58

Much of this summary doesn't even add up - literally.

Straight / gay / bi: sexual orientation

Cis / trans/cd: gender identity/presentation

Two separate things (cis can be gay or straight, trans can be gay or straight), so the numbers for each need to total 100% of the population separately.

Reply

Replies

Anonymous 4 June 2016 at 12:13

According to a trans organization (Mermaids) 'cis' people are happy with gender AND attracted to opposite sex

Anonymous 31 December 2017 at 14:01

"For brevity, the list uses "gay" for "gay and cis-", "straight" for "straight and cis-", etc"

Reply

Anonymous 13 January 2016 at 23:47

"regular gay or lesbian folks"
:-/

Reply

George Davis 15 January 2016 at 11:08

For the early studies, it is probably a fair criticism to say that the children may not have had gender dysphoria. They may have been in treatment because they were gender non-conforming and their parents were concerned about it.

However, the more recent studies talk about children who feel they should be or are a different gender.

In addition, Wallien et al. and Steensma et al. are studies from the Amsterdam clinic. This is the clinic that pioneered the use of puberty blockers in adolescents with gender dysphoria; they are not at all anti-trans.

Reply

Replies

Anonymous 9 June 2017 at 08:33

Whether or not they're anti trans, their result is potentially misleading. Of the 54, 12 kids in the study never actually got a GID diagnosis, so if youre talking about if kids diagnosed with GID "stay trans" the result from that study was actually 50:50. It's also worth noting that a further 6 of the respondents who were diagnosed, weren't available to be contacted, and so their parents filled out a questionnaire on their behalf

epiphanius 7 November 2017 at 23:28

50:50 still strikes me as very high.

Reply

Lisa Mullin 24 January 2016 at 02:35

People are mixing up Gender Non Conforming Only Children, GNC Only, (usually as defined by their parents) and transgender children (those who show strong cross gender desires and associated Gender Dysphoria, GD).

Now GNC Only (little or no transgender desires and the associated GD) will fairly often, but not always by any means, end up bi-sexual, gay or lesbian as adolescents and adults.

GNC with strong GD will retain that into adolescence and adulthood and at some stage transition or die, that 30%-40% suicide attempt rate is no mistake.

So it is important to separate them, which to be fair for a young child can take a few years to work out, hence the WPATH 'support and wait and see' approach.

The longer a child expresses transgender desires and has GD the more likely they will retain that. But, an important but, a child with strong GD may not be a 'typical'* 'sissy boy' or 'tomboy'. though they will almost certainly show some clear GNC behaviour of some kind and strongly express transgender wishes and show suffering if they are thwarted.

The other issue is the treatment of some GNC Only kids, who if you do the 'drop the Barbie' stuff to them means you are making them act 'straight', which is cruel and if not actual SOCE is pretty close.

GNC Only behaviour by itself will not 'make' someone transgender, which seems to be the fear by some.
GD plus GNC means they are transgender and almost certainly will not change and if you try you are playing Russian roulette with their lives. There is only one treatment for GD that works.

So the issue is selection and that is not that hard. A 2012 study on CAMH children showed the only statistically significant factor (logistic regression) was the strength of (their combined GNC/GD) scores. So their own tests showed good measures to predict outcomes, which were a lot higher that the commonly stated '80% desist' (based on lumping the two groups together).

A rough 'back of the envelope' calculation shows that maybe only 5% of GNC Only kids will become transgender. BUT, maybe as much as 80% to 90% of GNC + strong GD ones will persist.

The majority, by far, are of course GNC Only with transgender children being a small minority.

*And what is a typical 'sissy boy' or 'tomboy' anyway? This is usually just parent paranoia and their absurd social 'norms'.

Reply

Anonymous 24 January 2016 at 19:40

Cannot use this level of analysis as having any scientific validity. Must dig into methods and clarify integrity of diagnosis, especially noting the year span of the studies. Then submit it for peer review. At most, this begs for further examination which of course, it always good!

Reply

no 9 February 2016 at 13:49

A debunking for the last study listed: https://gidreform.wordpress.com/2014/02/25/methodological-questions-in-childhood-gender-identity-desistence-research/

Reply

Anonymous 10 February 2016 at 15:31

I've reviewed the first Cohen-Kettenis study and their definition of "persistence" was if the person reported for for transitional surgery as an adult. They also included in desisters, those who dropped out of the study. So methods and operational definitions need to be carefully looked at. I'd like to see the numbers for those who were insistent, persistent and consistent since the mid 90's and see what their follow up outcome was.

Reply

Kay Brown 3 April 2016 at 21:08

What I take from these studies is that it would appear that as time as gone on, we narrow down the defintions of GNC+GD, we get greater diagnostic specificity and reliability for 'persistence'. This is a hopeful sign that we may yet have a set of diagnostic criteria that reliably differentiate the two populations. Dr. Kelly Winters noted in her talk on the subject, referenced in the link above by "no", that anatomic dysphoria correlated with persistence. I have noted this anecdotally, talking to a number of parents of GNC kids, both desisters and persisters. This needs to be explored further.

The other item that the listed research shows is that desisting seems to slow down, if not stop entirely around the ages ten to thirteen, suggesting that a rethink of the puberty blocking protocols now in vogue is in order. It may be more desirable to phase in cross-sex HRT at an earlier age with properly screened clients:

https://sillyolme.wordpress.com/2011/02/28/age-of-innocence/

Reply

Unknown 3 August 2016 at 21:49

The most important part of the Steensma study is that he identified two groups and the the main characteristic of the "desisters" were being gender non-conforming (wanting to have the role of the other sex - being able to behave like a boy/girl) and the persisters felt they were in the "wrong body" (I am simplifying the study).
So, what we have is a difficult in diagnosing a children with less than 13 yo - we can say that they are gender non-conforming, but not transgender.

Reply

Jane 4 July 2017 at 11:55

Then the answer to this question is the vast majority of these kids do not transition. So why is there a difference between kids and adults? I would just say that most adults do not have the therapy available that kids have and that their dysphoria is never dealt with in the same way. Either way the culprit is dysphoria and cutting off healthy body parts, helping people pretend they are the opposite sex and giving lifelong hormones instead of better cognitive care to deal with underlying issues is a disgraceful way to say we are 'treating' anyone. If we can get big pharma to investigate dysphoria for a real cure and stop the trans activists then we could really say we are on the right track. Sorry to upset people but this is the truth.

Reply

Replies

Unknown 7 November 2017 at 18:11

For me, this is tantamount to saying we need a cure for homosexuality--which is what the protocol was before it was determined to be biological. No trans child/adult chooses a life that is difficult, marginalized and exposes them to violence.

Boo 9 April 2018 at 11:16

Thank you Jane. A sensible attitude - enabling young people, at a very sensitive and often confusing age, to make life-changing decisions of this sort is crazy. I don't think anyone is suggesting we need a cure for homosexuality. Gender and sexuality are not the same thing. But allowing a child to grow, mentally and emotionally, before embarking on irreversible and massively life-changing procedures seems like good sense to me.

Rod Fleming 20 April 2018 at 23:28

@ lisa: Exactly. I don't think James believes that to be desirable, but there is clearly a political imperative growing towards suppression of HSTS transsexualism in favour of gender-conforming homosexuality. It is not a good thing

Reply

FlaemDragon 2 January 2018 at 18:45

Most of these studies took place before the Tavistock Gender identity clinic opened in London. Presumably other countries opened clinics around the same time? The European Professional Association for Transgender Health started in Dec 2013 - AFTER all these studies.
How do you expect a child to transition if there is no medical help available? The only available help would be assistance to desist.
It's a bit like saying pilots don't exist because none of Napolean's troops flew a plane.
Have these children been followed up recently now that gender clinics are actually available? Did they transition as adults?

Reply

Rod Fleming 20 April 2018 at 23:18

James,

All but 4 of these studies are over 30 years old. Given that there is plenty of evidence to the effect that culture does influence outcome in transsexual persistence (see below), the earlier studies should be taken with a pinch of salt. Of the others, Wallien shows 43% ; Drummond applies ONLY to girls; Singh, while noting desistance in the sample, stresses the importance of severity of childhood GD in predicting adult GD; and Steensma again concludes 'Intensity of early GD appears to be an important predictor of persistence of GD.'

So the proper conclusion actually should be that, while a majority of GD-displaying children do desist, this is related to the intensity of the childhood GD itself. In other words, for some it is a passing phase and for others, it's an indicator of their future sex/gender presentation. The clinician's role is to determine which is being presented, before proceeding with any therapy. This will probably involve a 'wait and see' approach.

Now there is a big problem in the West in that there is a clear bias amongst clinicians that 'being "gay" is a better outcome'. There is no statistical data to support this, nor, as far I am aware, and as you know I research this, is there a consistent position as to what constitutes a 'better outcome'. Clinicians like Bailey and Zucker, both of whom I respect, have made this claim and neither have any material evidence to support it. Their case seems to be 'avoiding a lifetime of hormones and surgery is better', which is superficially

reasonable, but only so. We ALL face a lifetime on hormones, otherwise we should not be human. Further, in cultures where transsexualism is far more obvious than in the West, genital surgery (GRS) is very rarely sought. This suggests that an alternative solution would be to allow people to live as their desired sex, without any requirement for GRS, either legally or in terms of social pressure.

(I would point out that Dr Winter of UHK has often said that he is perplexed that people claiming to research transsexualism do not do so in parts of the world where it is an everyday, obvious occurrence. In many parts of SE Asia, one will encounter transsexuals on a daily basis even in remote communities; one does not have to seek them out or wait for them to be referred to a clinic, in order to interview them. I agree with him.)

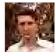
In these cultures there is no requirement, social or legal, for trans people to have GRS in order to live in the gender they desire to. In these cultures, one sees far more transsexual expression and it has frequently been stated to me that about 80% of GNC children will grow up trans, not gay males or lesbians; this is more-or-less the inverse of the reported position in the West. I accept that this is an anecdotal figure but it is certainly borne out by observation. The corollary is that there is a fair bit of adult desistance, in the 35-up age range, but since GRS is so rare, this, at least in MtF, is not so much of an issue.

This tells us, as I opined above, that culture is everything. It was once normal, in the West, to suppress homosexuality in favour of heterosexuality; now we appear to be suppressing HSTS transsexualism in favour of gender-conforming homosexuality. (I know you understand that there are two types of TS and we are ONLY discussing HSTS here; others please read up on this.)

I can't for the life of me see how deliberately suppressing transsexualism in favour of gender-conforming homosexuality is any more acceptable or morally justifiable than suppressing homosexuality in favour of heterosexuality. If anything needs to change it is society's prescriptive attitudes; we might say 'some women have dicks, get over it.'

The only valuable measure should be the individual's life satisfaction and it is not, whether they like it or not, a 21st-century clinician's role to shoehorn individuals into conforming to social expectations.

Reply



Malcolm Smith 4 September 2018 at 20:01

Several commentators have suggested that many of the desisters were not actually suffering from gender dysphoria. This may well be the case. If so, however, it reinforces the necessity of making an accurate diagnosis the first time round, because it seems to me there is a lamentable tendency to over-diagnose GID, and to put these young people onto the hormone/surgery treadmill without carefully assessing the situation.
The other point is the high proportion who ended up as non-trans heterosexuals rather than homosexuals. As I understand it, among adult transsexuals, sexual orientation and perceived sexual identity tend to diverge in about half the cases. In other, they are like a male colleague of mine who said the he had always felt like a woman, but at the same time, had always been sexually attracted to women.
If that is the case with adult transsexuals, then we should not be surprised if those trans kids who grow out of their GID do not automatically end up as homosexuals or lesbians, but as normal heterosexuals.

Reply

Replies

James M. Cantor, PhD 6 September 2018 at 11:03

Actually, the entire (alleged) criticism is moot. There was a study which had a sample of gender dysphoric kids AND a sample of gender non-conforming kids. Upon follow-up, their desistance rates were nearly identical (and both were over 50%).

If all the desistance cases (or most of the desistance case) came from the only the gender non-conforming group, then it would be valid to criticize the study for blurring the groups to look like desistance happened among the gender dysphorics as much as the gender non-conforming. However, the (alleged) criticism is demonstrably false: The study compared the two groups explicitly, demonstrating their outcomes to be the same. It is simply not the case that desistance cases are accounted for by people who are gender non-conforming rather than gender dysphoric.

Reply

Add comment

New comments are not allowed.

Newer Post Home Older Post

Subscribe to: Post Comments (Atom)

Case 2:21-cv-00316 Document 321-7 Filed 05/12/22 Page 10 of 10 PageID #: 22833

The opinions expressed here are my own and do not necessarily reflect
those of any institution or organization with which I am affiliated.

James M. Cantor ©

Simple theme. Theme images by Ollustrator. Powered by Blogger.

Exhibit H

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE WESTERN DISTRICT OF WEST VIRGINIA
3 CHARLESTON DIVISION
4
5 ______________________________
B.P.J. by her next friend and)
6 mother, HEATHER JACKSON,)
)
7 Plaintiff,)
)
8 vs.) No. 2:21-cv-00316
)
9 WEST VIRGINIA STATE BOARD OF)
EDUCATION, HARRISON COUNTY)
10 BOARD OF EDUCATION, WEST)
VIRGINIA SECONDARY SCHOOL)
11 ACTIVITIES COMMISSION, W.)
CLAYTON BURCH in his official)
12 capacity as State)
Superintendent, DORA STUTLER,)
13 in her official capacity as)
Harrison County)
14 Superintendent, and THE STATE)
OF WEST VIRGINIA,)
15)
Defendants,)
16)
LAINEY ARMISTEAD,)
17)
Defendant-Intervenor.)
18 ______________________________)
19 VIDEOTAPED DEPOSITION OF
STEPHEN LEVINE
20 Wednesday, March 30, 2022
Volume I
21
22
23 Reported by:
ALEXIS KAGAY
24 CSR No. 13795
Job No. 5122884
25 PAGES 1 - 289

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE WESTERN DISTRICT OF WEST VIRGINIA
3 CHARLESTON DIVISION
4
5 ______________________________
)
6 B.P.J. by her next friend and)
mother, HEATHER JACKSON,)
7)
Plaintiff,)
8) No. 2:21-cv-00316
vs.)
9)
WEST VIRGINIA STATE BOARD OF)
10 EDUCATION, HARRISON COUNTY)
BOARD OF EDUCATION, WEST)
11 VIRGINIA SECONDARY SCHOOL)
ACTIVITIES COMMISSION, W.)
12 CLAYTON BURCH in his official)
capacity as State)
13 Superintendent, DORA STUTLER,)
in her official capacity as)
14 Harrison County)
Superintendent, and THE STATE)
15 OF WEST VIRGINIA,)
)
16 Defendants,)
)
17 LAINEY ARMISTEAD,)
)
18 Defendant-Intervenor.)
______________________________)
19
20 Remote videotaped deposition of
21 STEPHEN LEVINE, Volume I, taken on behalf of Plaintiff,
22 with all participants appearing remotely, beginning at
23 9:09 a.m. and ending at 5:46 p.m. on Wednesday,
24 March 30, 2022, before ALEXIS KAGAY, Certified
25 Shorthand Reporter No. 13795.

1 APPEARANCES (via Zoom Videoconference):
2
3 For The Plaintiff B.P.J.:
4 COOLEY
5 BY: KATELYN KANG
6 BY: VALERIA M. PELET DEL TORO
7 BY: ANDREW BARR
8 BY: KATHLEEN HARTNETT
9 BY: JULIE VEROFF
10 BY: ELIZABETH REINHARDT
11 BY: ZOE HELSTROM
12 Attorneys at Law
13 500 Boylston Street
14 14th Floor
15 Boston, Massachusetts 02116-3740
16 617.937.2305
17 KKang@Cooley.com
18 VPeletDelToro@Cooley.com
19 ABarr@Cooley.com
20 KHartnett@cooley.com
21 JVeroff@Cooley.com
22 ZHolstrom@Cooley.com
23
24
25

1 APPEARANCES (Continued):
2
3 For Plaintiff:
4 LAMBDA LEGAL
5 BY: SRUTI SWAMINATHAN
6 BY: MAIA ZELKIND
7 Attorneys at Law
8 120 Wall Street
9 Floor 19
10 New York, New York 10005-3919
11 SSwaminathan@lambdalegal.org
12 MZelkind@lambdalegal.org
13
14
15 For the Intervenor:
16 ALLIANCE DEFENDING FREEDOM
17 BY: ROGER BROOKS
18 BY: LAWRENCE WILKINSON
19 Attorneys at Law
20 1000 Hurricane Shoals Road, NE 30043
21 RBrooks@adflegal.org
22 LWilkinson@adflegal.org
23
24
25

1 APPEARANCES (Continued):

2

3

4 For the State of West Virginia:

5 WEST VIRGINIA ATTORNEY GENERAL

6 BY: DAVID TRYON

7 Attorney at Law

8 112 California Avenue

9 Charleston West Virginia 25305-0220

10 681.313.4570

11 David.C.Tryon@wvago.gov

12

13

14 For West Virginia Board of Education and Superintendent

15 Burch, Heather Hutchens as general counsel for the

16 State Department of Education:

17 BAILEY & WYANT, PLLC

18 BY: KELLY MORGAN

19 Attorney at Law

20 500 Virginia Street

21 Suite 600

22 Charleston, West Virginia 25301

23 KMorgan@Baileywyant.com

24

25

1 APPEARANCES (Continued):
2
3 For defendants Harrison County Board of Education and
4 Superintendent Dora Stutler:
5 STEPTOE & JOHNSON PLLC
6 BY: SUSAN L. DENIKER
7 Attorney at Law
8 400 White Oaks Boulevard
9 Bridgeport, West Virginia 26330
10 304.933.8154
11 Susan.Deniker@Steptoe-Johnson.com
12
13
14 For West Virginia Secondary School Activities
15 Commission:
16 SHUMAN MCCUSKEY SLICER
17 BY: SHANNON ROGERS
18 Attorney at Law
19 1411 Virginia Street E
20 Suite 200
21 Charleston, West Virginia 25301-3088
22 SRogers@Shumanlaw.com
23
24
25

1 APPEARANCES (Continued):
2
3 For West Virginia Secondary School Activities
4 Commission:
5 SHUMAN MCCUSKEY SLICER
6 BY: ROBERTA GREEN
7 Attorney at Law
8 1411 Virginia Street E
9 Suite 200
10 Charleston, West Virginia 25301-3088
11 RGreen@Shumanlaw.com
12
13
14
15 Also Present:
16 MITCH REISBORD - VERITEXT CONCIERGE
17
18 Videographer:
19 KIMBERLEE DECKER
20
21
22
23
24
25

1 INDEX

2 WITNESS EXAMINATION

3 STEPHEN LEVINE

4 Volume I

5

6 BY MS. HARTNETT 14

7

8

9 EXHIBITS

NUMBER	DESCRIPTION	PAGE
Exhibit 86	Expert Declaration of Dr. Stephen B. Levine in Support of Plaintiff's Motion for Preliminary Injunction	51
Exhibit 87	Declaration of Stephen B. Levine, M.D.	69
Exhibit 88	Presentation of Healthcare Models for Transgender Adolescents	217
Exhibit 89	Video Clip	256
Exhibit 90	Video Clip	258

1 Exhibit 91 Video Clip 260
2
3 Exhibit 92 Video Clip 261
4
5 Exhibit 93 Video Clip 263
6
7 Exhibit 94 Video Clip 265
8
9 Exhibit 95 Video Clip 267
10
11 Exhibit 96 Video Clip 267
12
13 Exhibit 97 Video Clip 268
14
15 Exhibit 98 Video Clip 269
16
17 Exhibit 99 Video Clip 270
18
19 Exhibit 100 Video Clip 271
20
21 Exhibit 101 Video Clip 272
22
23 Exhibit 102 Video Clip 275
24
25 Exhibit 103 Video Clip 278

1
2 Exhibit 104 Video Clip 278
3
4 Exhibit 105 Video Clip 279

5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 Wednesday, March 30, 2022
2 9:09 a.m. A.M.
3 THE VIDEOGRAPHER: We are on the record at
4 9:09 a.m. on March the 30th of 2022.
5 All participants are attending remotely. 06:09:27
6 Audio and video recording will continue to
7 take place unless all parties agree to go off the
8 record.
9 This is media unit 1 of the recorded
10 deposition of Dr. Stephen Levine, taken by counsel for 06:09:39
11 the plaintiff, in the matter of B.P.J., by her be- --
12 by her next friend and mother, Heather Jackson, versus
13 West Virginia State Board of Education, filed in the
14 U.S. District Court, for the Southern District of
15 West Virginia, Charleston Division, Case 06:09:59
16 Number 2:21-cv-00316.
17 My name is Kimberlee Decker from Veritext
18 Legal Solutions, and I am the videographer. The court
19 reporter is Alexis Kagay.
20 I am not related to any party in this action, 06:10:16
21 nor am I financially interested in the outcome.
22 Counsel and all present will now state your
23 appearances and affiliations for the record. If there
24 are any objections to proceeding, please state them at
25 the time of your appearance, beginning with the 06:10:31

1 noticing attorney.
2 MS. HARTNETT: Good morning. I am Kathleen
3 Hartnett from Cooley, LLP, and I represent the
4 plaintiff B.P.J.
5 I will let my co-counsel introduce themselves, 06:10:40
6 starting with my colleagues at Cooley.
7 MR. BARR: Good morning. Andrew Barr from
8 Cooley, LLP, for the plaintiff.
9 MS. VEROFF: Good morning. This is Julie
10 Veroff from Cooley, LLP, for Plaintiff. 06:10:53
11 MS. KANG: Good morning. This is Katelyn Kang
12 from Cooley, LLP, for Plaintiff.
13 MS. PELET DEL TORO: Good morning. This is
14 Valeria Pelet del Toro of Cooley, for Plaintiff.
15 MS. REINHARDT: Good morning. This is 06:11:00
16 Elizabeth Reinhardt at Cooley, for Plaintiff.
17 MS. HELSTROM: Hello. This is Zoe Helstrom
18 from Cooley, LLP, for Plaintiff.
19 COUNSEL SWAMINATHAN: Good morning. This is
20 Sruti Swaminathan from Lambda Legal, for Plaintiff. 06:11:26
21 And I have a paralegal at Lambda, Maia Zelkind, with me
22 as well.
23 MR. BLOCK: Good morning. This is Josh Block
24 from the ACLU, for Plaintiff.
25 MS. DENIKER: Good morning. Susan Deniker 06:11:44

1 from Steptoe & Johnson, PLLC, representing Harrison
2 County Board of Education and Superintendent Dora
3 Stutler.
4 MS. MORGAN: This is Kelly Morgan on behalf of
5 the West Virginia Board of Education and 06:11:58
6 Superintendent Burch.
7 MS. ROGERS: This is Shannon Rogers on behalf
8 of the West Virginia Secondary School Activities
9 Commission.
10 MR. TRYON: This is David Tryon. I'm with the 06:12:12
11 West Virginia attorney general's office, representing
12 the State of West Virginia.
13 MR. BROOKS: This is Roger Brooks with
14 Alliance Defending Freedom, representing the intervenor
15 Lainey Armistead and defending Dr. Levine today in this 06:12:28
16 deposition. With me is my colleague and law clerk,
17 Lawrence Wilkinson.
18 THE VIDEOGRAPHER: Thank you.
19 Will the court reporter please swear in the
20 witness. 06:12:41
21
22 STEPHEN LEVINE,
23 having been administered an oath, was examined and
24 testified as follows:
25

1 EXAMINATION
2 BY MS. HARTNETT:
3 Q Good morning, Dr. Levine.
4 A Good morning.
5 MS. HARTNETT: Before we start, I'm just going 06:13:01
6 to put a housekeeping matter on the record that the
7 attorneys discussed before we went on the record and
8 that is that objection to form preserves all objections
9 other than privilege and that the parties will make an
10 effort to use "form," "scope" and "terminology" as the 06:13:13
11 shorthand objections. In addition, an objection by one
12 defendant is an objection for all defendants.
13 Could any counsel for the defense let me know
14 if they have any disagreement with that?
15 MR. BROOKS: We have agreed, in fact. 06:13:30
16 MS. HARTNETT: Thank you very much.
17 BY MS. HARTNETT:
18 Q So again, my name is Kathleen Hartnett, and
19 I'm with the law firm called Cooley, LLP.
20 Can you hear me okay? 06:13:41
21 A I do. At this point, yes.
22 Q Okay. Please let me know if that changes.
23 I use she/her pronouns.
24 Would you please state and spell your name for
25 the record. 06:13:53

1 A Stephen Barrett Levine, S-T-E-P-H-E-N
2 B-A-R-R-E-T-T L-E-V-I-N-E.
3 Q And what pronouns do you use?
4 A He/him.
5 Q Thank you. Dr. Levine, you've been deposed 06:14:07
6 many times before; correct?
7 A Yes.
8 Q Was the most recent deposition that you gave
9 in September of last year, 2021?
10 A No. 06:14:21
11 Q What was the most recent deposition that you
12 gave?
13 A In -- within the last month, I was deposed in
14 a Connectica- -- a Connecticut case involving a
15 transgender prisoner. 06:14:41
16 Q Do you know the name of that case?
17 A Probably Clark versus the department of
18 corrections in Connecticut. Connecticut Department of
19 Corrections (sic).
20 Q Okay. And what was your -- the nature of your 06:15:01
21 testimony in that Connecticut case, this recent
22 deposition that you gave?
23 A Well, I provided a psychiatric evaluation of
24 the patient and made recommendations. It -- it was --
25 I'm hesitating because -- I provided a thorough 06:15:28

1 psychiatric evaluation of the developmental history and
2 the in prison history of the patient and the -- the
3 psychology of his new transgender identity.
4 Q And you say "new transgender identity."
5 Was the new identity of -- male or female? 06:16:02
6 A The -- the new identity as a transgender
7 woman.
8 MR. BROOKS: And -- and, Counsel, I will
9 caution that obviously any detail about a psychiatric
10 evaluation of an individual prisoner is a matter 06:16:18
11 covered by confidentiality that Dr. Levine is not free
12 to get into detail about.
13 MS. HARTNETT: I hear you. I -- this is not a
14 disclosed matter on his CV and is a recent deposition,
15 so we'll have to just determine whether we need more 09:16:23
16 information, but thank you.
17 BY MS. HARTNETT:
18 Q Could you let me know what -- without giving
19 any personal identifying -- or, I guess, any more
20 detail than you believe appropriate, could you tell me 09:16:33
21 what the nature of any recommendations you made were in
22 that matter?
23 A My recommendations were to provide a pathway
24 towards further evaluation so that eventually a
25 decision could be made about whether sex reassignment 09:16:56

1 surgery would be appropriate.
2 The -- the reason I'm hesitating is that that
3 really did not come to be the subject of the
4 deposition. The subject of the deposition really was
5 the contents of my evaluation, which was done two years 09:17:24
6 before, and -- so lots of things had happened in the
7 two years since I saw the patient or interviewed the
8 patient and -- so I was not able to make
9 recommendations based on current knowledge of the
10 patient, and so I did not. 09:17:43
11 Q And was the -- prior to this recent deposition
12 in Clark, was the most recent deposition before that
13 the deposition in September of last year?
14 A Yes.
15 Q Thank you. And I'm asking that by way of 09:18:03
16 introduction just because I want to make sure we're on
17 the same page about the ground rules for the
18 deposition, and it sounds like you've been through this
19 before, but I'll just let you know my basic ground
20 rules and make sure we're on the same page. 09:18:18
21 So I will ask questions, and you must answer
22 the questions unless your counsel instructs you not to
23 answer.
24 Do you understand that?
25 A I do. 09:18:26

1 Q And if your counsel objects, you'll still need
2 to answer my question unless you've been instructed not
3 to answer.
4 Do you understand that?
5 A I do. 09:18:35
6 Q If you don't answer (sic) my question, could
7 you please let me know, and I'll be happy to try to
8 rephrase it or make it clear for you?
9 Does that make sense?
10 A I'll try to remember. 09:18:48
11 Q And if you answer, I will assume you
12 understood the question.
13 Do you understand that?
14 A Yes.
15 Q I'm going to ty -- try to take a break every 09:19:00
16 hour or so. If you need a break at a different time,
17 please let me know.
18 Do you understand that?
19 A I understand.
20 Q And if I've asked a question, you'll need to 09:19:11
21 provide an answer before we take a break.
22 Do you also understand that?
23 A I do.
24 Q I will do my best not to speak over you -- and
25 please use verbal answers so the court reporter can 09:19:25

1 transcribe your answers. Nodding or shaking your head
2 can't be captured on the transcript.
3 Do you understand that?
4 A I do, but I can guarantee you you'll have to
5 remind me of that. 09:19:36
6 Q Well, you may have to do the same for me, but
7 we'll try.
8 I also just want to explain what I'm going to
9 mean when I use a couple of terms today.
10 For purposes of this deposition, when I say 09:19:51
11 "cisgender," I will mean someone who's gender identity
12 matches the sex that was recorded for that person at
13 birth.
14 Do you understand that?
15 A Yes. 09:20:02
16 Q And then when I say the word "transgender," I
17 will mean someone whose gender identity does not match
18 the sex for which was recorded at birth.
19 Do you understand that?
20 A Yes. 09:20:13
21 Q And when I say "B.P.J.," I'm referring to the
22 plaintiff in this case.
23 Do you understand that?
24 A Yes.
25 Q Do you understand that you are testifying 09:20:21

1 under oath today just as if you were testifying in
2 court?
3 A Yes.
4 Q Is there anything that would prevent you from
5 testifying truthfully today? 09:20:32
6 A No.
7 Q Are you taking any medication that would
8 affect your ability to give truthful testimony?
9 A Well, I took a sleeping pill last night, but I
10 feel reasonably alert today. 09:20:48
11 Q Okay. So you don't -- you don't have a belief
12 that that medication you took last night will affect
13 your ability to give truthful testimony today?
14 A I -- I don't think it will.
15 Q Do you know what case you're being deposed in 09:21:06
16 today?
17 A Well, I -- yes.
18 Q What case is that?
19 A B.P.J. versus Department of Education.
20 Q And do you know what jurisdiction this case is 09:21:19
21 from?
22 A West Virginia.
23 Q And do you have -- sorry.
24 Do you have an understanding of the issue
25 presented by this case? 09:21:35

1 A I have an understanding. I'm not sure it is
2 the correct understanding, but I do have an
3 understanding.
4 Q Understood. What is your understanding of
5 this case? 09:21:47
6 A The plaintiff and next friend and mother wish
7 the young person to be able to compete in athletics
8 according to their current gender identity and
9 apparently the State Board of Education is --
10 disagrees. 09:22:13
11 Q Okay. Thank you.
12 So we already touched on that you had been
13 deposed previously. I just want to ask you about a
14 couple of specific depositions you gave to see if you
15 recall those? 09:22:29
16 There was a matter in North Carolina called
17 Kadel that you gave a deposition in September of 2021
18 regarding state employee healthcare.
19 Do you recall giving that deposition?
20 A Would you repeat -- regarding what? I didn't 09:22:41
21 hear that last phrase.
22 Q I'll try to speak more slowly.
23 That was regarding -- so let me just start
24 that one again.
25 So do you recall giving a deposition in a 09:22:51

1 North Carolina matter called Kadel in September of 2021
2 regarding state employee healthcare?
3 A Yes.
4 Q Do you recall giving a deposition in a Florida
5 case in December of 2020 called "Claire"? That was 09:23:07
6 also about state employee healthcare.
7 A Yes.
8 Q There also was a case called Keohane in
9 Florida where you gave a deposition in 2017 and that
10 was a prisoner case. 09:23:21
11 Do you recall that?
12 A Yes.
13 Q Did you give true and correct testimony in
14 those depositions?
15 A Yes. 09:23:31
16 Q Have you always given true and correct
17 testimony in your depositions?
18 A To the best of my knowledge, yes.
19 Q Thank you. And you've had depositions in
20 cases involving prisoners who were seeking care for 09:23:45
21 gender dysphoria; is that correct?
22 A Yes.
23 Q Have you ever testified in favor of a prisoner
24 who was seeking medical care for gender dysphoria?
25 A Yes. 09:23:59

1 Q Can you describe those instances where you've
2 testified in favor of a prisoner seeking medical care
3 for gender dysphoria?
4 A In the last case involving a prisoner by the
5 name of Soneeya, S-O-N-E-E-Y-A, I recommended transfer 09:24:14
6 to a female prisoner and -- sorry -- transfer to a
7 female prison and the opportunity to have sex
8 reassignment surgery if, after a year of adaptation
9 there, there were no significant decompensations or
10 problems. 09:24:44
11 Q And do you remember what year you made that
12 recommendation?
13 A I think it was 2019.
14 Q Okay. And can you -- are you aware of any
15 other examples of you having testified in favor of a 09:25:05
16 prisoner seeking medical care for gender dysphoria?
17 A I'm hesitating because medical care includes
18 many things. And so the answer is yes. It involves
19 accommodations to their current gender identity in
20 terms of canteen items, for example, and it includes 09:25:35
21 the prescription of cross gender -- cross-sex hormones.
22 So I've been involved in the provision of those kind of
23 things repeatedly over the years for prisoners.
24 Q Have you ever, other than in the Soneeya
25 matter, recommended that a prisoner -- sorry -- 09:26:04

1 testified that a prisoner should receive gender
2 confirmation surgery?
3 A I'm hesitating to answer the question because
4 it's about testimony. In my work as consultant, I have
5 repeatedly recommended both surgery and, more -- more 09:26:25
6 commonly, hormone treatment, electrolysis treatment,
7 canteen item treatment. Most of -- the vast majority
8 of these cases never come to trial.
9 Q When is the last time that you recommended
10 that a pres- -- a prisoner should have hormone 09:26:46
11 treatment?
12 A It would have been the third Thursday in
13 March, this year.
14 Q And where is that prisoner located?
15 A Massachusetts. 09:27:06
16 Q Can you estimate how many prisoners you've
17 given a recommendation about through the course of your
18 career?
19 A That would be very difficult. I've been the
20 consultant to the department of corrections gender 09:27:30
21 identity committee since, I think, 2008 and every month
22 since that time, with less than one handful of
23 exceptions, I've been present at discussions, and we've
24 recommended accommodations in prison to people who
25 declare identity as a trans woman. And I would say 09:27:58

1 probably, and I ask you not to hold me to this number,
2 40 times.
3 Q Sorry, 40 times describes what?
4 A That -- that I've joined a group of people who
5 decided to provide electrolysis, canteen item -- 09:28:25
6 special privileges for canteen items, that is, female
7 canteen items, the ability to shower alone, the ability
8 to be tapped down or searched by a female attendant,
9 not a male attendant, a correction officer, hormone --
10 the beginning of hormone treatment and -- and, of 09:28:52
11 course, bilateral mastectomies and -- and on several
12 occasions, male gender confirming surgery for biologic
13 males who are living as trans women. In other words,
14 the whole gamete of services.
15 Q So 40 times you've recommended something -- or 09:29:19
16 joined in a recommendation for something for -- a
17 prisoner to receive medical care, as you've broadly
18 described that term?
19 A Yes.
20 Q And then how many times can you estimate where 09:29:34
21 you had made a recommendation that the prisoner should
22 not receive medal care, as you've broadly defined it?
23 A I don't think I've ever recommended that no
24 treatment be offered to this person. The -- the --
25 because the treatment involves that entire array of 09:30:07

1 matters that I just delineated.
2 And so prisons -- or at least Massachusetts,
3 where I work as a consultant, has been very --
4 eventually, by 2008, has been -- have been very
5 interested in providing individual services to -- to 09:30:26
6 help these people diminish their pain about their
7 incongruence, and I have been one of the people who
8 devised the program.
9 Q The prisoner that you reco- -- you
10 recommended -- sorry -- that you were referring earlier 09:30:49
11 to, the one in the Clark matter, do you recall us
12 discussing that?
13 A I do.
14 Q And that person identifies as female; correct?
15 A Yes. 09:31:00
16 Q Do you view that person as a female?
17 A I view that person as a trans woman.
18 Q You have just testified that you've never
19 recommended that a -- no treatment be offered to a
20 prisoner for gender dysphoria; is that correct? 09:31:22
21 A I'm hesitating because "no treatment"
22 includes -- would include all of the above, of the
23 array I previously listed, and at this moment, I don't
24 recall ever saying no treatment should be given to this
25 individual, no accommodation should be given to this 09:31:47

1 individual.
2 Q Do you recall if you've ever recommended that
3 no surgery be permitted for an individual in prison?
4 A Oh, yes, I have. I have said that I didn't
5 think sex reassignment surgery -- in those days, that's 09:32:06
6 what we called it, but it's now called gender
7 confirming surgery -- I have said I did not think
8 sex -- that kind of surgery was indicated or
9 necessary -- medically necessary.
10 Q And so how many times did you say that surgery 09:32:26
11 was medically necessary?
12 A Would you repeat that, please.
13 Q How many times did you say that surgery was
14 medically necessary for a prisoner?
15 MR. BROOKS: Objection; ambiguous. 09:32:45
16 THE WITNESS: You may or may not know that I
17 do not like the term "medically necessary." I prefer
18 to use the term "would be psychologically beneficial to
19 this person." So that's the reason I'm hesitating
20 answering your question. 09:33:12
21 I generally avoid using the term "medical
22 necessity." Instead, I try to make a determination
23 whether I think, in the -- in the long run, this
24 particular intervention that we're talking about would
25 be psychologically beneficial to the patient. 09:33:29

1 BY MS. HARTNETT:
2 Q My question is whether you've ever recommended
3 any gender confirming surgery as medically necessary
4 for a prisoner.
5 A Yes, I -- I have signed my name to such 09:33:47
6 documents, such recommendations, because where I work,
7 in Massachusetts, this is the way that the -- most of
8 the staff and -- and -- that -- that is the common term
9 used to -- to justify that kind of intervention.
10 Q How many times have you signed your name to 09:34:10
11 that kind of intervention for a prisoner?
12 A Perhaps five times.
13 Q And you referenced the Soneeya matter;
14 correct?
15 A Correct. 09:34:38
16 Q And years earlier than the 2019 recommendation
17 that you just described, you testified against surgery
18 for that prisoner; correct?
19 A That is not correct.
20 Q What's not correct about that? 09:34:50
21 A That I did not testify -- I did not testify
22 against sex reassignment surgery.
23 Q Did you testify against something earlier in
24 that matter?
25 A I testified the recommendation to -- to have 09:35:05

1 what the judge called a soft landing, like first
2 transferring the person to a female facility, and then,
3 based upon her adaptation there, to have sex
4 reassignment surgery.
5 In fact, that was really -- the issue was not 09:35:29
6 whether the person should eventually have sex
7 reassignment surgery, but -- but whether it should be
8 done before transfer to the female facility or after
9 transfer.
10 Q Did that prisoner seek sex reassignment 09:35:46
11 surgery before transfer?
12 A Please repeat that.
13 Q Did that prisoner seek sex reassignment
14 surgery before transfer?
15 A She did until we presented this idea to her, 09:36:04
16 and she jumped at the idea. She thought it was a very
17 good idea when we interviewed her. And by the time
18 this case got to court, her attorneys were arguing for
19 immediate sex reassignment surgery. But --
20 Q So she -- by the time you were -- oh, pardon 09:36:27
21 me. Please complete your answer.
22 A So we were aware that, because we were in the
23 room when we -- I discussed this with her, she was very
24 happy with the idea of transfer with the -- because she
25 was very positive that she would have a fine adaptation 09:36:41

1 among women prisoners, and she was delighted.
2 And then months later, when this came to
3 trial, the -- her attorney arg- -- was arguing against
4 that.
5 Q So you testified against her wishes as 09:37:05
6 expressed by her attorney at trial; correct?
7 A I never conceived that I was testifying
8 against Soneeya. You may do that, but I -- that's not
9 my concept.
10 Q In the cases where you've given testimony 09:37:24
11 about employee healthcare coverage, you were testifying
12 against the employee healthcare coverage for gender
13 dysphoria; correct?
14 A Incorrect.
15 Q What's incorrect about that? 09:37:38
16 A What I was testifying to is my understanding
17 of the state of science. I was not taking a stand that
18 people should not have healthcare coverage. I was
19 trying to inform the Court about what we knew about
20 this subject and what we don't know about this subject. 09:37:58
21 I didn't take a position that -- that I knew
22 what should be done. I was just here as a -- to offer
23 what I understood about the state of science, about
24 various aspects of surgical and medical and
25 psychological care for the trans population. 09:38:18

1 Q Are you aware in the Kadel and the Claire
2 matters -- those are the North Carolina and Florida
3 employee healthcare coverage matters -- your testimony
4 was submitted by the defendants in that case against
5 the relief being sought? Are you aware of that? 09:38:37
6 A I was aware that -- who employed me and what
7 their purposes were, but -- but I was not enjoining
8 psychologically with the idea that I was doing anything
9 but offering the Court what I hope to be an objective
10 appraisal of the state of knowledge based upon 09:39:01
11 literature and, you know, participation in trans care
12 over the years.
13 Q So were you, in those two matters, agnostic as
14 to whether the employees received the healthcare
15 coverage or not? 09:39:21
16 A Agnostic?
17 Q That you didn't have a view.
18 A Would you -- would you mind explaining that
19 term? I'm -- I usually understand that in terms of
20 religious notions. 09:39:34
21 Q That you did not have a view -- in those
22 cases, Kadel and Claire, is it fair to say you did not
23 have a view as to whether the healthcare coverage
24 should be extended or not?
25 A I felt insufficient to make a societal 09:39:47

1 decision. I'm not an expert in the insurance industry
2 at all. I -- I am certainly not an expert in the
3 political processes in any particular state. The
4 only -- the only knowledge base that I feel I have
5 comes from the study of the literature and the 09:40:05
6 participation in trans care, both in the community and
7 in prison systems.
8 And so the fact that the State used my
9 testimony does not really equate, in my mind, with my
10 position on whether or not people should have 09:40:31
11 healthcare insurance.
12 I -- again, to repeat, my understanding is I
13 am somewhat knowledgeable about the state of science in
14 this area and that the various people on law -- on the
15 side of -- in -- in -- in judicial issues -- judicial 09:40:48
16 matter want somebody who can articulate the state of --
17 of knowledge. And that's what I do.
18 The state of knowledge should be applied, in
19 my view, to both sides of the issue, not just, you
20 know, the State or the Board of Education. It should 09:41:09
21 be -- it should be established -- it should be relevant
22 to the plaintiff's side.
23 Q Were you paid by the State in the
24 North Carolina and the Florida matters for your
25 testimony? 09:41:27

1 A Ultimately, I think I was paid by the State,
2 but the check did not come from the State. The check
3 came from the lawyer who employed me.
4 Q Understood. Have you ever provided testimony
5 with your -- what you've described as your expertise in 09:41:46
6 favor of -- on the side of extending the healthcare
7 coverage to tran- -- to people seeking care for gender
8 dysphoria?
9 A No attorney representing that side of the
10 issue has ever hired me, but if they would, I would be 09:42:03
11 happy to present my knowledge or -- to, and they can do
12 what they want with that testimony.
13 Q You were deposed in at least one child custody
14 matter in Texas where a child wanted to transition; is
15 that correct? 09:42:26
16 A I was.
17 Q And you testified in trial at that matter,
18 too?
19 A I did.
20 Q And was your testimony in that case in 09:42:37
21 opposition to the desired transition?
22 A The testimony in that case was to present the
23 state of knowledge about this matter. I did not take a
24 position that a child should or should not have a
25 particular treatment. I was just informing the Court, 09:42:56

1 as I previously described to you. I thought I was a
2 witness about the nature of knowledge about trans
3 children.
4 THE WITNESS: Could you get me some water,
5 please. 09:43:16
6 BY MS. HARTNETT:
7 Q Sorry, is your testimony that you, in that
8 case, in the -- this is the Younger matter; is that
9 correct?
10 A Yes. That's what I understand you to be 09:43:23
11 referring to.
12 Q And your testi- -- your testimony today is
13 that you were not testifying in opposition to the
14 transition that the child -- of the child in the
15 Younger matter? 09:43:36
16 A I was hired by the lawyer who was representing
17 the father who did not want his son to be transitioned
18 to a little girl, socially. But I was not testifying
19 that the child should not be transitioned. I was
20 testifying -- I had no knowledge of that -- I wasn't 09:44:02
21 asked for that question. That -- that was never asked
22 of me, Ms. Hartnett. What was asked of me was what we
23 knew about this subject. And, therefore, I felt
24 comfortable sharing the state of knowledge and -- and
25 what is missing from our knowledge. 09:44:23

1 Again, it -- it has the appearance that I was
2 testifying against the socialization of the child, but
3 I think if you look closely at that, what I was doing
4 was telling the Court what was known and what was not
5 known and what the consequences were, the implications 09:44:45
6 of treating the child one way versus another.
7 Q So you did not testify in that matter that
8 desistance was preferable to affirmation?
9 A I actually don't recall if I made that
10 statement. It's -- I just don't recall. 09:45:09
11 Q Okay. Has your testimony -- oh, sorry.
12 Have you testified in any other matters of --
13 similar to the Younger matter, in which parents were
14 disputing the proper care of their child who sought
15 care for gender dysphoria? 09:45:37
16 A Yes. There was a case that I believe is
17 sealed in the Tucson court. I don't know if I'm
18 allowed to give the name. I presume I can give the
19 name. I don't know.
20 MR. BROOKS: If -- if it's sealed, I would not 09:45:56
21 give any identifying information.
22 THE WITNESS: But the answer to your question
23 is yes.
24 BY MS. HARTNETT:
25 Q And in that matter, did your -- was your 09:46:05

1 testimony used by the party who was opposing the
2 treatment for gender dysphoria for the child?
3 A In that particular matter, it was the parents,
4 who hired me, who objected to losing custody of their
5 child when the child was hospitalized for a suicide 09:46:38
6 gesture and told the people in the hospital that her
7 evil parents were preventing her, at age 13, from
8 transitioning to being a boy. And her parents --
9 MR. BROOKS: I'm just going to interrupt and
10 caution the witness. I'm not part of that case, but 09:47:03
11 I -- nor do I want Dr. Levine to violate any
12 confidentiality obligations.
13 So as you answer, whatever level of generality
14 you think is appropriate, just be very careful not to
15 disclose information that you believe you received in 09:47:18
16 confidence and that remains confidential given the
17 conduct of that case.
18 So I -- I don't want us in our proceedings to
19 violate any obligations of that proceeding.
20 THE WITNESS: Well, given that, I actually 09:47:35
21 think anything I would say about this would violate the
22 confidentiality rule here, and I think I've told you
23 enough about the case.
24 MS. HARTNETT: Well, I don't want to waste our
25 time on the record discussing this, but we have a right 09:47:51

1 to discovery into your testimony, so we will follow up
2 with counsel to figure how to get it.
3 BY MS. HARTNETT:
4 Q When was this testimony given?
5 A In the spring of 2021. And if I'm wrong, it 09:48:13
6 was in the spring of 2020.
7 Q Thank you. And, sorry, what -- was the
8 testimony given in deposition or trial or some other
9 fashion?
10 A In juvenile court. 09:48:32
11 Q In what form did the testimony take?
12 MR. BROOKS: Objection; vague.
13 BY MS. HARTNETT:
14 Q Just, sorry, meaning written or oral.
15 A Oh, in person? I was in -- I was in person by 09:48:50
16 video, and I was cross-examined, you know.
17 I also submitted a report of the psychiatric
18 evaluation.
19 Q Any other testimony that you've given in a
20 case involving parents and the potential care of a 09:49:13
21 child with gender dysphoria?
22 A I submitted a rebuttal to a report in a case
23 in Cincinnati I think the first week of January of this
24 year. The case is called Siefert, S-I-E-F-O-R-D (sic),
25 or E-R-T, something like that. Siefert versus Hamilton 09:49:49

1 County, which is the Cincinnati county.
2 So that would be the answer to your question.
3 Q And what's the nature of that matter, the
4 Siefert matter?
5 A The -- the child, who was identifying as a 09:50:08
6 trans male, were treated -- the parents were treated
7 during the hospitalization as persona non grata and the
8 hospital refused to discharge the patient even though
9 the patient did not meet criteria for continued
10 hospitalization and -- so the -- the parents were 09:50:46
11 objecting to the loss of parental rights.
12 Subsequently, the child reidentified as a
13 female and -- so I don't know what the outcome has been
14 legally. It's in process.
15 And I just commented on the limitations of 09:51:07
16 the -- another expert who felt that it was justified to
17 keep the child in the hospital against the parents'
18 wishes, for two and a half months.
19 Q In the Tucson matter that you discussed,
20 which, again, we will follow up on, but can you just 09:51:34
21 tell me if that's been resolved? Do you know if that's
22 reached a conclusion?
23 A Yes, that -- the -- the particular judicial
24 issue was -- was resolved. Whether or not the parents
25 are going to continue to sue the -- the child welfare 09:51:56

1 organization, I -- I don't know. I haven't heard -- I
2 haven't had any follow-up on the case since it was
3 adjudi- -- since it was resolved.
4 Q Thank you. Has your testimony ever been
5 excluded by a court? 09:52:18
6 A Yes.
7 Q When?
8 A 2015.
9 Q What matter was that?
10 A It was in the matter of a prisoner named 09:52:33
11 Noseworthy (sic) in California.
12 Q And what is your understanding of how your
13 testimony was excluded?
14 A Well, I didn't actually have testimony. I
15 submitted a psychiatric evaluation and a 09:52:50
16 recommendation, and I was never invited to a -- a
17 courtroom for that.
18 The judge -- I presented, in my written
19 deposition, an account of a female prisoner who had a
20 very extremely negative outcome from genital surgery, 09:53:12
21 and the judge -- the judge thought I was lying about
22 this case, and he also did not think that -- that I
23 followed the Harry -- the WPATH standards of care, and
24 he dismissed my -- without asking me one question,
25 without asking me do I have any evidence to show that I 09:53:39

1 wasn't lying about this case, he -- he dismissed my
2 recommendation.
3 So I'm aware that judges have their -- judges
4 can make mistakes. Because I, in fact, have in my
5 possession the case history, I saved the case history 09:54:01
6 that was presented to me by the California Department
7 of Corrections, and that -- no one seems to know that.
8 Or at least the judge did not inquire about that. I
9 never had a chance to defend myself and -- so that's --
10 that's when my testimony was dismissed. 09:54:24
11 Q Thank you. Is there any other time where your
12 testimony has been excluded by a court?
13 MR. BROOKS: Objection; vague.
14 THE WITNESS: Well, I believe that the impact
15 of that judge in the Noseworthy -- Norsworthy case has 09:54:48
16 influenced two other cases to discredit my position, at
17 least whatever I said on those other cases -- on one
18 other case.
19 One of the cases that -- that my name gets
20 brought up about, I actually never submitted any 09:55:10
21 testimony to, but someone quoted what I had taught in a
22 workshop; and, therefore, the judge dismissed that
23 testimony.
24 You should understand that since that time and
25 even before that time, my testimonies have been 09:55:29

1 accepted by various courts, and -- for example, in the
2 district court of Arizona, in a case involving
3 insurance coverage, the judge quoted my testimony.
4 That -- that was appealed to the Ninth Circuit Court,
5 and the Ninth Circuit Court made -- made a reference 09:55:49
6 to, but did not name my testimony.
7 And so it seems to me that since -- before
8 2015, in that particular case, and subsequent to 2015,
9 my testimony has been accepted by various courts, in
10 various matters involving, you know, trans issues that 09:56:10
11 I am asked to opine about.
12 Q Thank you. Is there any other example you can
13 think of where your testimony has been excluded by a
14 court?
15 MR. BROOKS: Objection, vague. 09:56:37
16 THE WITNESS: Well, I'm aware of the
17 Noseworthy case, the -- the Edmo case, and there's a
18 Hecox case.
19 But again, all these exclusions were
20 objections to my expertise derived from the judge in 09:56:58
21 the Norsworthy case.
22 And the answer to your specific question, I am
23 not aware of any other situation where my testimony was
24 excluded.
25 Q Thank you. For the Noseworthy case, you did 09:57:13

1 submit an expert report; correct?
2 A I -- I -- yes.
3 Q So you understand this case involves sports;
4 correct?
5 A Yes. 09:57:42
6 Q What, if any, prior testimony have you given,
7 whether by declaration or report or oral testimony,
8 about transgender participation in sports?
9 A I believe that both in the Connecticut case
10 and in the Hecox case the expert opinion report that I 09:58:09
11 gave about the state of knowledge in this field has
12 been submitted for the Court's consideration.
13 I am not an expert, as you probably know, in
14 matters of athletics and physiology. I am only
15 providing information that I feel I know about, which 09:58:41
16 is the knowledge and the lack thereof about certain
17 issues related to trans care.
18 So I -- I've never really, as far as I know,
19 as far as I remember, made an opinion about this should
20 happen or this should not happen. I'm just providing 09:59:06
21 information to the courts about what I know and what is
22 not known by society or by science.
23 Q Thank you. So in this case, for example,
24 B.P.J., is it fair to say you do not have an opinion as
25 to whether she should be permitted to play sports? 09:59:25

1 A I do not have an opinion.
2 Q Have you -- setting aside the context of
3 transgender participation in sports, have you ever
4 given any testimony of any kind in a matter related to
5 sports? 09:59:51
6 A I can't think of any.
7 Q Have you given any prior testimony, whether by
8 declaration, report or oral testimony, about
9 prepubertal trans- -- transgender children?
10 MR. BROOKS: Let -- let me ask you to restate 10:00:16
11 that question. Not to rephrase it, necessarily. I
12 just want to hear it back.
13 MS. HARTNETT: Sure.
14 BY MS. HARTNETT:
15 Q Have you given any prior testimony by 10:00:22
16 declaration, report or oral testimony involving
17 prepubertal transgender children?
18 A I'm hesitating because I have written about
19 informed consent and -- and that my writings about
20 informed consent have covered all trans, beginning with 10:01:02
21 prebu -- prepubertal children. But your question is
22 about giving testimony about that. I would imagine
23 that in the Younger I may have raised the issue of --
24 of what we know -- I mean, I did raise tissue of what
25 was known and what is not known. 10:01:38

1 So I would imagine the answer to your question
2 must be yes.
3 And the Arizona case that is sealed is not
4 about a preber -- prepubertal child. But, of course,
5 in taking a history of any child in adolescence, we 10:01:55
6 certainly take histories of their prepubertal period
7 and the behaviors evidenced during that time.
8 So I just find the answer to your -- I'm not
9 actually sure what the answer to your question should
10 be. 10:02:13
11 Q Did the Younger case involve a prepubertal
12 child?
13 A It did.
14 Q And the Arizona case did not involve a
15 preber -- prepubertal child; is that correct? 10:02:26
16 A That's -- that's correct.
17 Q And how about the Cincinnati case you
18 mentioned, was that a prepubertal child?
19 A No.
20 Q Can you think of any other -- and I'm setting 10:02:34
21 aside your nonjudicial work, but any -- any
22 testimony -- and I -- that was my question. Thank you
23 for focusing on that -- but any testimony you've given
24 other than these examples that you consider to be
25 related to prepubertal transgender children? 10:02:57

1 A The key word to your question is "testimony."
2 And so I have played -- I have -- I have offered
3 opinions to lawyers that never rose to the point of
4 testimony. So the --
5 Q And let me be clear. 10:03:25
6 A The answer to your question must be no.
7 Q And for this question, I was just trying to be
8 clear when I said "testimony," whether by written
9 declaration, written report or oral testimony.
10 And so I want to -- just using that 10:03:41
11 understanding of "testimony" for this question, other
12 than the Younger case, have you given any prior
13 testimony regarding a prepubertal -- in a case
14 involving a prepubertal transgender child?
15 A I'm trying to be helpful and -- and 10:03:55
16 informative to your question.
17 I think the -- I think the -- the -- to the
18 best of my knowledge, the answer is no, but people use
19 my knowledge, in my previous publications, and call me
20 sometimes and ask me opinions about matters -- the 10:04:24
21 lawyers, I mean, or guardian ad litem persons -- and --
22 but it's not testimony per se. I guess it would be
23 consultation.
24 Q Thank you. And then just again sticking with
25 testimony, which for this question I'm meaning to be 10:04:52

1 written or oral testimony in a judicial proceeding,
2 have you given any testimony about a case involving a
3 transgender adolescent, other than the Arizona case and
4 the Cincinnati case?
5 A At the moment, I can't think of any. 10:05:21
6 Q And have you -- and this is, again, for the
7 purposes of this questions meaning -- "testimony" to
8 mean written or oral testimony in a judicial
9 proceeding. Have you ever given testimony in support
10 of a transgender party? 10:05:40
11 A In support of a transgender what?
12 Q Party.
13 A Party. Please repeat that question.
14 MS. HARTNETT: Could the reporter read that
15 back. I'm not sure I could do it. 10:05:50
16 (Record read.)
17 THE WITNESS: I guess the key word in your
18 question is "support." And I want you to know that
19 when I testify about the state of knowledge, I actually
20 think that because my perspective is a long-term life 10:06:48
21 cycle perspective, I think of that my knowledge base
22 sometimes suggests that I'm actually being quite
23 supportive in -- in trying to have people understand
24 what the consequences of -- of, quote, affirmative or
25 supportive care actually may mean, what the risks are. 10:07:11

1 So I believe your understanding of the word
2 "support" is different than my understanding of the
3 word "support."
4 But once again, I want to repeat, I
5 conceptualize what I'm doing is accurately stating the 10:07:32
6 state of science, of what is known, what is not known
7 and what we need to do in order to get the answers to
8 the unknown questions. That's what I'm doing.
9 I'm not supporting this or supporting that.
10 I'm not against this. I'm not against that. I'm 10:07:52
11 trying to give an appraisal of what we know, in a
12 scientific sense. Because of the one principles of
13 medical ethics is that science should lead our
14 therapeutics.
15 BY MS. HARTNETT: 10:08:07
16 Q Dr. Levine, you understand that your testimony
17 in this matter has been provided by the State, the
18 defendants, in support of their position; is that
19 correct?
20 A Yes. 10:08:15
21 Q And so when I use the word "in support of," in
22 the context of a judicial proceeding, you understand
23 that your testimony, what has been submitted in these
24 proceedings, is submitted in support of one party or in
25 support of another party; correct? 10:08:36

1 A Yes. But that has to do with legal processes.
2 What -- what I am supporting is to inform the court of
3 what is known and what is not known. If you were to
4 hire me to tell what -- the Court what is known and not
5 known, I think I would be giving the same testimony. 10:08:58
6 Q Let me ask you again, then. Which of -- have
7 you ever previously given written or oral testimony
8 that was submitted in support of the transgender party
9 in a judicial proceeding?
10 MR. BROOKS: Objection. 10:09:16
11 THE WITNESS: You asked that question before,
12 so I'm going to answer it in the same way I answered it
13 before. It depends on your notion or my notion of
14 "support."
15 BY MS. HARTNETT: 10:09:36
16 Q I'm using the notion of "support" that we just
17 discussed, which is -- like, for example, your
18 testimony in this matter is being submitted in support
19 of the defendants. You understand that?
20 A I do. 10:09:44
21 MS. DENIKER: This is Susan Deniker. I just
22 want to place on the record an objection to the form.
23 BY MS. HARTNETT:
24 Q And using that understanding of "support," do
25 you agree with me that you have not previously had your 10:10:00

1 testimony submitted in a judicial proceeding in support
2 of the transgender party; correct?
3 MR. BROOKS: Objection.
4 THE WITNESS: Incorrect. I already told you
5 that I have recommended transfer to a female prison and 10:10:10
6 ultimate sex reassignment surgery and that -- for --
7 for the Soneeya case, and there were -- there was
8 another case -- another prisoner at the same time that
9 we made the same recommendation for.
10 And I've already told you that I have -- I -- 10:10:33
11 I -- I have participated in the support of -- of
12 bilateral mastectomies for female prisoners, but
13 that -- none of those cases have gone to court. So
14 I -- I guess that's not relevant to your question.
15 BY MS. HARTNETT: 10:10:51
16 Q Right. I was asking about whether you've
17 submitted, in a judicial proceeding, an opinion on the
18 side of the transgender party. Have you?
19 MR. BROOKS: Objection.
20 THE WITNESS: I already answered that question 10:11:10
21 three times about Soneeya.
22 BY MS. HARTNETT:
23 Q Can you please answer my question?
24 Have you ever submitted an expert opinion on
25 the side of the transgender party? 10:11:20

1 MR. BROOKS: Objection.
2 THE WITNESS: In your narrative --
3 BY MS. HARTNETT:
4 Q In a --
5 A In your -- 10:11:32
6 Q Sorry, I'm just trying to be really clear
7 since I understand you're disputing the term "support,"
8 which I thought was clear, but I -- I -- I'm listening
9 to you, and now I'm asking you whether, in a judicial
10 proceeding, you've ever submitted testimony on the side 10:11:43
11 of the transgender person, the formal side of the case.
12 MR. BROOKS: Objection. Experts don't
13 themselves submit anything in court.
14 You may answer, if you recall.
15 THE WITNESS: I may answer? 10:12:09
16 MR. BROOKS: If you recall.
17 THE WITNESS: I -- I find myself unable to
18 answer that question.
19 MS. HARTNETT: Okay. I'm going to introduce
20 an exhibit now, so we'll see how this Exhibit Share 10:12:22
21 works for you. Just a moment here.
22 MR. BROOKS: Tell me when you've placed it in
23 the folder, and I will then refresh the folder --
24 MS. HARTNETT: Will do.
25 We're starting with 86. Okay. Just one 10:12:49

1 moment, please.
2 (Exhibit 86 was marked for identification
3 by the court reporter and is attached hereto.)
4 MR. BROOKS: Are you doing all right, or do
5 you want to take a break? 10:13:02
6 THE WITNESS: Well, she said we would have a
7 break in an hour. It's a little over an hour.
8 MR. BROOKS: If you're -- you're about to
9 introduce a document and you're taking a little time to
10 get that straight, let's take a short break. 10:13:07
11 MS. HARTNETT: That works for me. Thank you.
12 MR. BROOKS: All right.
13 THE VIDEOGRAPHER: We're off the record at
14 10:13 a.m.
15 (Recess.) 10:22:57
16 THE VIDEOGRAPHER: We are on the record at
17 10:23 a.m.
18 BY MS. HARTNETT:
19 Q Now, Dr. Levine, you've been retained as an
20 expert witness in this case, B.P.J.; correct? 10:23:20
21 A Correct.
22 Q Who retained you?
23 A Initially, David Tryon.
24 Q And was there someone who retained you after
25 that? 10:23:37

1 A I -- I think David Tryon, in the matter and
2 means that I don't understand, created a liaison with
3 Alliance for Defending Freedom, Mr. Brooks, and then
4 they became -- so then I am -- I've been recruited by
5 both Mr. Tryon and Mr. Brooks, their -- their 10:24:10
6 particular institutions.
7 Q And with respect to Mr. Brooks, he's
8 affiliated with the Alliance for Defending Freedom, is
9 that your understanding?
10 A Yes. 10:24:29
11 Q Have you previously worked with the Alliance
12 for Defending Freedom on any matter?
13 A Yes. I -- I think of it as working with
14 Mr. Brooks.
15 Q And I don't want to -- 10:24:45
16 A Mr. Brooks is associated with the Alliance for
17 Defending Freedom, so I guess the answer to your
18 question is yes.
19 Q When did you first work with Mr. Brooks?
20 A In the Young -- Young -- in the Younger case. 10:24:57
21 Q And that was the Texas matter we discussed?
22 A Yes.
23 Q And I think you testified in your deposition
24 in the Claire matter, that's the Florida case, that you
25 worked with a lawyer from the Alliance Defending 10:25:17

1 Freedom to write your report in Younger; is that right?
2 A In -- the question is a little confusing to me
3 because you brought up the Florida case, and I don't --
4 could you repeat the question and ask me just one
5 question? 10:25:36
6 Q Sure. I was trying to orient you that I
7 understand that you gave a deposition in that Florida
8 matter of Claire; correct?
9 A I did.
10 Q And in that case, you were asked some 10:25:44
11 questions about your report. Do you remember that?
12 A You mean my report in the Younger case?
13 Q Correct.
14 A I don't remember that. I'm not denying it,
15 but I just don't remember that. 10:26:00
16 Q Yeah, was just curious about the kind of
17 genesis of your report in this case, and so what -- I
18 guess what I'll ask you is, is it -- is it fair to say
19 that you worked with a lawyer from the Alliance for
20 Defending Freedom to prepare your report in the Younger 10:26:14
21 matter? Correct?
22 A Yes.
23 Q And then your report in the Claire matter in
24 Florida was derivative of the Younger report; correct?
25 A I don't think that's correct. 10:26:27

1 Q What's not correct about it?
2 A I think the Florida case was about three --
3 the plaintiffs, I think, were three adults. The
4 Younger case was about, as we established before, a
5 very young child. 10:26:53
6 Q Okay. So your testimony is that the report
7 you submitted in the Claire case was not a derivative
8 of the report that was submitted in Younger; is that
9 right?
10 MR. BROOKS: Object to the form. 10:27:06
11 THE WITNESS: It's -- it's very difficult for
12 a person like me to know how my clinical activities and
13 my consulting activities interplay and influence one
14 another.
15 I am a very busy person, doing a lot of 10:27:28
16 different things, and I often think about, in a very
17 pleasing way, how my various activities cross-fertilize
18 my -- and stimulate my views, and what I read in one
19 case for one particular matter may stay with me and
20 help me understand yet another matter. 10:27:48
21 So this cross-fertilization is a very
22 intellectually stimulating process, but it makes me
23 very unable to answer the question about what
24 influenced what. You know, sometimes I read a novel
25 and it influences, I think. 10:28:08

1 But it's hard -- I -- I can't really track,
2 with any degree of certainty, what influences what.
3 Perhaps if you had specific -- more specific
4 questions, I may be able to give you an opinion. But
5 based on what you just said, I -- I -- I'm at a loss to 10:28:29
6 answer it definitively.
7 BY MS. HARTNETT:
8 Q So I think my -- just to be clear for the
9 record, then, you cannot answer definitively whether
10 the report you submitted in the Claire case was a 10:28:44
11 derivative of the report that was done in the Younger
12 case; is that fair?
13 MR. BROOKS: Objection; vague.
14 THE WITNESS: Based on how I currently think
15 at the moment, I think it's correct. 10:28:59
16 BY MS. HARTNETT:
17 Q Sorry, correct that you -- you can't take a
18 view on that?
19 A It is correct that I don't know whether the
20 Younger case influenced my -- a specific -- I mean, 10:29:18
21 I -- I probably wrote many, many pages for the Florida
22 case, and so, you know, maybe there's a sentence or a
23 paragraph or two that, in my mind, was conceptualized
24 in part because of -- of my experience in the Younger
25 case. 10:29:38

1 But at this moment, I cannot tell you
2 definitively this influenced me or this did not
3 influence me.
4 Number one, that was a couple of years ago.
5 Lots of things have happened in my brain in the last 10:29:51
6 couple of years.
7 Q Did any novels affect your expert opinion in
8 this case?
9 A Not that I can think of.
10 Q You mentioned that you first encountered 10:30:03
11 Mr. Brooks on behalf of ADF in the Younger case.
12 Can you tell me how you got connected with him
13 in that matter?
14 A He called me. He had read two papers, I
15 believe, that I had published, and he wanted to talk to 10:30:22
16 me.
17 Q So for this case, B.P.J., what were you asked
18 to do in terms of presenting an expert opinion?
19 A He wanted me to present the state of
20 knowledge, what is known and what is not known, about 10:30:47
21 trans care as a background for this particular case.
22 But he was aware, and -- and I told him very clearly --
23 that he was quite aware. I didn't have to tell him. I
24 just reminded him that I am not an expert in the
25 physiology of estrogen and testosterone blockages for 10:31:11

1 athletic capacities, I'm not an expert in lung volumes
2 and cardiac capacities. And -- and I asked him why --
3 why he would --
4 MR. BROOKS: I'm going to instruct you not to
5 disclose the substance of conversations with your 10:31:28
6 attorneys.
7 THE WITNESS: All right. Thank you.
8 BY MS. HARTNETT:
9 Q Was that a conversation you had before you
10 were retained in this matter, Dr. Levine? 10:31:36
11 A Was that a conversation?
12 MR. BROOKS: Counsel, the -- the witness can
13 answer that question, but any conversations surrounding
14 the retention, I will instruct the witness not to
15 answer. 10:31:53
16 THE WITNESS: I wondered why he needed my
17 testimony in this case. He provided an answer for me.
18 BY MS. HARTNETT:
19 Q Do you view your testimony as relevant to this
20 case? 10:32:07
21 MR. BROOKS: Objection.
22 THE WITNESS: Insofar as you make claims --
23 you -- that your side may make claims that is not --
24 that are not scientifically correct or established, it
25 may very well be relevant. 10:32:29

1 But that is not a question for me to decide.
2 That's a question for lawyers on both sides and for the
3 judge.
4 Again, I'm just -- I'm just -- I just have a
5 certain limited understanding and knowledge which I 10:32:44
6 believe the Court might benefit from having.
7 BY MS. HARTNETT:
8 Q Did you prepare for the deposition today?
9 A Yes.
10 Q What did you do to prepare? 10:33:03
11 And please don't disclose your
12 communications that you had -- the substance of the
13 communications that you had with counsel.
14 A I reread my report Sunday evening. I met with
15 counsel yesterday afternoon. 10:33:17
16 Q How long did you meet for yesterday afternoon?
17 A I'm sorry, how long, did you say?
18 Q Yes, how long did you meet with counsel
19 yesterday afternoon?
20 A Between 1:30 and quarter to 7:00. 10:33:30
21 Q Did you review any documents to prepare for
22 this deposition other than your expert report?
23 MR. BROOKS: And you -- you can answer that
24 question yes or no without identifying specific
25 documents. 10:33:44

1 THE WITNESS: Yes.
2 BY MS. HARTNETT:
3 Q Did you review the rebuttal report of
4 Dr. Safer?
5 MR. BROOKS: I'm going to instruct the witness 10:33:52
6 not to answer questions about what specifically he
7 reviewed with counsel yesterday.
8 MS. HARTNETT: I believe I have a right to
9 know what, if any, additional documents he's reviewed
10 before the deposition other than his report. 10:34:08
11 MR. BROOKS: On the contrary. I believe that
12 selection is my work product. And I stand by my
13 instruction.
14 BY MS. HARTNETT:
15 Q Outside the presence of your counsel, is there 10:34:15
16 anything other than the expert report that you reviewed
17 to -- before your deposition?
18 MR. BROOKS: On your own, outside our session
19 yesterday, did you review anything else in preparation
20 for your deposition? 10:34:32
21 THE WITNESS: No.
22 BY MS. HARTNETT:
23 Q Do any materials other than those cited in
24 your expert report inform your opinion in this matter?
25 MR. BROOKS: Objection. 10:34:49

1 THE WITNESS: As was -- if you have read my
2 curriculum vitae, I have recently published two papers
3 about issues. One is titled the Reflections of a
4 Clinician about the trans -- the care of trans youth
5 that was published in November, in the Archives of 10:35:19
6 Sexual Behavior. And about 16 days ago, a new article
7 appeared online about informed consent, Reconsidering
8 Informed Consent in the Treatment of Trans Children,
9 Adolescents, and Young Adults.
10 And so I can't really separate the processes 10:35:46
11 of writing these papers from, you know, the submission
12 of documents in this particular case.
13 But in a literal answer to your question, did
14 I -- did I review any particular documents in -- in --
15 in preparation for this testimony today, this 10:36:07
16 deposition today? The answer is no. But the process
17 of writing articles is a deep, you know, dive into all
18 kinds of issues and -- so I'm busy with this -- these
19 sub- -- these topic areas.
20 But I guess the answer to your question is no. 10:36:31
21 BY MS. HARTNETT:
22 Q Thank you. And what I need to understand
23 and -- and find a way to get that information from you,
24 notwithstanding your counsel's objection, but he should
25 make any direction he sees fit to make, in -- in your 10:36:46

1 expert report, you refer to certain materials in this
2 case that you had reviewed as a basis for your opinion.
3 Do you recall that?
4 MR. BROOKS: Do you want to direct the
5 witness's attention to what you're referring to? 10:37:03
6 MS. HARTNETT: Yeah, I can do that, I guess.
7 BY MS. HARTNETT:
8 Q You reviewed Dr. Adkins' and Dr. Safer's
9 declarations before you -- as part of your materials
10 that you rely on in your expert report; correct? 10:37:13
11 A Yes.
12 Q And what I'm trying to understand is whether
13 or not you are going to rely on Dr. Adkins' or
14 Dr. Safer's supplemental declarations as part of your
15 expert opinion in this matter. 10:37:29
16 MR. BROOKS: Counsel, let me -- I'll object
17 and, I think, make a suggestion.
18 The -- is your question whether he has
19 considered those rebuttal reports submitted by
20 Dr. Adkins and Safer? Or did you mean something else? 10:37:47
21 MS. HARTNETT: I would like to know if he has
22 reviewed the expert -- supplemental expert report of
23 Dr. Adkins.
24 Will you allow him to answer that question?
25 MR. BROOKS: I will. 10:38:02

1 THE WITNESS: I think at one point I did.
2 BY MS. HARTNETT:
3 Q Do you understand that Dr. Adkins wrote an
4 initial report and then a rebuttal, including to your
5 report? 10:38:13
6 A Yes.
7 Q Have you reviewed Dr. Adkins' rebuttal,
8 including to your report?
9 A Not -- not in preparation for this deposition,
10 no. 10:38:23
11 Q And did you review Dr. Safer's rebuttal
12 declaration in this case, ever?
13 A I think I have. Yes, I --
14 Q And have you --
15 A I -- 10:38:36
16 Q Okay.
17 A I have, yeah.
18 Q And have you reviewed the declaration of
19 Aron Janssen in this matter?
20 A Of Aron who? 10:38:43
21 Q Janssen.
22 A I can't recall that. I may have.
23 Q He's a physician at Chicago Children's
24 Hospital. Is that ringing a bell?
25 A No. 10:39:02

1 Q Okay.
2 A It's ringing a faint bell.
3 Q All right. If you could go into your "Marked
4 Exhibits," there should now be a marked Exhibit 86.
5 MR. BROOKS: I have that on the screen. 10:39:23
6 MS. HARTNETT: Thank you, Roger.
7 And this is a document that starts with the
8 page that says "Exhibit A," and then it goes on to --
9 it's an attached expert declaration.
10 BY MS. HARTNETT: 10:39:38
11 Q Do you see this document, Dr. Levine?
12 A We're scrolling through it here.
13 Expert declaration of Dr. Levine. Robert
14 Ferguson -- Tingley, yeah, okay.
15 Q And so what -- what is this document, if you 10:39:54
16 know?
17 A This is something I submitted several years
18 ago of -- I think it was about an attempt to censor a
19 psychologist who wanted to provide a certain
20 exploration with a patient, and -- and so I was 10:40:19
21 offering an opinion about, I guess, the
22 psychotherapeutic evalua- -- the evaluation of
23 pyscho- -- the psychotherapeutic processes involving
24 patients.
25 Q And just turning to page 2 of this document, 10:40:38

1 do you see it says -- are -- are you on page 2 of the
2 PDF?
3 A Let's see. How do I know that?
4 Q The page after the page that says "Exhibit A."
5 A I -- I'm on the page that is the title page 10:40:54
6 that says, Expert Declaration of Dr. Stephen Levine.
7 Q And, Dr. Levine, the caption of this page says
8 "Expert Declaration of Dr. Stephen B. Levine in Support
9 of Plaintiff's Motion for Preliminary Injunction";
10 correct? 10:41:14
11 A Correct.
12 Q And I know we had some discussion before the
13 break about what the word "support" means. In this
14 case, did you understand that your declaration was
15 being submitted in support of the plaintiff challenging 10:41:25
16 the practice that you were referring to?
17 A I guess I now understand that, yes.
18 Q Okay. And just flashing back to the end of --
19 this is a declaration that was submitted in a matter in
20 court in Washington State. 10:41:46
21 Do you see that?
22 A Yes.
23 Q And then at the -- it's -- you can page
24 through, but it appears that you signed this
25 declaration on May 10th, 2021; is that correct? 10:41:57

1 MR. BROOKS: Well, we'll go to the end and see
2 what we see.
3 THE WITNESS: Let's see. May 2021.
4 BY MS. HARTNETT:
5 Q Okay. And what -- what, if any, additional 10:42:17
6 involvement have you had with the Tingley matter other
7 than submitting this declaration?
8 A I think none.
9 Q Okay. Now, just turning back to the first
10 page or any page, frankly, in this document, you can 10:42:41
11 see there's a caption on the top of the page there.
12 Do you see "Case 2:21-cv-00316"? Do you see
13 that?
14 A Yes.
15 Q And that, I would represent, is the caption 10:42:51
16 for the current case, B.P.J.
17 And this was Exhi- -- this -- this
18 declaration, the version that I put before you, is
19 actually the version that was attached in opposition to
20 plaintiff's motion for preliminary injunction in this 10:43:11
21 case.
22 Did you have an understanding that your
23 declaration from the Washington case was going to be
24 submitted as an attachment in support of the defendants
25 in this matter at the preliminary injunction stage? 10:43:25

1 MR. BROOKS: Objection.
2 THE WITNESS: No.
3 BY MS. HARTNETT:
4 Q Were you asked to -- for permission before the
5 defendants in this case attached your Washington 10:43:44
6 declaration to the opposition to the preliminary
7 injunction motion in this case?
8 A No.
9 Q Do you recall whether you were asked to submit
10 an expert declaration at the preliminary injunction 10:43:58
11 phase of this case?
12 A Would you clarify that question? I'm not
13 exactly sure what you're asking.
14 MS. HARTNETT: Could the reporter read back my
15 question. 10:44:29
16 (Record read.)
17 MR. BROOKS: Objection.
18 THE WITNESS: I don't know what the
19 preliminary injunction phase was. I don't know the --
20 who the implied person who might have asked me. I -- 10:44:38
21 I -- I'm -- I'm a psychiatrist. I am not a -- I'm not
22 very knowledgeable about your -- about the law and the
23 legal processes.
24 So I -- I just can't answer the question
25 because I don't I understand the terms. 10:44:56

1 Perhaps you can simplify the question for me.
2 BY MS. HARTNETT:
3 Q What I'm trying to understand -- and thank you
4 for -- for that.
5 I'm trying to understand whether you are aware 10:45:09
6 that your declaration from the Tingley matter was
7 submitted in opposition to the plaintiff's motion for
8 preliminary injunction in this case.
9 MR. BROOKS: Objection; asked and answered.
10 THE WITNESS: I thought I already answered 10:45:23
11 that question.
12 By MS. HARTNETT:
13 Q Okay. Right. And you said, I think, that you
14 were not aware. And then what I'm asking you is, were
15 you asked to prepare a declaration specifically for 10:45:30
16 this case at the preliminary injunction phase?
17 MR. BROOKS: Objection; asked and answered.
18 THE WITNESS: Again, I don't know the phases
19 of this case. And the preliminary injunction phase
20 is -- I don't understand specifically what that means 10:45:49
21 in terms of the long process of adjudication in this
22 case.
23 I was asked to submit a report for this case,
24 but I was not told it was for a preliminary injunction
25 or what- -- an injunction that's not preliminary. 10:46:05

1 I simply don't know the answer to your
2 question.
3 BY MS. HARTNETT:
4 Q Thank you. When were you retained in this
5 case, B.P.J.? 10:46:15
6 MR. BROOKS: Objection.
7 If you recall.
8 THE WITNESS: I presume it was sometime in
9 2021, but I don't recall the specific date. I -- you
10 know, I could find out, but right now, I -- I -- I 10:46:33
11 can't tell you a specific date. I would presume in the
12 last half of 2021.
13 BY MS. HARTNETT:
14 Q Do you have any objection to your declaration
15 from one case being submitted in another case without 10:46:51
16 your approval?
17 MR. BROOKS: Objection.
18 THE WITNESS: Personally do I have an
19 objection for people using my previous testimony? Yes.
20 I don't -- I don't think that's fair to me because 10:47:06
21 every case is somewhat different. And it feels like
22 it's my work product and that -- but the truth is that
23 I'm naive about the -- about the legal processes, and I
24 think when -- the first time I submitted an expert
25 opinion report, I was shocked that people had read it 10:47:30

1 who weren't involved in the case.
2 So there was this problem with Dr. Levine not
3 being a forensic psychiatrist, just did not understand
4 about what is public and what is not public when it
5 comes to legal documentations. 10:47:51
6 I think I subsequently learned that -- that
7 lots of people read my reports who have nothing to do
8 with the matter at hand because lawyers are looking for
9 experts and precedents and so -- and arguments and so
10 forth. 10:48:12
11 So in a -- in a personal sense, I have some
12 kind of objection to that. It doesn't feel fair to me,
13 but it's also a reflection of my naivety about this --
14 my past naivety about this matter -- about legal
15 matters. 10:48:28
16 BY MS. HARTNETT:
17 Q Thank you. I have added a different --
18 another exhibit that I would like to introduce into the
19 folder, if you could refresh.
20 MR. BROOKS: 87? 10:48:44
21 MS. HARTNETT: That's correct.
22 MR. BROOKS: Shall I open that now?
23 MS. HARTNETT: Yes, if you would.
24 (Exhibit 87 was marked for identification
25 by the court reporter and is attached hereto.) 10:48:48

1 BY MS. HARTNETT:

2 Q And, Dr. Levine, I've marked as Exhibit 87

3 your expert report and declaration in this matter dated

4 February 23rd, '22.

5 Could you please just take a moment to look 10:49:04

6 through the document.

7 MR. BROOKS: Well, Counsel, the document, I

8 think we'll all agree, is perhaps, what, 70-some pages

9 long, plus bibliography.

10 Would you -- what do you mean by asking the 10:49:17

11 witness to look through the document?

12 MS. HARTNETT: I was just giving him the

13 courtesy of making sure he agrees it's his expert

14 report.

15 THE WITNESS: Well, my -- my signature is on 10:49:28

16 the first page.

17 BY MS. HARTNETT:

18 Q Excellent. So what is this document,

19 Dr. Levine?

20 A Well, I believe it is the report that I 10:49:34

21 submitted at the end of February about -- in this

22 matter.

23 Q Okay. And did you prepare this report?

24 A Yes.

25 Q And do you notice that this one has the 10:49:50

1 caption for this case on it, on the first page;
2 correct?
3 A It does, yeah.
4 Q How much time did you spend preparing this
5 report? 10:50:06
6 A I could -- I would say approximately 20 to
7 25 hours. I would say closer to 25 hours.
8 Q And were you -- as a basis for this report,
9 did you use a kind of prior report that you had
10 submitted in a different case? 10:50:35
11 A Yes.
12 Q What was the basis -- like, the prior report
13 that you used as a basis for this report?
14 A Well, as I've told you already, I have
15 provided reports about the nature of what is known and 10:50:51
16 what is not known in a scientific sense about this
17 whole matter and -- so that's just part of my thinking.
18 And one report is a sort of modern refinement of a
19 previous report that -- that is selected, added to or
20 deleted from based upon the relevance to the case in 10:51:22
21 point.
22 So every -- every submission that I have made,
23 in a sense, has contributed to the -- to this current
24 report with the understanding that things have been
25 added and things have been deleted every time that I -- 10:51:44

1 I submit a report for a case.
2 I hope that's an answer to your question.
3 Q Thank you, yes. I guess what I'm trying to
4 get at is was there a particular past report that you
5 used as a template to work from as you made your 10:52:03
6 refinements and edits for this report?
7 A No. That's -- that's -- I think the answer is
8 my -- my -- my knowledge -- my -- I think the answer is
9 to all, all my reports. I guess the answer to your
10 question is no, there's not a particular one, but there 10:52:38
11 are a series of reports, and I sometimes will select
12 from various reports.
13 Well, for example, this -- the -- the simplest
14 thing is if -- in the beginning of the report, when I
15 provide my credentials, for much of that, there is a 10:52:58
16 cut and paste phenomenon and -- and it doesn't much
17 matter which report I cut and paste from, but I only
18 added to it or subtract to it depending on, I think,
19 the relevance.
20 So, for example, if you looked at my report on 10:53:20
21 the North Carolina matter, probably there's much
22 similarity in the beginning of the report.
23 Q Thank you. So this document indicates that
24 the -- at least by my reading of it -- the only
25 documents specific to this case, B.P.J., that you 10:53:39

1 reviewed in preparing your report were the Adkins
2 declaration and the Safer declaration; is that correct?
3 A I think so.
4 Q Are you familiar with the concept of a
5 reasonable degree of scientific certainty? 10:53:57
6 A I hear it as "medical certainty." Is this a
7 reasonable degree -- can you offer this with a
8 reasonable degree of medical certainty, Doctor? And
9 when I've asked what that -- what that meant, I've been
10 told 51 percent certainty. 10:54:17
11 Q Okay. What is your understanding of -- so
12 your understanding of a reasonable degree of medical
13 certainty means 51 percent certainty?
14 A No. I think that's my understanding of the
15 legal definition of medical certainty. My clinical 10:54:35
16 idea and my scientific idea would be very different.
17 I -- I often smile when I think that -- if I'm
18 correct -- that in the legal world, medical certainty
19 refers to 51 percent.
20 Q And what is, in contrast, your clinical 10:54:58
21 standard that you were referring to?
22 A Repeat that, please. What is what?
23 Q The -- I think you were contrasting it with a
24 clinical standard; is that correct?
25 A Right. Oh, clinical or scientific. 10:55:14

1 You know, in -- in science, we have -- in
2 clinician, we have the idea of what is the risk of a
3 false positive and what is the risk of a false
4 negative, and it's a complicated statistical balance
5 between the ability to get it right or to get it wrong. 10:55:31
6 And I am -- I am one who is very humbly
7 impressed by the inability to be certain about things,
8 and I distrust certainty because facts change in
9 medicine.
10 And -- and if I could just tell you a -- an 10:55:52
11 experience that I've had. As a young person, I was
12 interested in becoming a physician, and I went to a
13 premed program at the University of Pittsburgh, and
14 somebody in that program held up Harrison's textbook of
15 medicine, which requires considerable arm strength to 10:56:13
16 lift over your head because it's probably, you know,
17 900 to a thousand pages. And he said, This is what you
18 have to learn when you're in medical school, by the
19 time you graduate medical school. I want to tell you,
20 ladies and gentlemen, that 90 percent of the things in 10:56:33
21 this book are probably not true. They probably will
22 not prove to be true in time. The trouble is I and
23 other people in medicine can't tell which of the
24 10 percent -- which of the facts are correct and which
25 of the facts are not. This is the nature of medical 10:56:48

1 science as it -- and clinical science as it moves
2 forward. We have, at any given time, a set of facts, a
3 set of principles and -- and controversy occurs, people
4 disagree and studies are done, and the facts disappear
5 and new facts take their place. 10:57:12
6 That was my introduction to medical science.
7 And as I've spent most of my -- the majority
8 of my years in this field, I still believe that that
9 little example remains to be -- remains salient and
10 something that all of us need to remember. 10:57:32
11 And so I say to you, 51 percent medical
12 certainty is a joke to me. It -- it -- I always smile.
13 Q Thank you. That -- that's helpful.
14 If we could just go through your CV attached
15 to your report, we can -- I have a few questions on 10:57:52
16 that, and then I'll turn to your report.
17 You'll have to page down a bit. It starts
18 repaginating about page -- after page 81.
19 MR. BROOKS: We are at the beginning of where
20 it says "Brief Introduction," "Curriculum Vita." 10:58:20
21 MS. HARTNETT: Okay. Thank you.
22 BY MS. HARTNETT:
23 Q Dr. Levine, is this your CV?
24 A It is.
25 Q Are you aware of anything, sitting here today, 10:58:27

1 that needs to be updated or corrected?
2 A Probably if you scroll to the end of the
3 articles, article 151 -- publication 151.
4 MR. BROOKS: We're scrolling. We're
5 scrolling. 10:58:51
6 MS. HARTNETT: I think it might be 147.
7 MR. BROOKS: There's a lot. Pardon me. 86.
8 Here we are at -- just before --
9 THE WITNESS: Oh --
10 MR. BROOKS: -- where it says "Book Chapters." 10:59:00
11 THE WITNESS: I'm sorry, 147. 147 is -- I
12 can -- you know, today -- if I were to give you my CV
13 today, I would give you the exact citation of that
14 article.
15 And if we scroll down to the end of the CV, I 10:59:34
16 will show you something else.
17 MR. BROOKS: I'm not sure there's a further
18 question --
19 THE WITNESS: Oh.
20 MR. BROOKS: -- pending. 10:59:46
21 Or is there a question pending?
22 MS. HARTNETT: Well, yeah, I can -- I can ask
23 one.
24 BY MS. HARTNETT:
25 Q So I take it that 147 has now been published. 10:59:51

1 Is that the difference?
2 A Yes.
3 Q Did you -- is there a -- a more updated
4 version of your CV that goes up to 151?
5 A I think last week, I -- I rearranged the 11:00:03
6 numbers and somehow -- I may be -- I may -- I may not
7 be accurate at 151.
8 Q Okay. And then 146 there is what you were
9 talking about earlier, the November piece about the
10 reflections on a clinician's role? 11:00:26
11 A Yes.
12 Q Thank you. And is there anything further on
13 here you'd like to draw my attention to is in need of
14 updating?
15 A I don't know if -- if this -- this thing has 11:00:40
16 a -- this CV has a -- my -- a podcast I participated
17 in. I never -- unlike many of my colleagues, I never
18 put in my CV the talks I give and the -- you know, and
19 now there's this whole thing about podcasts. I -- I
20 gave a -- I didn't -- I was invited to give a podcast 11:01:04
21 recently and -- so I think it's on my CV, but I'm not
22 sure.
23 Q That was in January of this year?
24 A Was it in January? It was -- it was within
25 several months ago, yeah. 11:01:20

1 Q Have you given any podcasts other than the one
2 you gave in January of this year?
3 A The -- the answer to that question is I don't
4 know. I mean, sometimes people come and talk to me
5 and -- and film me on camera and I never know what 11:01:46
6 happens to -- what hap- -- what -- what -- that
7 happens. I never know what happens to it.
8 Q Are you aware of any other -- sorry.
9 A The answer to your question is I'm not aware
10 that I have been in any other podcast, but, you know, 11:02:04
11 you may dig up some other conversation that is -- that
12 I've had somewhere along the line.
13 Q Thank you. If we could just turn back to the
14 first page of your CV, I would appreciate it.
15 Let me know when you're there. 11:02:26
16 MR. BROOKS: Yeah. We're there.
17 MS. HARTNETT: Okay.
18 BY MS. HARTNETT:
19 Q So on page 1, it notes that you are -- board
20 certified in -- in June of 1976; correct? 11:02:39
21 A Yes.
22 Q In neurology and psychiatry; is that correct?
23 A That's the name of the board that
24 psychiatrists get certified in. It's a little bit of a
25 joke that I'm -- that any psychiatrist is certified as 11:02:59

1 a neurologist.
2 Q Have you been recertified with that
3 certification?
4 A No. I don't need to be. I'm grandfathered
5 in, as they say. 11:03:13
6 Q Thank you. Do you have any other board
7 certifications?
8 A No.
9 Q So you are not board certified in child and
10 adolescent psychiatry; correct? 11:03:27
11 A No, I'm not board certified.
12 Q Do you have any specialized training in child
13 development?
14 A Yes.
15 Q Can you describe that? 11:03:36
16 A I'm a psychiatrist. All psychiatrists are
17 trained in child development. I, in particular, have
18 been interested in the whole process of adult -- of --
19 of development throughout the life cycle and have -- I
20 think I quoted in my expert opinion report that 11:03:57
21 Tom Insel, who was the head of the NIH, NIMH, said that
22 75 percent of adult psychopathology, that is, suffering
23 as a result of mental disorders, have their origins in
24 childhood.
25 So it's hard for me to conceive that any -- 11:04:16

1 any -- any psychiatrist is not knowledgeable about the
2 processes of growing from birth to death. And I, in
3 particular, am interested in that process. I often say
4 to my -- to other people that I -- development is my
5 field. In fact, when -- when people talk about 11:04:40
6 psychoanalysis and psychodynamic psychiatry, I like to
7 rephrase those terms as developmental psychology.
8 Q Thank you. I just -- my -- my question,
9 though, was whether you have any specialized training
10 in child development. 11:04:57
11 Do you have any specialized training?
12 A Well, of course, I rotated through child
13 psychology when I was a resident. For the purpose- --
14 Q Anything else?
15 A For the purposes of questioning my expertise, 11:05:12
16 I have no specialized credentialed, certificated
17 training in child psychi- -- in -- in child
18 development.
19 However, what I'm saying to you is that my
20 understanding of being a psychiatrist and listening to 11:05:27
21 people's stories about their development all day long,
22 I don't need a special certificate to testify that I am
23 trained in -- in -- in child, adolescent, young adult,
24 middle-aged and older-aged development.
25 Q And would the answer be the same if I asked 11:05:49

1 you whether you had any specialized training in -- in
2 children or adolescents with gender dysphoria?
3 A Specialized training? I was in on the ground
4 floor of these things when there was no specialized
5 training. I was part of the -- I was part of the 11:06:12
6 process that was trying to figure out what this all was
7 about, you see. And --
8 THE WITNESS: Sorry.
9 -- I very much object to that term
10 "specialized training" because I have an understanding 11:06:30
11 of what that really -- the connotation of that term is,
12 and I don't accept that -- the legitimacy of
13 specialized training.
14 I feel what you may mean is indoctrination
15 training. I'm -- I like to distinguish between 11:06:50
16 indoctrination and education.
17 BY MS. HARTNETT:
18 Q Are you an endocrinologist?
19 Are you an endocrinologist?
20 A No. 11:07:17
21 Q And you would not hold yourself out as an
22 expert in endocrinology; correct?
23 A I'm not an expert in endocrinology.
24 Q And are you an expert in sports medicine?
25 A No, I'm not an expert in sports medicine. 11:07:33

1 Q Are you an expert in athletic performances?
2 A I've already testified to that. The answer is
3 no.
4 Q Yeah, I'm asking because I think your attorney
5 at some point indicated that might be part of your 11:07:44
6 privileged conversation. That's why I'm asking you
7 again.
8 Do you have any -- have you ever had any
9 complaints made against you related to your medical
10 practice? 11:07:56
11 A Yes.
12 Q Could you tell me about those?
13 A Yes. We had a trans adult who wanted
14 hormones, and I was supervising a psychology intern,
15 and the -- we decided the person was mentally unstable 11:08:17
16 and was not in a position to be given hormones just
17 yet, and the patient threatened to murder the
18 psychology intern who told her that -- who told the
19 patient that answer.
20 And I -- when she told me that, I went in and 11:08:36
21 I saw the patient, and I told the -- and I discharged
22 the patient. And I said that patients have obligations
23 and doctors have obligations and you have justified the
24 rule, you have crossed over the line, and I cannot
25 allow you to continue to get care here. 11:08:59

1 The patient then left and then reported me to
2 the State Medical Board, and the State Medical Board
3 investigated and -- and found -- and found that I was
4 perfectly justified in what I did.
5 That is the only awareness that I have of -- 11:09:21
6 of complaints to the State Medical Board about my work.
7 Q Thank you. Just back to the point, we -- we
8 were discussing the notion of specialized training a
9 minute ago.
10 Do you recall that? 11:09:40
11 A I recall.
12 Q So do you -- do you accept the legitimacy of
13 the notion of specialized training in child and
14 adolescent psychiatry?
15 A For people who are interested in having a more 11:09:58
16 extensive experience and plan to spend their lives with
17 young -- young people only or primarily, I think it's a
18 fine thing to -- to -- to -- it's just one of the many
19 houses in the big -- in the mansion of medicine and one
20 of the -- one of the subspecialties in psychiatry. I 11:10:20
21 have no objection to people becoming child and
22 adolescent psychiatrists.
23 Q And just to be clear, that's not a specialty
24 of yours; correct?
25 MR. BROOKS: Objection. 11:10:40

1 THE WITNESS: It's not formally. I -- I don't
2 define myself as a board-certified child and adolescent
3 psychiatrist, but I do define myself as a psychiatrist.
4 And as -- as I've already stated, I believe
5 that psychiatrists, over the -- during the course of 11:10:51
6 their training and -- that is, their initial education
7 and their subsequent life education, practicing
8 psychiatry, comes to understand or should come to
9 understand the influence of childhood positive and
10 negative experiences on their subsequent mental life 11:11:09
11 and behavioral life.
12 BY MS. HARTNETT:
13 Q In your mind, are the concepts of having an
14 understanding of child psychology and actually working
15 with child patients distinct notions? 11:11:25
16 A Well, I think they're -- they are to be
17 separated. One's -- one's theoretical understanding of
18 the processes of development, the stages of development
19 and understanding childhood adversities that -- that we
20 hear about all the time from adolescents and from 11:11:49
21 adults, that's different than actually, you know,
22 seeing five-year-old children or six-year-old children.
23 So I make a distinction between that, sure.
24 Q And how much of your practice throughout your
25 career has involved actually seeing children or 11:12:12

1 adolescent patients?
2 A Well, I -- I spend a lot of time with
3 adolescent patients, and I spend much less time with --
4 with children per se. I spend an enormous amount of
5 time talking about children to their parents. I mean, 11:12:30
6 conversations about childhood are about the -- my -- my
7 older patients, about their childhood, and the parents
8 that I see about their children's processes, that's
9 a -- I would say a daily occurrence in my practice.
10 Q How many child patients have you had in your 11:12:56
11 career?
12 MR. BROOKS: Objection; vague.
13 THE WITNESS: I -- I would have a very hard
14 time answering that question. I've had -- you know,
15 when -- when parents talk to me about their children, 11:13:26
16 for insurance purposes, the patient is the mother or
17 father or both; right? But the subject of our
18 conversation is the child.
19 So I don't know -- you see, and one of the
20 therapeutic activities that I do, I call "parent 11:13:47
21 guidance." And so parent guidance involves the focus
22 on the child's environment and how to improve the
23 child's anxiety problems or whatever, you see.
24 So I don't know if I -- if that constitutes
25 how many children. Can I answer that question in terms 11:14:08

1 of parent guidance?
2 I have a pediatrician, for example, as an
3 adult patient now, and he and I have spent a lot of
4 time talking about his daughter and -- and some of the
5 things I've said to him have really helped his daughter 11:14:25
6 overcome a problem. But he's my patient, you see.
7 I don't -- so I can't answer your question
8 with numerical terms and --
9 BY MS. HARTNETT:
10 Q Children can be patients; correct? 11:14:39
11 A Children can be patients, certainly.
12 Q And so I'm just asking you how many actual
13 children patients you've had over your career, if you
14 could estimate that.
15 MR. BROOKS: Objection; vague as to the term 11:14:51
16 "children."
17 THE WITNESS: Can you clarify whether -- what
18 a child is versus what a teenager is?
19 BY MS. HARTNETT:
20 Q Yeah, I'll ask you for two categories. 11:15:04
21 I'll ask you for prepubertal children.
22 How many prepubertal children have you had as
23 a patient in your career, approximately?
24 A And if I saw that prepubertal child one time,
25 would that -- would that constitute a patient? 11:15:20

1 Q Why don't you give me your estimate of how
2 many prepubertal children you've ever seen as patients,
3 and then we can ask more questions.
4 A I would say a handful. Six.
5 Q And how many of those -- of those 11:15:35
6 approximately six did you see more than one time?
7 A I can't recall one.
8 Q And then I'll ask the same question about
9 adolescents, which I'll mean minors from puberty
10 through being a minor. 11:16:00
11 How many adolescent patients have you had in
12 your career, approximately?
13 A 50.
14 Q And how many of those have you seen more than
15 once? 11:16:14
16 A Most.
17 Q And were most of those, of the adolescent
18 patients you've seen, late adolescence?
19 A No.
20 Q Turning back to your CV, you list yourself -- 11:16:27
21 you're listed as a clinical professor at Case Western
22 Reserve University School of Medicine; correct?
23 A Yes.
24 Q Do you work at Case Western Reserve University
25 School of Medicine full-time? 11:16:51

1 A No. No.
2 Q When did you stop working full-time?
3 A In 19- -- November 1992.
4 Q Are you currently teaching any classes at
5 Case Western? 11:17:09
6 A I've never taught classes per se. That's not
7 how my teaching has ever been. If you think about a
8 college course, I have never -- I don't teach college
9 courses or graduate school courses. I provide seminars
10 sometimes. I've written articles about the sex 11:17:32
11 education of doctors and -- so over the years, I've
12 taught a number of seminars to our residents in
13 psychiatry. I teach -- I give workshops.
14 I recently, for example, gave a
15 four-hour work- -- a four-hour workshop at the Harvard 11:17:59
16 student health service for their mental health
17 professionals where I presented, you know, ideas to
18 them, and we had discussions.
19 So I teach -- I teach sometimes by giving
20 grand rounds. I -- there -- there is a named 11:18:20
21 lectureship in my honor at Case Western Reserve, and
22 once a year, I invite someone to give a talk from
23 another university about some sexual topic.
24 So I have residents who come to spend --
25 for -- I can't -- for probably -- probably -- since 11:18:44

1 1992, 1993, I've always had a resident with me who
2 comes and sees my patients with me, and they usually
3 spend six months with me, sitting in and seeing my
4 patients together.
5 So my teaching is not in the classic sense 11:19:03
6 that -- that the average layperson would think of
7 teaching classes. It's -- it's much more -- you know,
8 coming in and seeing how an older doctor does work,
9 has, quote, therapy.
10 I also, since 1977, have led two clinical case 11:19:26
11 conferences a week, and residents and medical students,
12 depending on the year, medical students, residents and
13 members of the community come in to those conferences
14 and we discuss cases.
15 So I have multiple avenues, multiple ways of 11:19:45
16 being a teacher, but none of them are through
17 coursework per se.
18 Q Thank you.
19 A I forgot to tell you. I also sometimes am
20 invited to give continuing education lectures. And, 11:20:02
21 for example, at the -- I've given courses, for seven
22 years in a row, at the American Psychiatric Association
23 on sex and love, mostly love I use as -- as the title,
24 and we talk about sexual problems and the barriers to
25 loving. 11:20:25

1 And this year's APA meeting, I -- I am
2 presenting a symposium with three colleagues on whether
3 or not this is time to reexamine the best practices for
4 transgender youth.
5 So all those things are -- in my review, are 11:20:39
6 -- are my teaching.
7 Q I was going to ask you about the May
8 presentation.
9 Who are your copresenters for that?
10 A Sasha Ayad, Lisa Marciano and Ken Zucker. 11:20:55
11 Q Thank you. When is that expected to be
12 presented?
13 A May 24th.
14 Q And do you know if there are other panels or
15 presentations regarding the care of transgender 11:21:15
16 patients at that conference?
17 A There probably are, but I'm -- I haven't seen
18 the entire program. But -- but there are usually --
19 there usually are one or two presentations.
20 Q And you said it was Sasha Ayad, Ken Zucker. 11:21:29
21 And who was the third person?
22 A Lisa Marciano.
23 Q Right. So I just had one -- a couple of
24 follow-up questions about the discussion we were having
25 about seeing prepubertal and adolescent patients. 11:21:46

1 When is the last time you saw a prepubertal
2 child patient?
3 A Physically saw?
4 Q Or -- or virtually. I mean, as your patient.
5 A Maybe two years ago. 11:22:20
6 Q And how about an adolescent, meaning puberty
7 while -- through being a minor?
8 A Three weeks ago.
9 Q And what was the age of that patient?
10 A 17. 11:22:44
11 Q Okay. Let's just turn to page 2 of your CV.
12 I had a couple of questions there.
13 MR. BROOKS: Just checking --
14 MS. HARTNETT: I'm just --
15 MR. BROOKS: Since it's been an hour, I was 11:23:00
16 just checking. The witness says he's fine and doesn't
17 need a break yet.
18 MS. HARTNETT: Okay. Please let me know.
19 This is --
20 MR. BROOKS: We're on -- 11:23:08
21 MS. HARTNETT: So --
22 MR. BROOKS: -- the next page. If you'll
23 direct -- I can't fit the whole page on the screen at a
24 time, so you have to direct me to portions of it.
25 MS. HARTNETT: Okay. It's -- I'm looking 11:23:16

1 at -- under "Professional Societies."
2 MR. BROOKS: All right. I have it up.
3 BY MS. HARTNETT:
4 Q Dr. Levine, on page 2 of your CV, you list
5 professional societies; correct? 11:23:28
6 A Yes.
7 Q Is the Cochrane Collaborative a professional
8 society?
9 A Is the what?
10 Q The Cochrane Collaborative. 11:23:40
11 A I don't know the answer to that question. The
12 Cochrane Library, you're talking about?
13 Q The Cochrane Collaborative.
14 A Cochrane Collaborative.
15 Well, I -- the word "Cochrane" is -- is what 11:23:54
16 comes to mind. It -- the second word changes from
17 whomever is using it.
18 I don't think it's a society. It's an
19 organization that does objective appraisal of -- of
20 scientific questions or controversies. And I -- I 11:24:13
21 don't -- I never thought about that as a society;
22 therefore, it's not listed there.
23 Q Okay. And I apologize. I believe I misstated
24 the name of it. It's on paragraph 4 of your report,
25 which you can look back to, but it then will require 11:24:31

1 flipping forward again.
2 You discussed being an invited member of the
3 Cochrane Collaboration subcommittee, and so I was just
4 trying to understand whether the Cochrane Collaboration
5 is a professional society. 11:24:42
6 A Well, it's an organization, and it's an
7 organization devoted to the objective appraisal of
8 issues that are controversial in medicine, throughout
9 medicine, every branch of medicine, every specialty of
10 medicine. It's an older institution, and it's among 11:25:02
11 the most highly respected institutions about objective
12 scientific appraisal of clinical work, and I -- I am on
13 the -- one of their committee- -- I'm on two of their
14 committees, actually.
15 Q Which committees are you on? 11:25:20
16 A It's the evaluation of puberty blockers and
17 the evaluation of cross-sex hormones for transgender
18 teens.
19 Q Do you know how many committees the
20 Cochrane Collaboration has? 11:25:35
21 A No. I think it's many decades old, and it --
22 that's -- but the answer to your question is I don't
23 know.
24 Q Are you a member of the Cochrane
25 Collaboration? 11:25:53

1 A I'm a member of those subcommittees.
2 Q And can you describe your work on those
3 subcommittees? What does that entail?
4 A I'm hesitating to answer that question because
5 you're going to ask a follow-up question, and it is my 11:26:12
6 understanding that until the publication of our work is
7 finished -- is published, our work is published, that
8 we are not to discuss the processes and the content
9 of -- of that.
10 So I -- I feel constrained to, you know, ask 11:26:35
11 you not to ask me more questions about that.
12 MR. BROOKS: Well, I -- I'm -- I'm not going
13 to instruct the witness either way. I will advise the
14 witness that we can, I'm sure with counsel's agreement,
15 designate a portion of the transcript as confidential 11:26:50
16 and kind of proceed question by question as you are
17 comfort- -- as you are -- as you feel able, given --
18 I -- I don't know the nature of your commitments to the
19 organization.
20 But we can designate a portion of the 11:27:04
21 transcript as confidential, which will make it
22 available to attorneys representing parties in this
23 case but would prevent it from being published
24 generally.
25 So I -- I -- I offer that. I don't -- I don't 11:27:18

1 represent Dr. Levine, and I don't know that in
2 connection with that -- that professional activity, and
3 I don't know the nature of the obligations, but I'd
4 just advise the client of that pos- -- of that --
5 Dr. Levine of that possibility. 11:27:37
6 If you want --
7 BY MS. HARTNETT:
8 Q Does your work with the Cochrane -- does your
9 work with the Cochrane Collabor- -- Collaboration
10 affect your -- sorry. 11:27:46
11 Has your work on the Cochrane Collaboration
12 informed your opinions in this matter?
13 A My work with the Cochrane group, in reading
14 about the evidence on those two -- on that subject of
15 puberty blockers adds to my -- I should say there's -- 11:28:17
16 I'm hesitating because I really don't know whether I
17 should be saying anything about this, even answering
18 your reasonable question.
19 Q I appreciate that, but --
20 A Pardon me? 11:28:51
21 Q -- we do need to know this for you views, and
22 so I would ask if we -- could you -- could -- are you
23 able to answer my questions and we can designate this
24 portion of the transcript as confidential, meaning it
25 would not be publicly disclosed? 11:29:03

1 A There's nothing that I have -- there's nothing
2 that I have seen in my work with Cochrane that has led
3 me to modify what is in that report.
4 Q Can you please generally describe what the
5 nature of your work is with Cochrane? 11:29:20
6 A It is to read and respond to summaries of the
7 data, various studies. It has been to help
8 conceptualize what the issue is and what measurements
9 we need -- are needed in order to answer the question
10 in the future about a more -- to provide data in the 11:29:43
11 future if -- based on studies. It's been about trying
12 to limit the number of issues that need to be measured
13 to -- in outcome studies in order to be practical
14 versus comprehensive.
15 So my work has been to participate with other 11:30:06
16 people in Zoom discussions after we read documents and
17 to given our opinions about draft documents.
18 And you may or may not know how Cochrane
19 works, but it's a series of -- like, our subcommittee
20 goes through a number of other committees above them to 11:30:31
21 be consistent and -- with the traditions of Cochrane.
22 And so I'm not, you know, privy to the
23 committees above the subcommittee. I just sometimes
24 hear about, learn about, their -- their responses to
25 druff -- draft reports. 11:30:54

1 So I think that's my answer to your question.
2 Q Okay. Are you a member of the Society for the
3 Scientific Study of Sexuality?
4 A The -- oh, no longer.
5 Q What is the Society for Scientific Study of 11:31:19
6 Sexuality?
7 A It's a bunch of clinicians who are
8 interested in -- it's a bunch of clinicians who are
9 interested in providing services for people's sexual
10 problems. 11:31:36
11 Q And you ended your membership there in 1999?
12 A Yes, apparently so.
13 Q Why?
14 A Apparently so. I -- I -- if I hadn't looked
15 at my CV, I wouldn't have been able to answer your 11:31:56
16 question.
17 Q Okay. I'm sorry, I was asking why you stopped
18 being a member in 1999.
19 A Oh. Because I felt that the majority of the
20 membership thought very differently than me. They 11:32:15
21 weren't -- they were mostly Master's prepared people.
22 They included people who were sexual surrogates. It
23 was a potpourri of people interested in human sexuality
24 that did not have my academic interest in sexuality.
25 I was interested, I guess -- back then, in the 11:32:39

1 '90s, there was the -- there was the Society for Sex
2 Therapy and Research, and there was this society.
3 Quadruple S, it's called. And this was -- and there
4 was another society called AASEC- -- AASECT. And
5 the -- the range of professional degrees, the people 11:32:59
6 who had -- the people in those societies had different
7 ranges of professional degrees, and they had different
8 interest in -- sort of an understanding of sexual
9 disorders and in research, and I thought that the
10 society for scientific study of sex really -- I thought 11:33:23
11 that the activities of the organization did not rise to
12 the level of -- of the title of their organization,
13 that it really wasn't scientific.
14 And, you know, it is amazing to me what --
15 what people call -- who wrap themselves in the mantle 11:33:49
16 of science that really don't have a concept of science.
17 So I -- you know, when I was younger, I wanted
18 to be part of the scene and -- and when I got into part
19 of the scene, I didn't want to be part of the scene.
20 Q Are you aware of the Society for Evidence 11:34:06
21 Based Gender Medicine?
22 A Yes.
23 Q And does that go by an acronym?
24 A Is what?
25 Q Does that go by an acronym? 11:34:15

1 A Yes. SEGM.
2 Q SEGM. Are you a member of SEGM?
3 A I contributed -- when I -- when I learned
4 about SEGM probably a year and a half ago, two years
5 ago, I -- I felt that I -- I wanted to support that 11:34:35
6 because they were interested in evidence, in scientific
7 evidence, so I sent them a check for $200.
8 So I don't know if I'm a supporter of it or --
9 but I -- they consider me to be an integral and
10 important member of their society. So I guess, based 11:35:02
11 on the fact that I gave them a one-time check of $200
12 and they hired me to write a -- to -- to develop a
13 paper and they put me on a subcommittee to talk about
14 psychotherapy of adolescents, so I guess I am a member
15 of SEGM. 11:35:21
16 I think I'm a valued member of SEGM.
17 Q Understood. Sorry, you said you were on the
18 psychotherapy -- child psychotherapy subcommittee?
19 A I think we should call it an adolescent -- it
20 doesn't exist anymore. We met -- we met every two 11:35:45
21 weeks for almost a year, but I certainly was an active
22 participant of that.
23 Q And what -- what was the work of that
24 subcommittee?
25 A It was talking about what -- it was talking 11:36:01

1 about how to develop case histories that would teach
2 mental health professionals, in general, on how to
3 approach a -- an -- an approach to transgender children
4 and adolescents.
5 As you probably know, there has been, in the 11:36:33
6 last ten years, a dramatic increase in the number of
7 teenage children who are declaring themselves to be
8 trans people. And so the number of, quote, experts --
9 the epidemiology is such that there is enormous
10 pressure on a -- on the few people who say they're 11:36:53
11 interested in gender, taking care of gender cases.
12 So SEGM was trying to develop concepts that
13 could be taught to people in the community who are not
14 experts. We are trying to interest them in providing
15 psychiatric services, psychological services to 11:37:14
16 families and to the -- the patients themselves.
17 And so we were talking about how to -- how to
18 achieve that, whether we should publish -- whether we
19 should give a conference, whether we should -- they
20 just -- they talked about various ways of -- of 11:37:32
21 informing -- of getting more mental health
22 professionals to -- to stop ignoring this problem and
23 to be interested in -- in how to help these kids and
24 their families.
25 Q Okay. Thank you. 11:37:56

1 So you said that that subcommittee is no
2 longer meeting?
3 A That particular committee is no longer
4 meeting, as far as I know. But that -- but SEGM
5 sponsors many things that I'm totally unaware of. 11:38:07
6 Q Was there a work product that came out of that
7 committee?
8 A Well, in some sense, my paper, my most recent
9 paper, didn't come out of that committee, but it came
10 out of the deliberations of that committee because one 11:38:24
11 of the strategies that SEGM had is that they wanted
12 to -- they wanted to put things in the literature
13 that -- that were based on evidence rather than based
14 on precedent.
15 And so I think that led to the publication of 11:38:45
16 my -- of 147.
17 Q What do you mean, precedent?
18 A Well, as you may or may not know, there's a
19 60-year history of -- of trying to find treatments for
20 transgendered individuals and -- so there has been a 11:39:08
21 precedent of treatment over the years that has preceded
22 the -- the -- the scientific demonstration of the
23 efficacy and the long-term outcomes of that treatment.
24 So I would say that precedent is a -- is a
25 very important influence in how transgender people are 11:39:30

1 being treated today and -- so that's how I use the term
2 "precedent." That is, we have patterns or fashions of
3 treatment that have gone in -- far in advance of the
4 scientific demonstration of the efficacy and were
5 the -- and the long-term outcomes of those treatments. 11:39:55
6 So that's the term precedent, as I -- as -- as
7 how I use it or how I think about it.
8 Q And was your -- I think your testimony was
9 that you were in the kind of ground floor of starting
10 that precedent; is that correct? 11:40:10
11 A I -- well, if -- well, the ground floor really
12 began in the '70s, and I was --
13 Q I'm sorry, did your counsel say something?
14 MR. BROOKS: No. I looked at him. He looked
15 at me. I didn't say anything. 11:40:28
16 THE WITNESS: Yeah.
17 MS. HARTNETT: Just for the record, the
18 counsel and the witness appeared to be exchanging some
19 sort of a glance, but please continue.
20 THE WITNESS: So the ground floor has to do 11:40:37
21 with the Harry Benjamin International Dysphoria
22 Association, which I think I joined in 1974 or
23 something like that, and I was in that program or in
24 that -- that associ- -- whatever you call that, a
25 society or something. I was in that professional 11:41:02

1 organization for many, many years. And in 19- -- when
2 the fifth standard of care was being thought about, I
3 was named to be the chairman of the writing group that
4 made what was called the Fifth Edition.
5 So -- 11:41:25
6 BY MS. HARTNETT:
7 Q So you were part of creating the precedent;
8 correct?
9 A Yes. The only objection I had, what is ground
10 floor. That's the only word I was responding to. I 11:41:34
11 didn't know what ground floor meant.
12 Q Fair enough. So back to SEGM. Were you part
13 of helping to develop treatment guidelines for the
14 treatment of gender dysphoria with SEGM?
15 A I don't know that SEGM has ever issued 11:41:52
16 treatment guidelines. In a sense, my latest
17 publication is -- is probably in that ballpark.
18 What we're trying to do is to -- I think what
19 we are trying to do is -- is create treatment
20 guidelines. 11:42:19
21 You know, Sweden, Finland, the UK and France
22 have all come out and said that -- let's slow this
23 down, let's be very careful. Even -- even in the
24 United States, there are people who used to be on
25 this -- sort of on a different -- they had a -- they 11:42:46

1 had a different treatment guidelines.
2 There's been a wave of objectivity --
3 Q I'm sorry to interrupt. I'm sorry to
4 interrupt you, but I -- I really need to ask you to
5 answer my question. And I -- I think we're -- my -- my 11:42:57
6 question was just whether SEGM is developing treatment
7 guidelines.
8 A I think it's the aspiration of SEGM to develop
9 development treatment guidelines in keeping with what
10 is happening scientifically and -- in terms of 11:43:13
11 objective reviews.
12 So I'm not so sure that SEGM has published
13 treatment guidelines yet, but I do think they're
14 interested in -- in providing a different set of
15 guidelines that may have dominating the United States 11:43:34
16 and European countries in the past. And Australian and
17 compani- -- countries in the past --
18 Q Are you part -- are you part of any effort at
19 SEGM to develop treatment guidelines on a going-forward
20 basis? 11:43:55
21 A No, not directly, but I do --
22 Q Are you involved --
23 A I do believe that my recent article will be
24 read by people and considered by people who are
25 going -- if -- if they do develop treatment guidelines. 11:44:12

1 Q Is -- is -- am I understanding correctly that
2 your article was an effort, in conjunction with SEGM,
3 to affect the practitioner community about how you view
4 treatment should be provided?
5 A To the extent that treatment should be 11:44:35
6 provided based upon a thorough informed consent
7 process, that my article describing informed consent
8 would be affirmative answer to your question that I --
9 I'm hoping that the influence of my article will
10 influence all treatment guidelines in the future, 11:45:01
11 regardless of who issues those guidelines.
12 MR. BROOKS: Counsel, when --
13 BY MS. HARTNETT:
14 Q Are you --
15 MR. BROOKS: When you come to a convenient 11:45:10
16 point, let's take one more break and have one more
17 stint before lunch. I don't mean to disrupt the line
18 of questioning, but when you come to a point, it would
19 be good.
20 MS. HARTNETT: I appreciate that. I have a 11:45:20
21 couple more questions on this, and then we can take a
22 break.
23 BY MS. HARTNETT:
24 Q Are you actively involved in any SEGM work
25 currently? 11:45:29

1 A No.

2 Q Do you know where SEGM receives its funding

3 from?

4 A I believe that -- that the hundred or so

5 people that are, quote, members contribute something, 11:45:55

6 but it's something as modest, perhaps, as I gave, $200.

7 There must be a large donor or set of donors.

8 And the answer to your question is I don't

9 know the answer.

10 Q Is there someone at SEGM that you think would 11:46:15

11 know that answer?

12 A Yes.

13 Q Who is that?

14 MR. BROOKS: Objection.

15 THE WITNESS: There are several people. 11:46:26

16 May I answer that question?

17 MR. BROOKS: You may answer.

18 THE WITNESS: Stephen Beck, Dr. Stephen Beck,

19 and Ema Zane, E-M-A Z-A-N-E.

20 MR. BROOKS: And, Counsel, we will designate 11:46:47

21 the testimony about finances of SEGM as confidential.

22 MS. HARTNETT: We can -- oh, we can

23 provisionally do that. That's fine.

24 BY MS. HARTNETT:

25 Q You mentioned -- I have just one more. 11:46:59

1 You -- you mentioned you were a valued member
2 of SEGM. Is that just your -- is there a special group
3 of people that are valued, or do you just kind of view
4 yourself as having a valued role in the organization?
5 A Well, I was asked to develop this paper or a 11:47:12
6 series of papers on informed consent, and to me, I
7 considered that a compliment, and it was based upon my
8 previous publications about this matter.
9 And in the concept -- and in the discussions
10 of the committee on psychotherapy, I just got the sense 11:47:41
11 that -- I offered an opinion and people really -- they
12 often said that was helpful or clarifying or, you know,
13 really good or "Can I use that term?" or whatever.
14 So whatever the subjective appraisal I was
15 making of my role, my status, among these very 11:48:04
16 respected people, I believed that I was a valued
17 member. You know, I could be --
18 Q Do you think you're the most --
19 A -- delusional about that.
20 Q Do you think you're the most -- are you the 11:48:18
21 most highly credentialed professional in SEGM?
22 A No.
23 Q Huh?
24 A No.
25 MS. HARTNETT: Okay. I think this is a good 11:48:34

1 time for a break.
2 MR. BROOKS: All right.
3 THE VIDEOGRAPHER: Off the record at
4 11:49 a.m.
5 (Recess.) 12:00:19
6 THE VIDEOGRAPHER: We are on the record at
7 12:01 p.m.
8 MS. HARTNETT: Thank you.
9 BY MS. HARTNETT:
10 Q Welcome back, Dr. Levine. 12:00:40
11 A Thank you.
12 Q I think I want to turn from your -- we were
13 talking through your CV a bit and now just go to your
14 report. So if you could -- I'm going to be asking a
15 question about paragraph 5, if you want to pull up that 12:00:53
16 page?
17 MR. BROOKS: We now have paragraph 5 on the
18 screen.
19 MS. HARTNETT: Great.
20 BY MS. HARTNETT: 12:01:14
21 Q So you, in the first sentence of paragraph 5,
22 say you first encountered a patient suffering with
23 what -- sorry -- "what we would now call gender
24 dysphoria in July 1973."
25 Do you see that? 12:01:30

1 A Yes, I do.
2 Q Who was that patient?
3 MR. BROOKS: I will, of course, object to the
4 extent you're asking the doctor to disclose
5 confidential -- 12:01:43
6 THE WITNESS: Actually --
7 MR. BROOKS: -- identifying information.
8 THE WITNESS: Actually, the patient and I
9 wrote a paper together and -- and so the patient has
10 used the name, so I feel like I can tell you the name. 12:01:52
11 BY MS. HARTNETT:
12 Q That's why I was asking.
13 A Yeah. So the name was Rutherford Shumaker.
14 Q And did you refer to the patient as
15 "Rutherford" or some other name? 12:02:07
16 A Well, the name of the -- the name of the
17 article was Increasingly Ruth: Towards an understanding
18 of sex reassignment surgery.
19 And so Rutherford, in, I think -- became Ruth.
20 So Ruth and I published that paper, and then I wrote a 12:02:32
21 follow-up to that paper after Ruth committed suicide in
22 her family's home. But that was 1983. I'd have to
23 check the CV.
24 So that was my -- the man coming to me as
25 Rutherford, who eventually became Ruth, came to me in 12:02:56

1 July of 1973.
2 Q And do you recall how long after you first
3 encountered that patient you encountered your next
4 patient that was suffering from what we would now call
5 gender dysphoria? 12:03:11
6 A Oh, it probably -- it was probably a couple of
7 months.
8 The answer to your question, I don't
9 specifically recall, but --
10 Q Okay. 12:03:26
11 A -- I -- I -- there was enough pressure by
12 patient request for care that we started this -- this
13 clinic.
14 Q Understood. And you note here, on your
15 paragraph 5, you also founded the Case Western Reserve 12:03:37
16 University Gender Identity Clinic; correct?
17 A Correct.
18 Q And you note, later in that paragraph, that in
19 1993, the Gender Identity Clinic was renamed.
20 A In 1993, I left full-time employment at 12:03:52
21 Case Western Reserve, and I continued the program, but
22 we changed the name of the program, but our work
23 evaluating and providing services for trans individuals
24 continued.
25 Q And what did you change the name of the 12:04:15

1 program to?
2 A Well, I think we just called it the Gender
3 Identity Clinic of Levine, Risen -- Althof, Levine and
4 Risen, which was the name of our clinical practice,
5 Althof, Levine and Risen. So it -- 12:04:34
6 Q Okay.
7 A Gender Identity Clinic at ALR.
8 Q And when you -- when the university kind of
9 discontinued -- or you discontinued the affiliation
10 with the university in 1993, did you consider that to 12:04:50
11 be a dark day in the department, in the politics of the
12 department?
13 MR. BROOKS: Objection; compound question.
14 THE WITNESS: Number one, I did not
15 discontinue my affiliation. I changed my affiliation. 12:05:06
16 That is, I was salaried until 1993, and then I left the
17 university and personally, for a while, I did consider
18 it a -- a great disappointment that I left the
19 university.
20 BY MS. HARTNETT: 12:05:30
21 Q Did you consider it a dark day in the
22 department, in the politics of the department, at the
23 university?
24 A That per se wasn't the source of the darkness.
25 That day wasn't it. In my view, it's a very 12:05:43

1 prejudicial view, the dark day came when a new chairman
2 was selected, who came aboard, who then basically ran
3 the department into a great debt, and then I and
4 several other program- -- my program and several other
5 programs needed to be cut from the department in order 12:06:07
6 to get the department back into solvency.
7 So the fact that one day I left was the
8 by-product of things that had happened over a
9 three-year period.
10 So the dark days began, I think, on day one 12:06:25
11 when the chairman came.
12 Q Thank you. Are you familiar with the
13 University Hospitals?
14 A The department of psychiatry was part of the
15 University Hospitals of Cleveland. 12:06:41
16 Q And you did your psychiatric residency at the
17 University Hospitals of Cleveland?
18 A Yes.
19 Q Do you have an affiliation there now?
20 A I do. I'm a clinical professor. 12:06:52
21 Q And how often do you -- if at all -- do you go
22 to the University Hospitals?
23 A Not very frequently. The -- the resident
24 comes to me, and I -- but I am probably going to be
25 teaching a seminar at University Hospitals in the next 12:07:13

1 three months because I'm part of a committee to plan
2 the curriculum on sexuality and gender.
3 Speaking of education, the university --
4 other -- other institutions also asked me to teach
5 about this subject. And on August -- on April 7th, I'm 12:07:39
6 going to Akron to teach -- or virtually I'm going to
7 teach a three -- a two-and-a-half-hour seminar.
8 And I forgot to mention to you before, and I'd
9 like you to hear this, that when you were questioning
10 me about my credentials or not having a certificate 12:07:57
11 about -- in child psychiatry, you should know, I forgot
12 to tell you that Cleveland Clinic, department of child
13 psychiatry, and the University Hospitals, the
14 department of child psychiatry, sends residents to be
15 with me as part of their training in child development 12:08:18
16 and child clinical issues, child and adolescent
17 clinical issues.
18 So I think -- I just forgot to mention that.
19 Q Are you familiar with the University
20 Hospitals' LGBTQ and gender care program? 12:08:48
21 A I'm aware that it exists, yes.
22 Q Have you ever talked to any clinicians in that
23 practice?
24 A No one has ever talked to me in that practice.
25 The only time I have interaction with them is when -- 12:09:00

1 if I present grand rounds, some of those people ask me
2 a question. But they've never consulted me whatsoever
3 in the formation of their clinic and in the ongoing
4 work of their clinic.
5 Although, Cleveland Clinic has a very similar 12:09:20
6 program, and they have called me up and -- for some
7 advice sometimes.
8 But my -- my, quote, own University Hospitals'
9 place I don't really think has any people from child
10 psychiatry in it, but I'm not sure because they have 12:09:38
11 kept me away.
12 Q What do you mean they have kept you away?
13 A Just what I explained. They have never
14 communicated with me. It is -- you know, other people
15 know me as being published in this area. You know, I 12:09:54
16 think I've written 20 articles on this -- you know, I
17 have 20 or so publications in this area. You would
18 think that they would invite me or consult with me or
19 ask me questions, but I think they recognized that they
20 are part of what is called affirmative care and what I 12:10:18
21 would say, rapidly affirmative care, and -- and they
22 sense that I'm not so interested in rapid, that -- that
23 I believe that -- that I have long believed that people
24 who have this kind of dilemma need some patient time in
25 talking about this matter. 12:10:45

1 And while I can't tell you how they feel about
2 me, I can only deduce that they're not interested in my
3 concepts because --
4 Q Have you --
5 A -- they must be different than their concepts. 12:10:57
6 Q Have you offered your -- your services to
7 them?
8 A No.
9 Q You said your understanding is that they
10 provide rapid affirmative care; is that correct? 12:11:10
11 A I presume so. I -- you know, I can't
12 understand why -- why the organizers and the leaders of
13 those -- that team are not interested in anything I
14 have to say because they've never asked me.
15 Q So just because someone hasn't asked you for 12:11:29
16 your view, do you assume that they're not interested in
17 what you have to say?
18 A This -- I wouldn't say as a general principle,
19 but I would say in this case, I have long assumed that,
20 correctly or incorrectly. 12:11:44
21 Q It sounds like you don't agree with rapid
22 affirmative care; is that fair?
23 A Yes. I don't believe that people, after
24 meeting someone for an hour, for example, ought to be
25 given a firm diagnosis and a prescription for hormones. 12:12:00

1 Q Is that your definition of rapid affirmative
2 care?
3 A That would be one definition, yes.
4 Q Can you give me a more general definition of
5 what rapid affirmative care is? 12:12:17
6 A It would be -- it would be a commitment to be
7 affirmative in -- in being a cheerleader for social
8 transition or taking hormones or having one's breasts
9 removed after what I would consider to be an inadequate
10 evaluation. 12:12:34
11 So it begins with an adequate evaluation.
12 It -- it requires having an understanding of the
13 elements of informed consent. And in dealing with
14 minors, it has to do with working with not only with
15 the patient but with the parents. 12:12:51
16 So rapid affirmative care would be care that
17 does not meet my criteria for thorough evaluation,
18 including a developmental history, a process of
19 informed consent and involvement, over time, with the
20 parents so they consider the weighty -- the weighty 12:13:10
21 implications of -- of what affirmative care represents.
22 So anything short of deliberation in this and
23 careful consideration I would kind of dismiss as rapid.
24 Q If affirmative care is given with deliberation
25 and informed consideration, do you disagree with that? 12:13:33

1 A No. No. I think parents -- parents have a
2 weighty decision to make, but they ought to be informed
3 about the state of science. The -- the health tour
4 benefits have to be understood in terms of the
5 scientific likelihood of achieving those benefits. And 12:13:51
6 they have to understand the short-term medical but more
7 important the long-term psychosocial risk of what
8 they're doing.
9 And if those competent parents, knowing the
10 child as they know them, decide, after they're 12:14:09
11 informed, they -- they have my blessing to socialize
12 their child in the opposite gender.
13 Whether I think in that particular case it's a
14 wise thing or not, it's not my decision to make. I
15 don't actually believe that people like me ought to be 12:14:29
16 recommending. I think we ought to be educating,
17 evaluating and informing and the parents and the child
18 make the decision with my supportive help, both on the
19 positive side and the negative side.
20 I am to be the trustee, informer of what 12:14:45
21 science knows, and I believe that clinicians who don't
22 know science, who actually think they can evaluate this
23 in a -- in -- in a -- in an hour, I just think that's
24 not good care.
25 Q Is your view that the clinicians at the 12:15:06

1 University Hospitals LGBTQ and gender program don't
2 know science?
3 A I don't know what they know. I don't know
4 what they know. I have no views about that because I
5 have no means of knowing, only that I get to see people 12:15:22
6 brought to me after they've gone to various affirmative
7 care programs and the parents are horrified at the
8 recommendations that are being made. So --
9 Q How many -- sorry. Go ahead.
10 A But in answer to your specific question, since 12:15:44
11 I don't even know the people there and I don't know
12 what they're doing, I'm not -- I would just -- I would
13 just -- I pose these standards, and I don't know
14 whether they meet them or not.
15 I have not been impressed in general that 12:16:04
16 affirmative care programs in various cities that I get
17 to hear about meet those criteria.
18 I'm just trying to help people, you know,
19 realize the importance of trans care and -- and trans
20 care, to me, includes careful evaluation and -- and 12:16:19
21 addressing the comorbidities that are frequently
22 present in these kids.
23 And by "kids," I mean even teenagers.
24 Q Have you had -- sorry, so you -- but your
25 understanding is that the University Hospitals LGBTQ 12:16:39

1 and gender care program does provide the rapid type of
2 affirmative care; is that right?
3 MR. BROOKS: Objection.
4 THE WITNESS: I already --
5 MR. BROOKS: Asked and answered. 12:16:48
6 THE WITNESS: -- answered that question. I'm
7 not -- I'm not aware of what they do. I -- I am --
8 BY MS. HARTNETT:
9 Q Okay. Sorry, I thought you had said you
10 thought that they provided rapid affirmative care, 12:17:01
11 which is why I was asking.
12 A I wouldn't be surprised if their definition of
13 inadequate evaluation is different than my evalua- --
14 my -- my definition of an adequate evaluation.
15 Q Do you know what their definition is of an 12:17:20
16 adequate evaluation?
17 A No. And because I don't know, I don't want to
18 endorse them, nor do I want to condemn them.
19 Q What is the basis for your understanding that
20 there is kind of rapid transition care being provided 12:17:32
21 out there?
22 MR. BROOKS: Objection; vague.
23 BY MS. HARTNETT:
24 Q Sorry, let me just use your term.
25 You said rapid affirmation. 12:17:42

1 A Well --
2 MR. BROOKS: I was objecting to the outlier as
3 vague. I'm not sure what you -- are you referring to
4 the clinic you've been discussing or something else?
5 BY MS. HARTNETT: 12:17:52
6 Q What is your basis for your view that there
7 are clinicians in the United States performing rapid
8 affirmation care?
9 A Thank you for asking that question.
10 I have been in contact with -- that is, 12:18:03
11 parents -- there -- there are parent groups who cannot
12 find -- there -- there are groups of parents who
13 brought -- were brought together, who came together,
14 bounded -- bound together in organizations who are
15 objecting to what they call rapid affirmation and the 12:18:27
16 inability to find a therapist in their community who is
17 willing to just do psychiatric care like they would do
18 psychiatric care if a child presented simply with
19 anxiety or depression or substance abuse or some other
20 behavioral problem. 12:18:48
21 The -- the basis for -- for my -- the answer
22 to your question is parents, both Cleveland parents,
23 national -- parents from all over the country and
24 parents from the UK. I am aware that parents are
25 particularly perturbed by rapid affirmation and its 12:19:07

1 treatment, and they -- they have complaints that their
2 child is not understood; that is, their problems have
3 not been understood.
4 Q How many parents have you talked -- how many
5 parents have you talked to about their concern with 12:19:26
6 what you call the rapid affirmation model?
7 A Well, I gave a talk to 35 parents probably a
8 year ago. In 2017, I think I wrote about it in the
9 article that -- the last four or five cases that I was
10 involved with, the parents all said the same thing; 12:19:53
11 that is, they were horrified that after one hour,
12 their -- their child was diagnosed and -- and had
13 recommend- -- and had recommendations that horrified
14 them.
15 Q Sorry, how -- where was the talk that you gave 12:20:10
16 to the 35 parents? What -- what was that?
17 A It was in -- it was in my easy chair in my
18 bedroom.
19 Q What was the convening? What was the venue
20 for that? 12:20:23
21 A It was a group of parents who invited me to
22 give a talk, and what I gave a talk on was -- the
23 aspects of what -- what I knew about human identity,
24 not just --
25 Q What was -- 12:20:38

1 A -- not just gender identity.
2 Q Was this group of parents affiliated with an
3 organization, or how did they -- how did they present
4 themselves? As some sort of an organization?
5 A A woman contacted me and said that she belongs 12:20:50
6 to an organization of -- of concerned parents of trans
7 teenagers or children. I'm not sure which. Mostly
8 teenagers. She actually sent me an analysis of --
9 of -- of -- that she made, a little research that she
10 had done that demonstrated a very high intelligence 12:21:10
11 in -- of their -- all the children in this group and
12 very high incidents of autism and other developmental
13 problems and -- so she sent me that data, and she
14 wanted some advice to -- from me about how to get that
15 published. 12:21:37
16 And -- and then she invited me to give a talk.
17 When we talked, she then said she would get back to me,
18 and she got back to me and invited me to give a talk to
19 the parent group. And so that's what happened.
20 Q Is the parent group called Genspect? 12:21:51
21 A No. I think -- it -- it might -- it -- this
22 was an American group of people and --
23 Q What was the parent's name that did the
24 research?
25 A You know, I -- I would have to look that up. 12:22:15

1 I don't remember.
2 Q I'm just going to try to -- so I appreciate
3 what you've explained.
4 Could you tell me how many actual parents have
5 described to you, personally, an experience where their 12:22:29
6 child was diagnosed and prescribed treatment in an
7 hour?
8 A Well, if -- some people, it would be two
9 hours, okay?
10 Q Let me just start with one hour. 12:22:46
11 How many parents have told you directly that
12 their child had been prescribed -- diagnosed and
13 prescribed treatment in an hour?
14 A I would say perhaps 50 percent of the people
15 who -- who have consulted me. 12:22:59
16 Q And how many people have consulted you?
17 A I really can't answer. You know, if I told
18 you 11, if I told you 16, if I told you four, I
19 would -- I would have no conviction that I -- that --
20 that that answer is correct. 12:23:19
21 I'm telling you I had the impression that over
22 and over again parents complain about this. They
23 complain about affirmation. They're afraid of
24 affirmation, what that will mean to their child's
25 future. And they complain that they can't get their 12:23:35

1 point of view to influence their thera- -- the -- the
2 person -- their gender expert that they took their kid
3 to and -- and that they can't find anyone else who
4 has -- who has the courage, they say, to just talk to
5 their kid without saying they believe in affirmation 12:23:55
6 because that's the right thing to do.
7 Q Thank you. I -- I just -- you've talked about
8 the importance of scientific data; correct?
9 A Correct.
10 Q And you've made the representation that there 12:24:09
11 is a practice of rapid affirmation happening in the
12 United States; correct?
13 A As -- as far as I know, yes.
14 Q And what I'm trying to understand is the basis
15 for your understanding that there is a phenomenon of 12:24:22
16 rapid affirmation happening in the United States.
17 And so --
18 A Well --
19 Q -- I guess my question is -- sorry.
20 A -- the basis. And I've tried to answer the 12:24:33
21 basis is -- is that the parents who consult me all
22 tell -- pretty much all tell me the same story. It is
23 multiple patient reports.
24 And when I -- when I was on that committee
25 that we talked about before, of psychotherapy, people 12:24:52

1 in Australia, people in Ireland, people in London, in
2 various parts of the UK and -- let me think where this
3 is a source of -- and the United States have all
4 reported to me the same thing. Everyone says the same
5 thing, that the parents complained to them about going 12:25:18
6 to specialty care which rapidly confirms the diagnosis
7 and recommends affirmation and tends to make the
8 parents feel like they're -- they're doing a terrible
9 thing by resisting transition.
10 Q You mentioned -- 12:25:39
11 A So the answer to your question is multiple
12 sources, both directly in my clinical practice, both --
13 what I read about sometimes in these legal proceedings,
14 legal documents and in -- and -- and from my
15 colleagues. 12:26:01
16 I -- I just want you to know that if -- that
17 professionals all claim to do thorough evaluations, but
18 I -- I'm not sure that our definition of thorough
19 evaluation is -- is correct.
20 Q Have you talked to any gender-affirming 12:26:18
21 professional to learn what their practice actually is?
22 A Well, I've read Dr. Adkins, for example,
23 reassurance about the thorough evaluations done in her
24 clinic.
25 And -- have I talked to any affirmation -- 12:26:40

1 well, I did talk to the Cleveland Clinic people and --
2 who are -- were sharing with me their angst about what
3 they should do with these borderline personality kids,
4 kids who aren't doing well, who don't want to focus on
5 anything but their transgender state. So they consult 12:26:57
6 me about these -- these case- -- you know, they
7 consulted me about this.
8 So I guess the answer is yes.
9 And if you ask me the number, I would say it's
10 not a large number. I don't -- and I don't -- 12:27:14
11 Q Sorry, other than Dr. -- other than Dr. Adkins
12 and whoever you talked to at the Cleveland Clinic, have
13 you -- are you -- sorry.
14 You've never talked to Dr. Adkins; correct?
15 A I've never personally spoken to her, no. 12:27:25
16 Q So other than the people at the Cleveland
17 Clinic that you referred to, have you spoken to any
18 other gender-affirming professionals about their
19 practices?
20 A Well, in these various legal matters, 12:27:37
21 oftentimes I'm asked to review case material, and I --
22 and I -- I haven't visibly, virtually, talked to -- the
23 answer to your question is no, but I -- I certainly
24 have seen materials that indicate the -- the quality of
25 the interactions that have been between the affirming 12:28:09

1 and the professional and the patient and sometimes the
2 parents.
3 Q And you mentioned -- you mentioned multiple
4 patient reports, I think, when you were saying what the
5 basis was for your review. 12:28:24
6 Do you recall that?
7 A Yes.
8 Q Are you -- and there, you're talking about the
9 patient would be the -- the parent of the child that's
10 being cared for; right? 12:28:30
11 A Yes. I think if --
12 Q In other words, you were -- you were not
13 getting complaints from the -- the child or adolescent
14 that was being discussed; you were getting the
15 complaint from the patient parent; is that right? 12:28:45
16 A Oh, I've heard -- I -- I've heard patients say
17 that they were a little surprised by the rapidity of
18 things, yes.
19 Q Sorry, one of your child or adolescent --
20 A So it's -- 12:28:58
21 Q -- patients --
22 A It's not entirely parents, but it's largely
23 parents.
24 Q And then I've asked you how many parents
25 you've directly heard reports of -- let's just say 12:29:10

1 two-hour or less diagnosis and treatment. How many
2 parents have you heard that from directly?
3 MR. BROOKS: Objection; asked and answered.
4 THE WITNESS: I would say 15 sets of parents.
5 And if you allow me to accept the reports of the people 12:29:31
6 on the committee, probably it's over a hundred. But,
7 you know, as I already answered, I can't really -- I'm
8 just giving you numbers because you're asking for
9 numbers.
10 BY MS. HARTNETT: 12:29:54
11 Q Well, isn't it important to have good data?
12 A You're right, it is important to have good
13 information. And data varies in its nature. And
14 parental reports that are consistent over time, to me,
15 is good data. That represents good data. That are 12:30:10
16 good data, rather.
17 Q Have you ever had a parent report to you a
18 positive experience from an affirming practitioner, as
19 you describe them?
20 A Ever had a positive experience. 12:30:35
21 Well, last Sunday morning, I gave a talk at a
22 church, and a grandmother told me that her very
23 disturbed granddaughter has transitioned to a -- living
24 as a boy and she's far less disturbed and much happier
25 and she's beginning to restart her life as a student 12:30:50

1 now, when she couldn't function as a student before.
2 So if a grandparent -- I mean, it's -- it's --
3 today's Wednesday. So that was Sunday morning.
4 So I think -- that is not the first time I've
5 ever heard from somebody. I've also heard from 12:31:05
6 grandmothers who were deeply concerned about their
7 grandchild.
8 And, actually, come to think of it, I had an
9 interview -- yes, I -- I have heard about a -- another
10 trans male teenager who is doing very well now as -- 12:31:23
11 and much better than they were doing living as a -- as
12 a distressed female.
13 So I do have positive reports of people doing
14 well.
15 And in -- in my years of taking care of -- of 12:31:39
16 adults, I've seen some people, at least who have came
17 back in follow-up after transition, who seem to be
18 doing very well in life.
19 I'm not saying that -- so I -- you know, I get
20 both sides of the coin here. 12:32:01
21 Q You haven't undertaken a scientific sampling,
22 though, to figure out what parents' experiences are
23 with affirming practitioners; correct?
24 A I -- no, I have no follow-up study on this. I
25 am like other people who don't have follow-up studies. 12:32:18

1 Q And it could be that parents that are having
2 negative experiences are the ones that are seeking you
3 out; correct?
4 A Yes. There's always a selection by a -- in --
5 in clinics. When -- when you have data coming from any 12:32:35
6 clinic, one of the methodologic questions is, What is
7 the selection bias?
8 And so I -- I represent a person who has some
9 kind of unknown or known reputation in the community,
10 and so people come to see me because they think I have 12:32:54
11 knowledge or attitude that is consistent with their
12 position.
13 But, you see, in the -- in the fundamentals
14 of -- of the use of statistics and creating scientific
15 methodology, selection bias is a well-known problem, 12:33:12
16 and that's one of the reasons why some studies need
17 to -- that's one of the advantages of having multisite
18 studies and multicultural -- studies from multiple
19 countries, is -- is what we're going to do about
20 selection bias. 12:33:31
21 Q I believe earlier you said that your view is
22 that the doctor's role isn't to recommend the treatment
23 for the minors who may be experiencing gender dysphoria
24 but, rather, to provide information to the parents and
25 the children and the parents and the children should 12:33:47

1 make the decision; is that fair?
2 A Yes. This is the idea that I am trying to
3 educate the world about, that, actually, doctors don't
4 know what the best treatment is for a particular child
5 and that they shouldn't pretend to know because there's 12:34:06
6 no follow-up data that are -- there's no compelling
7 follow-up data. There's just anecdotal reports like
8 you and I were just discussing. Or anecdotal reports.
9 And so given the fact that -- that people
10 believe doctors and they believe that doctors know 12:34:24
11 things and that I know doctors don't know things, you
12 see, what I'm saying, what I'm trying to influence the
13 world to think about is that we should make a -- we --
14 we recommend that you go to surgery for appendicitis
15 because we know the consequences of not having surgery. 12:34:44
16 You're going to die from this condition if you don't
17 have surgery, you see.
18 So we -- based on the consequences, we know
19 what is indicated medically to save life or preserve
20 function. 12:34:59
21 But in this particular area, the long-term
22 follow-up of children or adolescents or even adults who
23 undergo transition are not known. And I -- they're
24 not -- they're simply not known.
25 And because we are -- some doctors make 12:35:15

1 recommendation to transition a seven-year-old or
2 transition a 14-year-old or remove the breasts of a
3 14-year-old, and I would say that what is the
4 scientific basis of your recommendation to tell
5 parents, who are often trusting of your knowledge base, 12:35:36
6 what is the scientific basis of your recommendation?
7 And I say, given what we know about science,
8 I'm not opposed to transitioning a child or
9 transitioning a teenager or an adult. What I'm saying,
10 that we should be able to educate, objectively, the 12:35:54
11 parents and the child themselves, you see, so that they
12 know the issues here.
13 And it's their child. They are legally
14 responsible and they're morally and ethically
15 responsible for the welfare of their child. And so I 12:36:11
16 think they need to be informed.
17 And -- and what I'm saying is, in the past,
18 doctors have recommended things, and I'm -- so I'm
19 questioning the wisdom of making a strong
20 recommendation because it's based on the allusion that 12:36:25
21 we know what is best for this kid or this adult. And
22 I'm saying, please, doctors, please be humble about
23 what your knowledge is here. Please respect the
24 limitations of your knowledge. That's all I'm saying.
25 So I -- I am objecting. I'm trying to teach 12:36:47

1 the world. If -- I know that sounds rather grandiose,
2 but I'm trying to teach the world that based on our
3 lack of information about the long-term follow-up, we
4 can give options for the treatment of this condition
5 and that option includes what you would call 12:37:03
6 affirmative care.
7 But we should understand the scientific basis
8 of affirmative care, you see, and we should understand
9 the limitations, and we should understand that even the
10 advocates of -- of gender-conforming surgery have 12:37:17
11 published two papers recently saying that the -- the
12 long-term psychosocial outcomes are not clear, that the
13 benefit of -- of -- of genital surgery or breast
14 surgery, in the long run, is not -- they're not clear.
15 And so people have undergone -- undertaken two 12:37:38
16 studies in the last year or two years to prove that
17 there are benefits. So why are we, in 2020 (sic),
18 doing studies to prove there are benefits if -- if we
19 already know the answer.
20 We don't know the answer. And I say because 12:37:56
21 we don't know the answer, there's an ethical
22 responsibility, a professional responsibility, to teach
23 the parents, teach the adult what is known and what is
24 not known.
25 What they decide is their business. It's 12:38:12

1 their prerog- -- it's their prerogative. It's their
2 child. It's their seven-year-old. It's not my
3 seven-year-old. See? It's not your seven-year-old.
4 It's not your 14-year-old. It's theirs. And it's a
5 weighted decision. And the idea that it's not a 12:38:25
6 weighted decision requires you to be an ostrich and
7 bury your head in the sand.
8 Q Do you think that politicians should be making
9 that decision?
10 MR. BROOKS: Objection. 12:38:36
11 THE WITNESS: Well, I -- I do ask myself the
12 question who should be making decisions about the
13 delivery of medical care, you see. And I do realize
14 that in some circumstances, politicians make decisions
15 that influence medical care and medical treatment. 12:38:55
16 I don't know the answer to that question, but
17 I don't know that doctors per se who are not informed
18 about the -- about the state of science really should
19 be making these decisions with the illusion that they
20 know best. I am not sure politicians know what's best. 12:39:16
21 I mean, when it comes to politicians, you know, we --
22 we all have skepticism.
23 But nowadays, what -- who is making decisions
24 are -- are judges, you see. I don't think juries as
25 much as judges and -- and state legislature and 12:39:35

1 governors are making decisions. I don't like that
2 either.
3 I would prefer that an informed medical
4 professional -- I would -- I would prefer that doctors
5 make these decisions based upon accurate scientific 12:39:54
6 information and not political ideology and not mixing
7 up civil rights concerns with medical decision-making.
8 So I realize we're in a -- this is a morass,
9 and I -- all I -- all -- my point to you today is let's
10 look at the science and let -- let the doctors decide 12:40:21
11 or let the politicians decide, let the governors
12 decide, let the judges decide, but on the basis of
13 science.
14 Q And are you aware of any scientific study
15 showing that affirmative care practitioners in the 12:40:40
16 United States are providing rapid affirmation, a
17 scientific study, not just anecdotal reports?
18 A There was a study out of the UK about 20 years
19 ago. I kind of think the author of the study was
20 M-O-L-E. I'm not certain. And they did a follow-up 12:41:10
21 study of people who were given sex reassignment surgery
22 immediately because they asked for it, with -- with
23 very little screening, versus people who were treated
24 as usual, because in that days, people had psychiatric
25 evaluation and psychotherapy, and I think they found in 12:41:33

1 the small numbers of patients that they operated on
2 versus the people who weren't operated on, that there
3 seemed to be -- they seemed to be happier in the short
4 term after surgery than the people who didn't have
5 surgery. 12:41:49
6 But you know what I've been saying to you
7 in -- well, maybe I haven't quite said it yet. What
8 I'm saying is, when we come to evaluate the impact of
9 these treatments, we need to agree upon -- we have to
10 have a consensus, and it should be an international 12:42:07
11 consensus, about what is the ideal way to evaluate the
12 effects of these treatments.
13 Should it be, like, at six months, at
14 twelve months, should it be at six -- two years,
15 five years, ten years. And we should agree upon the 12:42:28
16 mecha- -- the measurements that we're going to use
17 prior to actually doing the study so that we all agree
18 upon both -- both the strengths and the limitations of
19 the methods.
20 So what I'm -- 12:42:42
21 Q Yeah, maybe my question --
22 A What I'm trying to do is to refine the
23 requirements to answer your question.
24 Q Thank you. And I think maybe my question may
25 have been unclear. 12:42:55

1 What I'm trying to figure out is that you've
2 testified about a perception that there's this
3 widespread practice of providing rapid affirmation
4 service in the U.S.; is that fair?
5 A Yes, I do have that perception. 12:43:05
6 Q And what I'm trying to figure out, is there
7 any kind of scientific or other -- otherwise kind of an
8 analysis of a -- of that healthcare market to determine
9 whether in fact that is actually happening or in fact
10 whether these are just anecdotal occurrences that 12:43:22
11 you've learned of?
12 A There -- your question is one of a series of
13 questions that I would have to answer as far as I know,
14 there are not -- there are not respected scientific
15 methods demonstrating my -- my impression. 12:43:44
16 Q Thank you. If you could turn to page --
17 paragraph 6 of your -- or it's probably on the same
18 page you have there, but I'm going to just ask a
19 question about paragraph 6 of your declaration -- or
20 your report. 12:44:02
21 And you talk about -- you can read the whole
22 thing. I'm not trying to misread it into the record,
23 but I wanted to focus on the sentence that says (as
24 read):
25 I have at one time or another 12:44:13

1 recommended or prescribed or supported
2 social transition, cross-sex hormones,
3 and surgery for particular patients,
4 but only after extensive diagnostic
5 and psychotherapeutic work." 12:44:26
6 Do you see that?
7 A I do.
8 Q Have you ever recommended cross-sex hormones
9 for a minor patient?
10 A No. 12:44:37
11 Q Have you ever prescribed cross-sex hormones
12 for a minor patient?
13 A Is that a different question than you just
14 asked me?
15 Q Well, you have recommended or prescribed or 12:44:53
16 supported, and so I could go into asking you what the
17 difference is, but I just figured I'd ask you -- is
18 there a differences between recommended, prescribed and
19 supported?
20 A Oh, yes. I feel like my view of my role is to 12:45:08
21 write a letter of recommendation describing the patient
22 in detail, the -- the diagnosis, the patient's
23 sensibilities, whether I think this would be beneficial
24 to the patient at this time in his life.
25 The last person that I wrote, I was doing 12:45:26

1 psychotherapy with a young person, starting at age 16,
2 and saw this person over the course of a year and a
3 half. I promised that if they continued talking to me,
4 at the end of the time, I -- if patient still wanted
5 hormones, I would give hormone- -- I -- I wrote a 12:45:47
6 letter of recommendation.
7 And I did write a letter of recommendation,
8 and the patient did take hormones. He went off to
9 college, failed miserably at college, transferred
10 college, and I sadly I tell you, and I -- I sadly tell 12:46:01
11 you, this person died of a heroin overdose in his dorm
12 room at Ohio State University.
13 And I know from the parents, postmortem, that
14 he acquired a girlfriend, and he then said that it's
15 not so bad -- he's rethinking this matter. It's not so 12:46:23
16 bad being -- being a male and having sex with someone.
17 But I don't know whether -- I -- his heroin
18 overdose, which was his third heroin overdose, was
19 accidental death or suicide.
20 So I have provided hormones. I do have that 12:46:40
21 really negative taste in my mouth from that experience.
22 I don't -- I don't -- I don't have remorse about giving
23 hormones to this person because I promised that if --
24 that it is his decision.
25 His parents weren't happy with that decision, 12:47:02

1 but they also agreed with the decision. And now
2 they're, of course, in perpetual mourning for their
3 deceased 18-year-old child.
4 So, yes, listen, I also have given hormones to
5 someone else who is living okay, who is not made any 12:47:20
6 suicide attempts. But it is, as I described in that
7 paragraph, after I get to know these people. And to
8 tell you, I -- as best as I can tell, they appreciate
9 that.
10 Q Thank you. I'm just -- sorry for the -- for 12:47:35
11 the person that you -- your -- your patient that you
12 mentioned, the -- the 18-year-old, I'm -- I'm sorry to
13 hear about that.
14 Sorry, when was that? What -- what time
15 period? 12:47:47
16 A That was --
17 Q Datewise.
18 A -- March 17th, 2021.
19 Q And did you prescribe the -- or, sorry, write
20 a letter for the hormones before the person was 18 or 12:47:58
21 only once they were 18?
22 A I think the person turned 18 in August or
23 September, and I think I wrote the letter right near
24 the person's birthday. Whether it was before or after,
25 I'm not sure. 12:48:19

1 Q How about social transition, have you ever
2 recommended or prescribed or supported social
3 transition for a minor?
4 A A minor being someone less than 18?
5 Q Correct. 12:48:34
6 A Have I ever recommended, prescribed -- I have
7 never prescribed. I have met people who already had
8 social transition, and I had supported them even in the
9 face of their parents' objection. But I don't think I
10 have ever prescribed social transition to a person. I 12:49:00
11 cooperate with it. I recognize that -- I recognize
12 that it is the patient's decision. And while I may not
13 have thought it was a wise decision to transition or to
14 surreptitiously take hormones, you know, from China or
15 something, I -- I don't interfere with it. I just talk 12:49:30
16 about it.
17 So -- but if you're really asking have I said,
18 oh, Parents, you should transition your child, I think
19 the answer is no.
20 Q Yeah. So I'm trying to -- that's -- thank you 12:49:43
21 for clarifying that. I -- I'm trying to figure out if
22 you've supported the transition of a -- the social
23 transition of any minor patients.
24 A Yes.
25 MR. BROOKS: Objection; vague. 12:49:53

1 BY MS. HARTNETT:
2 Q When was the last time you supported the
3 social transition of a minor patient?
4 A Two years ago, I'm guessing.
5 Q Okay. Let me -- do you know who B.P.J. -- 12:50:08
6 B.P.J. is the plaintiff in this case.
7 Do you know if B.P.J. is a girl or a boy?
8 A I know nothing about B.P.J.
9 Q So you've reviewed none of her medical records
10 or anything like that? 12:50:32
11 A Yeah, I would presume that this is a trans
12 boy -- a trans girl who was born a -- a boy, but I
13 wouldn't -- I have no certainty.
14 Q What makes you presume that?
15 A Well, because trans -- trans girls 12:50:47
16 generally -- I mean -- how should I say it? Trans
17 girls -- trans adolescent girls generally don't -- wait
18 a -- I'm getting confused here. Excuse me.
19 I presume that B.P.J. is an -- was born and
20 assigned and is a natal -- was a natal male. 12:51:17
21 But if it's a natal female, I -- I've not
22 heard anything where a natal female becomes a trans boy
23 and wants to compete against boys. If there is a
24 lawsuit like that, that has been raised, I am unaware
25 of it. 12:51:43

1 When I read these things in the newspaper,
2 it's -- it's -- they're -- they're always about natal
3 boys who live as trans women or girls and want to
4 compete against women. So that's why I presume that
5 B.P.J. must be a natal male. 12:52:04
6 But because my role in this case had nothing
7 to do with the athletic side, it's just to -- to
8 provide some basis of -- some background basis on the
9 science of transgender knowledge and the lack of
10 knowledge, I didn't spend time investigating that. 12:52:23
11 Q Okay. And are you familiar with the law
12 that's being challenged in this case that's called
13 H.B. 3293?
14 A No.
15 Q Could we just turn to page 20 of your 12:52:42
16 declaration, paragraph 50 -- or your -- sorry, I'm
17 saying declaration. I mean report.
18 MR. BROOKS: We're getting there.
19 MS. HARTNETT: No, take your time. Page 20,
20 paragraph 50. 12:53:00
21 MR. BROOKS: Let's see. This is under -- just
22 simply -- since I can't fit it all on the screen at
23 once, it's under the heading that says, "The
24 affirmation therapy model (model #4)." And now, under
25 that, I have paragraph 50 showing on the screen. 12:53:14

1 MS. HARTNETT: There is a way to, I believe,
2 make that -- I don't know if he needs that to be that
3 large to read it, but there is -- if you hover over the
4 document, you can zoom in or out.
5 MR. BROOKS: Perhaps. But this is, I think, 12:53:31
6 much smaller, and it would be hard to read.
7 THE WITNESS: I have the entire paragraph 50
8 in front of me.
9 BY MS. HARTNETT:
10 Q Okay. Thank you. 12:53:41
11 So I was looking through your report, trying
12 to see if there was a connection to the context here,
13 which is this sport -- whether the plaintiff can play
14 sports, and I'm just looking -- you can look at all of
15 paragraph 50, if you need to, but I'm going to be 12:53:51
16 focused on -- well, feel free to take a look.
17 But you're -- under this part called "the
18 affirmation therapy model." That's the heading that's
19 above paragraph 50.
20 Do you see that? 12:54:04
21 A Yes.
22 Q And you're referring to -- what -- you say
23 that -- you're referring to some advocates and
24 practitioners that go much further. That's in your
25 second line there. And then I'm going to just read one 12:54:14

1 sentence in the middle of the paragraph. (As read):
2 "They argue that the child should be
3 comprehensively resocialized in grade
4 school to (sic) their aspired-to
5 gender. As I understand it, this is 12:54:27
6 asserted as a reason why male students
7 who assert a female gender identity
8 must be permitted to compete in girls'
9 or women's athletic events."
10 Did I read that correctly? 12:54:37
11 A Yes, you did.
12 MR. BROOKS: And I will -- well, you can ask a
13 question. I'm going to ask the witness to read the
14 entire paragraph so we don't lose the --
15 MS. HARTNETT: He should feel free. I'm 12:54:50
16 not -- this is not a trick.
17 MR. BROOKS: Nope.
18 BY MS. HARTNETT:
19 Q Let me know when you're ready.
20 A I've read the paragraph. 12:55:22
21 Q Do you know whether the law being challenged
22 in this case applies to grade school?
23 A I don't -- I don't know the law being
24 challenged here.
25 Q So you don't know whether the law at issue 12:55:35

1 requires that transgender youth be comprehensively
2 resocialized; is that fair?
3 MR. BROOKS: Objection.
4 THE WITNESS: When I talk about
5 comprehensively resocialized, it was not in 12:55:51
6 relationship to this law; it was in relationship to the
7 American Academy of Pediatrics' recent study, I think
8 in 2018, by Rafferty, et al., where it was asserting --
9 they were asserting such things that I'm summarizing
10 here. 12:56:18
11 And, see, for them, participation in athletics
12 just follows their fundamental assumption that they
13 know what's best for these children even though they
14 have no long-term -- they don't even have adolescent
15 follow-up, let alone adult follow-up. 12:56:35
16 And so I just think that the case of
17 athletics -- the issue of athletics is a secondary
18 derivative issue about the more fundamental matter of
19 when and how, to what extent, and before -- what
20 requirements are necessary before we socialize a child, 12:56:55
21 you see.
22 So if you think about the -- your issue today
23 about athletics, it's what I would call a downstream
24 issue, downstream from the fundamental thing that we
25 were talking about before the last break about what are 12:57:15

1 the requirements to ethically enable parents to make
2 this decision without doctors pretending like they know
3 what's best for a seven-year-old or an eight-year-old
4 or a 12-year-old or a 15-year-old, you see.
5 So this is a downstream question about which I 12:57:34
6 feel I have no legitimacy to pretend expertise.
7 So I think every question you ask me about
8 this, I'm going to have to say, listen, this is not
9 my -- this is not my wheelhouse. This is not my
10 knowledge base. My knowledge base is about what we 12:57:54
11 were talking about, you know, about the evaluation of
12 children and teens.
13 BY MS. HARTNETT:
14 Q So here, where you say, "this is asserted as a
15 reason why male students who assert a female gender 12:58:07
16 identity must be permitted to compete in girls' or
17 women's athletic events," when you say -- asserted by
18 whom? Is it the American Academy of Pediatrics? Is
19 that who you're referring to there?
20 A No, I don't think it's entirely that. I think 12:58:23
21 it has to -- you know, this is a -- this is a big
22 cultural issue in many, many states. They made -- the
23 NCAA, you know, the high school athletic associations,
24 whatever the names, the acronyms of those
25 organizations, they have made policies based upon 12:58:48

1 information that they've gotten from various, quote,
2 expert groups, and -- and there is this -- in education
3 services today, there is this enormous emphasis on
4 diversity and support for all forms of diversity, and
5 so I -- I think the answer is not it's just from the 12:59:12
6 American Academy of Pediatrics. I think the American
7 Academy of Pediatrics is influenced by these larger
8 social trends that have recognized how much harm we've
9 done to various -- to women, for example, or to African
10 Americans or to Asians, and we are trying, as a 12:59:34
11 society, to make things more open and to -- to
12 represent more people in the public discourse in arts,
13 in music, in the theater and so forth.
14 So there's just a broad, broad cultural trend
15 towards being much more inclusive, you see, and -- and 12:59:52
16 I just thing the trends -- athletic issue must be
17 viewed in terms of the larger social questions that are
18 being answered in a political sense in our culture.
19 MR. BROOKS: Counsel, when you get to a
20 breaking point, I think it is one o'clock, and it would 01:00:10
21 be a good time to take a lunch break.
22 MS. HARTNETT: We can break now. I have a
23 couple more questions on this paragraph, but we can
24 pick it up after lunch. What would you prefer?
25 MR. BROOKS: You can finish up the paragraph. 01:00:27

1 MS. HARTNETT: Sure.
2 BY MS. HARTNETT:
3 Q So -- so is it your view that allowing a
4 transgender youth to participate on the team of
5 their -- the sex that they present as, is that a 01:00:39
6 psychotherapeutic intervention that would dramatically
7 change the outcome for that child?
8 A I'm not certain.
9 Q What is your concern -- I'm sorry, please.
10 A I think if -- I think if a child, let's say a 01:01:02
11 14-year-old, wants to run track or play a sport as a
12 member of a female -- the female side of the sport and
13 if the school or the -- the State or the -- the
14 organization that -- that organizes high school
15 athletics or junior high school athletics says, no, you 01:01:31
16 can't because you were a natal male and you -- trans is
17 not accepted as -- for athletic purposes, I think that
18 person would be disappointed. I think that would be
19 disappointed. And disappointment may look like
20 depression. It may increase the person's anxiety for a 01:01:52
21 while. But like many, all of us get disappointed in
22 life, and, you know, we deal with it. And sometimes we
23 grow from our disappointment.
24 So I would think they would be disappointed.
25 Whether that is to be considered harm, you see, I don't 01:02:12

1 think we would -- we should, just on the basis of
2 disappointment, refer to that as harm. Harm is a
3 different concept, you see.
4 And -- so I guess the answer to your question
5 is I'm not sure. 01:02:32
6 Q But do you think that permitting them to play
7 with -- in that example, allowing the 14-year-old
8 person that identifies and is a girl to play with the
9 girl team, do you believe that that would make them
10 more likely to continue to identify as transgender when 01:02:50
11 they otherwise would not?
12 MR. BROOKS: Objection; ambiguous.
13 THE WITNESS: They would otherwise continue --
14 you -- you mean -- if I understand --
15 BY MS. HARTNETT: 01:03:05
16 Q I'm sorry, I'll ask a better questions.
17 I'm just trying to figure out if your opinion
18 is that allowing transgender, let's just say,
19 adolescents to play on sports teams that match their
20 gender identity will cause them to continue to identify 01:03:15
21 as transgender when they otherwise would not.
22 A I have no idea the answer to that question. I
23 would imagine that they would continue to identify as a
24 trans female, but I don't know what would happen to
25 their identity if they didn't. That was the other side 01:03:40

1 of your question, the last part of your questions.
2 So I guess I can answer part of the question.
3 It would be my opinion, if we allowed a child
4 who currently identifies as a trans girl to participate
5 in a girl's athletic -- organized athletics, that that 01:03:57
6 would do nothing -- that would -- that would reinforce
7 the idea that she continues -- that she is a trans
8 girl. Not that she is a girl, but that she's a trans
9 girl. That's -- I think that would be my opinion.
10 About the other aspect to your question, I 01:04:20
11 don't know the answer.
12 Q But is your opinion that there's a -- is that
13 a -- in your opinion, is there something wrong with
14 reinforcing the girl being on -- sorry -- the girl's
15 gender identity of being on the team? 01:04:33
16 Like, do you have a problem with that, or are
17 you okay with the 14-year-old girl playing on the --
18 transgender girl playing on the girls' team if the
19 rules allow it?
20 MR. BROOKS: Objection; vague, compound. 01:04:42
21 THE WITNESS: If you -- if you look narrowly
22 at the individual girl, we get one set of
23 considerations.
24 If we look at fairness, if we look at the
25 perspective of the other girls, the natal girls who are 01:05:07

1 participating, we get another perspective.
2 If we look at the parents' perspective of the
3 very talented athletes who are natal girls who may be
4 defeated by these trans girls, we get yet a third or
5 fourth perspective. 01:05:31
6 BY MS. HARTNETT:
7 Q Well, that's not your area of expertise;
8 correct?
9 A But you -- you just anticipated what I was
10 going to say. I mean, you're asking me opinions that I 01:05:39
11 have no legitimate expertise to answer. I -- I'm
12 just -- I'm separating the perspectives for you. And I
13 say your -- your question is not as simple as it
14 sounded because there are these other perspectives to
15 be considered which people other than me are going to 01:05:57
16 consider.
17 There is -- shall I repeat?
18 There is the child --
19 Q No, I don't think so. I don't think you
20 should repeat. But what I do -- would like would be 01:06:08
21 before we have lunch, just an answer, which is do you
22 object --
23 MS. HARTNETT: Can you -- can the reporter
24 read back my last question, please.
25 THE REPORTER: Yes. 01:06:15

1 (Record read.)
2 MR. BROOKS: Objection; compound, form of the
3 question, vague.
4 You can answer, if you are able and know what
5 the question is. 01:07:02
6 MS. HARTNETT: That's -- enough coaching.
7 THE WITNESS: Pardon me? I didn't hear what
8 you just said.
9 BY MS. HARTNETT:
10 Q I was telling your counsel to please stop 01:07:07
11 coaching you. And I can ask a better question.
12 A Oh.
13 Q Is it your perspective that allowing a
14 transgender girl to participate on a girl team,
15 consistent with her gender identity, is harmful to the 01:07:18
16 transgender girl?
17 A No, I don't think it's harmful in the short
18 run to the transgender girl. In the long run, if the
19 transgender girl detransitions, say, in five years, I
20 wonder what he will now think about what happened five 01:07:36
21 years before when she was competing against girls as a
22 girl.
23 But in the -- I presume your question is in
24 the short term, you see? And I guess in the short
25 term, I don't think it would harm the child to the 01:07:58

1 extent that it reinforces their current identity.
2 But as you may or may not know, gender
3 identity can evolve over time. And so when people
4 detransition and return to presenting themselves as a
5 boy and thinking of themselves as a boy, they then have 01:08:20
6 to -- they then have to consider what happened when
7 they were -- when they were presenting themselves as a
8 girl and believing that they were a girl. They no
9 longer believe that they're a girl, but they did back
10 then, you see? 01:08:39
11 So I don't know, I don't think anybody knows,
12 what implications, what harm, might come from their --
13 what retrospective view of the harm that -- that they
14 cause themselves by presenting -- by competing against
15 girls. So -- 01:08:58
16 Q Does anybody know the implications of the
17 disappointment that the transgender girl might
18 experience from exclusion, or is it similarly
19 indeterminant?
20 MR. BROOKS: Objection. 01:09:09
21 THE WITNESS: Well, I -- I think I've already
22 answered the question, that disappointment -- I would
23 expect it if a -- if the girl -- the trans girl wanted
24 to participate and was prohibited by some larger force
25 from participating, they would be disappointed, and it 01:09:24

1 may have -- it may have -- it -- and I couldn't predict
2 the outcome of the disappointment, whether it would
3 precipitate depression or whether it would precipitate
4 giving up their trans identity, as being unrealistic,
5 that other people are saying I am very unrealistic 01:09:47
6 and -- and this is unfair and I'm asking for an unfair
7 advantage.
8 So, you know, I can't -- I don't -- these are
9 not areas that I -- that anyone has had any experience
10 with, you see. And -- and I -- it's hard for me to 01:10:01
11 give you a simple answer.
12 It feels to me, Ms. Hartnett, that you are
13 trying to get me to answer a question in a certain way,
14 and I'm just trying to say I think it's more
15 complicated. And I think you're asking me to give an 01:10:16
16 opinion about which I don't have adequate knowledge,
17 and I don't -- that's all. Period.
18 Lunch.
19 MS. HARTNETT: Let's go to lunch.
20 THE VIDEOGRAPHER: We are off the record at 01:10:35
21 1:11 p.m.
22 (Lunch recess.)
23 THE VIDEOGRAPHER: We are on the record at
24 2:11 p.m.
25 MS. HARTNETT: Thank you. 02:11:22

1 BY MS. HARTNETT:
2 Q Welcome back, Dr. Levine.
3 I think before the break, we had -- I'm not
4 sure what page you have up, but I -- I'm at
5 paragraph 50 of the declaration. 02:11:31
6 A So are -- so am I.
7 Q Okay. Let's -- I was trying to -- and the
8 reason why we were talking about that is there was a
9 mention of athletic events there, and the other mention
10 of athletic events in your declaration is at 02:11:43
11 paragraph 130. So if you could go to 130, I'll have a
12 question about that.
13 Let me know went you get to 130, please.
14 MR BROOKS: We are at 130, which fits on the
15 screen. 02:12:14
16 BY MS. HARTNETT:
17 Q Great. So here in this paragraph, you say, in
18 the third sentence, the following (as read):
19 "It is evident from the scientific
20 literature that engaging in therapy 02:12:26
21 that encourages social transition
22 before or during puberty——which would
23 include participation on athletic
24 teams designated for the opposite
25 sex——is a psychotherapeutic 02:12:37

1 intervention that dramatically changes
2 outcomes."
3 Do you see that?
4 A I do.
5 Q And you don't know if H.B. 3293 applies to 02:12:46
6 prepubertal kids; right?
7 A I'm sorry, would you repeat that question.
8 Q You don't know if H.B. 3293 applies to
9 prepubertal kids?
10 A I already testified that I don't know the 02:13:03
11 content of the deal.
12 Q So is it your opinion that allowing
13 transgender children and adolescents to play on sports
14 teams will continue -- will cause them to continue to
15 identify as transgender? 02:13:21
16 A I think it -- well -- well, you know, my
17 hesitance is because you used the word "cause."
18 Q I'm just trying to --
19 A A child --
20 (Simultaneous speaking.) 02:14:10
21 BY MS. HARTNETT:
22 Q Oh, sorry, go ahead.
23 A That's why I have taken so long. I'm -- I'm
24 thinking about the word "cause" and its implications in
25 my mind. I -- I do think that various aspects of 02:14:20

1 social transition tend to continue the child on a life
2 course consistent with trans life, whether or not
3 they're aware of the risk that they're entailing or
4 not.
5 I think that's as close to an answer I can 02:14:45
6 give you.
7 Q Are you aware of any research indicating that
8 by preventing children from playing on sports teams
9 consistent with their gender identity that will prevent
10 them from continuing to identify as transgender going 02:14:59
11 forward?
12 A I'm not aware of research literature about
13 athletic teams and its impact, positive or negative, at
14 all. I'm totally unaware.
15 Q Okay. Do you think that by excluding 02:15:14
16 transgender girls from playing on the girls' team the
17 law that's being challenged in this case stigmatizes
18 transgender girls?
19 MR. BROOKS: Objection.
20 THE WITNESS: I think it may disappoint 02:15:48
21 transgender girls. Stigma has another concept. You
22 know, it has to do with social things.
23 I -- I think a reasonable mental health
24 professional could assume that if a child wanted
25 something and was prohibited from it, they would be 02:16:03

1 disappointed, at least initially.
2 Other than that, I -- I don't care to comment.
3 BY MS. HARTNETT:
4 Q Well, say a child wants a cookie and they
5 aren't allowed to have it. That's disappointing; 02:16:23
6 right?
7 A Yes.
8 Q Is the disappointment that a transgender child
9 would have from being excluded from a sports team
10 consistent with their gender identity essentially that, 02:16:31
11 equivalent of the cookie denial?
12 MR. BROOKS: Objection; calls for speculation.
13 THE WITNESS: I don't know if you even put my
14 smile into the text.
15 Obviously, you know, there -- there are 02:16:57
16 degrees of disappointment in the universe. And to
17 equate that with a cookie, I don't know. I prefer not
18 to even answer that question.
19 BY MS. HARTNETT:
20 Q Well, your -- your point of view is that 02:17:10
21 people that experience being transgender also generally
22 experience a wide range of other distressing feelings
23 and conditions; correct?
24 A My point of view is what?
25 Q That people who are transgender also 02:17:27

1 experience a wide range of other concerns and -- and
2 issues; correct?
3 A Yes, I think -- yes.
4 Q That they're subject to serious mental health
5 issues, that's your point of view; correct? 02:17:47
6 A I think they're apt to encounter a number of
7 frustrations in their future lives that could add to
8 their social anxiety, their sense of pervasive sadness
9 and it lead to solving the problem in ineffective ways,
10 like substance abuse. 02:18:13
11 So, yes, I do think that being transgender,
12 for -- for many, many people, poses adaptive challenges
13 in the present and in the future.
14 Q How do you know that that's based on being
15 transgender as opposed to how the transgender people 02:18:34
16 are being treated, or do you not distinguish between
17 the two?
18 A Because -- because some of the -- in children,
19 some of the psychiatric problems that they have are --
20 occur well before there's any awareness of the society. 02:18:54
21 And in every cross-sectional study of adults
22 in the transgender community have shown that the --
23 that they're a vulnerable population and they're
24 vulnerable to many psychiatric difficulties, and the
25 common explanation for that, among trans advocates, is 02:19:19

1 that it's entirely due to social discrimination whereas
2 I think if you look at the premorbid and the
3 accompanying psychiatric difficulties of many trans
4 people, these -- these -- the social discrimination has
5 only added to the -- the internalized conflicts about 02:19:37
6 what they're doing.
7 So I think it's far more complicated than it's
8 merely a result of stigma, so to speak.
9 "Discrimination" would be a better word, I guess.
10 Q Yeah, I'm -- thank you. And I'm trying to 02:19:54
11 reconcile that view with the notion that excluding a
12 transgender youth who, in your view, might be subject
13 to these various preexisting psychological problems,
14 why -- where you're having -- where -- what is the
15 basis for you believing it would just be a simple 02:20:09
16 source of disappointment for the trans youth to be
17 excluded from a team, consistent with their gender
18 identity, as opposed to a more severe harm?
19 MR. BROOKS: Objection.
20 THE WITNESS: Number one, I don't think 02:20:22
21 there's any research in this area. So whatever --
22 whatever you would like to conclude, I think there's no
23 basis for it.
24 I'm just trying to understand, based on my
25 knowledge of human beings, that for one person, it 02:20:37

1 would be a major disappointment and it might lead to
2 harm for that person, and for another person, it might
3 be a major disappointment that leads to no harm, and
4 for another person, it might be, oh, well, so what, and
5 it's not a big -- not a big deal. 02:20:52
6 Every study of human beings shows the variety
7 of human beings. And we can't predict that if you
8 exclude a child from anything on the basis of their
9 gender identity, that it's going to cause --
10 automatically, you can guarantee it will cause harm. 02:21:12
11 There's just no reason to think that.
12 It doesn't mean there isn't a child who might
13 not be harmed, but it doesn't mean that all the
14 children will be harmed, and it doesn't mean that the
15 harm will follow in the same manifestation. 02:21:27
16 Human beings have a variety of responses to
17 everything.
18 BY MS. HARTNETT:
19 Q So is your view for the trans girls that would
20 be excluded under a policy of not allowing them to play 02:21:43
21 on the team consistent with their gender identity, that
22 they should just toughen up and stomach the
23 disappointment?
24 MR. BROOKS: Objection.
25 THE WITNESS: You're putting words in my 02:21:55

1 mouth. That's not my view. That's not how I was --
2 that's not how I have spoken about it. You're
3 summarizing it in a very negative way for me. I don't
4 accept your language. It's not me.
5 BY MS. HARTNETT: 02:22:09
6 Q Okay. You don't have to.
7 How would you put it?
8 A I already put it.
9 MR. BROOKS: Objection.
10 BY MS. HARTNETT: 02:22:15
11 Q You mentioned before the break that you also,
12 in your view, had to look at the potential harms or the
13 effects on the other people at issue, and I think you
14 mentioned the other girls on the team; is -- did I hear
15 you right? 02:22:26
16 A I think I did mention that.
17 Q Are you giving an expert opinion in this case
18 about the harm to girls on a team where they would have
19 to include a transgender girl?
20 A I don't know how many times, Ms. Hartnett, I 02:22:41
21 have to tell you that I don't consider myself having an
22 expert opinion on this subject. I have stated what I
23 stated, but I don't -- I don't -- I don't feel like I
24 represent an expert.
25 And so the answer to your question is, no, I 02:22:59

1 don't have an expert opinion on that.
2 Q Thank you. I have a few questions about your
3 expert report. I'm just going to go back to the
4 beginning and go through sequentially, and I'll --
5 please feel free to read the paragraphs I cite to you 02:23:16
6 while I'm asking you questions.
7 My first one is going to be back on
8 paragraph 5, page 2.
9 MR. BROOKS: Getting there.
10 Paragraph 5 is on the screen. 02:23:36
11 MS. HARTNETT: Yeah, we were there before.
12 BY MS. HARTNETT:
13 Q I just had a question about -- so I was
14 comparing this report to the declaration that was
15 submitted at the beginning of the case. That was the 02:23:47
16 one from the Washington State declaration that had been
17 attached to an earlier motion in the case. And that's
18 something I introduced as Exhibit 86. So if you need
19 to refer to it, feel free.
20 But I will just represent to you that in the 02:24:02
21 version of paragraph 5 that was in your earlier
22 declaration, you had certain language that's no longer
23 in this report. I'll read it to you and then -- just
24 curious as to why you removed it.
25 You -- this is the declaration that you signed 02:24:15

1 in May of 2021. (As read):
2 "As the incidence of gender dysphoria
3 has increased among children and youth
4 in recent years, larger numbers of
5 minors presenting with actual or 02:24:29
6 potential gender dysphoria have
7 presented to our clinic.
8 I currently am providing psychotherapy
9 for several minors in this area. I
10 also counsel distressed parents of 02:24:41
11 these teens."
12 Do you know why you removed that language from
13 your -- this report?
14 MR. BROOKS: And, counsel, are -- asking that
15 question, are you representing that that or similar 02:24:54
16 language doesn't appear somewhere else in the report?
17 MS. HARTNETT: I was unable to find that
18 language in this report. It was in paragraph 4 of the
19 PI declaration, which is now paragraph 5 of this
20 report, and I was not able to find that language. 02:25:09
21 THE WITNESS: I would imagine the answer to
22 the question is I didn't think it was relevant to this
23 particular document.
24 Please understand, in preparing this document,
25 I did not read the -- Exhibit 86. 02:25:29

1 BY MS. HARTNETT:
2 Q Is it true that larger numbers of minors have
3 been presenting with actual or potential gender
4 dysphoria to your clinic?
5 A No. It's true that across the world larger 02:25:46
6 numbers of minors are requesting services for gender.
7 That's an epidemiologic phenomenon that exists on four
8 continents.
9 Q Is it true that you are currently providing
10 psychotherapy for several minors in this area? 02:26:07
11 A Yes.
12 Q How many?
13 A It depends on what era you're -- what month,
14 what week, what -- what year you're talking about. If
15 you're talking about within the last year, I would say 02:26:22
16 probably four or five kids.
17 Q Can you give me the ages of those kids?
18 A Probably from 14 to 17.
19 Q And how many of those have you seen more than
20 one time? 02:26:41
21 A Each of them.
22 You should -- well, okay.
23 Oh, one of them I've seen once, I'm sorry.
24 I -- let me correct that.
25 Q For the other four, do you see them on a 02:27:01

1 monthly basis?
2 A No. I -- I tend to see them more often.
3 Q Are there any of those patients that you have
4 seen on a monthly or less basis, other than the one you
5 only saw once? 02:27:21
6 A Well, I hear from patients I see in the past
7 periodically, sometimes. I hear from their parents. I
8 sometimes hear from them. But it's -- it's not
9 anything regular.
10 Q Yeah, I'm -- thank you. I'm just trying to 02:27:45
11 understand. There was a statement made in your
12 May 2021 declaration that you were currently providing
13 psychotherapy for several minors in this area, and I'm
14 just trying to figure out, is that actually true today?
15 A No, it's not true today to the same extent 02:27:59
16 that it was when I wrote the original -- the Tingley
17 declaration.
18 Q Thank you. Moving down in here, you have on
19 page -- paragraph 7 and paragraph 8, you identify a
20 couple of cases where you previously provided 02:28:15
21 testimony.
22 A Yes.
23 Q There's the -- the case in the Eastern
24 District of Massachusetts, in the First Circuit, that
25 you refer to in paragraph 7. 02:28:29

1 Do you see that?
2 A Yes.
3 Q And then there's the Younger litigation in
4 paragraph 8.
5 Do you see that? 02:28:37
6 A Yes.
7 Q And you do cross-reference your CV list and
8 then the Tavistock case.
9 Do you see that?
10 A Yes. 02:28:47
11 Q Why did you choose to highlight the
12 Massachusetts and the Younger case here?
13 A Well, the Massachusetts case, under
14 Judge Wolf, Judge Wolf asked me to be a judge's
15 witness. That was the beginning of my legal 02:29:10
16 involvement in that whole area of transgenderism. So I
17 think that that's noteworthy. It's also noteworthy
18 because that became -- among the DOC attorneys across
19 the nation, that's a very landmark case, and it's often
20 quoted in various other legal matters. 02:29:29
21 So it seemed to me that you ought to know that
22 I began in that area in 2006 with Dr. -- with
23 Judge Avery.
24 And what was the second part of your question?
25 Q Oh, the Younger case and why you included that 02:29:49

1 here.
2 A I included that because that was my entry case
3 into transgender children and the -- when parents don't
4 agree on the treatment of their trans child and -- and
5 courts are involved and -- I mean, that is not just 02:30:10
6 happening in the Younger case. That's happening in
7 other jurisdictions as well. And so I --
8 Q In the Younger -- oh, sorry.
9 A That that's the kind of thing you wanted to
10 know. That is a credential, in a sense. Or I thought 02:30:26
11 that you would like to read that case, if you could.
12 Q Are you aware the jury rejected the father's
13 claim in the Younger case and awarded the
14 decision-making to the mother?
15 MR. BROOKS: Objection; mischaracterizes the 02:30:43
16 record.
17 THE WITNESS: One of my complaints about my
18 participation is I -- I often am not informed about the
19 outcome and the progress of the cases that I've
20 testified in. 02:30:55
21 I did -- I did hear something like you --
22 what -- what you said, but it seems to me that it was a
23 more complicated decision than you summarized.
24 BY MS. HARTNETT:
25 Q Are you aware that -- of the more recent 02:31:14

1 litigation in Texas regarding a directive from the
2 attorney general about the investigation of the --
3 sorry -- by the directive of state officials to
4 investigate those providing transgender care for child
5 abuse? Does that ring a bell? 02:31:30
6 MR. TRYON: Objection.
7 THE WITNESS: I only know about that because I
8 read it in the papers. I have not --
9 BY MS. HARTNETT:
10 Q Okay. That's what I was going to ask you. 02:31:40
11 Were you involved in that? Were you asked to
12 provide an expert opinion in that case?
13 A Never.
14 Q Is there a reason why you didn't include the
15 Nosewor- -- Norsworthy case when you were summarizing 02:31:50
16 your background here in paragraph 7 and 8?
17 A The Noseworthy case is one of, I don't know,
18 seven or eight cases. I -- if you look at my CV, I'm
19 sure it's listed in my CV.
20 This is a prisoner case. I didn't think it 02:32:22
21 had to do with -- it just didn't seem it had to do with
22 athletics and -- and teenagers.
23 Q Are you aware that your testimony was
24 partially excluded in a case called Claire in Florida
25 that was about the -- it was precluded with respect to 02:32:40

1 the testimony about the motivations that plaintiffs had
2 for seeking gender confirmation surgery.
3 A I was not --
4 MR. BROOKS: Objection.
5 THE WITNESS: I was not aware. 02:32:51
6 BY MS. HARTNETT:
7 Q Just flashing forward to paragraph 13 here.
8 This is a paragraph where you're discussing, in part,
9 Dr. Adkins' declaration. And my first question is, at
10 the end of this paragraph, you talk about a life course 02:33:15
11 perspective?
12 A Yes.
13 Q I'm just curious if that's a term that you
14 coined or that's from somewhere else in the literature.
15 A If I took credit for coining that term, I 02:33:36
16 think it would be -- I didn't -- I didn't coin the term
17 "life perspective."
18 I'm a -- I'm a psychiatrist, and I see people
19 throughout the life cycle, and so I am constantly
20 confronted with the consequences of early life 02:33:54
21 decisions and of behavioral patterns.
22 I have a natural life perspective on matters.
23 I certainly didn't -- I don't believe I coined the
24 term.
25 Q Well, I ask because it's in quotes, and so I'm 02:34:10

1 just wondering if it's something that you refer to your
2 method as the life course perspective or if that's a
3 method I could look to in the literature somewhere.
4 A I think it's in quotes -- I think it's in
5 quotes because I wanted to emphasize the perspective 02:34:25
6 that this whole question about how to take care of
7 trans youth needs to be understood, not does it make
8 them happy in the current life, but what will it do to
9 the whole course of their life.
10 And so by putting it into italics (sic), I -- 02:34:46
11 I -- perhaps -- perhaps I shouldn't have done that, but
12 I was just trying to bring the reader's attention to
13 the perspective here that the decisions that are made
14 in teenage years, for example, or in their 20s or in
15 their 30s have implications, serious implications, for 02:35:08
16 10 years, 20 years, 30 years down the pike.
17 And as an adult psychiatrist who deals with
18 people, you know, from 96 down, I certainly see the
19 impact of previous life decisions on their current
20 suffering. 02:35:32
21 And so that's all it refers to, that -- and I
22 do believe that if you spend your time in pediatrics,
23 you probably don't have as -- as sharp a focus on the
24 life perspective that an adult person -- adult -- a
25 per- -- specializes in adults or who has a lot of 02:35:50

1 experience with adults have. That's all I'm trying to
2 say.
3 Q Is it your view that Dr. Adkins' approach is
4 to make the young person happy as opposed to creating a
5 happy, high-functional, mentally healthy person for the 02:36:06
6 next 50 to 70 years of life?
7 A I believe that Dr. Adkins has hope that she is
8 going to create a happy, functional human being for the
9 next 70 years of life, but I do believe she's
10 influenced, primarily, on making her child -- her 02:36:20
11 current patients happy.
12 The question is does Dr. Adkins have any
13 evidence whatsoever that the decisions that she has
14 been making with teenagers and younger children,
15 does -- does she know that creates happiness in ten 02:36:38
16 years or in five years. And certainly, I don't think
17 she knows what happens in 30 years.
18 But I think as a society, you and I as
19 representatives of society, can recog- -- recognize the
20 relevance of the question. 02:36:56
21 We want to separate, at all times, physicians'
22 beliefs from the evidence that supports those beliefs.
23 Q What's the basis for your notion that
24 Dr. Adkins lacks an understanding of how to create a
25 happy, highly functional, mentally healthy person for 02:37:15

1 the next 50 to 70 years of life?
2 A Because she's a pediatric endocrinologist.
3 Because she's a busy person dealing with young people.
4 Because she doesn't follow-up her patients, I'm sure,
5 for 30 years. 02:37:31
6 Q Do you follow-up your patients for 30 years?
7 A Some of them, yes. You know I published a
8 paper about a 30-year follow-up of a trans person.
9 Maybe you don't know. I published a paper about
10 returning to the male gender role after 30 years. 02:37:48
11 Now, I can't say that I have, you know, 20
12 patients I've followed for 30 years, but I -- I have
13 certainly written about that case, and in -- in writing
14 about that case, I have raised certain issues that are
15 germane to your questioning right now. That is, a life 02:38:05
16 perspective, a life course perspective is something
17 that's reasonable and that an educa- -- a physician
18 needs to be thinking about the long-term outcome of
19 what is being done today.
20 Q What is the basis for you -- but you're -- 02:38:24
21 sorry, I think you've already stated it, but I -- is
22 there any other reason you have to believe that
23 Dr. Adkins is not informing herself about the
24 consequences of her actions on her patients 30 --
25 30 years from today? 02:38:39

1 A Only that she could not know what happens.
2 She hasn't been practicing 30 years, I don't believe.
3 And I don't believe she is in a position, considering
4 the work that she does, to have systematic follow-up,
5 even for shorter periods of times, on her patients. 02:38:54
6 If, for example, she has systematic follow-up
7 on 80 percent of the patients she's ever given a
8 hormone treatment for, that should be in the
9 literature. And she knows, she should know, given
10 the -- the -- what's absent from the literature, how 02:39:15
11 welcome such a study would be, such a report would be.
12 But as far as I know, she hasn't published that
13 information.
14 Q So your testimony is that you're basing your
15 assumption that Dr. Adkins doesn't conduct systematic 02:39:28
16 follow-up on her failure to publish a study showing her
17 systematic follow-up?
18 A I'm sorry, you'll have to repeat that. Too
19 many similar phrases.
20 MS. HARTNETT: Can the -- well, I'll try. 02:39:42
21 BY MS. HARTNETT:
22 Q Is the basis for your assumption that
23 Dr. Adkins doesn't engage in systematic follow-up of
24 her patients her failure to publish research indicating
25 her systematic follow-up? 02:39:52

1 A No. I am sure Dr. Adkins follows her
2 patients, but she's a pediatrician, basically, and
3 usually, and I can't be certain about this, that at 18,
4 pediatrics people turn the kids over to adult
5 endocrinologists. 02:40:23
6 And so I think just in the nature of being a
7 pediatric endocrinologist, although she may see some
8 kids into their 20s, I would imagine that the usual
9 trend in pediatrics is to hand kids off, when they're
10 18, to other practitioners; and, therefore, she 02:40:37
11 probably has limited systematic follow-up after 18.
12 And if you extend that by years, like five
13 years and ten years and so forth, I would imagine that
14 she may have a case or two that she follows or knows
15 about, but it would not be anything like systematic. 02:40:55
16 So the answer to your question is the basis --
17 did she not publish, and that's the basis. I'm giving
18 you an additional basis.
19 Q Thank you. You mentioned one patient you had
20 followed up over the course of 30 years, and I think 02:41:10
21 said something like maybe 20 or -- how many patients,
22 overall, do you feel like -- do -- do you believe that
23 you followed up with over a period of decades in your
24 practice?
25 A Very -- very few. Because I exist in America, 02:41:26

1 and in America, we have no means of guaran- -- of -- of
2 insisting on follow-up.
3 And on -- in -- another reason why is that
4 when people transition, they -- they want to get rid of
5 their professionals who dealt with them, and they don't 02:41:47
6 naturally come back.
7 In fact, all attempts at follow-up, not just
8 in my clinic, but elsewhere, we -- we reach -- we reach
9 very few people.
10 For example, in a 2002 study of everyone who 02:42:02
11 had sex reassignment surgery by one surgeon, only
12 30 percent of the people who ever had surgery by this
13 one surgeon actually were available for follow-up.
14 And all follow-up studies -- very few
15 follow-up studies can have a hundred percent of the 02:42:22
16 data of all the patients.
17 Follow-up is a problem. It's a much better
18 problem -- it's solved much better in Scandinavia than
19 it is in the United States. The United States have 50
20 states. They have different rules. Nobody -- I don't 02:42:39
21 think we -- we don't publish follow-up studies in the
22 United States very often.
23 Q What do you do to try to follow up with your
24 patients?
25 MR. TRYON: I think we have a connection 02:43:08

1 problem.
2 MS. HARTNETT: Is that me? It could be me.
3 THE VIDEOGRAPHER: We're just going to pause
4 and see if he -- there he is. He's back.
5 MR. TRYON: There -- he came back. 02:43:15
6 BY MS. HARTNETT:
7 Q Sorry, I think you froze.
8 Did you hear my question?
9 MR. BROOKS: No, I think we don't -- we did
10 not hear a pending question in this room. 02:43:32
11 Can you hear us now?
12 MS. HARTNETT: Okay. Sorry. The video froze
13 from your end.
14 MR. BROOKS: We -- we see --
15 BY MS. HARTNETT: 02:43:40
16 Q My question was, what do you do to follow up
17 with your patients?
18 A I ask them to follow up with me after their
19 surgery, for example, or after their consultation with
20 another person, another professional, and they actually 02:43:54
21 rarely do.
22 Q Do you try to find them if they don't come
23 back to you --
24 A Yes.
25 Q -- afterwards? 02:44:07

1 A Yes.
2 Q How?
3 A I write them notes. I write them a letter.
4 Sometimes I write them a cute little postcard reminding
5 them of who I am. But they know what I mean. 02:44:15
6 Q If you have such limited follow-up with your
7 own patients, how do you know your method has -- what
8 the effect of your method is on people 30 years later?
9 A I don't know. And I -- I am like other people
10 in this field. I don't know the 30-year implication of 02:44:47
11 what we're doing. I don't know the 20-year implication
12 of what we're doing. I'm just raising the question,
13 shouldn't we be concerned about a life course
14 perspective.
15 I don't know and the people who are advocates 02:45:05
16 don't know, you see. I don't know how they can be so
17 sure that they're going to create a happy life.
18 Q So for all you know, your method could
19 actually be harming your patients more than the other
20 methods; is that fair? 02:45:24
21 A You mean in the long run I may be harming them
22 by talking with them, say, for six months about their
23 decision, what -- what they should go -- what -- what
24 they want to do?
25 I can't imagine that -- that my 02:45:48

1 psychotherapeutic -- my relationship with them that is
2 helping them to consider their thoughts, their feelings
3 and their futures is -- is harming them and in 30 years
4 they're going to have some terrible result of my
5 intervention, you see. 02:46:07
6 What you're trying to contrast is talking to a
7 person, say, for six months, every -- twice, three
8 times a month for six months with socializing them in a
9 new gender or supporting, giving them hormones and --
10 and saying yes to genital surgery or mastectomy or 02:46:24
11 sterilizing procedures, you see.
12 You're comparing Dr. Levine or
13 psychotherapeutic talking, conversation, extended
14 evaluation, with major biologically sterilizing,
15 sexually dysfunction in causing interventions. 02:46:44
16 I really think -- we're not talking about
17 apples and oranges here. I think we're talking about
18 apples and zebras.
19 Q Your report discusses four competing models of
20 therapy; correct? 02:47:13
21 A Correct.
22 Q So you have the apple, the zebra and two other
23 things in that; correct?
24 MR. BROOKS: Objection.
25 THE WITNESS: No. 02:47:20

1 BY MS. HARTNETT:
2 Q The four competing models are watchful
3 waiting, sub 1; sub 2, psychotherapy; and the
4 affirmation model.
5 That's what you've set forth; correct? 02:47:30
6 A That's right.
7 Q And I'm asking you whether, for all you know,
8 the psychotherapy model may be creating more harm for
9 people than the affirmation theory model. You just
10 don't know? 02:47:46
11 A I think I've already testified that it's hard
12 for me to even conceptualize that I'm causing harm.
13 Sometimes I'm causing frustration because "I want
14 hormones now" and you're 14, and I'm sorry, we have --
15 I want to talk about this. 02:48:14
16 But I don't really think that's harm in the
17 way that when I look at the cross-sectional data on
18 adults who have transitioned and -- and the
19 comorbidities that they have, I consider those to be
20 manifestations of harm, you see. 02:48:32
21 I don't really think that talking briefly
22 and -- and honestly and examining things is -- is a
23 source of harm.
24 It is --
25 Q But your -- your practice isn't to talk 02:48:46

1 briefly to someone. You're talking -- right?
2 The -- the -- the model that you're setting
3 forth is to talk with them at length and get to know
4 them; correct?
5 A Yes, this used to be the model -- before 2011, 02:48:55
6 this was the endorsed model by the World -- by WPATH,
7 you see. I'm not talking -- I'm not inventing a new
8 model here. This was the model we had in the '60s, the
9 '70s, the '80s and the '90s and in the 2010s and --
10 Q And it's your view that the psychotherapy -- 02:49:14
11 A The view model changed.
12 Q It's your view that the psychotherapy model
13 cannot, by its nature, harm anyone?
14 A I know some people think that it harms people.
15 I don't believe that, actually. 02:49:28
16 Q Well, let me give you an example.
17 Say you're meeting with a patient and they
18 want to talk you about their need or their perceived
19 need for cross-sex hormones and you don't agree or
20 choose not to support them with a letter. 02:49:45
21 Do you -- is that a fair -- just assume that,
22 okay?
23 And that person then goes on to stop seeing
24 you, has been taken off course from getting the
25 cross-sex hormones, ends up becoming distraught at 02:49:55

1 their condition and commits suicide.
2 Is that a situation where the psychotherapy
3 model might be responsible for causing harm?
4 MR. BROOKS: Objection; calls for speculation.
5 MR. TRYON: Objection. 02:50:08
6 THE WITNESS: If that -- such a patient goes
7 to me -- comes to me and after -- in the first session
8 wants a letter and I refuse to provide it, I will help
9 that person -- if the person doesn't know, I will refer
10 them to clinics -- to other resources. 02:50:26
11 The idea that my refusal would cause them to
12 suicide is enormous and deep that leaves out so many
13 intervening factors as to make me say I can't possibly
14 agree with what you said.
15 BY MS. HARTNETT: 02:50:43
16 Q But it's possible that your patients, for
17 example, have higher rates of suicide than other
18 patients that have gone through a different model;
19 correct? You just don't know?
20 MR. TRYON: Objection. 02:50:52
21 THE WITNESS: It's equally possible that the
22 patients have a lower rate of suicide that have gone
23 through Dr. Levine's care.
24 BY MS. HARTNETT:
25 Q But it's also possible that they have had a 02:51:04

1 higher rate of suicide going through Dr. Levine's care;
2 correct?
3 MR. BROOKS: Objection --
4 MR. TRYON: Objection.
5 MR. BROOKS: -- calls for speculation. 02:51:13
6 BY MS. HARTNETT:
7 Q You said it's possible that they have a lower
8 rate. It seems that the flip side of that is it's
9 possible that they had a higher rate; is that correct?
10 A You're -- 02:51:23
11 MR. BROOKS: Same -- same objection.
12 THE WITNESS: You're asking me to speculate
13 about something you know I don't have the answer to, so
14 why should I give you an answer that I don't have? Why
15 are you asking -- 02:51:32
16 BY MS. HARTNETT:
17 Q You testified that it's possible that --
18 MS. HARTNETT: I'm going to ask for an answer
19 to my question without coaching, please.
20 BY MS. HARTNETT: 02:51:37
21 Q My -- I asked if it's possible that the
22 patients of Dr. Levine have a higher rate of suicide
23 than patients going through another method, and then
24 you responded it's possible that they have a lower --
25 lower rate. That's an answer. 02:51:49

1 I'm asking you, is it possible that they also
2 have a higher rate?
3 MR. BROOKS: And I have objected to the
4 question as calling for speculation.
5 BY MS. HARTNETT: 02:52:01
6 Q Please answer.
7 A In order to -- in order to have an answer to a
8 rate question, one has to have a denominator and
9 numerator. I have neither a denominator or numerator;
10 and, therefore, I can't really ask -- in any expert 02:52:23
11 way, I cannot answer a question about the rate.
12 You're asking me theoretical possibilities,
13 and there probably are at least three theoretical
14 possibilities, and I could probably think of more,
15 but -- 02:52:40
16 Q What are the three?
17 A There would be no difference in the rates,
18 right? The rates could not be ascertained because the
19 denominator -- the numerator and the denominator
20 couldn't be determined. And then the fifth one would 02:52:52
21 be because the numerator can't be determined.
22 So if you ask me a question about rate, it's a
23 mathematical question. It's a scientific question.
24 But you're not asking it in a scientific way at all.
25 And I can't answer it. 02:53:07

1 To the extent that I have any expertise, it's
2 on the science. It's not on the speculation side of
3 things.
4 Q Your expert opinion is that the affirmative
5 model is more harmful than the psychotherapy model; 02:53:18
6 correct?
7 A My -- my expert opinion is that the
8 affirmative model does not have the scientific
9 justification to declaim -- to -- to declare it to be
10 the best practice. That's my expert opinion that -- 02:53:35
11 Q Does the psychotherapy model have any more
12 justification than the affirmative model?
13 A Only the tradition that if any other
14 psychiatric problem presented in a 14- or 15-year-old,
15 no one, no one would object to an extended evaluation, 02:53:53
16 a psychotherapeutic exploration and the use of a
17 medication to a drug -- to address some comorbidity.
18 It's just that when a -- when the child
19 declares themselves trans, we want to create a whole
20 different approach to this situation. That's my point. 02:54:12
21 Q And just to make sure that we close the loop
22 on the other point, because I'm not quite sure what the
23 answer was there, is it your testimony that it's
24 possible that your -- that Dr. Levine's patients could
25 have lower rates of suicide than other methods? 02:54:29

1 MR. BROOKS: Objection; calls for speculation.
2 THE WITNESS: I'm afraid -- although you don't
3 understand my answer to the question, I feel like I've
4 answered the question repeatedly already.
5 BY MS. HARTNETT: 02:54:46
6 Q Well, you've said that it could be -- I
7 thought you -- I thought I understood you to say you
8 could have lower rates, you could have a missing
9 numerator or denominator or equivalent, but I didn't
10 hear whether or not you think another possibility is in 02:54:54
11 fact that the rates of suicide could be higher from
12 your patients.
13 A Well, perhaps you missed the implication of
14 what I said, that it could be higher, it could be
15 lower, it could be the same, it could be indeterminant 02:55:06
16 because of the denominator issues, and it could be
17 indeterminant because of the numerator issues.
18 Q I appreciate that. Thank you.
19 We've talked about Dr. Adkins a bit here. I
20 just wanted to ask you -- this is flashing back to -- I 02:55:22
21 think we're in paragraph 13.
22 You then go on, in paragraph 16, to talk about
23 Dr. Safer. Let me know when you're there.
24 A Got it.
25 Q Other than reviewing Dr. Safer's expert 02:55:43

1 report, do you have any other familiarity with
2 Dr. Safer's practices?
3 A I believe he's the head of a New York gender
4 team, clinic.
5 Q Have you ever met him before? 02:55:58
6 A Not that I am aware of.
7 Q Have you ever been to his clinic?
8 A No.
9 Q Have you ever spoken to any of his patients?
10 A Not that I'm aware of. 02:56:11
11 Q How about Dr. Adkins, have you been to her
12 clinic?
13 A No.
14 Q Have you spoken to any of her patients?
15 A Not that I'm aware of. 02:56:23
16 Q So do you know whether or not Dr. Safer's
17 approach is focused on creating a happy, healthy --
18 sorry -- happy, highly functional, mentally healthy
19 person for the next 50 to 70 years?
20 A Ms. Hartnett, I think everyone in this field 02:56:42
21 is hoping that what they're doing is creating that
22 outcome. I would presume that Dr. Safer believes that
23 and Dr. Adkins believes that. I just go back to the
24 fact that we don't know the answer in what they're
25 doing and what they're doing is a rather dramatic 02:57:04

1 interventions in a person's biology, their physiology,
2 their anatomy and their social roles, and it seems to
3 me that if we're making such a very, very
4 life-changing -- or cooperating with such a life
5 change, a profound life change, that's going to effect 02:57:21
6 every aspect of their lives, or most aspect of their
7 lives, we ought to at least acknowledge that we don't
8 have the follow-up data to match our belief systems.
9 And as I wrote about in the most recent
10 publication, I do think that ethically we have a 02:57:40
11 responsibility to inform people of what science knows
12 and what we as professionals believe, but it's not
13 supported by science.
14 So in answer -- to summarize my answer, I
15 believe that your experts believe that they are 02:57:58
16 creating a happy, healthy, functional life, even in the
17 face of the fact that they -- cross-sectional studies
18 of adults who are transgender and those who have had
19 complete medical surgeries have significant problems.
20 And so what I have been saying, in summary, is 02:58:18
21 that we -- we should separate our beliefs from what
22 science knows.
23 Q You said "cross-sectional studies." You're
24 just saying that those are lacking to -- to -- to -- to
25 substantiate their approach. Is that what you're 02:58:37

1 saying?

2 A Please repeat that. You sort of -- I couldn't

3 understand.

4 Q Sorry. You had -- yeah, fair -- fair enough.

5 I think you said something about 02:58:44

6 cross-sectional studies being lacking to support their

7 approach. Is that what you were saying?

8 A Yes. Not only cross-sectional studies failed

9 to support the idea that everyone is living happily

10 ever after or the majority are living happily ever 02:59:04

11 after, the -- the Swedish study that was published in

12 2011 that had outcome data on everyone who had sex

13 reassignment surgery over a 30-year period. You may

14 know that as the D-H-E-N-J-A (sic) study, et al. They

15 demonstrated -- the -- the recommendation of that study 02:59:26

16 is that everyone after sex reassignment surgery should

17 have lifelong psychiatric care because the suicide rate

18 was 19 times higher after this than the general

19 population. The death rates were higher of cancer and

20 of heart disease, the criminal rates were higher, and 02:59:45

21 the admission rates to psychiatric hospitals were

22 higher, after, then general population.

23 So that group in Sweden, in 2011, said, wow,

24 these people are not necessarily doing so well as a

25 group; that is, everyone that was -- everyone who had 03:00:01

1 sex reassignment surgery was in that. So
2 we wouldn't -- we wouldn't call that a cross-sectional
3 study. We would have a life perspective study, you
4 see. You are aware --
5 Q Was that -- was that comparing it to the 03:00:14
6 general population, though? Not transgender people
7 that had gone untreated, right?
8 A That study did not include people who were not
9 treated with surgery, that's right.
10 Q Right. So to figure out if surgery makes a 03:00:26
11 difference, wouldn't you study a population that had
12 had surgery versus the population that had not had
13 surgery, all of transgender people?
14 A Yes, I often wondered why the authors of that
15 study did not study those people that they had records 03:00:39
16 on who didn't have surgery. It's one of the missing
17 issues about that. It doesn't take away from the fact
18 that relative to non-transgender people of either sex,
19 these people don't do nearly as well in life. But it
20 doesn't answer the question that you're raising, and 03:00:59
21 that's been amazing -- that's an amazing absence. One
22 wonders why that is absent. I don't know why.
23 Q So just to be clear, the -- the thing that's
24 absent is testing whether or not it's actually the
25 medical interventions with the transgender people that 03:01:16

1 are accounting for the difference in suicide from
2 the -- is that what you were saying?
3 MR. BROOKS: Objection; vague.
4 THE WITNESS: I'm saying that it would have
5 been nice to have four control groups. And they only 03:01:35
6 had three control groups. And I don't --
7 BY MS. HARTNETT:
8 Q Right.
9 A I don't understand why there wasn't the fourth
10 control group that you are raising because it does -- 03:01:43
11 you know, I already testified that nothing is certain,
12 but this would have increased our conviction about
13 whether or not people are dying of cancer and heart
14 disease and HIV and suicide and so forth at a higher
15 rate compared to those who are transgender but who 03:02:08
16 weren't getting the surgery.
17 So I don't know the answer.
18 Q Could I go to -- paragraph 18 has several
19 subparagraphs. I just have a couple of questions on
20 this. The first is on paragraph 18A. 03:02:28
21 I just had a -- it was a minor reference, but
22 I'm just curious about your own use of terminology.
23 You had, here in the second sentence of 18A (as read):
24 "While hormonal and surgical
25 procedures may enable some individuals 03:02:45

1 to 'pass' as the opposite gender
2 during some or all of their lives..."
3 And the sentence continues.
4 In the declaration you had -- that had been
5 filed, your declaration that was filed at the PI stage, 03:02:55
6 the words "female identifying male" were used instead
7 of "some individuals."
8 Is -- is there a reason why that would have
9 been changed?
10 A In the original -- what was in the original 03:03:15
11 draft that you looked at?
12 Q It said "a female identifying male" as opposed
13 to "some individuals."
14 MR. BROOKS: I'll object to the question as
15 characterizing that as original. 03:03:24
16 BY MS. HARTNETT:
17 Q Well, it was the declaration -- I compared the
18 declaration that was apparently submitted without your
19 knowledge on your -- in -- in the PI stage of this case
20 with the report, thinking that you had done both of 03:03:36
21 them, and I'm -- what I'm just observing was that the
22 words "female identifying male" had been used in this
23 paragraph and then now has been replaced by "some
24 individuals," and I'm just curious as to why that
25 change was made, if you know. 03:03:47

1 A I don't know. I don't remember that phrase.
2 That seems like -- that seems like a rather awkward
3 phrase, you know, that you quoted.
4 Q Yeah, why -- is that a phrase you use --
5 "female identifying male," is that a phrase that you 03:04:00
6 use?
7 A I -- I may have at one time or another used
8 that phrase.
9 Obviously, for everyone concerned, the
10 language -- the vocabulary -- the -- the -- the 03:04:12
11 socially acceptable vocabulary in this field changes so
12 often.
13 So, you know, as I told you, I spent probably
14 25 hours developing this, and there are numerous
15 changes here and there which I could not possibly 03:04:33
16 recall.
17 And I can't answer your question. I really
18 don't know the answer.
19 Q Okay. Well, I'll ask one more in that vein,
20 and then we'll move on. 03:04:42
21 For paragraph 18L, which is at the top of
22 page 8 -- and this a paragraph where you're
23 describing -- you say that (as read):
24 "Hormonal interventions to treat
25 gender dysphoria are experimental in 03:05:01

1 nature and have not been shown to be
2 safe, but rather put an individual at
3 risk of a wide range of long-term and
4 even life-long harms..."
5 And then you go on to list all that. 03:05:10
6 A Yes.
7 Q The prior version of this -- in the same place
8 had -- had language that said -- I'm going to just read
9 it to you. (As read):
10 "Putting a child or adolescent on a 03:05:21
11 pathway towards life as a transgender
12 person."
13 And that has been removed. I'm just curious
14 as to why that was removed.
15 MR. BROOKS: Late objection. 03:05:28
16 THE WITNESS: I actually -- I can't give you a
17 specific answer to the question. I have no memory
18 of -- of -- of making that editorial change.
19 I -- I -- I am sensitive to and actually have
20 a preference to not using the same phrase endlessly in 03:06:01
21 any document. And one of my concerns about previous
22 documents has been the redundancy of phrases, and so
23 I -- I try not to repeat certain powerful phrases.
24 I -- I think they actually have more impact on the
25 reader if they read them once or twice and not 15 03:06:26

1 times. So that may have been an example of that.
2 As a writer, I'm very sensitive to redundancy,
3 and I prefer to have things done short -- in shorter
4 versions than in longer versions, but that is not
5 always in keeping with legal requirements. 03:06:46
6 Q Turning to paragraph 19, this is -- I'm not
7 going to -- there's a couple of questions I had
8 about -- or, sorry, not -- 20. You're talking about
9 biological sex.
10 Do you see that? 03:07:01
11 A Yes.
12 MR. BROOKS: Sorry, you want 19 or 20?
13 MS. HARTNETT: I'll move to 20.
14 BY MS. HARTNETT:
15 Q You say that (as read): 03:07:08
16 "Sex is not 'assigned at birth' by
17 humans visualizing the genitals of a
18 newborn; it is not imprecise.
19 Do you see that?
20 A Yes. 03:07:17
21 Q Do you have any experience with the process of
22 assigning sex to newborns at birth?
23 MR. BROOKS: Objection.
24 THE WITNESS: You know, I -- probably for a
25 week in my medical school pediatrics rotation I was 03:07:32

1 part of the newborn nursery and delivery -- and in
2 obstetrics. The newborn delivery room phenomenon of
3 saying, Mother, your -- you have a daughter. Or,
4 Mother, you have a son. So I guess that's part of my
5 experience. I'm a parent, so I've had that experience. 03:07:52
6 What I -- period. I think that's an answer.
7 BY MS. HARTNETT:
8 Q Thank you. You also say in this paragraph,
9 among other things, that sex is determined at
10 conception; correct? 03:08:06
11 A Yes, when -- yes, I do -- that's when sex is
12 determined, yes.
13 Q You say that at the end of the first
14 sentence of -- sorry -- the second sentence of
15 paragraph 20. And the source that you cite in this 03:08:22
16 paragraph for everything in this paragraph is a
17 document that says "NIH 2022."
18 Do you see that?
19 That's at the top of page 9.
20 A Yes. 03:08:34
21 Q What is NIH 2022?
22 A I think the first author's name is Aditi
23 B-H-R-A-R- -- Bhar- -- Bhargara or something like that,
24 but it has probably 15 authors, the paper.
25 Q So that's a paper that you were citing? 03:08:55

1 A Yes.
2 Q Okay. Let me move down to section D. So that
3 starts on page 14 of your report.
4 MR. BROOKS: We have it.
5 BY MS. HARTNETT: 03:09:26
6 Q And you -- this is your section about "Three
7 competing conceptual models of gender dysphoria and
8 transgender identity."
9 Do you see that?
10 A Yes. 03:09:35
11 Q Is this your construct, these three models?
12 A Yes.
13 Q Paragraph 37, you describe the developmental
14 paradigm, I guess; is that fair?
15 A Yes. 03:09:50
16 Q I was comparing the declaration submitted at
17 the earlier stage of the case with the report here, and
18 I noticed that some language was deleted, and I will
19 double-check to represent to you that it is not still
20 here. 03:10:09
21 But the language that was deleted from
22 paragraph 37 is as follows (as read):
23 The developmental paradigm does not
24 preclude a biological temperamental
25 contribution to some patients' 03:10:22

1 life (sic); it merely objects to
2 assuming these problems are biological
3 in origin. All sexual behaviors and
4 experiences involve the brain and the
5 body." 03:10:31
6 Is there some reason that you removed this
7 language from this report?
8 A Well, I think I said it in a different way. I
9 said (as read):
10 "The developmental paradigm is mindful 03:10:42
11 of temperamental, parental bonding,
12 psychological, sexual, and physical
13 trauma influence (sic), and the fact
14 that young children work out their
15 psychological issues through fantasy 03:10:53
16 and play and adolescents work out
17 their issues by adapting various
18 interests and identity labels."
19 This is -- this is the material that I
20 prepared as the expert witness report for this 03:11:07
21 particular case.
22 Over time, you see, I have a different -- I --
23 I say things more efficiently, I believe.
24 I could elaborate that, but I don't think it's
25 relevant. 03:11:27

1 Q No. Thank you. I appreciate it.
2 But you agree, sitting here today, that all
3 sexual behaviors and experiences involve the brain and
4 the body?
5 A I agree that all behaviors involve -- well, 03:11:38
6 the brain and the body is really one thing, you know.
7 They're just part of the biology of a -- of the
8 human -- of human beings, and that -- those biology --
9 multiple biologic factors interact with other
10 psychosocial factors throughout life to shape our 03:12:03
11 feelings and our behaviors and so forth.
12 Q In paragraph 38, you refer to a Littman 2018
13 study.
14 Do you see that?
15 A Paragraph 38, yeah. 03:12:17
16 Yeah.
17 Q Are you aware that that article was -- had to
18 be withdrawn and corrected and republished?
19 MR. BROOKS: Objection.
20 THE WITNESS: I am aware that there was a lot 03:12:32
21 of political brouhaha about that and that various trans
22 advocates accused that author of bad things or whatever
23 but that the restatement of the study really did not --
24 did not amount to a great change.
25 But -- but, in fact, there was a brouhaha by 03:13:01

1 the publication objecting to her methods so to speak,
2 but really were -- they were objecting to her
3 conclusions.
4 BY MS. HARTNETT:
5 Q Was her method an anonymous survey of parents? 03:13:16
6 A Her -- it was a survey of parents, right.
7 Q Do you know if they were anonymous or not?
8 A At this moment, I don't know.
9 Q You go on in section E here, starting on
10 page 16, to talk about four competing models of care. 03:13:32
11 MR. BROOKS: Sorry.
12 BY MS. HARTNETT:
13 Q I also was wondering --
14 MS. HARTNETT: Oh, sorry.
15 MR. BROOKS: I hit the wrong thing, and the 03:13:38
16 document disappeared off the screen. Let me -- I'm not
17 sure what's going on here.
18 Okay. Sorry, I -- it accidentally closed as I
19 tried to get rid of some pop-up on the screen, and we
20 will get us back. 03:14:04
21 And, I'm sorry, what paragraph were you at?
22 MS. HARTNETT: It's section header E, page 16.
23 MR. BROOKS: Page 16.
24 BY MS. HARTNETT:
25 Q I'm just asking whether the four competing 03:14:25

1 models of care is your schema.
2 A I think it borrows from other things in the
3 literature. I wouldn't want to claim, you know,
4 authorship for that per se. It's really hard for me to
5 know where all my ideas come from because I read so 03:14:54
6 much and go to meetings and so forth, and I hear
7 things, and it influences me.
8 I -- I -- it's my summary of -- when we think
9 about what are the options that we can offer to people,
10 this is all I think of. Maybe tomorrow -- 03:15:11
11 Q Okay.
12 A -- I'll think of a fifth option.
13 Q Can you go down to paragraph 53?
14 And this is after you walk through the
15 watchful waiting model, A and B, a psychotherapy model 03:15:25
16 and then the affirmation model and then coming to
17 paragraph 53.
18 MR. BROOKS: Let me just find the heading
19 above it.
20 So we're under the affirmation therapy model 03:15:38
21 number 4, if I'm scanning the --
22 MS. HARTNETT: Yeah.
23 MR. BROOKS: Okay.
24 MS. HARTNETT: That's correct.
25 And then paragraph 53. 03:15:46

1 MR. BROOKS: Okay.
2 BY MS. HARTNETT:
3 Q Out of these four models, you do not know what
4 proportion of practitioners are using which model; is
5 that correct? 03:15:57
6 A Yes.
7 Q Okay. Oh, sorry, I had one question about 49,
8 which was within the psychotherapy model area, if you
9 could flip up to there.
10 MR. BROOKS: Yes, let me just find the heading 03:16:11
11 again so we understand how much material --the
12 psychotherapy model begins at the top of page 18, and
13 you now want to direct us to paragraph 49? Was that
14 the paragraph you mentioned?
15 MS. HARTNETT: Correct. 03:16:29
16 MR. BROOKS: All right.
17 BY MS. HARTNETT:
18 Q And is the psychotherapy model the model you
19 follow, Dr. Levine?
20 A It's the model that I approach new patients 03:16:43
21 with, and depending on the situation of the patient in
22 the family's life, I then go from there. So individual
23 patients, I may counsel the support of the -- I may
24 counsel parents to support the transgender
25 identifications of their child. 03:17:09

1 But it begins with trying to figure out what's
2 going on here and going on here with the child and the
3 child's history and the parents and their history and
4 the interactions between the -- the parents and the
5 child. 03:17:25
6 So it's not my model for all therapy. As I've
7 said, I think earlier, that I have supported trans care
8 for individuals, affirmative care for individuals. But
9 if you ask me how I begin, I don't not -- I do not
10 begin with the affirmative model. I begin with let's 03:17:44
11 investigate this situation thoroughly so we can
12 eventually make a prudent decision.
13 Q You say in paragraph 49 (as read):
14 "To my knowledge, there is no evidence
15 beyond anecdotal reports that 03:18:01
16 psychotherapy can enable a return to
17 male identification for genetically
18 male boys, adolescents, and men, or
19 return to female identification for
20 genetically female girls, adolescents, 03:18:13
21 and women."
22 Do you see that?
23 A I do.
24 Q And you stand by that statement?
25 A Yes. 03:18:24

1 Q Paragraph 50, this is at the beginning of the
2 affirmative therapy model, on the next page. I think
3 we've already covered this, so we don't need to belabor
4 it, but here, you -- among other things, you say that,
5 under the affirmation therapy model, practitioners -- 03:18:44
6 and I'm going to read from the first sentence. And I'm
7 not reading the whole sentence, but you can obviously
8 read whatever you want. I'm reading from the middle of
9 it. (As read):
10 "...promote and recommend that any 03:18:58
11 expression of transgender identity
12 should be immediately accepted as
13 decisive..."
14 I'm just going to stick on that part, the
15 "immediately accepted as decisive." 03:19:08
16 What is your basis for believing that the
17 affirmation model proceeds with an immediate acceptance
18 as decisive?
19 A Because --
20 MR. TRYON: Objection. 03:19:19
21 Go ahead.
22 MR. BROOKS: Mr. Tryon is objecting.
23 You have to give him time.
24 THE WITNESS: In a previous -- in a -- in a
25 previous portion of this informed consent, I said that 03:19:29

1 it is my impression that many people in the affirmative
2 model have a number of beliefs that I don't think are
3 scientifically accepted or acceptable or correct and
4 including the fact that this is biologically dictated,
5 that anytime a person, any stage in life, declares a 03:19:52
6 transgender identity, it's because prenatally that was
7 determined and it merely unfolded at a different rate
8 at different times.
9 So the -- the justification for immediate
10 affirmation is based upon this idea, one, that it's 03:20:13
11 biologically dictated; and, two, that it's
12 unchangeable.
13 BY MS. HARTNETT:
14 Q Yeah, I'm sorry, I think -- just given that
15 we're -- have only so much time and I -- I think my 03:20:25
16 question, though, was what was your basis for
17 understanding that the practitioners engage in this
18 practice.
19 MR. BROOKS: Objection; vague as to "this
20 practice. 03:20:36
21 BY MS. HARTNETT:
22 Q Well, the practice of immediate acceptance as
23 decisive.
24 A I think I've already testified how many
25 parents have told me these things and how many patients 03:20:43

1 have told me these things and -- and -- well, I won't
2 repeat what I began to tell you about.
3 Q No. Thank you. That -- that just helps me
4 connect that that -- that basis of evidence is the same
5 that's at issue here. 03:20:59
6 Paragraph 56, I had a question there.
7 MR. BROOKS: And, Counsel, we should take an
8 hourly break soon.
9 MS. HARTNETT: Now is fine.
10 MR. BROOKS: All right. Now is it -- now it 03:21:14
11 is.
12 THE VIDEOGRAPHER: We are off the --
13 MS. HARTNETT: Come back at --
14 THE VIDEOGRAPHER: Off the record at 3:21 p.m.
15 (Recess.) 03:35:28
16 THE VIDEOGRAPHER: We are on the record at
17 3:36 p.m.
18 MR. BROOKS: And -- and --
19 MS. HARTNETT: Thank you.
20 MR. BROOKS: -- Josh, if you would turn off 03:35:34
21 your camera, you will -- will be able to see the
22 questioner better.
23 There we go. Thank you.
24 MS. HARTNETT: Okay. Great.
25 ///

1 BY MS. HARTNETT:
2 Q Before the break, we were talking, at least a
3 bit, about the four models that you had in the
4 psychotherapy model, and I was asking you if you follow
5 that, and we were having a discussion. And I want to 03:35:54
6 make sure I don't misconstrue your approach.
7 Is it fair to say that you kind of follow the
8 psychotherapy model, but also not to the exclusion of
9 providing medical care or recommending medical care, if
10 it's appropriate, after some course of psychotherapy? 03:36:07
11 A Yes, I -- to summarize, the initial approach
12 to a patient, I believe my model, what I endorse, is an
13 extended evaluation, an opportunity to talk over time
14 in what I call psychotherapy. Other people may call it
15 extended evaluation. And then depending on what I 03:36:34
16 understand about the patient and his or her life and
17 their aspirations and their capacities to understand
18 the present and the future and the past, then I may in
19 fact say, you know, Fine. You know, do what you -- do
20 what you -- use your best judgment. And I will write a 03:36:55
21 letter for you, you know, telling your -- the surgeon
22 or telling the endocrinologist about you.
23 And I do that.
24 Q And was that general approach extended to
25 minors as well? 03:37:17

1 A Well, if -- if minors are children, I actually
2 have never recommended socialization of a child in
3 that -- that is, in a new gender. I have seen -- I
4 have never recommended that.
5 When it comes to teenagers, the closer they 03:37:36
6 get to 18, the more I'm willing to talk to them about
7 the possibility of hormones and being supportive of it
8 after a certain period of time.
9 When it comes to older people, it's -- it's
10 not as broad a question. 03:37:57
11 Q And how long is your -- when you discuss an
12 extended evaluation, how -- how long is that?
13 A It doesn't have a definable length.
14 Q Is there -- and I'm just trying to really
15 understand. Is it a matter of hours, days or longer? 03:38:13
16 A It's certainly -- a -- a psychotherapeutic
17 hour is typically one; right? But when people come to
18 Cleveland for an evaluation, I often spend two days.
19 And so I may spend, you know, four hours over two days
20 or maybe even more with a patient and then separately 03:38:37
21 with their parents and sometimes together with their
22 parents.
23 But when I'm talking about an extended
24 evaluation, I mean that in two terms. One is for
25 people who want to come for an intense evaluation that 03:38:53

1 at the end of two days will give some -- give some
2 feedback to them and -- but the usual sense for people
3 who live in Cleveland, where I reside, that is over
4 weeks and months of talking over time, considering
5 various -- the things I've already articulated. 03:39:14
6 Q Have there been situations where after the
7 sort of intense extended evaluation, the two days
8 and -- four hours over two days period, where you've
9 supported or recommended any medical treatment after
10 that period? 03:39:33
11 A Well, about -- about a year ago, a -- a --
12 a -- a college student who wasn't doing very well, who
13 got actually hormones on a one-hour visit, to the
14 student health service, the -- we recommended that the
15 patient could decide whether to continue hormones or 03:39:53
16 not. The parents did not want the person to continue
17 hormones, and the patient continued hormones. And we
18 just made a recommendation. We thought there was an
19 advantage to stopping and reconsidering life, but it
20 was the patient's choice, you see. It wasn't the 03:40:12
21 parents' choice. It wasn't my choice, you see. But
22 it's the respect for the patient's autonomy.
23 Q Did you write a letter there or some sort of
24 authorization for him to get the hormones?
25 A No. He already had the hormones. As I said, 03:40:29

1 he got the hormones after one hour with a person who
2 knew nothing about his background, really, that -- what
3 I would say, relatively nothing.
4 Q Where was that treatment?
5 A That was at the University of Rochester. 03:40:40
6 Q Okay. So -- and then my question is just for
7 kind of -- I guess, what's the shortest period of
8 extended evaluation that you've performed after which
9 you've written a letter for someone to get transgender
10 medical care? 03:41:00
11 A I'm going to elaborate your question into me
12 or my staff because in some --
13 Q Thank you.
14 A It's a whole -- it's a committee of work, a
15 group of people. 03:41:13
16 I would say four hours.
17 Q Thank you. You had mentioned your -- the
18 recently published article about the -- the
19 reconsidering informed consent piece; correct?
20 A Yes. 03:41:32
21 Q And in there, you note that -- kind of --
22 you're talking about the affirmation -- what you
23 characterize as the affirmation approach; right?
24 A Correct. There's a section on that, yeah.
25 Q And then you note that the "research about 03:41:46

1 alternative approaches, such as psychotherapy or
2 watchful waiting, shares the scientific limitations of
3 the research of more invasive interventions; there are
4 no control groups, nor is there systematic follow-up at
5 predetermined intervals with predetermined means of 03:42:03
6 measurement."
7 Does that --
8 A Yes.
9 Q Is that something you have in the article?
10 A I think I made the same point in -- in this 03:42:10
11 document that I gave to you.
12 Q Right. I was just trying to connect the two.
13 So that's basically the same point you've been
14 making, that -- the kind of lack of evidence, from your
15 perspective, as to which approach is kind of 03:42:26
16 scientifically based; is that right?
17 A Yes.
18 Q Okay. If we could flip forward, I -- sorry,
19 going backward for a minute and then we'll go forward
20 again, in your declaration, but I had a question about 03:42:36
21 paragraph 18, little L. Sorry, that's not right. It
22 is 18, little -- sorry, one second.
23 I'll try again.
24 Can I direct your attention to paragraph 18H,
25 on page 7? 03:43:03

1 MR. BROOKS: And let me just first start on
2 the top of 18 so we know what the major proposition
3 here -- a summary of key points. All right.
4 And, I'm sorry, you said H?
5 MS. HARTNETT: Correct. 03:43:18
6 BY MS. HARTNETT:
7 Q So I'm going to direct your attention to
8 paragraph H, on page 7, which you talk about
9 administration of puberty blockers not being a benign,
10 quote, pause of puberty. 03:43:31
11 Do you see that?
12 A I do.
13 Q And this, I noticed, was something newly added
14 to this declarations from the one that you had
15 submitted at the preliminary injunction stage. 03:43:42
16 My question for you is what the basis is for
17 your qualification, in your perspective, to talk about
18 the effects of puberty blockers.
19 MR. BROOKS: Object to the form of the
20 question. 03:43:57
21 THE WITNESS: What is the basis of my
22 objection to the use of puberty blockers?
23 BY MS. HARTNETT:
24 Q Sorry, the basis for your understanding of
25 whether -- how they function on the body and whether 03:44:04

1 they're a benign pause of puberty or not.
2 A The initial justification for puberty blockers
3 being a benign thing is that it merely was a pause and
4 that if it was fully reversible, puberty would -- would
5 return when puberty blockers were removed, if they were 03:44:32
6 chosen to be removed.
7 I often reacted to that word "pause" because I
8 was aware that I was unaware of the rich biological
9 details that puberty changes every organ in the body.
10 Puberty not only causes growth of bones, but puberty 03:44:53
11 causes growth of the liver, of the lungs, of the heart,
12 of the brain. You name the organ, and the pubertal
13 changes are occurring, and they occur in a sequence.
14 And one of the developmental aspects of development is
15 that there are windows of opportunity for development, 03:45:15
16 and when the window closes, we're not sure whether
17 things can be totally reversed.
18 And I noticed that there was a benign
19 connotation to the word "pause" which did not strike me
20 as true or possibly true or certifiably true. 03:45:35
21 And so I began looking at various statements
22 from various authors about saying this.
23 And in the early years, people talked about
24 complete reversibility and it's only a pause, but I
25 realized, in reading their subsequent sentences, that 03:45:56

1 they didn't consider -- they were talking about bone.
2 They were talking about the onset of puberty. They
3 weren't talking about the subtle changes of -- of, say,
4 for two or three years of interfering with the
5 processes that were naturally happening in your and my 03:46:11
6 children and the children of society.
7 So -- and then I looked closer at it, and I
8 said, what about the impact, the psychological, social,
9 sexual impact of having one's peers have these major
10 changes in every aspect of their body while the person 03:46:31
11 was paused in a puerile state, has anyone considered
12 that when they said it's completely reversible.
13 Nowadays, I think people are not certain it's
14 completely reversible, and they're beginning to
15 articulate the possibility that I just articulated. 03:46:53
16 They're beginning to say we don't know what
17 the psychosocial impact of being puerile while your
18 peers are pubertal.
19 And while your peers are pubertal, you're
20 getting -- you're starting to deal with your sexual 03:47:10
21 feelings and your sexual conflicts, and you're getting
22 to operationalize your -- what the early orientation
23 aspects of early puberty are, you see. And the puerile
24 child is not.
25 And so I thought the word pause was a kind of 03:47:23

1 rhetoric that -- that justified doing something that
2 was much more complicated and had not been articulated
3 well by the people who began using it.
4 I'm not sure that today's people are talking
5 in the same way that they did when -- 20 -- ten years 03:47:41
6 ago.
7 Q When did you come to --
8 A I think they're more sophisticated today.
9 Q When did you come to this understanding or
10 view about the -- your kind of concern with using the 03:47:53
11 term "pause"?
12 A I think it's been evolving in my mind over the
13 last two or three years.
14 Q Do you know whether the pubertal response
15 would be the same -- basically, if the puberty blockers 03:48:06
16 were used and then a child were to go off the puberty
17 blockers, do you know whether it would be the same
18 pubertal response that would have been had without the
19 blockers?
20 A Well, I think endocrinologists have said that 03:48:21
21 it's same, but I don't know if they have even the -- I
22 don't know that -- I don't know that I trust that
23 they're right about that. I don't know that they're
24 wrong. I just don't know that they're right. Because
25 in concepts of development -- for example, if you 03:48:43

1 don't -- if you don't hear at a certain stage in life,
2 say the first two years of life, and even if we do a
3 cochlear implant, and we put -- we -- you can hear
4 starting at age three or age four or age five, you
5 can't speak as clearly as you and I can speak. 03:49:01
6 So, you see, there's a window of opportunity
7 when the brain is changing and we -- it's -- that --
8 that other -- other aspects of life develop. And I
9 think this is probably true throughout life as a
10 principle. 03:49:18
11 So the idea that, oh, we can give a kid for
12 three years or four years and keep them paused while
13 they decide what they want to do, whether they want to
14 go cross-sex hormones or not, and then if they decide
15 not to go the cross-sex hormone route, that they will 03:49:33
16 just go into puberty and everything be normal, I just
17 think that's a naive idea. But I was proposing that,
18 you see. I can't prove it and either can -- either can
19 the endocrinologist prove it. That's my point.
20 Q Thank you. 03:49:47
21 MS. HARTNETT: I've put in the "Marked
22 Exhibits" folder Exhibit 88. If you -- your counsel
23 could look at that.
24 Let me know if you see that.
25 (Exhibit 88 was marked for identification 03:50:05

1 by the court reporter and is attached hereto.)
2 MR. BROOKS: I do see it now.
3 BY MS. HARTNETT:
4 Q This is -- Dr. Levine, do you see -- this is
5 testimony that you gave to the Pennsylvania legislature 03:50:11
6 in March of 2020.
7 A Okay.
8 Q Do you recall giving this testimony?
9 A I recall testifying, yes.
10 Q Okay. I'm -- I have a question that -- you 03:50:19
11 had your kind of prepared remarks, and then you got
12 some questions from the legislators, and what I would
13 like to do is ask you about something on page 61, which
14 was your response to a question about puberty blockers,
15 if you could page forward to 61. 03:50:33
16 MR. BROOKS: Will you direct us to the
17 question?
18 Let me see here. I -- I --
19 MS. HARTNETT: Okay. If -- yeah. It's a
20 question from Representative Zimmerman, and it's asking 03:50:47
21 about the reversibility of puberty blockers, on
22 page 61.
23 MR. BROOKS: Oh, the question on 61 is
24 fragmentary; right?
25 "If puberty blockers are started," is that the 03:51:06

1 question you're referring to?
2 MS. HARTNETT: You can feel free to look
3 above, but I'd like to ask about the passage on 61.
4 He asked a two-part question, and he had then
5 asked to be reminded about the second part of the 03:51:21
6 question.
7 And Representative Zimmerman said, "Yes. If
8 puberty blockers are started."
9 And then Dr. Levine said, "Oh, reversible,
10 yes, sorry." 03:51:30
11 And what I'd like to ask him is to read this
12 passage -- hear his testimony and just whether he
13 continues to believe what he's testified to.
14 THE WITNESS: I've read the paragraph.
15 MR. BROOKS: The -- 03:52:06
16 BY MS. HARTNETT:
17 Q I guess, just --
18 MR. BROOKS: Just continue --
19 THE WITNESS: Oh, you want me to continue?
20 MR. BROOKS: I want you to read to the end of 03:52:11
21 that answer.
22 MS. HARTNETT: Correct. Thank you.
23 THE WITNESS: Okay.
24 BY MS. HARTNETT:
25 Q Do you stand by the testimony that you gave in 03:52:32

1 these two paragraphs?
2 A I don't see a -- a major difference between
3 what I just said to you except -- than what I said
4 here. Here, I was talking about one year. And -- and
5 it depends on -- you know, if you give a puber- -- an 03:52:51
6 eight-year-old child a puberty blocker versus a
7 nine-year-old child versus a 14-year-old child. I
8 think we're talking about different phenomenon, you
9 see. The -- not only biologic phenomenon, but
10 psychosocial phenomenon. Because if you give it to an 03:53:09
11 eight-year-old, their peers are still puerile, you see.
12 And -- and when -- if you give it to 14-year-old or a
13 12-year-old, their peers are rapidly growing and
14 changing and being involved in all kinds of
15 psychosocial and -- processes that -- that a 03:53:23
16 nine-year-old is not, the eight-year-old is not.
17 So I think today's testimony elaborates upon
18 what I was saying in a less sophisticated way to
19 Mr. Zimmerman.
20 Q Thank you. You talk about desistance at 03:53:37
21 length in your report; correct?
22 A I hope so, yes.
23 MR. BROOKS: Counsel, do you want me to take
24 down 88 or leave it up?
25 MS. HARTNETT: You can take down 88. 03:53:50

1 BY MS. HARTNETT:
2 Q Do you believe that desistance should be the
3 goal of treating patients with gender dysphoria?
4 A I think I previously stated that the goal of
5 treating gender dysphoria is to have an informed 03:54:05
6 consent process in a brain -- for a person whose brain
7 is old enough to consider the possibilities about the
8 risks, and the goal of -- of their gender expression
9 has to rely primarily on them and their process of
10 coming to grips with what it needs, not just in 03:54:24
11 fantasy, but in reality, for them to portray themselves
12 as a trans person.
13 So I don't -- your question has previously
14 been answered by me. Parents would very much like me
15 to be able to return their child efficiently and 03:54:44
16 quickly to a tran- -- to a cis state, but I can't
17 promise that as a goal. I can't even hold that out as
18 a goal. What I hold out is what I just said to you.
19 Q If you could -- you -- so you don't believe
20 it's possible to talk somebody out of being 03:55:08
21 transgender; is that fair?
22 MR. BROOKS: Objection.
23 THE WITNESS: It's not the language that I
24 would ever use. I don't talk people out of things. I
25 don't talk people out of getting married to a person. 03:55:22

1 I don't talk people out of going to this college versus
2 that college.
3 I -- I -- I sort of elicit their feelings. I
4 help them see where there is conflict. I help them
5 articulate the pluses and minuses, as we can predict 03:55:38
6 the future. I look at trends.
7 I don't talk people out. It's not what a --
8 what Dr. Levine, the psychiatrist, does, talk people
9 out of X, Y or Z. And Z may be transgender identity.
10 Q If you could treat everyone to have them cease 03:55:58
11 being transgender who -- sorry.
12 For the transgender patients you have, if you
13 were able to treat them such that they would no longer
14 be transgender, would that be your preferred outcome?
15 MR. TRYON: Objection. 03:56:19
16 THE WITNESS: It depends what cost it would
17 have to be -- to return to living as a cisgender
18 person. It would not be my goal if it would cost them
19 their sanity, for example, if it would cost them
20 continued anguish. My goal is -- is stated to -- I've 03:56:38
21 already stated my goal.
22 The -- there is a belief that life is hard
23 enough as a cisgender person, you see. But these
24 things -- you see, I -- I -- I'm interested in what it
25 is about being a cisgender person that is so hard for 03:57:08

1 you, you see. Why is it that this is so difficult for
2 you. What is it about femaleness or maleness or
3 your -- your -- your sex, your original sex, you know,
4 your sex, what it is about it that is so offensive and
5 offending to you. Why is there such incompatibility. 03:57:30
6 Tell me. Teach me.
7 Q But using the language from your -- at least
8 your declaration earlier in the case where you had
9 described, you know, the -- the risks and harms that
10 would come from, quote, putting a child or adolescent 03:57:44
11 on the pathway towards life as a transgender person --
12 I'm just trying to understand if -- if you, Dr. Levine,
13 could put all the young people that were experiencing
14 gender dysphoria on a pathway toward being
15 non-transgender, would you do that? 03:57:59
16 A What I would say about that, if I could put
17 them on a pathway of being non-transgender, I would
18 expect that the vast majority of them would end up to
19 be homosexual in their orientation. And the
20 cisgender with -- you know, if they were males, they 03:58:16
21 would probably be cisgender with a little feminine
22 aspects to them, but they would be homosexual. And if
23 they were biologic females, they would be cisgender
24 lesbians with a little touch of masculine patterns and
25 so forth. 03:58:35

1 So that would be cisgender to me, but I
2 wouldn't be cisgender heterosexual. I think we already
3 know scientifically the outcome of gender atypicality.
4 Cross-gender atypicality in boys and girls is
5 homosexual orientation. 03:58:52
6 Q Is it your opinion that it's better to be a
7 cisgender homosexual than a transgender heterosexual?
8 MR. BROOKS: Objection to the form of the
9 question.
10 THE WITNESS: Well, you do no harm to your 03:59:09
11 stability. You do no harm to your anatomy. You do no
12 harm to your physiology. In that sense, I think -- you
13 don't -- you don't risk any of the complications of
14 cross-sex hormones, and you don't risk any of the
15 complications of surgery. And I think it's probably -- 03:59:24
16 although I can't tell you the facts, but I do believe
17 it's probably easier to be a gay person in society than
18 to be a trans person. And I don't mean it's easy to be
19 any sexual minority in our society.
20 BY MS. HARTNETT: 03:59:43
21 Q Do you know what autogynephilia is?
22 A I -- I didn't understand what you just said.
23 Q Apologies. Do you know what autogynephilia
24 is?
25 A Yes. 03:59:56

1 Q What is autogynephilia?
2 A Well, "autogynephilia" is a word that means
3 love of the self as a woman. It's a characteristic of
4 internal life that was popular in the trans literature,
5 beginning in about 1988. It was a concept suggested by 04:00:11
6 Ray Blanchard of Toronto. It was a supposition that --
7 that autogynephilic trans people had a form of
8 paraphilia and that it -- I think it was a concept that
9 replaced pretty much the concept of fetishistic
10 transvestism that had existed since the 1900s, early 04:00:44
11 1900s.
12 So at about -- the trans community objected to
13 the idea of autogynephilia, very profoundly objected to
14 the idea.
15 Anne Lawrence, who is a transsexual 04:01:06
16 researcher, wrote a book on men who are trapped in
17 men's bodies, and it was all about gyne- --
18 autogynephilia, men who -- who recognized that they
19 were autogynephilic.
20 I recently had a patient who came to see me 04:01:15
21 because he couldn't find anyone who knew anything about
22 autogynephilia.
23 But I think you don't find that word used in
24 the literature -- in the modern literature anymore.
25 Because I think with 2011 standards of care, there was 04:01:29

1 much less interest in the pathways to transgenderism
2 and more interest in the treatment of transgenderism,
3 and so it became too many advocates, politically
4 irrelevant and obnoxious to -- to even use the term
5 "autogynephilia." 04:01:55
6 Q Do you find autogynephilia to be a helpful
7 concept?
8 A For some people.
9 Q Have you ever heard it said that transgender
10 people are either gay, mistaken or have autogynephilia? 04:02:06
11 MR. BROOKS: Objection.
12 THE WITNESS: I don't recall hearing that
13 sentence before.
14 BY MS. HARTNETT:
15 Q Do you think that that -- is that something 04:02:19
16 that you would agree with, that being transgender --
17 people think that transgender are either gay, mistaken
18 or have another malady, like autogynephilia?
19 MR. BROOKS: Objection.
20 THE WITNESS: It's not something that I would 04:02:32
21 summarize by saying. Those three options seem
22 pejorative and unscientific.
23 BY MS. HARTNETT:
24 Q Do you think the term --
25 A I'm sorry, I -- I object to the idea of 04:02:50

1 mistaken.
2 Q Do you think the term or that use of
3 autogynephilia is obnoxious?
4 A No.
5 Q Do you think that being transgender is a 04:03:07
6 paraphilia?
7 MR. BROOKS: Objection.
8 THE WITNESS: To the extent that -- to the
9 extent that autogynephilia is a paraphilia and that
10 some men develop a transgender identity as a 04:03:18
11 consequence of autogynephilic behaviors, that was --
12 that may be one pathway towards transgender identity.
13 But I wouldn't certainly -- I -- I certainly
14 would not say that at all transgenders or most
15 transgendered people are autogynephilic. 04:03:38
16 BY MS. HARTNETT:
17 Q I mentioned the -- one possible formulation
18 that people that are identifying as trans are just gay,
19 mistaken or have a malady like autogynephilia, and I
20 think you said that you took issue with the notion of, 04:03:55
21 among other things, the idea of it being a mistake; is
22 that fair?
23 A I -- yeah, I take -- I take issue with that,
24 yeah.
25 Q Why? 04:04:05

1 A A mistake is something that a patient decides
2 after they've trans- -- detransitioned and they say it
3 was a mistake to do that.
4 It's not something I would say. I would say
5 that they -- they have a current gender identity, and 04:04:21
6 I'm not sure they're -- I'm not sure anyone's gender
7 identity is not going to evolve in some way in the
8 future. Especially I would like to say that about
9 young adolescents.
10 But please don't -- please don't quote me 04:04:38
11 because I have never authored that sentence.
12 Q Thank you. Do you think that transgender
13 identity is something that can be cured?
14 A Can be cured?
15 Q Yeah. 04:04:54
16 A Is that what you said?
17 MR. BROOKS: Objection.
18 BY MS. HARTNETT:
19 Q Cured.
20 A If you read the end of my paper on the patient 04:05:02
21 who trans- -- detransitioned 30 years ago, I think I
22 said something like even though medical psychiatric
23 knowledge does not know how to transform a person from
24 a trans state to a cis state or a previous state, it
25 doesn't mean that life doesn't transform people into 04:05:25

1 detransitioned people.
2 We need to understand the modesty and the
3 differences between what we know how to do to create
4 behavioral change, which is quite modest throughout
5 psychiatry and what happens to people over time if we 04:05:44
6 take a life course perspective.
7 So my case illustration in that case was
8 Dr. Levine did not change his -- did not cause his
9 detransition at all; right? Life processes, which he
10 described in great detail in the that paper, changed, 04:06:02
11 and it took him years to make that change, years of
12 anguish, years of the sense of inauthenticity as a
13 woman, which at first he tried to deny.
14 So I would -- I would refer you to the last
15 paragraph in that paper if you wanted to find out how I 04:06:22
16 said it. I can't -- I can't quote it. I'm just
17 paraphrasing it if for you.
18 Q But is that an example of someone that you
19 think was cured?
20 MR. BROOKS: Objection. 04:06:41
21 THE WITNESS: It was an example of a person
22 who changed their presentation and now is terribly
23 embarrassed about what he had -- I can call him "he"
24 now -- what he had done, or what she had done; right?
25 And now -- and it is now a person who -- I think I'm 04:06:57

1 quoting -- hates all the advocates of the -- in the
2 trans world for, he believes, misleading people that
3 they can have a happy life.
4 But that's just one person's opinion, you
5 know. 04:07:13
6 But if you read the paper, I think, you know,
7 there's lots to think about in the paper.
8 Q Is it embarrassing to be transgender?
9 A In -- in some settings, it probably is, yes.
10 Q Do you think that transitioning, for a 04:07:28
11 transgender person, is something that you find to be an
12 embarrassing concept?
13 A No.
14 Q Well, you said that your -- I'm just -- I'm
15 not putting your patient's words in your mouth, but you 04:07:38
16 were describing him as having been embarrassed by the
17 whole thing. I -- I took that to mean he was
18 embarrassed by having transitioned; is that right?
19 A Yes, he's now angry at himself and angry at
20 those who facilitated his original transition. 04:07:52
21 But that's one person, you know.
22 Q But do you feel embarrassment for your
23 patients that have to go through transition?
24 MR. BROOKS: Objection.
25 THE WITNESS: Do I feel embarrassment? No. I 04:08:09

1 feel --
2 BY MS. HARTNETT:
3 Q I'm just --
4 A No. That's -- that would not describe a
5 dominant feeling I have. I have concern for my 04:08:20
6 patient. I have worry about this, but I'm not
7 embarrassed by it.
8 Q Is shame one of the feelings?
9 MR. BROOKS: Objection.
10 Of whom? 04:08:35
11 BY MS. HARTNETT:
12 Q Do you (technical difficulty) shame for them?
13 MR. BROOKS: Objection.
14 THE WITNESS: I'm a little hard of hearing,
15 and I actually could not discern what you said. 04:08:43
16 BY MS. HARTNETT:
17 Q Sorry, I'll speak up.
18 I was asking if you felt shame for your
19 patients experiencing transition.
20 A No, I'm not -- am I ashamed? 04:08:52
21 Q Yes.
22 A No.
23 Q Do you think that people can change their
24 sexual orientation?
25 MR. BROOKS: Objection; outside the scope of 04:09:10

1 this witness's testimony.
2 THE WITNESS: I think the work of Lisa Diamond
3 has demonstrated that among women who are -- who assert
4 a lesbian identity, that that lesbi- -- there is a lot
5 of two-way traffic between a heterosexual identity and 04:09:43
6 a homosexual identity, or orientation, we would say,
7 and -- so I don't know how to change a person's sexual
8 orientation, but I do think, especially among natal
9 women, sexual orientation is -- people experiment with
10 different ways of life and that there are -- there's 04:10:06
11 more two-way traffic between lesbian and a heterosexual
12 life among women. There's much more bisexual behavior
13 and bisexual eroticism among natal born females than
14 there is among natal born males.
15 So that would be my answer to your question, 04:10:29
16 without a yes-or-no answer.
17 Q Do you agree that gay people, on average, have
18 a harder time than straight people, on average, just
19 navigating life?
20 A Yes. 04:10:40
21 MR. BROOKS: Objection.
22 BY MS. HARTNETT:
23 Q Do you have similar views to those you've
24 expressed about caution before encouraging youth to be
25 transgender -- or to inhabit their transgender gender 04:10:51

1 identity? Do you have similar views about youth
2 expressing homosexuality?
3 A No.
4 Q Why not?
5 A Well, again, I think I'm going to make a 04:11:03
6 distinction between homosexuality as it occurs in men,
7 as it occurs in women, and the eroticism of a person is
8 a bunch of fantasies and thoughts and attractions that
9 makes sex comfortable or anxious and makes romance easy
10 or hard to -- to participate in, and given the power of 04:11:37
11 orientation, I believe that people have to come to
12 grips with -- with who they are attracted to and -- and
13 what is easy for them and what is difficult for them.
14 And so I just think that that's part of the
15 human landscape and that people can -- can -- they 04:12:03
16 know -- they know their orientation, and then they have
17 to choose how -- how to act or not act on their
18 orientation, and it's a very personal, private and
19 often difficult decision, and I respect that, and I'm
20 happy to hear about it when it comes up in my gay 04:12:23
21 patients.
22 And, you know, I see a lot of people who have
23 orientations that are not heterosexual.
24 Q I'm just curious why the same principle
25 doesn't hold for people that have a gender identity of 04:12:37

1 transgender, if they have an innate sense that that's
2 their identity, why would you not approach that the
3 same way you approach homosexuality.
4 MR. BROOKS: Objection.
5 THE WITNESS: Because homosexuality does not 04:12:51
6 involve the -- it's not against the first principle of
7 medical ethics; above all, do no harm.
8 It doesn't involve changing the body's
9 reproductive capacity. It doesn't change the body's
10 sexual physiology, you see. It doesn't change the 04:13:08
11 ability to find a love partner, a stable mate. It --
12 it -- it doesn't -- trans- -- we're talking about here
13 changing the anatomy, changing the physiology, creating
14 the inability to have a child, interfering with the
15 ability to have sexual pleasure as we understand it in 04:13:32
16 the general population as, you know, orgasm.
17 So -- so we understand -- transsexuality is
18 exposing yourself to surgical complications. And
19 surgical transformation of a teenager, before a child
20 has lived long enough to -- to come to grips with the 04:13:51
21 multiple dimensions of being an older person, that is,
22 a 20-year-old or a 19-year-old, and romance and so
23 forth, that's why it's different. It's not the same.
24 You're trying to take a principle and -- and
25 apply it to a group of people that -- that you're 04:14:10

1 talking about the possibility of harming them. Not
2 just their -- their -- their reproductive capacity, but
3 harming them in numerous ways. And they have to take
4 responsibility for that choice, and they -- I just have
5 been saying all morning and all afternoon, I just want 04:14:29
6 them to be informed.
7 And, you know, 13-year-old passionate kids
8 cannot be informed easily.
9 Q I'm glad you brought that up.
10 Could you turn to paragraph 202 of your 04:14:49
11 declaration, page 69.
12 MR. BROOKS: Yeah. And it was long. I didn't
13 think it was that long.
14 Page 69. Let's see here.
15 You said 202. Yes, we have that on the 04:15:13
16 screen.
17 BY MS. HARTNETT:
18 Q Yeah, I wanted to ask you, these are within a
19 larger section, well, about various harms that come
20 from, I guess, treating or -- or validating a 04:15:26
21 transgender person's identity. But this paragraph 202
22 talks about harm to family and friendships, and then
23 203 talks about sexual-romantic harms.
24 Do you see that?
25 A Yes. 04:15:41

1 Q And my question is, the harms you set forth in
2 these paragraphs -- first of all, you cite your -- only
3 your own publications for these two paragraphs; is that
4 correct?
5 A Yes, it's my only citation. 04:15:49
6 Q Is there any other basis for these assertions?
7 A Well, there's an article in the Archives of
8 Sexual Behavior about being the fetish object, when --
9 a transsexual adult talking about -- a survey of
10 transsexual adults, that they get really upset that 04:16:10
11 people want to have sex with them because they're what
12 they call a fetish object, that they're -- they -- they
13 have attractions to transsexuals and they want to have
14 an experience.
15 And so it's really about the frustration of 04:16:25
16 adult tran- -- sexually active transsexual, I think --
17 transsexuals who are complaining about difficulties in
18 romantic relationships because they feel they're being
19 used by people with perverse adventures, some
20 curiosities, as opposed to genuine romantic 04:16:47
21 relationships.
22 So I was happy to read that article because it
23 had confirmed one of the stories that I had been
24 hearing from many patients over the years by --
25 Q Can you direct me -- 04:17:00

1 A Sorry.
2 Q What article is that? Can you direct me --
3 A I -- I certainly can get you the reference.
4 It's in the Archives of Sexual Behavior. It's probably
5 within the last two years. And I think the first 04:17:13
6 author's name is either -- starts with an A, B or C.
7 Anyway, I -- you -- it's about tran- -- in the
8 title, there's something like "transgender and fetish
9 objects." So I --
10 Q Okay. 04:17:38
11 A I can -- if you want, I will eventually give
12 you the exact reference, yeah, but --
13 Q That's --
14 A -- you're -- you're not interested in wasting
15 time, I'm sure. 04:17:48
16 Q No, no, I -- I -- I just want to know the
17 basis for these -- these paragraphs, so I appreciate
18 you telling me that.
19 My question is -- you know, I read 202 and
20 203, and you say -- you list various perceived harms 04:17:58
21 and challenges from being transgender; is that fair?
22 A Yes.
23 Q What I'm confused about is, is this premised
24 on the notion that there's a way to dissuade someone
25 from being transgender so that they don't have these 04:18:14

1 outcomes?
2 A Exactly. I -- this is what I'm trying to do.
3 This is why I say to parents, you know, we have to
4 support and love this child regardless of what --
5 what -- what they pass through because mental health is 04:18:35
6 determined, in part, by the ability to -- to be valued
7 by your family before you can be valued by other
8 people.
9 And I think the outcomes -- I mean, so many of
10 my patients have in fact been alienated from their 04:18:53
11 families. And -- sorry -- you've heard about runaway
12 kids and throwaway kids and -- and I --
13 Q Well, why isn't -- sorry, why isn't that
14 the family's --
15 MR. BROOKS: Counsel -- Counsel, the witness 04:19:08
16 is busy talking, in the middle of his --
17 MS. HARTNETT: Yeah, I'm aware of that, but
18 he's also taking a long time to respond to
19 straightforward question.
20 BY MS. HARTNETT: 04:19:18
21 Q My question is whether or not --
22 MR. BROOKS: Counsel, the witness is entitled
23 to finish his answer.
24 MS. HARTNETT: He's not entitled to
25 filibuster. 04:19:23

1 MR. BROOKS: He's not filibustering; he's
2 answering your question.
3 MS. HARTNETT: I've been very permissible all
4 day with his answers, but I'm happy to have him finish
5 his answer. 04:19:35
6 MR. BROOKS: Thank you.
7 If you have -- if you feel that you haven't
8 finished, you may finish.
9 THE WITNESS: I have heard considerable
10 stories over the years about family relationships, 04:19:43
11 about alienations, about isolation. And in answer to
12 your question, in -- in hearing those stories, it has
13 led me to counsel both the patient and the parents to
14 do whatever they can to maintain their relationships,
15 despite what the child or the grownup, the adult, has 04:20:02
16 decided because I know the suffering of mothers and
17 fathers and grandmothers and grandfathers and of
18 patients.
19 And so it's an adverse outcome to have family
20 alienation. And from the very beginning, I say the 04:20:19
21 first principle evaluation is to preserve family
22 relationships, and I think you can read that in my 2021
23 paper.
24 BY MS. HARTNETT:
25 Q My question is -- so in the example of the 04:20:31

1 child who's -- or the adolescent who's experiencing
2 gender dysphoria and would like to be affirmed and the
3 parents that are horrified, why isn't the answer to try
4 to work with the parents to be more tolerant and
5 understanding rather than to try to change the child? 04:20:48
6 A I think I do work with the parents. I do.
7 But it's not an either-or thing. It's not an either-or
8 phenomenon.
9 And just because --
10 Q Is your -- 04:21:07
11 A Just because we work with a parent doesn't
12 mean I'm capable of changing the parent's behavior,
13 changing the parent's values, changing the parent's
14 knowledge of the child and changing the parent's fear
15 for their future. 04:21:22
16 Q I'm just puzzled by these paragraphs because
17 it strikes me that the person is going to be
18 transgender regardless if they get transgender
19 healthcare and, therefore -- I don't understand the
20 point that giving them healthcare is going to harm them 04:21:37
21 more than they would have otherwise been harmed if they
22 were transgender, but just without healthcare.
23 MR. BROOKS: Objection; assumes facts not in
24 evidence, argumentative.
25 THE WITNESS: I accept the fact that you don't 04:21:47

1 understand.
2 BY MS. HARTNETT:
3 Q Can you explain to me why -- so, I guess --
4 let me ask you this: Do you disagree that these people
5 are transgender even if they don't get the healthcare? 04:21:56
6 MR. BROOKS: Objection.
7 THE WITNESS: I agree that the patient who
8 says that "I'm transgender" is currently transgender.
9 That's what I believe. They're currently transgender.
10 Do I believe they will always be transgender? 04:22:14
11 No.
12 Can I predict which ones will be transitioned
13 and not? Not -- not with any certainty, no.
14 But, you see, I believe that many of the
15 assumptions behind your questions is that 04:22:28
16 transgenderism is a fixed phenomenon, it never changes,
17 and I -- if I am correct that that is your assumption,
18 then you and I disagree.
19 BY MS. HARTNETT:
20 Q And do you agree that there's no evidence 04:22:44
21 to -- assuming those are different assumptions, that
22 there's not evidence out there that would prove either
23 of us correct on that one?
24 MR. BROOKS: Objection.
25 THE WITNESS: No, I don't agree with that at 04:22:53

1 all. Not at all.
2 BY MS. HARTNETT:
3 Q Do you believe that --
4 A I -- and -- and I give you evidence of
5 detransition. 04:22:59
6 Q Is there anything other than anecdotal
7 evidence to say whether or not gender identity is fixed
8 versus not labeled?
9 MR. TRYON: Objection.
10 THE WITNESS: You know, you and I have 04:23:13
11 different ideas of what is anecdotal.
12 Is Lisa Diamond's work anecdotal, about
13 homosexuality? Is that anecdotal?
14 And -- and, you know, there is something
15 called a proof of concept study that if you can 04:23:29
16 demonstrate that it is possible, for example, to cure a
17 particular cancer with a new drug that has never been
18 tried before, that proof of concept then leads to more
19 definitive studies.
20 And we're in -- we're -- we already have proof 04:23:47
21 of concept that -- that there are many people who
22 detransition.
23 In fact, if you look at the UK studies, the
24 two UK studies that have been done in the last, I
25 think, six months, we all now have a rate of 04:24:07

1 detransition. We now, for the first time, have a rate
2 of detransition data.
3 And so I would say it's not anecdotal.
4 It's -- it's an emerging new branch of transgender
5 science, so to speak, or knowledge that the error rate 04:24:24
6 in trans -- in -- in -- in affirmative care is now
7 becoming more clear than it ever was.
8 Q You are aware that some transgender -- many
9 transgender people have fulfilling romantic
10 relationships and family relationships; correct? 04:24:37
11 MR. BROOKS: Objection.
12 THE WITNESS: I am aware.
13 BY MS. HARTNETT:
14 Q In paragraph 203, you say (as read):
15 After adolescence, transgender 04:24:47
16 individuals find the pool of
17 individuals willing to develop a
18 romantic and intimate relationship
19 with them to be greatly diminished."
20 A Yes. 04:24:57
21 Q Do you have any basis for making that
22 statement other than your own anecdotal experience?
23 A Well, if you look at -- if you look at
24 cross-sectional data about the percentage of people who
25 are married and cohabitating among trans people versus 04:25:09

1 cis people, there are -- there are far less marriages,
2 and there are far less stable relationships.
3 If you look at a series of psychosocial
4 histories of -- of patients, many of them do not come
5 to us with stable functional relationships. I don't -- 04:25:31
6 Q You --
7 A I actually -- I actually don't think this
8 is -- this is anecdotal, but it is perhaps
9 impressionistic based upon 50 years of taking care of
10 these people. 04:25:50
11 Q Is it possibly also dated?
12 MR. BROOKS: I'm -- I'm sorry, I couldn't hear
13 the question.
14 BY MS. HARTNETT:
15 Q Is the notion also possibly dated? 04:25:57
16 A Well, the big hope in the trans advocate
17 community has been as society improves, the lives --
18 society recognizes and accepts transgender people,
19 there will be less suffering and less isolation in
20 trans people. That -- that is -- you can find that in 04:26:15
21 many, many studies that -- that articulate the -- the
22 frequency of psychiatric problems. And there's the
23 hope that as -- the whole idea of the minority stress
24 theory is that if we improve society, fewer people will
25 suffer. 04:26:40

1 I don't know whether that -- I hope it's true
2 that as society has improved its defense of -- of
3 gender diverse people, that more gender diverse people
4 will be able to have satisfying, intimate, stable
5 relationships. I hope that is true. And I hope it 04:26:56
6 will be worked through in ten years.
7 Q Thank you. In the paragraph 202, you say, in
8 the middle of that paragraph (as read):
9 "By adulthood, the friendships of
10 transgender individuals tend to be 04:27:11
11 confined to other transgender
12 individuals (often 'virtual' friends
13 known only online) and the generally
14 limited set of others who are
15 comfortable interacting with 04:27:24
16 transgender individuals."
17 Do you see that?
18 A Yes.
19 Q Is there a basis for that beyond your own --
20 you cite yourself for that, but are you aware of 04:27:39
21 whether or not that actually represents the lived
22 experience of transgender individuals in 2022?
23 A Well, I think in that sentence, if I could
24 edit it, I would emphasize rather than "by adulthood,"
25 I would say "during adolescence." And the basis is not 04:28:00

1 just my clinical experience. The basis is the clinical
2 experience of the people in the psychosocial therapy
3 group that I mentioned earlier this morning. That
4 seems to be a broad consensus, that many of their trans
5 people are -- have social isolation problems in their 04:28:19
6 friendships and their romances, and I've seen this in
7 my practice. They really are occurring through --
8 through the Internet.
9 And when they're not occurring through the
10 Internet, they're occurring with people in the sexual 04:28:34
11 minority community, other people who may not be trans
12 themselves, but who are excited by their trans and
13 supportive of their trans status.
14 So that's the basis of it.
15 Q You've referred to the trans community, at 04:28:53
16 times, in our conversation today; correct?
17 A I'm sure I've said that, yes.
18 Q Are you aware that the trans community, as a
19 general matter, takes issue with your viewpoint?
20 MR. BROOKS: Objection. 04:29:08
21 THE WITNESS: Yeah, I am aware that there are
22 members in the trans community who find me a hateful
23 person and who believe that I'm against medical,
24 surgical and social care and against the civil rights
25 of transgender people. 04:29:28

1 I can't control what they believe about me,
2 you see. But I am aware that some people are very
3 appreciative of me and other people think I'm an enemy.
4 BY MS. HARTNETT:
5 Q If 95 percent of trans people opposed your 04:29:47
6 methods, do you think that they would make sense to
7 continue suggesting them for trans people?
8 MR. BROOKS: Objection --
9 THE WITNESS: What was the --
10 MR. BROOKS: -- lack of foundation, calls for 04:29:56
11 speculation.
12 THE WITNESS: What was the last part of your
13 sentence?
14 BY MS. HARTNETT:
15 Q I'm just trying to ask you if -- like, say, 04:30:04
16 assuming 95 percent of trans people opposed your
17 methods, would you have concern for continuing to
18 promote them?
19 MR. BROOKS: Objection.
20 THE WITNESS: To promote my methods? 04:30:13
21 BY MS. HARTNETT:
22 Q Towards --
23 MR. BROOKS: Objection.
24 BY MS. HARTNETT:
25 Q -- trans people. 04:30:17

1 A My method of -- of informed consent and my
2 method of -- of being thoughtful and considerate
3 about -- about -- about the sources and the
4 consequences?
5 I don't believe that -- that a person 04:30:32
6 thinks -- misunderstands my position would make me give
7 up my position. If you show me that -- that my
8 position is not tenable in a -- in a -- in a -- in a
9 strong scientific basis, I'm certainly able to change.
10 The fact that public opinion, in some 04:30:53
11 commun- -- some sectors of the community, you know,
12 think -- misunderstand me and -- and don't really know
13 what I'm saying, you see, that -- that wouldn't make me
14 give it up.
15 And I don't know how you could assume that 04:31:09
16 95 percent of people, you see. I don't know -- you're
17 just presuming things.
18 Q Are you opposed to civil rights for
19 transgender people?
20 A Absolutely not. I am not -- 04:31:20
21 Q Do you understand --
22 A I am not --
23 Q Sorry?
24 A -- opposed to civil rights for transsexual
25 people. 04:31:26

1 Q Do you know that your opinion in this case is
2 being used to support excluding an 11-year-old
3 transgender girl from a middle school track team that
4 wants her to play on it?
5 MR. BROOKS: Objection. 04:31:36
6 MR. TRYON: Objection.
7 MR. BROOKS: Foundation.
8 THE WITNESS: I already told you I don't know
9 the details of this particular case, the B.P.J.
10 BY MS. HARTNETT: 04:31:50
11 Q I know. And I'm going to tell you that your
12 opinion is being used by some of the defendants in this
13 case to seek to deny an 11-year-old transgender girl
14 from playing on a girls' cross-country and track team
15 where her school otherwise would be willing to have her 04:31:57
16 play, with the support of her parents and family.
17 MR. BROOKS: Objection.
18 There's no question pending, so far as I
19 understand.
20 BY MS. HARTNETT: 04:32:12
21 Q Do you know that that's what your opinion is
22 being used for in this case?
23 MR. BROOKS: Objection.
24 THE WITNESS: I am not aware.
25 ///

1 BY MS. HARTNETT:
2 Q Do you object to your opinion being used to
3 deny an 11-year-old girl the ability to run on a track
4 team at her middle school in West Virginia when she's
5 already otherwise socially transitioning and is 04:32:26
6 supported by her family and her school?
7 MR. BROOKS: Objection; mischaracterizes the
8 witness's opinions.
9 THE WITNESS: I've heard the objection that
10 you're -- you're mischaracterizing my opinion. 04:32:41
11 I -- I don't understand.
12 My opinion has to do with the things I've
13 testified to. I did not testify to anything about an
14 11-year-old girl.
15 And what you are telling me about, I trust 04:32:54
16 you're telling me the truth.
17 I actually don't think about -- when I think
18 about civil rights, I am thinking much more about, I
19 think, older people, you know, housing, educational
20 discrimination in colleges and things like that, 04:33:18
21 vocation, right to vote.
22 You will have to -- it's a -- it's a new thing
23 for me to even think about the civil rights of a
24 six-year-old or a seven-year-old or an eight-year-old.
25 ///

1 BY MS. HARTNETT:
2 Q Well, your -- I'll help you.
3 Your opinion was also submitted in the case of
4 Lindsay Hecox, a college student who was seeking to run
5 consistent with her identity, gender identity, on her 04:33:39
6 college cross-country and track team.
7 A Yes.
8 Q You're aware that your -- your testimony was
9 submitted in support of prohibiting her from running on
10 the team? 04:33:51
11 MR. BROOKS: Objection; mischaracterizes that
12 case.
13 THE WITNESS: Again, my testimony --
14 MS. HARTNETT: I'm counsel of record in that
15 case, and I can tell you that I'm accurately 04:34:03
16 characterizing the case, which is that Dr. Levine's
17 declaration was submitted in support of a motion to
18 ban -- to -- to uphold a statute that would not permit
19 Lindsay Hecox to run, consistent with her gender
20 identity, on a college sports team. 04:34:15
21 And I'm asking him, in light of his statement
22 that he does not oppose transgender civil rights, how
23 he can reconcile that with having his testimony used in
24 this manner.
25 MR. BROOKS: Objection; argumentative. 04:34:26

1 The witness has explained that his opinions
2 are about science.
3 MS. HARTNETT: Please stop testifying.
4 MR. BROOKS: Please stop arguing.
5 BY MS. HARTNETT: 04:34:35
6 Q Dr. Levine, how can you reconcile --
7 (Simultaneous speaking.)
8 MR. BROOKS: This is not a debate. This is a
9 deposition.
10 MS. HARTNETT: And this -- you're not the 04:34:45
11 witness, either. I'd like to ask Dr. Levine and get an
12 answer as to how he can reconcile having his testimony
13 be filed to oppose the participation of a college
14 student on her college team consistent with her gender
15 identity. 04:34:59
16 THE WITNESS: I don't find it easy to
17 reconcile -- this is just part of some of the great
18 conflict embedded in -- in -- my -- my knowledge is
19 about science. And I do recognize that people
20 interpret what I say in various ways and -- but I don't 04:35:25
21 think I'm responsible for how that is interpreted. I'm
22 just making statements based on my knowledge, based on
23 my clinical experience. And I am uncomfortable, at
24 times, with various aspects of what people make of --
25 of what I have said. 04:35:46

1 I -- I am uncomfortable, to some extent, by
2 how the lawyers have used some of my -- you know, at
3 times. And I am certainly uncomfortable at how the
4 trans community has used some of what they think I
5 stand for. 04:36:04
6 I'm trying to be clear what I -- what I think
7 and what I stand for. And I am somewhat uncomfortable,
8 at times, about many things, including this, but --
9 BY MS. HARTNETT:
10 Q Do you understand that you're being paid as an 04:36:16
11 expert witness in both the Hecox case and in this case
12 by the defendants in order to submit testimony that
13 will be used against the participation of the
14 transgender students?
15 MR. TRYON: Objection. 04:36:31
16 THE WITNESS: I don't think I fully understand
17 that. I don't think -- I don't think that's -- I -- I
18 guess the answer to the question is I don't fully
19 understand it.
20 BY MS. HARTNETT: 04:36:48
21 Q Okay. Because I -- I'm -- I'm genuinely
22 perplexed because you've said that you're supporting
23 transgender civil rights and you wish for a time where
24 there's less discrimination and that -- yet your
25 submission is not being submitted in a neutral manner 04:36:59

1 in this case; it's being submitted in support of the
2 side of the case that's seeking to defend the exclusion
3 of the transgender student.
4 And so we don't need to belabor the point, but
5 I'm just trying to -- I'm happy to tell you that. And 04:37:11
6 if you have something you would like to say on the
7 record as to how you can reconcile the use of your
8 testimony for that, with the views you've expressed in
9 this deposition about seeking to make the world better
10 for transgender people, I would appreciate your chance 04:37:24
11 to respond to that.
12 MR. BROOKS: Objection; mischaracterizes --
13 MR. TRYON: Objection.
14 MR. BROOKS: -- testimony and is outside the
15 scope of this witness's expert opinions. 04:37:30
16 THE WITNESS: Well, I thank you for pointing
17 that out. I will think about it more.
18 MS. HARTNETT: Thank you.
19 I think we can take a break now.
20 THE VIDEOGRAPHER: We are off the record at 04:37:46
21 4:38 p.m.
22 (Recess.)
23 THE VIDEOGRAPHER: We are on the record at
24 4:55 p.m.
25 MS. HARTNETT: Thank you. 04:55:19

1 BY MS. HARTNETT:
2 Q Hi, Dr. Levine. We discussed the SEGM
3 organization earlier.
4 Do you recall that?
5 A I do. 04:55:25
6 Q And you described it as an evidence-based
7 organization; correct?
8 A Yes. That's the title, yes.
9 Q And you view them as an organization that
10 strictly adheres to the facts; correct? 04:55:35
11 A Well, facts are interpreted, but, yes, they
12 have a basis in facts.
13 Q In January, you earlier, in the deposition,
14 mentioned that you did a podcast; correct?
15 A I did. 04:55:53
16 Q And that podcast was with two of the lead
17 advisors of SEGM; is that right?
18 A I don't think they're the lead advisors.
19 They're -- they were members of the psychotherapy
20 group. I don't -- I don't -- I wouldn't describe them 04:56:10
21 as lead advisors to SEGM, no.
22 Q Okay. They're -- are they affiliated with
23 SEGM in some way?
24 A They're members of SEGM, yeah.
25 Q And that would be Sasha Ayad and Stella 04:56:21

1 O'Malley; is that right?

2 A Yes.

3 Q Were the thoughts that you shared with them

4 during that podcast all truthful?

5 A I hope so. 04:56:32

6 Q Okay. I'm just going to -- and I referenced,

7 before we went on the record, uploading a few audio

8 files. I've excerpted some excerpts from the talk you

9 gave, which was, for the record, available at

10 https://gender-a-wider-lens.captivate.fm/episode/60- 04:56:53

11 pioneers-series-we-contain-multitudes-with-Stephen --

12 S-T-E-P-H-E-N -- Levine, dated January 28th, 2022.

13 Dr. Levine, do you recall whether the podcast

14 was -- the conversation you had with Ms. O'Malley and

15 Ms. Ayad actually took place on January 28th? 04:57:38

16 A I think it did, yes.

17 Q Okay. So I'm going to just play for you an

18 excerpt, and I'll ask you a question about it.

19 MS. HARTNETT: Could you please play

20 Exhibit 89. 04:57:56

21 (Exhibit 89 was marked for identification

22 by the court reporter and is attached hereto.)

23 THE WITNESS: I'm not hearing anything.

24 THE VIDEOGRAPHER: Just -- just a moment. I

25 believe he's working on it. 04:58:22

1 MR. REISBORD: Were you unable to hear that?
2 THE VIDEOGRAPHER: Correct.
3 MS. HARTNETT: We did not hear that.
4 MR. REISBORD: Let my try one more time.
5 (Video Clip Played.) 04:58:40
6 "In 1973" --
7 MR. REISBORD: Are you able to hear that?
8 MS. HARTNETT: Yes.
9 THE WITNESS: Yes.
10 MR. REISBORD: Okay. 04:58:45
11 (Video Clip Played.)
12 "In 1973, after 30 days in -- in practice, I
13 was at a department of psychiatry and had a halftime
14 private practice. I got a man who told me he was
15 sitting in the backyard with a gun in his mouth, under 04:59:00
16 his oak tree, and he decided either to kill himself" --
17 MS. HARTNETT: We can't hear it anymore.
18 (Video Clip Played.)
19 -- "see a psychiatrist who used to be my
20 supervisor a month ago, and my supervisor said, Well, 04:59:17
21 there was an expert in human sexuality down at the
22 university. Why don't you go see him?
23 "And that was the beginning of my career
24 working with people who wanted to change their sex.
25 "You know, he almost killed himself at that 04:59:33

1 point in 1973."
2 BY MS. HARTNETT:
3 Q Dr. Levine, was that the patient that you were
4 referring earlier to in the deposition?
5 A Yes. 04:59:48
6 Q Rutherford or Ruth; correct?
7 A Yes.
8 MS. HARTNETT: Could you play tab 40, please.
9 MR. REISBORD: Tab 40 would be Exhibit 90.
10 MS. HARTNETT: Oh, sorry, thanks. 05:00:07
11 (Exhibit 90 was marked for identification
12 by the court reporter and is attached hereto.)
13 (Video Clip Played.)
14 "And -- and nine years later, he in fact did
15 kill himself after he changed his gender and left his 05:00:11
16 family and left his country and then returned back to
17 live in America and just decided to end his life. So
18 that was my introduction, my nine-year introduction, to
19 adults who wanted to change their sex.
20 "This was a highly accomplished man. He was 05:00:30
21 the head of our county library system. He had a degree
22 in divinity. And he was a joy to talk to. And he --
23 one day, about four years before he actually killed
24 himself, he slashed his -- at his neck, and when he was
25 admitted to the hospital, he -- he told me that I was 05:00:55

1 deficient as a therapist because I failed to
2 investigate how angry he has been all of his life at
3 his parents."
4 BY MS. HARTNETT:
5 Q Dr. Levine, is what was just played an 05:01:10
6 accurate account of -- I'm sorry, is -- is what -- do
7 you stand by the account that you provided to SEGM, as
8 just played in that sequence?
9 MR. BROOKS: Objection to the description.
10 THE WITNESS: Are you asking if -- if -- if I 05:01:28
11 said these things that you're recording --
12 BY MS. HARTNETT:
13 Q Yeah, thank you, I'll ask a better question.
14 Is that what you said on the SEGM podcast
15 earlier this year? 05:01:40
16 A I don't call this "the SEGM podcast." This is
17 a --
18 Q I'm sorry.
19 A -- podcast of these two women who have a
20 business in providing information to others who are 05:01:47
21 interested.
22 So I --
23 Q Okay.
24 A -- did say these things, as you -- as is
25 obvious, I said these things. 05:01:56

1 Q And they were truthful; correct?
2 A Was I telling the truth? Yes --
3 Q Yes.
4 A -- I was -- I tell --
5 Q Okay. 05:02:06
6 A -- the truth.
7 Q Sorry, it's partially a formality of -- I'm
8 just trying to confirm that what you were saying to
9 them is also true today, and so that's why I'm asking
10 you the question, but I won't refer to it as "the SEGM 05:02:17
11 podcast."
12 MS. HARTNETT: Could you please play tab 41,
13 Exhibit 91.
14 (Exhibit 91 was marked for identification
15 by the court reporter and is attached hereto.) 05:02:24
16 (Video Clip Played.)
17 "It was quite an educational experience for
18 me, both as a he and as a she, and -- and she and I
19 wrote a paper in the Archives of Sexual Behavior in
20 19-, I think, -83 called Increasingly Ruth: Towards an 05:02:37
21 understanding of sex reassignment surgery.
22 And then in 1984, when he died, I wrote a
23 letter to the editor about Ruth's suicide.
24 Q Dr. Levine, was that a recording of you
25 speaking to the podcast earlier this year? 05:03:03

1 A Yes.
2 Q You mentioned that you wrote a letter to the
3 editor after Ruth's death, and in that letter, you said
4 that Ruth's unfortunate legacy to those who invested in
5 her is psychologic injury due to her abandonment of 05:03:18
6 them; is that correct?
7 A Would you repeat that? I don't recognize
8 those words.
9 Would you repeat them slowly?
10 Q I'm sorry. Ruth's unfortunate legacy to those 05:03:30
11 who invested in her is psychologic injury due to her
12 abandonment of them.
13 A Yes, that was --
14 Q Did you write that?
15 A Yes. I don't want to give you more 05:03:39
16 information than you're asking for, but -- the answer
17 to your question is yes.
18 Q Thank you.
19 MS. HARTNETT: Could you play tab --
20 Exhibit 92, please. 05:04:01
21 (Exhibit 92 was marked for identification
22 by the court reporter and is attached hereto.)
23 (Video Clip Played.)
24 "So I've been accused of being very
25 conservative on this issue and biased by -- by that 05:04:06

1 experience, and, in fact, I plead guilty. I am -- I --
2 I -- that was my introduction."
3 Female: "Yeah."
4 "And it -- and, unfortunately, it's not the
5 only case of -- of people who have aspirations who 05:04:21
6 think that their troubles as a person will disappear
7 if -- if they change their gender presentation and
8 change their bodies and -- and only to discover that
9 life is not as easy as they imagined, and they didn't
10 escape much. 05:04:44
11 "So I plead guilty to being biased, and I
12 think all of us have a kind of bias, and we ought to
13 own it."
14 BY MS. HARTNETT:
15 Q Dr. Levine, were those your statements on the 05:04:55
16 podcast earlier this year?
17 A Yes.
18 Q And were they your truthful statements?
19 A Yes.
20 MS. HARTNETT: Could you please play 05:05:10
21 Exhibit 93.
22 MR. TRYON: This is Dave Tryon. I'm going to
23 object to --
24 (Video Clip Played.)
25 "I have a Mas-" -- 05:05:16

1 MR. TRYON: I'm going to object to to playing
2 these excerpts without the full context.
3 MS. HARTNETT: And I will just say for the
4 record that there is -- I think the -- the person that
5 gave the podcast knows the context, and I've given the 05:05:26
6 web URL for anyone to look at the full context.
7 There's not a written transcript online.
8 MR. TRYON: My objection stands.
9 MS. HARTNETT: Of course. Thank you.
10 Could you play Exhibit 93, please. 05:05:43
11 (Exhibit 93 was marked for identification
12 by the court reporter and is attached hereto.)
13 (Video Clip Played.)
14 "I have a Master's prepared person, just got
15 out of her -- her internship, who told me how you're 05:05:48
16 supposed to treat transgender people, and I was just
17 astounded.
18 "I gave a seminar two years ago to residents
19 who told me -- residents in psychiatry -- who told me
20 how trans people ought to be treated. 05:06:05
21 "See, they had a chain in trust. Somebody
22 taught them, and they believe it, the passion, they
23 believe it. They have the zeal of the new -- of the
24 convert to being a psychiatrist or being a counselor,
25 whatever it is. And -- and -- and when I give them 05:06:21

1 facts, they think I'm an outlier or they think I'm an
2 old fuddy-duddy, there's something wrong with me. They
3 don't believe me.
4 "Because the truth is that trans is normal,
5 you see, and -- and that they can have highly 05:06:33
6 successful lives, just like anybody else.
7 "And it's not based on experience. It's
8 certainly not based on any scientific scrutiny, you
9 see.
10 "And so what I'm really saying is that so many 05:06:46
11 of the doctors just practice how they've been taught to
12 practice. They -- they -- we -- we -- none of us have
13 the brain power -- we take care of so many different
14 things, we can't be experts in -- in -- in the original
15 train of -- that chain of trust at all, you see. 05:07:05
16 "So of course we oversimplify everything.
17 "And, you know, there -- we rely on -- on a
18 few skeptics like -- like the three of us."
19 BY MS. HARTNETT:
20 Q Dr. Levine, was that clip of you speaking on 05:07:22
21 the podcast earlier this year?
22 A It is.
23 Q Was that your truthful statements?
24 MR. TRYON: Objection.
25 ///

1 BY MS. HARTNETT:
2 Q Sorry?
3 A I said --
4 Q I --
5 A -- those things that you heard on the podcast, 05:07:44
6 yes.
7 Q And were they your truthful statements?
8 A Yes.
9 MS. HARTNETT: Okay. Could you play
10 Exhibit 94, please. 05:07:53
11 (Exhibit 94 was marked for identification
12 by the court reporter and is attached hereto.)
13 (Video Clip Played.)
14 "And then three years later, there was the six
15 standards of care that was almost word for word for 05:07:59
16 what our group did except for one letter was necessary.
17 That is, he wanted to make it easier to get
18 transgender."
19 BY MS. HARTNETT:
20 Q Dr. Levine, was that you speaking on the 05:08:15
21 podcast earlier this year?
22 A Yes. And it's my truthful statement.
23 Q Thank you. You used the term "get
24 transgender" on that clip. I was just wondering what
25 you mean by that. 05:08:27

1 A I think that was referring to hormones, access
2 to hormones.
3 We used to have a standard that two
4 independent individuals or one group committee were
5 required to write a recommendation for hormones, and 05:08:44
6 Dr. Richard Green, who was the head of the organization
7 at the time, didn't like that at all. He was a strong
8 advocate of immediate care. And he told me so, he
9 didn't like it. And -- and he reconstituted --
10 accepted the fifth standards of care, and he formed a 05:09:05
11 new committee with the -- you know, with the charge to
12 get rid of that criteria for hormones.
13 Q Do you typically use the term "get
14 transgender"?
15 A No. This was a spontaneous conversation. I 05:09:24
16 don't -- it's a funny phrase. I don't know. It came
17 out of my mouth. I don't know why. That's --
18 Q Okay.
19 A -- not my usual language.
20 But again, this was not a paper I was 05:09:33
21 delivering that I, you know, worked on. This is
22 something that happened rather spontaneously.
23 Q I understand.
24 MS. HARTNETT: Could you please play
25 Exhibit 95. 05:09:49

1 (Exhibit 95 was marked for identification
2 by the court reporter and is attached hereto.)
3 (Video Clip Played.)
4 "I think it's time for a re-examination of the
5 wisdom of affirmative care. I'm not saying affirmative 05:09:55
6 care doesn't help some people, but I'm not so sure how
7 many people it harms."
8 BY MS. HARTNETT:
9 Q Dr. Levine, was that your truthful statement
10 on the podcast earlier this year? 05:10:09
11 A It --
12 MR. TRYON: Same objection as before.
13 Thank you.
14 You may answer.
15 THE WITNESS: I -- it is my true statement. 05:10:18
16 I'm still not sure what percentage of people
17 are ultimately harmed and how to measure those harms
18 and when to measure those harms.
19 MS. HARTNETT: Thank you.
20 Could you play tab -- sorry -- Exhibit 96, 05:10:33
21 please.
22 (Exhibit 96 was marked for identification
23 by the court reporter and is attached hereto.)
24 (Video Clip Played.)
25 "The problem is that we do not have rigorous 05:10:38

1 follow-up studies of people who made the transition."
2 BY MS. HARTNETT:
3 Q Dr. Levine, is that your truthful statement
4 made earlier this year?
5 MR. TRYON: Objection. 05:11:00
6 THE WITNESS: Yes.
7 MR. TRYON: I just want to place on the record
8 evidence rule 106. Thank you.
9 Go ahead and answer.
10 BY MS. HARTNETT: 05:11:05
11 Q Dr. Levine, do you agree that there is not
12 rigorous follow-up studies of people who have made the
13 transition?
14 A Yes. I believe I testimony -- I testified to
15 that earlier today. 05:11:24
16 Q And for all of these statements that I've
17 asked you about, do you stand by those statements,
18 sitting here today?
19 A Number one, I have said those things, and I
20 believe them to be essentially correct today, yes. 05:11:36
21 Q And, thank you, I'm asking only to -- in light
22 of the objection, not to repeat my questions to you.
23 MS. HARTNETT: Could you please play
24 Exhibit 97.
25 (Exhibit 97 was marked for identification 05:11:48

1 by the court reporter and is attached hereto.)
2 (Video Clip Played.)
3 "The people who come to me who are depressed,
4 you know, those -- those -- after transition, those are
5 just anecdotal reports. I have no idea what the -- 05:12:00
6 what the denominator is, you see."
7 BY MS. HARTNETT:
8 Q Dr. Levine, do you agree with the statement
9 that was just played?
10 A Yes. 05:12:10
11 MS. HARTNETT: Could you please play
12 Exhibit 98.
13 (Exhibit 98 was marked for identification
14 by the court reporter and is attached hereto.)
15 MR. TRYON: Counsel, before you play it -- 05:12:19
16 MS. HARTNETT: Yes.
17 MR. TRYON: Counsel, will you just agree to
18 give me a standing objection to these excerpts?
19 MS. HARTNETT: Yes.
20 MR. TRYON: Thank you. 05:12:28
21 (Video Clip Played.)
22 "And -- and because we don't know, because we
23 don't know, I think we have to say why do we have all
24 this enthusiasm, why do we have all this chain of trust
25 passion that this is the best treatment. We don't know 05:12:46

1 is the best treatment, you see."
2 BY MS. HARTNETT:
3 Q Dr. Levine, do you agree with that statement
4 that you made earlier this year?
5 A I do. 05:12:58
6 MS. HARTNETT: Could you please play
7 Exhibit 99.
8 (Exhibit 99 was marked for identification
9 by the court reporter and is attached hereto.)
10 (Video Clip Played.) 05:13:05
11 "Now, I want to quickly say that while I'm an
12 advocate of someone who thinks or wants to be or
13 considers themselves a transgendered person, I think
14 they ought to have a psychotherapeutic approach before
15 they make any -- any life-changing decisions, but I 05:13:22
16 admit that I have no follow-up. This is not on the
17 basis of randomized control study. I am in the same
18 difficult position that the affirmative care doctors
19 are in, only I have more faith based upon a hundred
20 years of doing psychotherapy as a tradition, you see, 05:13:42
21 and they only have a few years, with no follow-up."
22 BY MS. HARTNETT:
23 Q Dr. Levine, is that your truthful statement?
24 A Yes.
25 MS. HARTNETT: Could you please play 05:14:02

1 Exhibit 100.
2 (Exhibit 100 was marked for identification
3 by the court reporter and is attached hereto.)
4 (Video Clip Played.)
5 "So -- so what I'm saying is that in the early 05:14:05
6 studies, the death rates from cancer and cardiovascular
7 disease and -- and accidents were -- were elevated and
8 what -- and what that really means is that the
9 lifestyle things predispose them to physical diseases.
10 "So, you know, if you're a parent, you -- 05:14:27
11 you -- you want to die -- you want to die before your
12 children, you see.
13 "So for many -- for many of these kids,
14 they're going to be sick.
15 "And I just saw a slide of the famous -- 05:14:41
16 Jazz Jennings. Do you know that name?
17 Female: Yeah.
18 "Apparently Jazz Jennings was a very thin,
19 very attractive person when she had surgery, and in the
20 postoperative time, she's now grossly obese. She is -- 05:14:58
21 I saw a picture of her. She is grossly obese.
22 "So, you know, this is one of the -- this is
23 one of the things that never gets talked about, what
24 are the physical manifestations, what are the
25 psychological manifestations, what are the outcomes." 05:15:13

1 BY MS. HARTNETT:
2 Q Dr. Levine, is that your truthful statement?
3 A Yes.
4 Q Is it your contention that Jazz Jennings is
5 grossly obese because she had gender confirmation 05:15:29
6 surgery?
7 A No. She became grossly obese after gender
8 confirmation surgery. In addition, she had -- she had
9 other problems as well, I think.
10 I only know that because Jazz Jennings is a 05:15:50
11 public, you know, celebrity, so to speak, and people
12 talk about her and people showed me pictures of her.
13 So I've never -- that's -- that's what I know.
14 Q But you've never met Jazz Jennings; correct?
15 A I have never met Jazz Jennings. 05:16:09
16 MS. HARTNETT: Could you play Exhibit 101,
17 please.
18 (Exhibit 101 was marked for identification
19 by the court reporter and is attached hereto.)
20 (Video Clip Played.) 05:16:19
21 "And the -- the affirmative care doctors like
22 to blame all these comorbidities and the shortened
23 lifespan on minority stress, and you would -- I
24 think -- I think we recognize that it is stressful to
25 be -- to belong to a sexual minority, but -- but 05:16:32

1 children who are cross-gender identified, who have
2 separation anxiety and depression and so forth, they're
3 not -- they're not having minority stress.
4 "And -- and the kids who -- you know, if
5 you -- if you walk in -- if you walk in and see your 05:16:50
6 postpartum depressed mom hanging from the rafters and
7 then you decide three weeks later that you're going to
8 change your gender, this is not minority stress."
9 BY MS. HARTNETT:
10 Q Dr. Levine, is that your truthful statement? 05:17:07
11 A Yes.
12 Q Are you aware of any example of an actual kid
13 who walked in and saw their postpartum depressed mom
14 hanging from the rafters and three weeks later decided
15 to change gender? 05:17:22
16 A Absolutely.
17 Q Can you tell me what -- where is that example?
18 A I think that case was presented to me.
19 Q By whom?
20 A One of my staff. Or it was presented to me, 05:17:33
21 you know, by somebody else.
22 Occasionally, I supervise other people.
23 But that came -- that -- that came from a
24 recent -- a recent January 20th case history that I
25 heard. 05:17:53

1 It -- it has to do, you see, with not taking a
2 history, giving people, very quickly, affirmative care
3 and not appreciating the forces that might have shaped
4 this -- that -- that may be very -- that may play out
5 and may -- very difficult to have a happy, successful 05:18:15
6 life as a trans person.
7 So I -- I can't give you the -- I can't tell
8 you at the moment who told me that, but I can tell you
9 I am not telling -- I am telling the truth. This is
10 what I recently heard prior -- 05:18:34
11 Q Was that as a -- sorry.
12 A Pardon me.
13 Q Was that -- was that an anecdote that came to
14 you from somebody in your clinic?
15 A As I said before, it might have been someone 05:18:43
16 in my clinic; it might have been some other
17 professional who talked to me about that.
18 Q Do you know if the person at issue, the --
19 the -- that was seeking a transition, whether they had
20 any signs of gender dysphoria prior to the mom hanging 05:18:58
21 from the rafters?
22 A I think the implication was that they hadn't,
23 but I don't remember enough details to -- I couldn't
24 tell you the case history. That's the aspect of the
25 case history that I recall. 05:19:18

1 Q Thank you.
2 MS. HARTNETT: Can you play Exhibit 102,
3 please.
4 (Exhibit 102 was marked for identification
5 by the court reporter and is attached hereto.) 05:19:26
6 (Video Clip Played.)
7 "Lots of girls have temporary eating
8 disorders, and some of them end up overcoming it, but
9 they overcome it sometimes by becoming vegetarians or
10 vegans. So it's okay, and it's much better. It's much 05:19:42
11 better than having an eating disorder."
12 BY MS. HARTNETT:
13 Q Dr. Levine, was that your truthful statement?
14 A Yes.
15 Q What point were you trying to make by drawing 05:19:59
16 an analogy to eating disorders and vegetarians and
17 vegans?
18 A I think you would have to play for me what
19 preceded that, but off the top of my head today, two
20 months after I made that statement, more than two 05:20:14
21 months after I made that statement, I was probably
22 making reference to the fact that among adolescent
23 girls who declare themselves to be trans boys, a large
24 percentage of them have a pre- -- a predeclaration
25 eating disorder, that this is part of the -- the 05:20:35

1 psycho- -- the -- if we can agree that an eating
2 disorder is a true problem and not just a dietary of
3 something or other, the -- this evidence of the
4 psychopathology that precedes transgender
5 identification, the crystallization of a trans 05:20:59
6 identification, eating disorder is just another way of
7 self-harm where -- where one cannot live comfortably in
8 the self as it is developing.
9 So that's probably what I was making reference
10 to, the pre-crystallization of a transgender, the 05:21:18
11 problems that are some- -- that are often seen in girls
12 prior to their coming out as a trans boy.
13 Q Is it your view that you could correct the
14 eating disorder and the person may stop identifying as
15 transgender? 05:21:38
16 A Well, I think most eating dis- -- what I was
17 saying -- I think you misunderstood -- is the -- the
18 prelude to the eating disorder was transgender. I will
19 say if you could help the person understand the
20 motivation for the eating disorder and help her to come 05:22:00
21 to grips with what she's doing is harmful to herself in
22 the short and in the long run, then it wouldn't -- it
23 may prevent -- it may help her to find another
24 solution, for example, becoming a vegan or -- that
25 would be a benign -- a less -- less problematic 05:22:25

1 solution than having to become transgender, forget her
2 eating disorder and focus on something else in a way
3 that dominates her life.
4 So you -- you dominate your life by thinking
5 that you're too fat when you're 93 pounds, and now 05:22:43
6 you're domi- -- you give that up, and then you dominate
7 your life because you're really a boy trapped in a
8 girl's body and --
9 So I'm telling you, as a psychiatrist, life is
10 complicated and histories are complicated and our 05:22:57
11 ability to predict things is not very good, and I just
12 want us to rely on science, as -- whatever the
13 limitations of sciences are, I want to rely on science
14 and not something shorter than science, you know,
15 fervent, passionate beliefs, whatever. 05:23:19
16 Q So in that instance -- I'm just trying to make
17 sure I understand -- your -- the idea would be that
18 it's better to end up being vegan than transgender?
19 A If -- if you put it in that way, if you reduce
20 everything to that simplicity, I guess the answer is it 05:23:35
21 would be better to have a -- that would be a better
22 supplementation of your original concerns about
23 yourself and your body and the sexual meaning of your
24 body than it is to repudiate your femininity entirely
25 and try to remove your breasts surgically and take 05:23:56

1 hormones and so forth, yes.
2 MS. HARTNETT: Could you play Exhibit 103,
3 please.
4 (Exhibit 103 was marked for identification
5 by the court reporter and is attached hereto.) 05:24:04
6 (Video Clip Played.)
7 "It's your current sexual identity --
8 Female: Yeah.
9 -- "you see. I mean, I'm sure I've had
10 identities -- I used to be a stamp collector, you know. 05:24:15
11 I had an identity as a stamp collector. And I don't
12 collect stamps anymore."
13 BY MS. HARTNETT:
14 Q Dr. Levine, are those your truthful
15 statements? 05:24:28
16 A I was a stamp collector.
17 Q I was a baseball card collector.
18 Is being transgender like being a stamp
19 collector?
20 A No. 05:24:38
21 MS. HARTNETT: Could you play tab --
22 Exhibit 104, please.
23 (Exhibit 104 was marked for identification
24 by the court reporter and is attached hereto.)
25 (Video Clip Played.) 05:24:55

1 "I think the doctor's responsibility is to
2 diagnose this, understand the factors that is pushing
3 the child in that direction and the family in that
4 direction and to inform what -- the parents and the
5 child of what is known and what is not known and what 05:25:10
6 the alternative treatments are, and the parents and the
7 child make the decision, not the doctor. The doctor
8 does not have the data to make the decision."
9 BY MS. HARTNETT:
10 Q Dr. Levine, is that your truthful statements? 05:25:28
11 A That is, although I'm embarrassed, but I used
12 the wrong -- I should have said "are" and not "is" in
13 the first sentence.
14 Q I think I just did the same thing.
15 I have one more excerpt to play. 05:25:42
16 MS. HARTNETT: Could you play Exhibit 105,
17 please.
18 (Exhibit 105 was marked for identification
19 by the court reporter and is attached hereto.)
20 (Video Clip Played.) 05:25:48
21 "So if I'm an expert in something, it's a very
22 narrow topic I'm an expert in. Even though I'm a
23 doctor and you -- somebody may think, well, he's a
24 doctor; right? But the doctor doesn't know much about
25 most things. 05:26:01

1 "And -- and there is the wisdom, I think, is
2 the difference between demagoguery, which I think many
3 affirmative care doctors are demagogues, and experts,
4 many of whom are just uneasy about what is not known."
5 BY MS. HARTNETT: 05:26:23
6 Q Dr. Levine, were these your truthful
7 statements from earlier this year?
8 A Yes.
9 Q Do you consider yourself to be a demagogue or
10 an expert? 05:26:36
11 A I consider myself, on this issue of the
12 scientific basis of -- of trans delivery -- care
13 delivery, to be an expert in this very narrow field
14 because my definition of an expert, knows the
15 difference between what is known and what is not known, 05:26:53
16 you see.
17 On many subjects that I have to work on every
18 day as a psychiatrist, I -- I have -- I -- I'm not sure
19 what -- the difference between what I know and what is
20 known by more expert people in the field. 05:27:10
21 I seem to have enough to have credentials as a
22 practicing doctor, but I'm not an expert in most things
23 I take care of.
24 When it comes to the data about this matter of
25 trans care, I feel I'm a relative expert, and I think I 05:27:28

1 have more perspective and more basis for that
2 perspective than many people who have been taught how
3 to take care of transgender people.
4 Q Do you believe Dr. Adkins is a demagogue?
5 A I don't know Dr. Adkins well enough to -- to 05:27:49
6 make that decision. I don't want to be insulting at
7 all to my colleagues, but if -- if Dr. Adkins believes
8 this is genetically determined and if she believes that
9 it's fixed and if she believes she's helping and she
10 has evidence that she's helping people live happy lives 05:28:11
11 for the next 40 years, I believe she is much more
12 closer to my definition of a demagogue than, say, a
13 person who can't distinguish between what she knows and
14 what is known versus an expert.
15 But I don't want to pass judgment on her 05:28:27
16 because, you know, I've just read her report, that's
17 all.
18 Q How about Dr. Safer, would you have the same
19 view there, that -- do you believe he's a demagogue, or
20 you wouldn't want to pass judgment? 05:28:39
21 A You know, one of the ethical principles of
22 being a doctor is to speak respectfully of one's
23 colleagues.
24 I -- I would say, I just want to repeat, that
25 most practicing doctors have a belief system that 05:28:58

1 they're working on the side of angels, and that's a
2 different set of ideas than what science has already
3 demonstrated.
4 So to the extent that people believe,
5 passionately believe, that what they are doing is 05:29:10
6 ensuring a -- a -- a productive, successful,
7 asymptomatic, fulfilling life and there's no evidence
8 for it, well, I think they're not -- they shouldn't be
9 certain about that.
10 And they're closer to an ordinary physician or 05:29:30
11 a demagogue than they are to an expert.
12 Q Thank you. Could you just -- I have a --
13 hopefully, a couple of final questions about your
14 expert report.
15 Could you pull that back up? That was 05:29:44
16 Exhibit 87.
17 MR. BROOKS: Coming, coming.
18 BY MS. HARTNETT:
19 Q And I'm going to be just going to
20 paragraph 81. 05:29:54
21 MR. BROOKS: Which is on.
22 MS. HARTNETT: It's on -- take your time, but
23 page 31, paragraph 81.
24 MR. BROOKS: What heading are we under here?
25 MS. HARTNETT: You are under -- 05:30:10

1 MR. BROOKS: I see it. I see the heading at
2 the top of page 30.
3 Is that the right heading? Am I missing
4 anything --
5 MS. HARTNETT: Correct. 05:30:23
6 MR. BROOKS: -- or is that --
7 Under "Opinions and practices vary widely..."
8 Okay.
9 And then you said paragraph 81?
10 MS. HARTNETT: Right. And this is a paragraph 05:30:29
11 about -- Dr. Levine is describing a Lichenstein
12 article; is that correct?
13 MR. BROOKS: Let me just say, Dr. Levine, if
14 you want to look at any paragraphs between the heading
15 and this one, for context, you should feel free to, or 05:30:46
16 if not -- if you don't feel the need, then you don't
17 need to.
18 THE WITNESS: Okay.
19 BY MS. HARTNETT:
20 Q So this paragraph is talking about, in your 05:31:09
21 words, the "loose standards" at Dr. Safer's clinics at
22 Mount Sinai in Columbia; correct?
23 A Yes.
24 Q And do you say that he's -- I'm just reading
25 from the first sentence, but you a say at least one 05:31:22

1 prominent clinic, quote, is quite openly admitting
2 patients for even surgical transition who are not
3 eligible under the criteria set out in WPATH's
4 Standards of Care.
5 Do you see that? 05:31:36
6 A Yes. The last sentence, right.
7 Q Is it your understanding that patients were
8 receiving care there without meeting the WPATH
9 standards?
10 A WPATH standards are just one set of standards, 05:31:53
11 and I guess Dr. Safer has a different set of standards.
12 I don't think that WPATH needs to be followed,
13 you know. I don't think they're -- they are in fact
14 the standards of care. They are just an organization
15 that is providing some guidelines, which they call 05:32:19
16 standards of care, but aren't true standards of care.
17 They're just guidelines from a professional
18 organization that is -- that is an advocacy
19 organization for -- for the treatment -- for
20 affirmative treatment. 05:32:36
21 Q But are you aware that Mount Sinai went
22 through the process of having those people satisfy the
23 WPATH standards before they had surgery notwithstanding
24 that they would have also met the other standards set
25 forth by Sinai? 05:32:47

1 MR. BROOKS: Objection.
2 THE WITNESS: I'm -- I'm not deeply involved
3 in the process of how Dr. Safer has done his work.
4 This would be not an area of my expertise about --
5 about his criteria. 05:33:04
6 BY MS. HARTNETT:
7 Q I guess my question for you is whether you
8 know, sitting here today, whether in fact Dr. Safer's
9 center allowed patients to have surgery under what you
10 call the "loose standards" without satisfying WPATH. 05:33:17
11 A Well, it was my understanding from the quoted
12 study that -- that he was providing -- or giving
13 permission for surgical care for people who may not
14 have met the few criteria that -- that we have -- had
15 organized in 2000- -- in, you know, the seventh 05:33:44
16 edition.
17 Q Did you read the Lichtenstein article before
18 citing it here?
19 A I must have read it, but it's probably one of
20 hundreds of articles, and right now, I can't recall the 05:33:54
21 details.
22 Q Thank you.
23 MS. HARTNETT: Could I take a -- go off -- I
24 think I'm almost -- or -- done, if not done.
25 But could we go off the record briefly for me 05:34:06

1 to collect my nets and then hopefully we'll be done?
2 THE VIDEOGRAPHER: We are off the record at
3 5:34 p.m.
4 (Recess.)
5 THE VIDEOGRAPHER: We are on the record at 05:44:53
6 5:45 p.m.
7 MS. HARTNETT: Thank you, Dr. Levine. I have
8 no further questions, but reserve the right to any
9 recross if there's further questioning of you.
10 THE WITNESS: You're welcome. 05:45:12
11 MS. HARTNETT: Thank you.
12 MR. BROOKS: Speaking for the -- Roger Brooks,
13 speaking for the intervenor, I have no questions for
14 the witness.
15 MR. TRYON: This is Dave Tryon on behalf of 05:45:20
16 the State of West Virginia.
17 Dr. Levine, thank you for your time.
18 I have no questions.
19 MS. MORGAN: This is Kelly Morgan on behalf of
20 the West Virginia Board of Education and Superintendent 05:45:29
21 Burch. I have no questions. Thank you.
22 MS. DENIKER: Dr. Levine, this is Susan
23 Deniker, counsel for defendants Harrison County Board
24 of Education and Superintendent Stutler, and I have no
25 questions for you.

1 Thank you for your time.
2 THE WITNESS: You're welcome.
3 MS. ROGERS: Dr. Levine, this is Shannon
4 Rogers on behalf of the West Virginia Secondary School
5 Activities Commission. I have no questions either. 05:45:53
6 Thank you.
7 THE WITNESS: You're welcome.
8 MS. HARTNETT: Dr. Levine, thank you for your
9 time.
10 THE VIDEOGRAPHER: Thank you. 05:46:00
11 We are off the record at 5:46 p.m., and this
12 concludes today's testimony given by Stephen Levine,
13 Dr. -- Dr. Stephen Levine.
14 The total number of media units was seven and
15 will be retained by Veritext Legal Solutions. 05:46:16
16 Thank you.
17 (TIME NOTED: 5:46 p.m.)
18
19
20
21
22
23
24
25

1
2
3
4 I, STEPHEN LEVINE, do hereby declare under
5 penalty of perjury that I have read the foregoing
6 transcript; that I have made any corrections as appear
7 noted, in ink, initialed by me, or attached hereto;
8 that my testimony as contained herein, as corrected, is
9 true and correct.
10 EXECUTED this _____ day of _______________,
11 20____, at ______________________, ________________.
(City) (State)
12
13
14
15 ____________________________________
STEPHEN LEVINE
16 VOLUME I
17
18
19
20
21
22
23
24
25

1 I, the undersigned, a Certified Shorthand
2 Reporter of the State of California, do hereby certify:
3 That the foregoing proceedings were taken
4 before me at the time and place herein set forth; that
5 any witnesses in the foregoing proceedings, prior to
6 testifying, were placed under oath; that a record of
7 the proceedings was made by me using machine shorthand
8 which was thereafter transcribed under my direction;
9 further, that the foregoing is an accurate
10 transcription thereof.
11 I further certify that I am neither financially
12 interested in the action nor a relative or employee of
13 any attorney of any of the parties.
14 IN WITNESS WHEREOF, I have this date subscribed
15 my name.
16
17 Dated: April 15, 2022
18
19
20

ALEXIS KAGAY
21 CSR NO. 13795
22
23
24
25

&

& 5:17 6:5 13:1

0

00316 1:8 2:8 11:16 65:12
02116-3740 3:15

1

1 1:25 11:9 78:19 181:3
10 74:24 172:16
100 9:19 271:1,2
1000 4:20
10005-3919 4:10
101 9:21 272:16,18
102 9:23 275:2,4
103 9:25 278:2,4
104 10:2 278:22,23
105 10:4 279:16,18
106 268:8
10:13 51:14
10:23 51:17
10th 64:25
11 123:18 249:2,13 250:3,14
112 5:8
11776 289:20
11:49 108:4
12 147:4 220:13
120 4:8
12:01 108:7
13 36:7 171:7 187:21 235:7
130 156:11,11,13 156:14
13795 1:24 2:25 289:21
14 8:6 132:2,3 134:4 149:11 150:7 151:17 166:18 181:14 186:14 198:3 220:7,12
1411 6:19 7:8
146 77:8
147 76:6,11,11,25 101:16
14th 3:14
15 128:4 147:4 186:14 195:25 197:24 289:17
151 76:3,3 77:4,7
16 60:6 123:18 139:1 187:22 201:10,22,23
17 91:10 166:18
17th 140:18
18 140:3,12,20,21 140:22 141:4 176:3,10,11 192:18 203:12 209:6 212:21,22 213:2
18a 192:20,23
18h 212:24
18l 194:21
19 4:9 88:3 103:1 190:18 196:6,12 234:22 260:20
1900s 225:10,11
1973 108:24 110:1 257:6,12 258:1
1974 102:22
1976 78:20
1977 89:10
1983 109:22
1984 260:22
1988 225:5
1992 88:3 89:1
1993 89:1 110:19 110:20 111:10,16
1999 97:11,18
1:11 155:21
1:30 58:20

2

2 63:25 64:1 91:11 92:4 164:8 181:3
20 71:6 114:16,17 135:18 143:15,19 172:16 174:11 176:21 179:11 196:8,12,13 197:15 216:5 234:22 288:11
200 6:20 7:9 99:7 99:11 106:6
2000 285:15
2002 177:10
2006 168:22
2008 24:21 26:4
2010s 182:9
2011 182:5 190:12 190:23 225:25
2015 39:8 41:8,8
2017 22:9 121:8
2018 146:8 200:12
2019 23:13 28:16
202 235:10,15,21 237:19 245:7
2020 22:5 37:6 133:17 218:6
2021 15:9 21:17 22:1 37:5 64:25 65:3 68:9,12 140:18 165:1 167:12 239:22
2022 1:20 2:24 11:1,4 197:17,21 245:22 256:12 289:17
203 235:23 237:20 243:14
20s 172:14 176:8
20th 273:24
217 8:19
22 70:4
23rd 70:4
24th 90:13
25 71:7,7 194:14
25301 5:22
25301-3088 6:21 7:10
25305-0220 5:9
256 8:22
258 8:24
260 9:1
261 9:3
263 9:5
26330 6:9
265 9:7
267 9:9,11
268 9:13
269 9:15
270 9:17
271 9:19
272 9:21
275 9:23
278 9:25 10:2
279 10:4
289 1:25
28th 256:12,15
2:11 155:24
2:21 1:8 2:8 11:16 65:12

3

30 1:20 2:24 11:1 172:16 173:17 174:5,6,8,10,12,24 174:25 175:2 176:20 177:12 179:8,10 180:3 190:13 228:21 257:12 283:2

30043 4:20
304.933.8154 6:10
30s 172:15
30th 11:4
31 282:23
3293 143:13 157:5 157:8
35 121:7,16
37 198:13,22
38 200:12,15
3:21 207:14
3:36 207:17

4

4 92:24 143:24 165:18 202:21
40 25:2,3,15 258:8 258:9 281:11
400 6:8
41 260:12
49 203:7,13 204:13
4:38 254:21
4:55 254:24

5

5 108:15,17,21 110:15 164:8,10 164:21 165:19
50 87:13 123:14 143:16,20,25 144:7,15,19 156:5 173:6 174:1 177:19 188:19 205:1 244:9
500 3:13 5:20
51 8:11 73:10,13 73:19 75:11
5122884 1:24
53 202:13,17,25
56 207:6
5:34 286:3
5:45 286:6
5:46 2:23 287:11 287:17

6

6 137:17,19
60 101:19 256:10
600 5:21
60s 182:8
61 218:13,15,22,23 219:3
617.937.2305 3:16
681.313.4570 5:10
69 8:16 235:11,14

7

7 167:19,25 170:16 212:25 213:8
70 70:8 173:6,9 174:1 188:19
70s 102:12 182:9
75 79:22
7:00 58:20
7th 113:5

8

8 167:19 168:4 170:16 194:22
80 175:7
80s 182:9
81 75:18 282:20,23 283:9
83 260:20
86 8:11 50:25 51:2 63:4 76:7 164:18 165:25
87 8:16 69:20,24 70:2 282:16
88 8:19 217:22,25 220:24,25
89 8:22 256:20,21

9

9 197:19
90 8:24 74:20 258:9,11
900 74:17
90s 98:1 182:9
91 9:1 260:13,14
92 9:3 261:20,21
93 9:5 262:21 263:10,11 277:5
94 9:7 265:10,11
95 9:9 247:5,16 248:16 266:25 267:1
96 9:11 172:18 267:20,22
97 9:13 268:24,25
98 9:15 269:12,13
99 9:17 270:7,8
9:09 2:23 11:2,4

a

a.m. 2:23 11:2,2,4 51:14,17 108:4
aasec 98:4
aasect 98:4
abandonment 261:5,12
abarr 3:19
ability 20:8,13 25:7,7 74:5 234:11,15 238:6 250:3 277:11
able 17:8 21:7 55:4 94:17 95:23 97:15 132:10 153:4 165:20 207:21 221:15 222:13 245:4 248:9 257:7
aboard 112:2
absence 191:21
absent 175:10 191:22,24
absolutely 248:20 273:16
abuse 120:19 160:10 170:5
academic 97:24
academy 146:7 147:18 148:6,7
accept 81:12 83:12 128:5 163:4 240:25
acceptable 194:11 206:3
acceptance 205:17 206:22
accepted 41:1,9 149:17 205:12,15 206:3 266:10
accepts 244:18
access 266:1
accidental 139:19
accidentally 201:18
accidents 271:7
accommodation 26:25
accommodations 23:19 24:24
accompanying 161:3
accomplished 258:20
account 39:19 259:6,7
accounting 192:1
accurate 77:7 135:5 259:6 289:9

accurately 47:5 251:15
accused 200:22 261:24
achieve 100:18
achieving 117:5
acknowledge 189:7
aclu 12:24
acquired 139:14
acronym 98:23,25
acronyms 147:24
act 233:17,17
action 11:20 289:12
actions 174:24
active 99:21 236:16
actively 105:24
activities 1:11 2:11 6:14 7:3 13:8 54:12,13,17 85:20 98:11 287:5
activity 95:2
actual 86:12 123:4 165:5 166:3 273:12
ad 45:21
adaptation 23:8 29:3,25
adapting 199:17
adaptive 160:12
add 160:7
added 69:17 71:19 71:25 72:18 161:5 213:13
addition 14:11 272:8
additional 59:9 65:5 176:18
address 186:17
addressing 118:21
adds 95:15
adequate 116:11 119:14,16 155:16
adf 56:11
adflegal.org 4:21 4:22
adheres 255:10
aditi 197:22
adjudi 39:3
adjudication 67:21
adkins 61:8,13,20 61:23 62:3,7 73:1 125:22 126:11,14 171:9 173:3,7,12 173:24 174:23 175:15,23 176:1 187:19 188:11,23 281:4,5,7
administered 13:23
administration 213:9
admission 190:21
admit 270:16
admitted 258:25
admitting 284:1
adolescence 44:5 87:18 243:15 245:25
adolescent 46:3 79:10 80:23 83:14 83:22 84:2 85:1,3 87:11,17 90:25 91:6 99:19 113:16 127:13,19 142:17 146:14 195:10 223:10 240:1 275:22
adolescents 8:20 60:9 81:2 84:20 87:9 99:14 100:4 131:22 150:19 157:13 199:16 204:18,20 228:9
adult 79:18,22 80:23 82:13 86:3 132:9,21 133:23 146:15 172:17,24 172:24 176:4 236:9,16 239:15
adulthood 245:9 245:24
adults 54:3 60:9 84:21 129:16 131:22 160:21 172:25 173:1 181:18 189:18 236:10 258:19
advance 102:3
advantage 155:7 210:19
advantages 130:17
adventures 236:19
adverse 239:19
adversities 84:19
advice 114:7 122:14
advise 94:13 95:4
advisors 255:17 255:18,21
advocacy 284:18
advocate 244:16 266:8 270:12
advocates 133:10 144:23 160:25 179:15 200:22 226:3 230:1
affect 20:8,12 56:7 95:10 105:3
affiliated 52:8 122:2 255:22
affiliation 111:9 111:15,15 112:19
affiliations 11:23
affirmation 35:8 119:25 120:8,15 120:25 121:6 123:23,24 124:5 124:11,16 125:7 125:25 135:16 137:3 143:24 144:18 181:4,9 202:16,20 205:5 205:17 206:10 211:22,23
affirmative 46:24 105:8 114:20,21 115:10,22 116:1,5 116:7,16,21,24 118:6,16 119:2,10 133:6,8 135:15 186:4,8,12 204:8 204:10 205:2 206:1 243:6 267:5 267:5 270:18 272:21 274:2 280:3 284:20
affirmed 240:2
affirming 125:20 126:18,25 128:18 129:23
afraid 123:23 187:2
african 148:9
afternoon 58:15 58:16,19 235:5
age 36:7 91:9 139:1 217:4,4,4
aged 80:24,24

ages 166:17
agnostic 31:13,16
ago 56:4 60:6 63:18 77:25 83:9 91:5,8 99:4,5 121:8 135:19 142:4 210:11 216:6 228:21 257:20 263:18
agree 11:7 48:25 70:8 115:21 136:9 136:15,17 169:4 182:19 183:14 200:2,5 226:16 232:17 241:7,20 241:25 268:11 269:8,17 270:3 276:1
agreed 14:15 140:1
agreement 94:14
agrees 70:13
ahead 118:9 157:22 205:21 268:9
akron 113:6
al 146:8 190:14
alert 20:10
alexis 1:23 2:24 11:19 289:20
alienated 238:10
alienation 239:20
alienations 239:11
alliance 4:16 13:14 52:3,8,11,16 52:25 53:19
allow 61:24 82:25 128:5 151:19
allowed 35:18 151:3 159:5 285:9
allowing 149:3 150:7,18 153:13 157:12 162:20
allusion 132:20
alr 111:7
alternative 212:1 279:6
althof 111:3,5
amazing 98:14 191:21,21
ambiguous 27:15 150:12
america 176:25 177:1 258:17
american 89:22 122:22 146:7 147:18 148:6,6
americans 148:10
amount 85:4 200:24
analogy 275:16
analysis 122:8 137:8
anatomy 189:2 224:11 234:13
andrew 3:7 12:7
anecdotal 131:7,8 135:17 137:10 204:15 242:6,11 242:12,13 243:3 243:22 244:8 269:5
anecdote 274:13
angels 282:1
angry 230:19,19 259:2
angst 126:2
anguish 222:20 229:12
anne 225:15
anonymous 201:5 201:7
answer 17:21,23 18:2,3,6,11,21 23:18 24:3 29:21 35:22 36:13 38:2 41:22 44:1,8,9 45:6,18 48:12 49:23 50:14,15,18 52:17 54:23 55:6 55:9 57:13,15,17 58:23 59:6 60:13 60:16,20 61:24 66:24 68:1 72:2,7 72:8,9 78:3,9 80:25 82:2,19 85:25 86:7 92:11 93:22 94:4 95:23 96:9 97:1,15 104:5 105:8 106:8 106:9,11,16,17 110:8 118:10 120:21 123:17,20 124:20 125:11 126:8,23 133:19 133:20,21 134:16 136:23 137:13 141:19 148:5 150:4,22 151:2,11 152:11,21 153:4 155:11,13 158:5 159:18 163:25 165:21 176:16 184:13,14,18,25 185:6,7,11,25 186:23 187:3 188:24 189:14,14 191:20 192:17 194:17,18 195:17 197:6 219:21 232:15,16 238:23 239:5,11 240:3 252:12 253:18 261:16 267:14 268:9 277:20
answered 48:12 49:20 67:9,10,17 119:5,6 128:3,7 148:18 154:22 187:4 221:14
answering 27:20 85:14 95:17 239:2
answers 18:25 19:1 47:7 239:4
anticipated 152:9
anxiety 85:23 120:19 149:20 160:8 273:2
anxious 233:9
anybody 154:11 154:16 264:6
anymore 99:20 225:24 257:17 278:12
anyone's 228:6
anytime 206:5
anyway 237:7
apa 90:1
apologies 224:23
apologize 92:23
apparently 21:9 97:12,14 193:18 271:18
appealed 41:4
appear 165:16 288:6
appearance 11:25 35:1
appearances 3:1 4:1 5:1 6:1 7:1 11:23

appeared 60:7 102:18
appearing 2:22
appears 64:24
appendicitis 131:14
apple 180:22
apples 180:17,18
applied 32:18
applies 145:22 157:5,8
apply 234:25
appraisal 31:10 47:11 92:19 93:7 93:12 107:14
appreciate 78:14 95:19 105:20 123:2 140:8 187:18 200:1 237:17 254:10
appreciating 274:3
appreciative 247:3
approach 100:3,3 173:3 186:20 188:17 189:25 190:7 203:20 208:6,11,24 211:23 212:15 234:2,3 270:14
approaches 212:1
appropriate 16:20 17:1 36:14 208:10
approval 68:16
approximately 71:6 86:23 87:6 87:12
april 113:5 289:17
apt 160:6
archives 60:5 236:7 237:4 260:19
area 32:14 114:15 114:17 131:21 152:7 161:21 165:9 166:10 167:13 168:16,22 203:8 285:4
areas 60:19 155:9
arg 30:3
argue 145:2
arguing 29:18 30:3 252:4
argumentative 240:24 251:25
arguments 69:9
arizona 41:2 44:3 44:14 46:3
arm 74:15
armistead 1:16 2:17 13:15
aron 62:19,20
array 25:25 26:23
article 60:6 76:3 76:14 104:23 105:2,7,9 109:17 121:9 200:17 211:18 212:9 236:7,22 237:2 283:12 285:17
articles 60:17 76:3 88:10 114:16 285:20
articulate 32:16 215:15 222:5 244:21
articulated 210:5 215:15 216:2
arts 148:12
ascertained 185:18
ashamed 231:20
asians 148:10
aside 43:2 44:21
asked 18:20 34:21 34:21,22 41:11 48:11 53:10 56:17 57:2 66:4,9,20 67:9,15,17,23 73:9 80:25 107:5 113:4 115:14,15 119:5 126:21 127:24 128:3 135:22 138:14 168:14 170:11 184:21 219:4,5 268:17
asking 17:15 39:24,25 49:16 50:9 66:13 67:14 70:10 82:4,6 86:12 97:17 108:14 109:4,12 119:11 120:9 128:8 138:16 141:17 152:10 155:6,15 164:6 165:14 181:7 184:12,15 185:1 185:12,24 201:25 208:4 218:20 231:18 251:21 259:10 260:9 261:16 268:21
aspect 151:10 189:6,6 215:10 274:24
aspects 30:24 121:23 157:25 214:14 215:23 217:8 223:22 252:24
aspiration 104:8
aspirations 208:17 262:5
aspired 145:4
assert 145:7 147:15 232:3
asserted 145:6 147:14,17
asserting 146:8,9
assertions 236:6
assigned 142:20 196:16
assigning 196:22
associ 102:24
associated 52:16
association 89:22 102:22
associations 147:23
assume 18:11 115:16 158:24 182:21 248:15
assumed 115:19
assumes 240:23
assuming 199:2 241:21 247:16
assumption 146:12 175:15,22 241:17
assumptions 241:15,21
astounded 263:17
asymptomatic 282:7
athletes 152:3
athletic 57:1 82:1 143:7 145:9 147:17,23 148:16 149:17 151:5 156:9,10,23 158:13

athletics 21:7 42:14 146:11,17 146:17,23 149:15 149:15 151:5 170:22
attached 51:3 63:9 65:19 66:5 69:25 75:14 164:17 218:1 256:22 258:12 260:15 261:22 263:12 265:12 267:2,23 269:1,14 270:9 271:3 272:19 275:5 278:5,24 279:19 288:7
attachment 65:24
attempt 63:18
attempts 140:6 177:7
attendant 25:8,9
attending 11:5
attention 61:5 77:13 172:12 212:24 213:7
attitude 130:11
attorney 5:5,7,19 6:7,18 7:7 12:1 13:11 30:3,6 33:9 82:4 170:2 289:13
attorneys 3:12 4:7 4:19 14:7 29:18 57:6 94:22 168:18
attracted 233:12
attractions 233:8 236:13
attractive 271:19
atypicality 224:3,4
audio 11:6 256:7
august 113:5 140:22
australia 125:1
australian 104:16
author 135:19 200:22
author's 197:22 237:6
authored 228:11
authorization 210:24
authors 191:14 197:24 214:22
authorship 202:4
autism 122:12
autogynephilia 224:21,23 225:1,2 225:13,18,22 226:5,6,10,18 227:3,9,19
autogynephilic 225:7,19 227:11 227:15
automatically 162:10
autonomy 210:22
available 94:22 177:13 256:9
avenue 5:8
avenues 89:15
average 89:6 232:17,18
avery 168:23
avoid 27:21
awarded 169:13
aware 23:14 29:22 31:1,5,6 40:3 41:16,23 56:22,23 67:5,14 75:25 78:8,9 98:20 113:21 119:7 120:24 135:14 158:3,7,12 169:12 169:25 170:23 171:5 188:6,10,15 191:4 200:17,20 214:8 238:17 243:8,12 245:20 246:18,21 247:2 249:24 251:8 273:12 284:21
awareness 83:5 160:20
awkward 194:2
ayad 90:10,20 255:25 256:15

b

b 8:12,16 15:2 64:8 197:23 202:15 237:6
b.p.j. 1:5 2:6 3:3 11:11 12:4 19:21 20:19 42:24 51:20 56:17 65:16 68:5 72:25 142:5,6,7,8 142:19 143:5 249:9
back 43:12 46:15 64:18 65:9 66:14 78:13 83:7 87:20 92:25 97:25 103:12 108:10 112:6 122:17,18 129:17 152:24 154:9 156:2 164:3 164:7 177:6 178:4 178:5,23 187:20 188:23 201:20 207:13 258:16 282:15
background 56:21 143:8 170:16 211:2
backward 212:19
backyard 257:15
bad 139:15,16 200:22
bailey 5:17
baileywyant.com 5:23
balance 74:4
ballpark 103:17
ban 251:18
barr 3:7 12:7,7
barrett 15:1
barriers 89:24
base 32:4 46:21 132:5 147:10,10
baseball 278:17
based 17:9 29:3 31:10 55:5,14 71:20 96:11 98:21 99:10 101:13,13 105:6 107:7 131:18 132:20 133:2 135:5 147:25 160:14 161:24 206:10 212:16 244:9 252:22,22 255:6 264:7,8 270:19
basic 17:19
basically 112:2 176:2 212:13 216:15
basing 175:14
basis 61:2 71:8,12 71:13 104:20 119:19 120:6,21 124:14,20,21 127:5 132:4,6 133:7 135:12 143:8,8 150:1 161:15,23 162:8

167:1,4 173:23 174:20 175:22 176:16,17,18 205:16 206:16 207:4 213:16,21 213:24 236:6 237:17 243:21 245:19,25 246:1 246:14 248:9 255:12 270:17 280:12 281:1
beck 106:18,18
becoming 74:12 83:21 182:25 243:7 275:9 276:24
bedroom 121:18
began 102:12 112:10 168:22 207:2 214:21 216:3
beginning 2:22 11:25 25:10 43:20 72:14,22 75:19 128:25 164:4,15 168:15 205:1 215:14,16 225:5 239:20 257:23
begins 116:11 203:12 204:1
behalf 2:21 13:4,7 56:11 286:15,19 287:4
behavior 60:6 232:12 236:8 237:4 240:12 260:19
behavioral 84:11 120:20 171:21 229:4
behaviors 44:7 199:3 200:3,5,11 227:11
beings 161:25 162:6,7,16 200:8
belabor 205:3 254:4
belief 20:11 189:8 222:22 281:25
beliefs 173:22,22 189:21 206:2 277:15
believe 16:20 35:16 36:15 40:14 42:9 47:1 56:15 58:6 59:8,11 70:20 75:8 84:4 92:23 104:23 106:4 114:23 115:23 117:15,21 124:5 130:21 131:10,10 144:1 150:9 154:9 171:23 172:22 173:7,9 174:22 175:2,3 176:22 182:15 188:3 189:12,15,15 199:23 208:12 219:13 221:2,19 224:16 233:11 241:9,10,14 242:3 246:23 247:1 248:5 256:25 263:22,23 264:3 268:14,20 281:4 281:11,19 282:4,5
believed 107:16 114:23
believes 188:22,23 230:2 281:7,8,9
believing 154:8 161:15 205:16
bell 62:24 63:2 170:5
belong 272:25
belongs 122:5
beneficial 27:18 27:25 138:23
benefit 58:6 133:13
benefits 117:4,5 133:17,18
benign 213:9 214:1,3,18 276:25
benjamin 102:21
best 18:24 22:18 45:18 90:3 131:4 132:21 134:20,20 140:8 146:13 147:3 186:10 208:20 269:25 270:1
better 129:11 150:16 153:11 161:9 177:17,18 207:22 224:6 254:9 259:13 275:10,11 277:18 277:21,21
beyond 204:15 245:19
bhar 197:23
bhargara 197:23
bias 130:7,15,20 262:12
biased 261:25 262:11
bibliography 70:9
big 83:19 147:21 162:5,5 244:16
bilateral 25:11 49:12
biologic 25:12 200:9 220:9 223:23
biological 196:9 198:24 199:2 214:8
biologically 180:14 206:4,11
biology 189:1 200:7,8
birth 19:13,18 80:2 196:16,22
birthday 140:24
bisexual 232:12,13
bit 75:17 78:24 108:13 187:19 208:3
blame 272:22
blanchard 225:6
blessing 117:11
block 12:23,23
blockages 56:25
blocker 220:6
blockers 93:16 95:15 213:9,18,22 214:2,5 216:15,17 216:19 218:14,21 218:25 219:8
board 1:9,10 2:9 2:10 5:14 6:3 11:13 13:2,5 21:9 32:20 78:19,23 79:6,9,11 83:2,2,6 84:2 286:20,23
bodies 225:17 262:8
body 199:5 200:4 200:6 213:25 214:9 215:10

277:8,23,24
body's 234:8,9
bonding 199:11
bone 215:1
bones 214:10
book 74:21 76:10 225:16
borderline 126:3
born 142:12,19 232:13,14
borrows 202:2
boston 3:15
boulevard 6:8
bound 120:14
bounded 120:14
boy 36:8 128:24 142:7,12,12,22 154:5,5 276:12 277:7
boylston 3:13
boys 142:23 143:3 204:18 224:4 275:23
brain 56:5 199:4 200:3,6 214:12 217:7 221:6,6 264:13
branch 93:9 243:4
break 18:15,16,21 51:5,7,10 64:13 91:17 105:16,22 108:1 146:25 148:21,22 156:3 163:11 207:8 208:2 254:19
breaking 148:20
breast 133:13
breasts 116:8 132:2 277:25
bridgeport 6:9
brief 75:20
briefly 181:21 182:1 285:25
bring 172:12
broad 148:14,14 209:10 246:4
broadly 25:17,22
brooks 4:17 13:13 13:13 14:15 16:8 27:15 35:20 36:9 37:12 40:13 41:15 43:10 48:10 49:3 49:19 50:1,12,16 50:22 51:4,8,12 52:3,5,7,14,16,19 54:10 55:13 56:11 57:4,12,21 58:23 59:5,11,18,25 61:4 61:16,25 63:5 65:1 66:1,17 67:9 67:17 68:6,17 69:20,22 70:7 75:19 76:4,7,10,17 76:20 78:16 83:25 85:12 86:15 91:13 91:15,20,22 92:2 94:12 102:14 105:12,15 106:14 106:17,20 108:2 108:17 109:3,7 111:13 119:3,5,22 120:2 128:3 134:10 141:25 143:18,21 144:5 145:12,17 146:3 148:19,25 150:12 151:20 153:2 154:20 156:14 158:19 159:12 161:19 162:24 163:9 164:9 165:14 169:15 171:4 178:9,14 180:24 183:4 184:3,5,11 185:3 187:1 192:3 193:14 195:15 196:12,23 198:4 200:19 201:11,15 201:23 202:18,23 203:1,10,16 205:22 206:19 207:7,10,18,20 213:1,19 218:2,16 218:23 219:15,18 219:20 220:23 221:22 224:8 226:11,19 227:7 228:17 229:20 230:24 231:9,13 231:25 232:21 234:4 235:12 238:15,22 239:1,6 240:23 241:6,24 243:11 244:12 246:20 247:8,10 247:19,23 249:5,7 249:17,23 250:7 251:11,25 252:4,8 254:12,14 259:9 282:17,21,24 283:1,6,13 285:1 286:12,12
brought 40:20 53:3 118:6 120:13 120:13 235:9
brouhaha 200:21 200:25
bunch 97:7,8 233:8
burch 1:11 2:12 5:15 13:6 286:21
bury 134:7
business 133:25 259:20
busy 54:15 60:18 174:3 238:16

c

c 237:6
california 5:8 39:11 40:6 289:2
call 45:19 85:20 98:15 99:19 102:24 108:23 110:4 120:15 121:6 133:5 146:23 191:2 208:14,14 229:23 236:12 259:16 284:15 285:10
called 14:19 21:16 22:1,5,8 27:6,6 29:1 37:24 56:14 98:3,4 103:4 111:2 114:6,20 122:20 143:12 144:17 170:24 242:15 260:20
calling 185:4
calls 159:12 183:4 184:5 187:1 247:10
camera 78:5 207:21
cancer 190:19 192:13 242:17 271:6
canteen 23:20 24:7 25:5,6,7
capable 240:12
capacities 57:1,2 208:17

capacity 1:12,13 2:12,13 234:9 235:2
caption 64:7 65:11 65:15 71:1
captured 19:2
card 278:17
cardiac 57:2
cardiovascular 271:6
care 22:20,24 23:2 23:16,17 25:17,22 30:25 31:11 32:6 33:7 35:14,15 37:20 39:23 42:17 46:25 56:21 60:4 82:25 90:15 100:11 103:2 110:12 113:20 114:20,21 115:10 115:22 116:2,5,16 116:16,21,24 117:24 118:7,16 118:19,20 119:1,2 119:10,20 120:8 120:17,18 125:6 129:15 133:6,8 134:13,15 135:15 159:2 170:4 172:6 183:23 184:1 190:17 201:10 202:1 204:7,8 208:9,9 211:10 225:25 243:6 244:9 246:24 264:13 265:15 266:8,10 267:5,6 270:18 272:21 274:2 280:3,12,23 280:25 281:3 284:4,8,14,16,16 285:13
cared 127:10
career 24:18 84:25 85:11 86:13,23 87:12 257:23
careful 36:14 103:23 116:23 118:20
carolina 21:16 22:1 31:2 32:24 72:21
case 11:15 15:14 15:16,21 19:22 20:15,18,20,25 21:5 22:5,8,10 23:4 29:18 31:4 33:20,22 34:8 35:16 36:10,17,23 37:20,22,24 39:2 39:22 40:1,5,5,15 40:18 41:2,8,17,17 41:18,21,25 42:3,9 42:10,23 44:3,11 44:14,17 45:12,13 46:2,3,4 49:7,8 50:11 51:20 52:20 52:24 53:3,10,12 53:17 54:2,4,7,19 55:10,12,20,22,25 56:8,11,17,21 57:17,20 60:12 61:2 62:12 64:14 65:12,16,21,23 66:5,7,11 67:8,16 67:19,22,23 68:5 68:15,15,21 69:1 71:1,10,20 72:1,25 87:21,24 88:5,21 89:10 94:23 100:1 110:15,21 115:19 117:13 126:6,21 142:6 143:6,12 145:22 146:16 158:17 163:17 164:15,17 167:23 168:8,12,13,19,25 169:2,6,11,13 170:12,15,17,20 170:24 174:13,14 176:14 193:19 198:17 199:21 223:8 229:7,7 249:1,9,13,22 251:3,12,15,16 253:11,11 254:1,2 262:5 273:18,24 274:24,25
cases 22:20 24:8 30:10 31:22 40:16 40:17,19 49:13 89:14 100:11 121:9 167:20 169:19 170:18
categories 86:20
cause 150:20 154:14 157:14,17 157:24 162:9,10 183:11 229:8
causes 214:10,11
causing 180:15 181:12,13 183:3
caution 16:9 36:10 232:24
cease 222:10
celebrity 272:11
censor 63:18
center 285:9
certain 42:16 58:5 61:1 63:19 74:7 135:20 149:8 155:13 164:22 174:14 176:3 192:11 195:23 209:8 215:13 217:1 282:9
certainly 32:2 44:6 86:11 99:21 126:23 171:23 172:18 173:16 174:13 209:16 227:13,13 237:3 248:9 253:3 264:8
certainty 55:2 73:5,6,8,10,13,13 73:15,18 74:8 75:12 142:13 241:13
certifiably 214:20
certificate 80:22 113:10
certificated 80:16
certification 79:3
certifications 79:7
certified 2:24 78:20,24,25 79:9 79:11 84:2 289:1
certify 289:2,11
chain 263:21 264:15 269:24
chair 121:17
chairman 103:3 112:1,11
challenged 143:12 145:21,24 158:17
challenges 160:12 237:21
challenging 64:15
chance 40:9 254:10
change 74:8 110:25 149:7 189:5,5 193:25 195:18 200:24

229:4,8,11 231:23 232:7 234:9,10 240:5 248:9 257:24 258:19 262:7,8 273:8,15
changed 110:22 111:15 182:11 193:9 229:10,22 258:15
changes 14:22 92:16 157:1 194:11,15 214:9 214:13 215:3,10 241:16
changing 189:4 217:7 220:14 234:8,13,13 240:12,13,13,14 270:15
chapters 76:10
characteristic 225:3
characterize 211:23
characterizing 193:15 251:16
charge 266:11
charleston 1:3 2:3 5:9,22 6:21 7:10 11:15
check 33:2,2 99:7 99:11 109:23 198:19
checking 91:13,16
cheerleader 116:7
chicago 62:23
child 33:13,14,24 34:14,14,19 35:2,6 35:14 36:2,5,5 37:21 38:5,12,17 38:25 44:4,5,12,15 44:18 45:14 54:5 79:9,12,17 80:10 80:12,17,17,23 83:13,21 84:2,14 84:15 85:10,18 86:18,24 91:2 99:18 113:11,12 113:14,15,16,16 114:9 117:10,12 117:17 120:18 121:2,12 123:6,12 127:9,13,19 131:4 132:8,11,13,15 134:2 140:3 141:18 145:2 146:20 149:7,10 151:3 152:18 153:25 157:19 158:1,24 159:4,8 162:8,12 169:4 170:4 173:10 186:18 195:10 203:25 204:2,5 209:2 215:24 216:16 220:6,7,7 221:15 223:10 234:14,19 238:4 239:15 240:1,5,14 279:3,5,7
child's 85:22,23 123:24 204:3
childhood 79:24 84:9,19 85:6,7
children 34:3 43:9 43:17,21 44:25 60:8 81:2 84:22 84:22,25 85:4,5,15 85:25 86:10,11,13 86:16,21,22 87:2 100:3,7 122:7,11 130:25,25 131:22 146:13 147:12 157:13 158:8 160:18 162:14 165:3 169:3 173:14 199:14 209:1 215:6,6 271:12 273:1
children's 62:23 85:8
china 141:14
choice 210:20,21 210:21 235:4
choose 168:11 182:20 233:17
chosen 214:6
church 128:22
cincinnati 37:23 38:1 44:17 46:4
circuit 41:4,5 167:24
circumstances 134:14
cis 221:16 228:24 244:1
cisgender 19:11 222:17,23,25 223:20,21,23 224:1,2,7
citation 76:13 236:5
cite 164:5 197:15 236:2 245:20
cited 59:23
cities 118:16
citing 197:25 285:18
city 288:11
civil 135:7 246:24 248:18,24 250:18 250:23 251:22 253:23
claim 125:17 169:13 202:3
claims 57:22,23
claire 22:5 31:1,22 52:24 53:8,23 54:7 55:10 170:24
clarify 66:12 86:17
clarifying 107:12 141:21
clark 15:17 17:12 26:11
classes 88:4,6 89:7
classic 89:5
clayton 1:11 2:12
clear 18:8 45:5,8 50:6,8 55:8 83:23 133:12,14 191:23 243:7 253:6
clearly 56:22 217:5
clerk 13:16
cleveland 112:15 112:17 113:12 114:5 120:22 126:1,12,16 209:18 210:3
client 95:4
clinic 110:13,16,19 111:3,7 113:12 114:3,4,5 120:4 125:24 126:1,12 126:17 130:6 165:7 166:4 177:8 188:4,7,12 274:14 274:16 284:1
clinical 54:12 73:15,20,24,25 75:1 87:21 89:10 93:12 111:4 112:20 113:16,17

125:12 246:1,1 252:23
clinician 60:4 74:2
clinician's 77:10
clinicians 97:7,8 113:22 117:21,25 120:7
clinics 130:5 183:10 283:21
clip 8:22,24 9:1,3 9:5,7,9,11,13,15 9:17,19,21,23,25 10:2,4 257:5,11,18 258:13 260:16 261:23 262:24 263:13 264:20 265:13,24 267:3 267:24 269:2,21 270:10 271:4 272:20 275:6 278:6,25 279:20
close 158:5 186:21
closed 201:18
closely 35:3
closer 71:7 209:5 215:7 281:12 282:10
closes 214:16
coaching 153:6,11 184:19
cochlear 217:3
cochrane 92:7,10 92:12,13,14,15 93:3,4,20,24 95:8 95:9,11,13 96:2,5 96:18,21
cohabitating 243:25
coin 129:20 171:16
coined 171:14,23
coining 171:15
collabor 95:9
collaboration 93:3 93:4,20,25 95:9,11
collaborative 92:7 92:10,13,14
colleague 13:16
colleagues 12:6 77:17 90:2 125:15 281:7,23
collect 278:12 286:1
collector 278:10 278:11,16,17,19
college 88:8,8 139:9,9,10 210:12 222:1,2 251:4,6,20 252:13,14
colleges 250:20
columbia 283:22
come 17:3 24:8 33:2 78:4 84:8 88:24 89:13 101:9 103:22 105:15,18 129:8 130:10 136:8 154:12 177:6 178:22 202:5 207:13 209:17,25 216:7,9 223:10 233:11 234:20 235:19 244:4 269:3 276:20
comes 32:5 69:5 84:8 89:2 92:16 112:24 134:21 183:7 209:5,9 233:20 280:24
comfort 94:17
comfortable 34:24 233:9 245:15
comfortably 276:7
coming 89:8 109:24 130:5 202:16 221:10 276:12 282:17,17
comment 159:2
commented 38:15
commission 1:11 2:11 6:15 7:4 13:9 287:5
commitment 116:6
commitments 94:18
commits 183:1
committed 109:21
committee 24:21 93:13 101:3,7,9,10 107:10 113:1 124:24 128:6 211:14 266:4,11
committees 93:14 93:15,19 96:20,23
common 28:8 160:25
commonly 24:6
commun 248:11
communicated 114:14
communications 58:12,13
community 32:6 89:13 100:13 105:3 120:16 130:9 160:22 225:12 244:17 246:11,15,18,22 248:11 253:4
comorbidities 118:21 181:19 272:22
comorbidity 186:17
compani 104:17
compared 192:15 193:17
comparing 164:14 180:12 191:5 198:16
compelling 131:6
compete 21:7 142:23 143:4 145:8 147:16
competent 117:9
competing 153:21 154:14 180:19 181:2 198:7 201:10,25
complain 123:22 123:23,25
complained 125:5
complaining 236:17
complaint 127:15
complaints 82:9 83:6 121:1 127:13 169:17
complete 29:21 189:19 214:24
completely 215:12 215:14
complicated 74:4 155:15 161:7 169:23 216:2 277:10,10
complications 224:13,15 234:18
compliment 107:7

[compound - continues]

compound 111:13 151:20 153:2
comprehensive 96:14
comprehensively 145:3 146:1,5
conceive 79:25
conceived 30:7
concept 30:9 73:4 98:16 107:9 150:3 158:21 225:5,8,9 226:7 230:12 242:15,18,21
conception 197:10
concepts 84:13 100:12 115:3,5 216:25
conceptual 198:7
conceptualize 47:5 96:8 181:12
conceptualized 55:23
concern 121:5 149:9 216:10 231:5 247:17
concerned 122:6 129:6 179:13 194:9
concerns 135:7 160:1 195:21 277:22
concierge 7:16
conclude 161:22
concludes 287:12
conclusion 38:22
conclusions 201:3
condemn 119:18
condition 131:16 133:4 183:1
conditions 159:23
conduct 36:17 175:15
conference 90:16 100:19
conferences 89:11 89:13
confidence 36:16
confidential 36:16 94:15,21 95:24 106:21 109:5
confidentiality 16:11 36:12,22
confined 245:11
confirm 260:8
confirmation 24:2 171:2 272:5,8
confirmed 236:23
confirming 25:12 27:7 28:3
confirms 125:6
conflict 222:4 252:18
conflicts 161:5 215:21
conforming 133:10
confronted 171:20
confused 142:18 237:23
confusing 53:2
conjunction 105:2
connect 207:4 212:12
connected 56:12
connectica 15:14
connecticut 15:14 15:18,18,21 42:9
connection 95:2 144:12 177:25
connotation 81:11 214:19
consensus 136:10 136:11 246:4
consent 43:19,20 60:7,8 105:6,7 107:6 116:13,19 205:25 211:19 221:6 248:1
consequence 227:11
consequences 35:5 46:24 131:15,18 171:20 174:24 248:4
conservative 261:25
consider 44:24 99:9 111:10,17,21 116:9,20 152:16 154:6 163:21 180:2 181:19 215:1 221:7 280:9 280:11
considerable 74:15 239:9
considerate 248:2
consideration 42:12 116:23,25
considerations 151:23
considered 61:19 104:24 107:7 149:25 152:15 215:11
considering 175:3 210:4
considers 270:13
consistent 96:21 128:14 130:11 153:15 158:2,9 159:10 161:17 162:21 251:5,19 252:14
constantly 171:19
constitute 86:25
constitutes 85:24
constrained 94:10
construct 198:11
consult 114:18 124:21 126:5
consultant 24:4,20 26:3
consultation 45:23 178:19
consulted 114:2 123:15,16 126:7
consulting 54:13
contact 120:10
contacted 122:5
contain 256:11
contained 288:8
content 94:8 157:11
contention 272:4
contents 17:5
context 43:2 47:22 144:12 263:2,5,6 283:15
continents 166:8
continue 11:6 38:25 82:25 102:19 150:10,13 150:20,23 157:14 157:14 158:1 210:15,16 219:18 219:19 247:7
continued 4:1 5:1 6:1 7:1 38:9 110:21,24 139:3 210:17 222:20
continues 151:7 193:3 219:13

continuing 89:20 158:10 247:17
contrary 59:11
contrast 73:20 180:6
contrasting 73:23
contribute 106:5
contributed 71:23 99:3
contribution 198:25
control 192:5,6,10 212:4 247:1 270:17
controversial 93:8
controversies 92:20
controversy 75:3
convenient 105:15
convening 121:19
conversation 57:9 57:11 78:11 82:6 85:18 180:13 246:16 256:14 266:15
conversations 57:5,13 85:6
convert 263:24
conviction 123:19 192:12
cookie 159:4,11,17
cooley 3:4 12:3,6,8 12:10,12,14,16,18 14:19
cooley.com 3:17 3:18,19,20,21,22
cooperate 141:11
cooperating 189:4
copresenters 90:9
correct 15:6 21:2 22:13,16,21 26:14 26:20 28:14,15,18 28:19,20 30:6,13 33:15 34:9 42:1,4 44:15,16 47:19,25 49:2 51:20,21 53:8,13,21,24,25 54:1 55:15,17,19 57:24 61:10 64:10 64:11,25 69:21 71:2 73:2,18,24 74:24 78:20,22 79:10 81:22 83:24 86:10 87:22 92:5 102:10 103:8 110:16,17 115:10 123:20 124:8,9,12 125:19 126:14 129:23 130:3 141:5 152:8 159:23 160:2,5 166:24 180:20,21 180:23 181:5 182:4 183:19 184:2,9 186:6 197:10 202:24 203:5,15 206:3 211:19,24 213:5 219:22 220:21 236:4 241:17,23 243:10 246:16 255:7,10,14 257:2 258:6 260:1 261:6 268:20 272:14 276:13 283:5,12 283:22 288:9
corrected 76:1 200:18 288:8
correction 25:9
corrections 15:18 15:19 24:20 40:7 288:6
correctly 105:1 115:20 145:10
cost 222:16,18,19
counsel 5:15 11:10 11:22 12:5,19 14:13 16:8 17:22 18:1 37:2 57:12 58:13,15,18 59:7 59:15 61:16 70:7 102:13,18 105:12 106:20 148:19 153:10 165:10,14 203:23,24 207:7 217:22 220:23 238:15,15,22 239:13 251:14 269:15,17 286:23
counsel's 60:24 94:14
counselor 263:24
countries 104:16 104:17 130:19
country 120:23 249:14 251:6 258:16
county 1:9,13 2:10 2:14 6:3 13:2 38:1 38:1 258:21 286:23
couple 19:9 21:14 56:4,6 90:23 91:12 105:21 110:6 148:23 167:20 192:19 196:7 282:13
courage 124:4
course 24:17 25:11 44:4 80:12 84:5 88:8 109:3 139:2 140:2 158:2 171:10 172:2,9 174:16 176:20 179:13 182:24 208:10 229:6 263:9 264:16
courses 88:9,9 89:21
coursework 89:17
court 1:1 2:1 11:14,18 13:19 18:25 20:2 29:18 30:19 31:9 33:25 35:4,17 37:10 39:5 40:12 41:2,4 41:5,14 48:2,4 49:13 50:13 51:3 58:6 64:20 69:25 218:1 256:22 258:12 260:15 261:22 263:12 265:12 267:2,23 269:1,14 270:9 271:3 272:19 275:5 278:5,24 279:19
court's 42:12
courtesy 70:13
courtroom 39:17
courts 41:1,9 42:21 169:5
coverage 30:11,12 30:18 31:3,15,23 33:7 41:3
covered 16:11 43:20 205:3
create 103:19 173:8,24 179:17 186:19 229:3
created 52:2
creates 173:15
creating 103:7 130:14 173:4

181:8 188:17,21 189:16 234:13
credential 169:10
credentialed 80:16 107:21
credentials 72:15 113:10 280:21
credit 171:15
criminal 190:20
criteria 38:9 116:17 118:17 266:12 284:3 285:5,14
cross 23:21,21 37:16 54:17,21 93:17 138:2,8,11 160:21 168:7 181:17 182:19,25 189:17,23 190:6,8 191:2 217:14,15 224:4,14 243:24 249:14 251:6 273:1
crossed 82:24
crystallization 276:5,10
csr 1:24 289:21
cultural 147:22 148:14
culture 148:18
cure 242:16
cured 228:13,14 228:19 229:19
curiosities 236:20
curious 53:16 164:24 171:13 192:22 193:24 195:13 233:24
current 17:9 21:8 23:19 65:16 71:23 154:1 172:8,19 173:11 228:5 278:7
currently 55:14 88:4 105:25 151:4 165:8 166:9 167:12 241:8,9
curriculum 60:2 75:20 113:2
custody 33:13 36:4
cut 72:16,17 112:5
cute 179:4
cv 1:8 2:8 11:16 16:14 65:12 75:14 75:23 76:12,15 77:4,16,18,21 78:14 87:20 91:11 92:4 97:15 108:13 109:23 168:7 170:18,19
cycle 46:21 79:19 171:19

d

d 37:24 190:14 198:2
daily 85:9
dark 111:11,21 112:1,10
darkness 111:24
data 96:7,10 122:13 124:8 128:11,13,15,15 128:16 130:5 131:6,7 177:16 181:17 189:8 190:12 243:2,24 279:8 280:24
date 68:9,11 289:14
dated 70:3 244:11 244:15 256:12 289:17
datewise 140:17
daughter 86:4,5 197:3
dave 262:22 286:15
david 5:6 13:10 51:23 52:1
david.c.tryon 5:11
day 80:21 111:11 111:21,25 112:1,7 112:10 239:4 258:23 280:18 288:10
days 27:5 60:6 112:10 135:24 209:15,18,19 210:1,7,8 257:12
deal 149:22 157:11 162:5 215:20
dealing 116:13 174:3
deals 172:17
dealt 177:5
death 80:2 139:19 190:19 261:3 271:6
debate 252:8
debt 112:3
decades 93:21 176:23
deceased 140:3
december 22:5
decide 58:1 117:10 133:25 135:10,11 135:12,12 210:15 217:13,14 273:7
decided 25:5 82:15 239:16 257:16 258:17 273:14
decides 228:1
decision 16:25 32:1 117:2,14,18 131:1 134:5,6,9 135:7 139:24,25 140:1 141:12,13 147:2 169:14,23 179:23 204:12 233:19 279:7,8 281:6
decisions 134:12 134:14,19,23 135:1,5 171:21 172:13,19 173:13 270:15
decisive 205:13,15 205:18 206:23
decker 7:19 11:17
declaim 186:9
declaration 8:11 8:16 42:7 43:8,16 45:9 62:12,18 63:9,13 64:6,8,14 64:19,25 65:7,18 65:23 66:6,10 67:6,15 68:14 70:3 73:2,2 137:19 143:16,17 156:5,10 164:14 164:16,22,25 165:19 167:12,17 171:9 193:4,5,17 193:18 198:16 212:20 223:8 235:11 251:17
declarations 61:9 61:14 213:14
declare 24:25 186:9 275:23 288:4

declares 186:19 206:5
declaring 100:7
decompensations 23:9
deduce 115:2
deep 60:17 183:12
deeply 129:6 285:2
defeated 152:4
defend 40:9 254:2
defendant 1:17 2:18 14:12
defendants 1:15 2:16 6:3 14:12 31:4 47:18 48:19 65:24 66:5 249:12 253:12 286:23
defending 4:16 13:14,15 52:3,8,12 52:17,25 53:20
defense 14:13 245:2
deficient 259:1
definable 209:13
define 84:2,3
defined 25:22
definition 73:15 116:1,3,4 119:12 119:14,15 125:18 280:14 281:12
definitive 242:19
definitively 55:6,9 56:2
degree 55:2 73:5,7 73:8,12 258:21
degrees 98:5,7 159:16
del 3:6 12:13,14
deleted 71:20,25 198:18,21
deliberation 116:22,24
deliberations 101:10
delighted 30:1
delineated 26:1
delivering 266:21
delivery 134:13 197:1,2 280:12,13
delusional 107:19
demagogue 280:9 281:4,12,19 282:11
demagoguery 280:2
demagogues 280:3
demonstrate 242:16
demonstrated 122:10 190:15 232:3 282:3
demonstrating 137:15
demonstration 101:22 102:4
denial 159:11
deniker 6:6 12:25 12:25 48:21,21 286:22,23
denominator 185:8,9,19,19 187:9,16 269:6
deny 229:13 249:13 250:3
denying 53:14
department 5:16 15:17,18 20:19 24:20 40:6 111:11 111:12,22,22 112:3,5,6,14 113:12,14 257:13
depending 72:18 89:12 203:21 208:15
depends 48:13 166:13 220:5 222:16
deposed 15:5,13 20:15 21:13 33:13
deposition 1:19 2:20 11:10 13:16 15:8,11,22 16:14 17:4,4,11,12,13,18 19:10 21:17,19,25 22:4,9 37:8 39:19 52:23 53:7 58:8 58:22 59:10,17,20 60:16 62:9 252:9 254:9 255:13 258:4
depositions 21:14 22:14,17,19
depressed 269:3 273:6,13
depression 120:19 149:20 155:3 273:2
derivative 53:24 54:7 55:11 146:18
derived 41:20
describe 23:1 79:15 94:2 96:4 128:19 198:13 231:4 255:20
described 25:18 28:17 33:5 34:1 123:5 140:6 223:9 229:10 255:6
describes 25:3
describing 105:7 138:21 194:23 230:16 283:11
description 8:10 259:9
designate 94:15,20 95:23 106:20
designated 156:24
desired 33:21
desistance 35:8 220:20 221:2
despite 239:15
detail 16:9,12,20 138:22 229:10
details 214:9 249:9 274:23 285:21
determination 27:22
determine 16:15 137:8
determined 185:20,21 197:9 197:12 206:7 238:6 281:8
detransition 154:4 229:9 242:5,22 243:1,2
detransitioned 228:2,21 229:1
detransitions 153:19
develop 99:12 100:1,12 103:13 104:8,19,25 107:5 217:8 227:10 243:17
developing 104:6 194:14 276:8
development 79:13,17,19 80:4 80:10,18,21,24 84:18,18 104:9 113:15 214:14,15

216:25
developmental 16:1 80:7 116:18 122:12 198:13,23 199:10 214:14
devised 26:8
devoted 93:7
diagnose 279:2
diagnosed 121:12 123:6,12
diagnosis 115:25 125:6 128:1 138:22
diagnostic 138:4
diamond 232:2
diamond's 242:12
dictated 206:4,11
die 131:16 271:11 271:11
died 139:11 260:22
dietary 276:2
difference 77:1 138:17 185:17 191:11 192:1 220:2 280:2,15,19
differences 138:18 229:3
different 18:16 47:2 54:16 68:21 69:17 71:10 73:16 84:21 98:6,7 103:25 104:1,14 115:5 119:13 138:13 150:3 177:20 183:18 186:20 199:8,22 206:7,8 220:8 232:10 234:23 241:21 242:11 264:13 282:2
284:11
differently 97:20
difficult 24:19 54:11 223:1 233:13,19 270:18 274:5
difficulties 160:24 161:3 236:17
difficulty 231:12
dig 78:11
dilemma 114:24
dimensions 234:21
diminish 26:6
diminished 243:19
direct 61:4 91:23 91:24 203:13 212:24 213:7 218:16 236:25 237:2
direction 60:25 279:3,4 289:8
directive 170:1,3
directly 104:21 123:11 125:12 127:25 128:2
dis 276:16
disagree 75:4 116:25 241:4,18
disagreement 14:14
disagrees 21:10
disappear 75:4 262:6
disappeared 201:16
disappoint 158:20
disappointed 149:18,19,21,24 154:25 159:1
disappointing 159:5
disappointment 111:18 149:19,23 150:2 154:17,22 155:2 159:8,16 161:16 162:1,3,23
discern 231:15
discharge 38:8
discharged 82:21
disclose 36:15 57:5 58:11 109:4
disclosed 16:14 95:25
discontinue 111:15
discontinued 111:9,9
discourse 148:12
discover 262:8
discovery 37:1
discredit 40:16
discrimination 161:1,4,9 250:20 253:24
discuss 89:14 94:8 209:11
discussed 14:7 29:23 38:19 48:17 52:21 93:2 127:14 255:2
discusses 180:19
discussing 26:12 36:25 83:8 120:4 131:8 171:8
discussion 64:12 90:24 208:5
discussions 24:23 88:18 96:16 107:9
disease 190:20 192:14 271:7
diseases 271:9
dismiss 116:23
dismissed 39:24 40:1,10,22
disorder 275:11 275:25 276:2,6,14 276:18,20 277:2
disorders 79:23 98:9 275:8,16
disputing 35:14 50:7
disrupt 105:17
dissuade 237:24
distinct 84:15
distinction 84:23 233:6
distinguish 81:15 160:16 281:13
distraught 182:25
distressed 129:12 165:10
distressing 159:22
district 1:1,2 2:1,2 11:14,14 41:2 167:24
distrust 74:8
disturbed 128:23 128:24
dive 60:17
diverse 245:3,3
diversity 148:4,4
divinity 258:22
division 1:3 2:3 11:15
doc 168:18
doctor 73:8 89:8 109:4 279:7,7,23 279:24,24 280:22 281:22
doctor's 130:22 279:1

doctors 82:23 88:11 131:3,10,10 131:11,25 132:18 132:22 134:17 135:4,10 147:2 264:11 270:18 272:21 280:3 281:25
document 51:9 63:7,11,15,25 65:10 70:6,7,11,18 72:23 144:4 165:23,24 195:21 197:17 201:16 212:11
documentations 69:5
documents 28:6 58:21,25 59:9 60:12,14 72:25 96:16,17 125:14 195:22
doing 31:8 35:3 47:5,8 51:4 54:15 117:8 118:12 125:8 126:4 129:10,11,13,18 133:18 136:17 138:25 161:6 179:11,12 188:21 188:25,25 190:24 210:12 216:1 270:20 276:21 282:5
domi 277:6
dominant 231:5
dominate 277:4,6
dominates 277:3
dominating 104:15
donor 106:7
donors 106:7
dora 1:12 2:13 6:4 13:2
dorm 139:11
double 198:19
downstream 146:23,24 147:5
dr 8:11 11:10 13:15 14:3 15:5 16:11 36:11 47:16 51:19 57:10 59:4 61:8,8,13,14,20,23 62:3,7,11 63:11,13 64:6,7,8 69:2 70:2 70:19 75:23 92:4 95:1,5 106:18 108:10 125:22 126:11,11,14 156:2 168:22 171:9 173:3,7,12 173:24 174:23 175:15,23 176:1 180:12 183:23 184:1,22 186:24 187:19,23,25 188:2,11,16,22,23 203:19 218:4 219:9 222:8 223:12 229:8 251:16 252:6,11 255:2 256:13 258:3 259:5 260:24 262:15 264:20 265:20 266:6 267:9 268:3 268:11 269:8 270:3,23 272:2 273:10 275:13 278:14 279:10 280:6 281:4,5,7,18 283:11,13,21 284:11 285:3,8 286:7,17,22 287:3 287:8,13,13
draft 96:17,25 193:11
dramatic 100:6 188:25
dramatically 149:6 157:1
draw 77:13
drawing 275:15
druff 96:25
drug 186:17 242:17
duddy 264:2
due 161:1 261:5 261:11
dying 192:13
dysfunction 180:15
dysphoria 22:21 22:24 23:3,16 26:20 30:13 33:8 35:15 36:2 37:21 81:2 102:21 103:14 108:24 110:5 130:23 165:2,6 166:4 194:25 198:7 221:3,5 223:14 240:2 274:20

e

e 6:19 7:8 15:1,1,2 15:2,2 23:5,5 37:24,25 106:19 106:19 135:20 190:14 201:9,22 256:12,12
earlier 26:10 28:16,23 77:9 130:21 164:17,21 198:17 204:7 223:8 246:3 255:3 255:13 258:4 259:15 260:25 262:16 264:21 265:21 267:10 268:4,15 270:4 280:7
early 171:20 214:23 215:22,23 225:10 271:5
easier 224:17 265:17
easily 235:8
eastern 167:23
easy 121:17 224:18 233:9,13 252:16 262:9
eating 275:7,11,16 275:25 276:1,6,14 276:16,18,20 277:2
edit 245:24
edition 103:4 285:16
editor 260:23 261:3
editorial 195:18
edits 72:6
edmo 41:17
educa 174:17
educate 131:3 132:10
educating 117:16
education 1:9,10 2:10,10 5:14,16 6:3 11:13 13:2,5 20:19 21:9 32:20 81:16 84:6,7 88:11 89:20 113:3

148:2 286:20,24
educational 250:19 260:17
effect 179:8 189:5
effects 136:12 163:13 213:18
efficacy 101:23 102:4
efficiently 199:23 221:15
effort 14:10 104:18 105:2
eight 147:3 170:18 220:6,11,16 250:24
either 94:13 135:2 191:18 217:18,18 226:10,17 237:6 240:7,7 241:22 252:11 257:16 287:5
elaborate 199:24 211:11
elaborates 220:17
electrolysis 24:6 25:5
elements 116:13
elevated 271:7
elicit 222:3
eligible 284:3
elizabeth 3:10 12:16
ema 106:19
embarrassed 229:23 230:16,18 231:7 279:11
embarrassing 230:8,12
embarrassment 230:22,25
embedded 252:18
emerging 243:4
emphasis 148:3
emphasize 172:5 245:24
employed 31:6 33:3
employee 21:18 22:2,6 30:11,12 31:3 289:12
employees 31:14
employment 110:20
enable 147:1 192:25 204:16
encounter 160:6
encountered 56:10 108:22 110:3,3
encourages 156:21
encouraging 232:24
ended 97:11
endlessly 195:20
endocrinologist 81:18,19 174:2 176:7 208:22 217:19
endocrinologists 176:5 216:20
endocrinology 81:22,23
endorse 119:18 208:12
endorsed 182:6
ends 182:25
enemy 247:3
engage 175:23 206:17
engaging 156:20
enjoining 31:7
enormous 85:4 100:9 148:3 183:12
ensuring 282:6
entail 94:3
entailing 158:3
enthusiasm 269:24
entire 25:25 90:18 144:7 145:14
entirely 127:22 147:20 161:1 277:24
entitled 238:22,24
entry 169:2
environment 85:22
epidemiologic 166:7
epidemiology 100:9
episode 256:10
equally 183:21
equate 32:9 159:17
equivalent 159:11 187:9
era 166:13
eroticism 232:13 233:7
error 243:5
escape 262:10
especially 228:8 232:8
essentially 159:10 268:20
established 32:21 54:4 57:24
estimate 24:16 25:20 86:14 87:1
estrogen 56:25
et 146:8 190:14
ethical 133:21 281:21
ethically 132:14 147:1 189:10
ethics 47:13 234:7
european 104:16
evalua 63:22 119:13
evaluate 117:22 136:8,11
evaluating 110:23 117:17
evaluation 15:23 16:1,10,24 17:5 37:18 39:15 63:22 93:16,17 116:10 116:11,17 118:20 119:13,14,16 125:19 135:25 147:11 180:14 186:15 208:13,15 209:12,18,24,25 210:7 211:8 239:21
evaluations 125:17,23
evening 58:14
events 145:9 147:17 156:9,10
eventually 16:24 26:4 29:6 109:25 204:12 237:11
evidence 39:25 95:14 98:20 99:6 99:7 101:13 173:13,22 204:14 207:4 212:14 240:24 241:20,22 242:4,7 255:6

268:8 276:3 281:10 282:7
evidenced 44:7
evident 156:19
evil 36:7
evolve 154:3 228:7
evolving 216:12
exact 76:13 237:12
exactly 66:13 238:2
examination 8:2 14:1 267:4
examined 13:23 37:16
examining 181:22
example 23:20 41:1,12 42:23 48:17 72:13,20 75:9 86:2 88:14 89:21 115:24 125:22 148:9 150:7 172:14 175:6 177:10 178:19 182:16 183:17 196:1 216:25 222:19 229:18,21 239:25 242:16 273:12,17 276:24
examples 23:15 44:24
excellent 70:18
exceptions 24:23
excerpt 256:18 279:15
excerpted 256:8
excerpts 256:8 263:2 269:18
exchanging 102:18
excited 246:12
exclude 162:8
excluded 39:5,13 40:12 41:13,24 159:9 161:17 162:20 170:24
excluding 158:15 161:11 249:2
exclusion 154:18 208:8 254:2
exclusions 41:19
excuse 142:18
executed 288:10
exhi 65:17
exhibit 8:11,16,19 8:22,24 9:1,3,5,7,9 9:11,13,15,17,19 9:21,23,25 10:2,4 50:20,20 51:2 63:4,8 64:4 69:18 69:24 70:2 164:18 165:25 217:22,25 256:20,21 258:9 258:11 260:13,14 261:20,21 262:21 263:10,11 265:10 265:11 266:25 267:1,20,22 268:24,25 269:12 269:13 270:7,8 271:1,2 272:16,18 275:2,4 278:2,4,22 278:23 279:16,18 282:16
exhibits 8:9 63:4 217:22
exist 99:20 176:25
existed 225:10
exists 113:21 166:7
expect 154:23 223:18
expected 90:11
experience 55:24 74:11 83:16 123:5 128:18,20 139:21 154:18 155:9 159:21,22 160:1 173:1 196:21 197:5,5 236:14 243:22 245:22 246:1,2 252:23 260:17 262:1 264:7
experiences 84:10 129:22 130:2 199:4 200:3
experiencing 130:23 223:13 231:19 240:1
experiment 232:9
experimental 194:25
expert 8:11 32:1,2 38:16 42:1,10,13 49:24 51:20 56:7 56:18,24 57:1 58:22 59:16,24 61:1,10,15,22,22 63:9,13 64:6,8 66:10 68:24 70:3 70:13 79:20 81:22 81:23,24,25 82:1 124:2 148:2 163:17,22,24 164:1,3 170:12 185:10 186:4,7,10 187:25 199:20 253:11 254:15 257:21 279:21,22 280:10,13,14,20 280:22,25 281:14 282:11,14
expertise 33:5 41:20 80:15 147:6 152:7,11 186:1 285:4
experts 50:12 69:9 100:8,14 189:15 264:14 280:3
explain 19:8 241:3
explained 114:13 123:3 252:1
explaining 31:18
explanation 160:25
exploration 63:20 186:16
exposing 234:18
expressed 30:6 232:24 254:8
expressing 233:2
expression 205:11 221:8
extend 176:12
extended 31:24 180:13 186:15 208:13,15,24 209:12,23 210:7 211:8
extending 33:6
extensive 83:16 138:4
extent 105:5 109:4 146:19 154:1 167:15 186:1 227:8,9 253:1 282:4
extremely 39:20

f

f 37:24
face 141:9 189:17
facilitated 230:20
facility 29:2,8
fact 14:15 29:5 32:8 40:4 80:5 99:11 112:7 131:9 137:9,9 177:7 187:11 188:24 189:17 191:17 199:13 200:25 206:4 208:19 238:10 240:25 242:23 248:10 258:14 262:1 275:22 284:13 285:8
factors 183:13 200:9,10 279:2
facts 74:8,24,25 75:2,4,5 224:16 240:23 255:10,11 255:12 264:1
failed 139:9 190:8 259:1
failure 175:16,24
faint 63:2
fair 31:22 42:24 53:18 55:12 68:20 69:12 103:12 115:22 131:1 137:4 146:2 179:20 182:21 190:4,4 198:14 208:7 221:21 227:22 237:21
fairness 151:24
faith 270:19
false 74:3,3
familiar 73:4 112:12 113:19 143:11
familiarity 188:1
families 100:16,24 238:11
family 235:22 238:7 239:10,19 239:21 243:10 249:16 250:6 258:16 279:3
family's 109:22 203:22 238:14
famous 271:15
fantasies 233:8
fantasy 199:15 221:11
far 42:18,19 101:4 102:3 124:13 128:24 137:13 161:7 175:12 244:1,2 249:18
fashion 37:9
fashions 102:2
fat 277:5
father 34:17 85:17
father's 169:12
fathers 239:17
favor 22:23 23:2 23:15 33:6
fear 240:14
february 70:4,21
feedback 210:2
feel 20:10 32:4 42:15 69:12 81:14 94:10,17 109:10 115:1 125:8 138:20 144:16 145:15 147:6 163:23 164:5,19 176:22 187:3 219:2 230:22,25 231:1 236:18 239:7 280:25 283:15,16
feeling 231:5
feelings 159:22 180:2 200:11 215:21 222:3 231:8
feels 68:21 155:12
felt 31:25 34:23 38:16 97:19 99:5 231:18
female 16:5 23:6,7 25:6,8 26:14,16 29:2,8 38:13 39:19 49:5,12 129:12 142:21,22 145:7 147:15 149:12,12 150:24 193:6,12,22 194:5 204:19,20 262:3 271:17 278:8
femaleness 223:2
females 223:23 232:13
feminine 223:21
femininity 277:24
ferguson 63:14
fertilization 54:21
fertilize 54:17
fervent 277:15
fetish 236:8,12 237:8
fetishistic 225:9
fewer 244:24
field 42:11 75:8 80:5 179:10 188:20 194:11 280:13,20
fifth 103:2,4 185:20 202:12 266:10
figure 37:2 81:6 129:22 137:1,6 141:21 150:17 167:14 191:10 204:1
figured 138:17
filed 11:13 193:5,5 252:13
files 256:8
filibuster 238:25
filibustering 239:1
film 78:5
final 282:13
finances 106:21
financially 11:21 289:11
find 44:8 50:17 60:23 68:10 101:19 120:12,16 124:3 165:17,20 178:22 202:18 203:10 225:21,23 226:6 229:15 230:11 234:11 243:16 244:20 246:22 252:16 276:23
fine 29:25 83:18 91:16 106:23 207:9 208:19
finish 148:25 238:23 239:4,8
finished 94:7 239:8
finland 103:21
firm 14:19 115:25
first 29:1 37:23 52:19 56:10 65:9

68:24 70:16 71:1 78:14 108:21,22 110:2 129:4 164:7 167:24 171:9 183:7 192:20 197:13,22 205:6 213:1 217:2 229:13 234:6 236:2 237:5 239:21 243:1 279:13 283:25
fit 60:25 91:23 143:22
fits 156:14
five 28:12 84:22 121:9 136:15 153:19,20 166:16 173:16 176:12 217:4
fixed 241:16 242:7 281:9
flashing 64:18 171:7 187:20
flip 184:8 203:9 212:18
flipping 93:1
floor 3:14 4:9 81:4 102:9,11,20 103:10,11
florida 22:4,9 31:2 32:24 52:24 53:3 53:7,24 54:2 55:21 170:24
focus 85:21 126:4 137:23 172:23 277:2
focused 144:16 188:17
focusing 44:23
folder 50:23,23 69:19 217:22
follow 37:1 38:20 39:2 90:24 94:5 109:21 129:17,24 129:25 131:6,7,22 133:3 135:20 146:15,15 162:15 174:4,6,8 175:4,6 175:16,17,23,25 176:11 177:2,7,13 177:14,15,17,21 177:23 178:16,18 179:6 189:8 203:19 208:4,7 212:4 268:1,12 270:16,21
followed 39:23 174:12 176:20,23 284:12
following 156:18
follows 13:24 146:12 176:1,14 198:22
force 154:24
forces 274:3
foregoing 288:5 289:3,5,9
forensic 69:3
forget 277:1
forgot 89:19 113:8 113:11,18
form 14:8,10 37:11 48:22 54:10 153:2 213:19 224:8 225:7
formal 50:11
formality 260:7
formally 84:1
formation 114:3
formed 266:10
forms 148:4
formulation 227:17
forth 69:10 148:13 176:13 181:5 182:3 192:14 200:11 202:6 223:25 234:23 236:1 273:2 278:1 284:25 289:4
forward 75:2 93:1 104:19 158:11 171:7 212:18,19 218:15
found 83:3,3 135:25
foundation 247:10 249:7
founded 110:15
four 88:15,15 121:9 123:18 166:7,16,25 180:19 181:2 192:5 201:10,25 203:3 208:3 209:19 210:8 211:16 217:4,12 258:23
fourth 152:5 192:9
fragmentary 218:24
france 103:21
frankly 65:10
free 16:11 144:16 145:15 164:5,19 219:2 283:15
freedom 4:16 13:14 52:3,8,12,17 53:1,20
frequency 244:22
frequently 112:23 118:21
friend 1:5 2:6 11:12 21:6
friends 245:12
friendships 235:22 245:9 246:6
front 144:8
froze 178:7,12
frustration 181:13 236:15
frustrations 160:7
fuddy 264:2
fulfilling 243:9 282:7
full 87:25 88:2 110:20 263:2,6
fully 214:4 253:16 253:18
function 129:1 131:20 213:25
functional 173:5,8 173:25 188:18 189:16 244:5
fundamental 146:12,18,24
fundamentals 130:13
funding 106:2
funny 266:16
further 16:24 76:17 77:12 144:24 286:8,9 289:9,11
future 96:10,11 105:10 123:25 160:7,13 208:18 222:6 228:8 240:15
futures 180:3

g

gamete 25:14
gay 224:17 226:10 226:17 227:18 232:17 233:20
gender 19:11,17 21:8 22:21,24 23:3,16,19,21 24:1 24:20 25:12 26:20 27:6 28:3 30:12 33:7 35:15 36:2 37:21 81:2 98:21 100:11,11 103:14 108:23 110:5,16 110:19 111:2,7 113:2,20 117:12 118:1 119:1 122:1 124:2 125:20 126:18 130:23 133:10 145:5,7 147:15 150:20 151:15 153:15 154:2 158:9 159:10 161:17 162:9,21 165:2,6 166:3,6 171:2 174:10 180:9 188:3 193:1 194:25 198:7 209:3 221:3,5,8 223:14 224:3,4 228:5,6 232:25 233:25 240:2 242:7 245:3,3 251:5,19 252:14 256:10 258:15 262:7 272:5,7 273:1,8,15 274:20
general 5:5,15 100:2 115:18 116:4 118:15 170:2 190:18,22 191:6 208:24 234:16 246:19
general's 13:11
generality 36:13
generally 27:21 94:24 96:4 142:16 142:17 159:21 245:13
genesis 53:17
genetically 204:17 204:20 281:8
genital 39:20 133:13 180:10
genitals 196:17
genspect 122:20
gentlemen 74:20
genuine 236:20
genuinely 253:21
germane 174:15
gesture 36:6
getting 100:21 127:13,14 142:18 143:18 164:9 182:24 192:16 215:20,21 221:25
girl 34:18 142:7,12 150:8,9 151:4,8,8 151:9,14,17,18,22 153:14,14,16,18 153:19,22 154:8,8 154:9,17,23,23 163:19 249:3,13 250:3,14
girl's 151:5,14 277:8
girlfriend 139:14
girls 142:15,17,17 143:3 145:8 147:16 151:18,25 151:25 152:3,4 153:21 154:15 158:16,16,18,21 162:19 163:14,18 204:20 224:4 249:14 275:7,23 276:11
give 20:8,13 22:13 35:18,18,21 47:11 55:4 76:12,13 77:18,20 87:1 88:13,22 89:20 100:19 116:4 121:22 122:16,18 133:4 139:5 155:11,15 158:6 166:17 182:16 184:14 195:16 205:23 210:1,1 217:11 220:5,10 220:12 237:11 242:4 248:6,14 261:15 263:25 269:18 274:7 277:6
given 22:16 24:17 26:24,25 30:10 36:16,20 37:4,8,19 42:6 43:4,7,15 44:23 45:12 46:2 46:9 48:7 75:2 78:1 82:16 89:21 94:17 96:17 115:25 116:24 131:9 132:7 135:21 140:4 175:7,9 206:14 233:10 263:5 287:12
giving 16:18 21:19 21:25 22:4 43:22 48:5 70:12 88:19 128:8 139:22 155:4 163:17 176:17 180:9 218:8 240:20 274:2 285:12
glad 235:9
glance 102:19
go 11:7 63:3 65:1 75:14 98:23,25 108:13 112:21 118:9 131:14 138:16 144:24 155:19 156:11 157:22 164:3,4 179:23 187:22 188:23 192:18 195:5 201:9 202:6 202:13 203:22 205:21 207:23 212:19 216:16 217:14,15,16 230:23 257:22 268:9 285:23,25
goal 221:3,4,8,17 221:18 222:18,20 222:21
goes 63:8 77:4 96:20 182:23 183:6
going 14:5 18:15 19:8 36:9 38:25 48:12 50:19 57:4 59:5 61:13 65:23 90:7 94:5,12 104:19,25 108:14 112:24 113:6,6 123:2 125:5 130:19 131:16 136:16 137:18 144:15,25 145:13 147:8 152:10,15

158:10 162:9 164:3,7 170:10 173:8 178:3 179:17 180:4 184:1,18,23 189:5 195:8 196:7 201:17 204:2,2 205:6,14 211:11 212:19 213:7 222:1 228:7 233:5 240:17,20 249:11 256:6,17 262:22 263:1 271:14 273:7 282:19,19
good 12:2,7,9,11 12:13,15,19,23,25 14:3,4 29:17 105:19 107:13,25 117:24 128:11,12 128:15,15,16 148:21 277:11
gotten 148:1
governors 135:1 135:11
grade 145:3,22
graduate 74:19 88:9
grand 88:20 114:1
grandchild 129:7
granddaughter 128:23
grandfathered 79:4
grandfathers 239:17
grandiose 133:1
grandmother 128:22
grandmothers 129:6 239:17
grandparent 129:2
grata 38:7
great 108:19 111:18 112:3 156:17 200:24 207:24 229:10 252:17
greatly 243:19
green 7:6 266:6
grips 221:10 233:12 234:20 276:21
grossly 271:20,21 272:5,7
ground 17:17,19 81:3 102:9,11,20 103:9,11
group 25:4 95:13 103:3 107:2 121:21 122:2,11 122:19,20,22 190:23,25 192:10 211:15 234:25 246:3 255:20 265:16 266:4
groups 120:11,12 148:2 192:5,6 212:4
grow 149:23
growing 80:2 220:13
grownup 239:15
growth 214:10,11
guaran 177:1
guarantee 19:4 162:10
guardian 45:21
guess 16:19 45:22 46:17 49:14 52:17 53:18 60:20 61:6 63:21 64:17 72:3 72:9 97:25 99:10 99:14 124:19 126:8 150:4 151:2 153:24 161:9 197:4 198:14 211:7 219:17 235:20 241:3 253:18 277:20 284:11 285:7
guessing 142:4
guidance 85:21,21 86:1
guidelines 103:13 103:16,20 104:1,7 104:9,13,15,19,25 105:10,11 284:15 284:17
guilty 262:1,11
gun 257:15
gyne 225:17

h

h 15:1 190:14 197:23 213:4,8 256:12
h.b. 143:13 157:5 157:8
half 38:18 68:12 99:4 113:7 139:3
halftime 257:13
hamilton 37:25
hand 69:8 176:9
handful 24:22 87:4
hanging 273:6,14 274:20
hap 78:6
happen 42:20,20 150:24
happened 17:6 56:5 112:8 122:19 153:20 154:6 266:22
happening 104:10 124:11,16 137:9 169:6,6 215:5
happens 78:6,7,7 173:17 175:1 229:5
happier 128:24 136:3
happily 190:9,10
happiness 173:15
happy 18:7 29:24 33:11 139:25 172:8 173:4,5,8,11 173:25 179:17 188:17,18 189:16 230:3 233:20 236:22 239:4 254:5 274:5 281:10
hard 55:1 79:25 85:13 144:6 155:10 181:11 202:4 222:22,25 231:14 233:10
harder 232:18
harm 148:8 149:25 150:2,2 153:25 154:12,13 161:18 162:2,3,10 162:15 163:18 181:8,12,16,20,23 182:13 183:3 224:10,11,12 234:7 235:22 240:20 276:7
harmed 162:13,14 240:21 267:17
harmful 153:15,17 186:5 276:21

harming 179:19 179:21 180:3 235:1,3
harms 163:12 182:14 195:4 223:9 235:19,23 236:1 237:20 267:7,17,18
harrison 1:9,13 2:10,14 6:3 13:1 286:23
harrison's 74:14
harry 39:23 102:21
hartnett 3:8 8:6 12:2,3 14:2,5,16 14:17,18 16:13,17 28:1 34:6,22 35:24 36:24 37:3 37:13 43:13,14 46:14 47:15 48:15 48:23 49:15,22 50:3,19,24 51:11 51:18 55:7,16 57:8,18 58:7 59:2 59:8,14,22 60:21 61:6,7,21 62:2 63:6,10 65:4 66:3 66:14 67:2,12 68:3,13 69:16,21 69:23 70:1,12,17 75:21,22 76:6,22 76:24 78:17,18 81:17 84:12 86:9 86:19 91:14,18,21 91:25 92:3 95:7 102:17 103:6 105:13,20,23 106:22,24 107:25 108:8,9,19,20 109:11 111:20 119:8,23 120:5 128:10 142:1 143:19 144:1,9 145:15,18 147:13 148:22 149:1,2 150:15 152:6,23 153:6,9 155:12,19 155:25 156:1,16 157:21 159:3,19 162:18 163:5,10 163:20 164:11,12 165:17 166:1 169:24 170:9 171:6 175:20,21 178:2,6,12,15 181:1 183:15,24 184:6,16,18,20 185:5 187:5 188:20 192:7 193:16 196:13,14 197:7 198:5 201:4 201:12,14,22,24 202:22,24 203:2 203:15,17 206:13 206:21 207:9,13 207:19,24 208:1 213:5,6,23 217:21 218:3,19 219:2,16 219:22,24 220:25 221:1 224:20 226:14,23 227:16 228:18 231:2,11 231:16 232:22 235:17 238:17,20 238:24 239:3,24 241:2,19 242:2 243:13 244:14 247:4,14,21,24 249:10,20 250:1 251:1,14 252:3,5 252:10 253:9,20 254:18,25 255:1 256:19 257:3,8,17 258:2,8,10 259:4 259:12 260:12 261:19 262:14,20 263:3,9 264:19 265:1,9,19 266:24 267:8,19 268:2,10 268:23 269:7,11 269:16,19 270:2,6 270:22,25 272:1 272:16 273:9 275:2,12 278:2,13 278:21 279:9,16 280:5 282:18,22 282:25 283:5,10 283:19 285:6,23 286:7,11 287:8
harvard 88:15
hateful 246:22
hates 230:1
head 19:1 74:16 79:21 134:7 188:3 258:21 266:6 275:19
header 201:22
heading 143:23 144:18 202:18 203:10 282:24 283:1,3,14
health 88:16,16 100:2,21 117:3 158:23 160:4 210:14 238:5
healthcare 8:19 21:18 22:2,6 30:11,12,18 31:3 31:14,23 32:11 33:6 137:8 240:19 240:20,22 241:5
healthy 173:5,25 188:17,18 189:16
hear 14:20 16:13 21:21 43:12 73:6 84:20 96:24 113:9 118:17 140:13 153:7 163:14 167:6,7,8 169:21 178:8,10,11 187:10 202:6 217:1,3 219:12 233:20 244:12 257:1,3,7,17
heard 39:1 127:16 127:16,25 128:2 129:5,5,9 142:22 226:9 238:11 239:9 250:9 265:5 273:25 274:10
hearing 226:12 231:14 236:24 239:12 256:23
heart 190:20 192:13 214:11
heather 1:6 2:6 5:15 11:12
hecox 41:18 42:10 251:4,19 253:11
held 74:14
hello 12:17
help 26:6 54:20 96:7 100:23 117:18 118:18 183:8 222:4,4 251:2 267:6 276:19,20,23
helped 86:5
helpful 45:15 75:13 107:12 226:6

helping 103:13 180:2 281:9,10
helps 207:3
helstrom 3:11 12:17,17
hereto 51:3 69:25 218:1 256:22 258:12 260:15 261:22 263:12 265:12 267:2,23 269:1,14 270:9 271:3 272:19 275:5 278:5,24 279:19 288:7
heroin 139:11,17 139:18
hesitance 157:17
hesitating 15:25 17:2 23:17 24:3 26:21 27:19 43:18 94:4 95:16
heterosexual 224:2,7 232:5,11 233:23
hi 255:2
high 122:10,12 147:23 149:14,15 173:5
higher 183:17 184:1,9,22 185:2 187:11,14 190:18 190:19,20,22 192:14
highlight 168:11
highly 93:11 107:21 173:25 188:18 258:20 264:5
hire 48:4
hired 33:10 34:16 36:4 99:12
histories 44:6 100:1 244:4 277:10
history 16:1,2 40:5,5 44:5 101:19 116:18 204:3,3 273:24 274:2,24,25
hit 201:15
hiv 192:14
hold 25:1 81:21 221:17,18 233:25
home 109:22
homosexual 223:19,22 224:5,7 232:6
homosexuality 233:2,6 234:3,5 242:13
honestly 181:22
honor 88:21
hope 31:9 72:2 173:7 220:22 244:16,23 245:1,5 245:5 256:5
hopefully 282:13 286:1
hoping 105:9 188:21
hormonal 192:24 194:24
hormone 24:6,10 25:9,10 139:5 175:8 217:15
hormones 23:21 82:14,16 93:17 115:25 116:8 138:2,8,11 139:5,8 139:20,23 140:4 140:20 141:14 180:9 181:14 182:19,25 209:7 210:13,15,17,17 210:24,25 211:1 217:14 224:14 266:1,2,5,12 278:1
horrified 118:7 121:11,13 240:3
hospital 36:6 38:8 38:17 62:24 258:25
hospitalization 38:7,10
hospitalized 36:5
hospitals 112:13 112:15,17,22,25 113:13,20 114:8 118:1,25 190:21
hour 18:16 51:7,7 88:15,15 91:15 113:7 115:24 117:23 121:11 123:7,10,13 128:1 209:17 210:13 211:1
hourly 207:8
hours 71:7,7 123:9 194:14 209:15,19 210:8 211:16
housekeeping 14:6
houses 83:19
housing 250:19
hover 144:3
https 256:10
huh 107:23
human 97:23 121:23 161:25 162:6,7,16 173:8 200:8,8 233:15 257:21
humans 196:17
humble 132:22
humbly 74:6
hundred 106:4 128:6 177:15 270:19
hundreds 285:20
hurricane 4:20
hutchens 5:15

i

idea 29:15,16,17 29:24 31:8 73:16 73:16 74:2 131:2 134:5 150:22 151:7 183:11 190:9 206:10 217:11,17 225:13 225:14 226:25 227:21 244:23 269:5 277:17
ideal 136:11
ideas 88:17 202:5 242:11 282:2
identification 51:2 69:24 204:17,19 217:25 256:21 258:11 260:14 261:21 263:11 265:11 267:1,22 268:25 269:13 270:8 271:2 272:18 275:4 276:5,6 278:4,23 279:18
identifications 203:25
identified 273:1
identifies 26:14 150:8 151:4
identify 150:10,20 150:23 157:15 158:10 167:19

identifying 16:19 35:21 38:5 58:24 109:7 193:6,12,22 194:5 227:18 276:14
identities 278:10
identity 16:3,4,5,6 19:11,17 21:8 23:19 24:21,25 110:16,19 111:3,7 121:23 122:1 145:7 147:16 150:20,25 151:15 153:15 154:1,3 155:4 158:9 159:10 161:18 162:9,21 198:8 199:18 205:11 206:6 222:9 227:10,12 228:5,7 228:13 232:4,5,6 233:1,25 234:2 235:21 242:7 251:5,5,20 252:15 278:7,11
ideology 135:6
ignoring 100:22
illusion 134:19
illustration 229:7
imagine 43:22 44:1 150:23 165:21 176:8,13 179:25
imagined 262:9
immediate 29:19 205:17 206:9,22 266:8
immediately 135:22 205:12,15
impact 40:14 136:8 158:13 172:19 195:24 215:8,9,17
implant 217:3
implication 179:10,11 187:13 274:22
implications 35:5 116:21 154:12,16 157:24 172:15,15
implied 66:20
importance 118:19 124:8
important 99:10 101:25 117:7 128:11,12
imprecise 196:18
impressed 74:7 118:15
impression 123:21 137:15 206:1
impressionistic 244:9
improve 85:22 244:24
improved 245:2
improves 244:17
inability 74:7 120:16 234:14
inadequate 116:9 119:13
inauthenticity 229:12
incidence 165:2
incidents 122:12
include 26:22 156:23 163:19 170:14 191:8
included 97:22 168:25 169:2
includes 23:17,20 26:22 118:20 133:5
including 62:4,8 116:18 206:4 253:8
inclusive 148:15
incompatibility 223:5
incongruence 26:7
incorrect 30:14,15 49:4
incorrectly 115:20
increase 100:6 149:20
increased 165:3 192:12
increasingly 109:17 260:20
independent 266:4
indeterminant 154:19 187:15,17
index 8:1
indicate 126:24
indicated 27:8 82:5 131:19
indicates 72:23
indicating 158:7 175:24
individual 16:10 26:5,25 27:1,3 151:22 195:2 203:22
individuals 101:20 110:23 192:25 193:7,13,24 204:8 204:8 243:16,17 245:10,12,16,22 266:4
indoctrination 81:14,16
industry 32:1
ineffective 160:9
influence 54:13 56:3 84:9 101:25 105:9,10 124:1 131:12 134:15 199:13
influenced 40:16 54:24 55:20 56:2 148:7 173:10
influences 54:25 55:2 202:7
inform 30:19 48:2 59:24 189:11 279:4
information 16:16 35:21 36:15 42:15 42:21 60:23 109:7 128:13 130:24 133:3 135:6 148:1 175:13 259:20 261:16
informative 45:16
informed 43:19,20 60:7,8 95:12 105:6,7 107:6 116:13,19,25 117:2,11 132:16 134:17 135:3 169:18 205:25 211:19 221:5 235:6,8 248:1
informer 117:20
informing 33:25 100:21 117:17 174:23
inhabit 232:25
initial 62:4 84:6 208:11 214:2
initialed 288:7
initially 51:23 159:1

injunction 8:14 64:9 65:20,25 66:7,10,19 67:8,16 67:19,24,25 213:15
injury 261:5,11
ink 288:7
innate 234:1
inquire 40:8
insel 79:21
insisting 177:2
insofar 57:22
instance 277:16
instances 23:1
institution 93:10
institutions 52:6 93:11 113:4
instruct 57:4,14 59:5 94:13
instructed 18:2
instruction 59:13
instructs 17:22
insufficient 31:25
insulting 281:6
insurance 32:1,11 41:3 85:16
integral 99:9
intellectually 54:22
intelligence 122:10
intense 209:25 210:7
interact 200:9
interacting 245:15
interaction 113:25
interactions 126:25 204:4
interest 97:24 98:8 100:14 226:1,2
interested 11:21 26:5 74:12 79:18 80:3 83:15 97:8,9 97:23,25 99:6 100:11,23 104:14 114:22 115:2,13 115:16 222:24 237:14 259:21 289:12
interests 199:18
interfere 141:15
interfering 215:4 234:14
intern 82:14,18
internal 225:4
internalized 161:5
international 102:21 136:10
internet 246:8,10
internship 263:15
interplay 54:13
interpret 252:20
interpreted 252:21 255:11
interrupt 36:9 104:3,4
intervals 212:5
intervening 183:13
intervenor 1:17 2:18 4:15 13:14 286:13
intervention 27:24 28:9,11 149:6 157:1 180:5
interventions 180:15 189:1 191:25 194:24 212:3
interview 129:9
interviewed 17:7 29:17
intimate 243:18 245:4
introduce 12:5 50:19 51:9 69:18
introduced 164:18
introduction 17:16 75:6,20 258:18,18 262:2
invasive 212:3
inventing 182:7
invested 261:4,11
investigate 170:4 204:11 259:2
investigated 83:3
investigating 143:10
investigation 170:2
invite 88:22 114:18
invited 39:16 77:20 89:20 93:2 121:21 122:16,18
involve 44:11,14 199:4 200:3,5 234:6,8
involved 23:22 69:1 84:25 104:22 105:24 121:10 169:5 170:11 220:14 285:2
involvement 65:6 116:19 168:16
involves 23:18 25:25 42:3 85:21
involving 15:14 22:20 23:4 37:20 41:2,10 43:16 45:14 46:2 63:23
ireland 125:1
irrelevant 226:4
isolation 239:11 244:19 246:5
issue 20:24 29:5 32:19 33:10 38:24 43:23 96:8 145:25 146:17,18,22,24 147:22 148:16 163:13 207:5 227:20,23 246:19 261:25 274:18 280:11
issued 103:15
issues 32:15 41:10 42:17 60:3,18 93:8 96:12 105:11 113:16,17 132:12 160:2,5 174:14 187:16,17 191:17 199:15,17
italics 172:10
item 24:7 25:5
items 23:20 25:6,7

j

j 190:14
jackson 1:6 2:6 11:12
janssen 62:19,21
january 37:23 77:23,24 78:2 255:13 256:12,15 273:24
jazz 271:16,18 272:4,10,14,15
jennings 271:16 271:18 272:4,10 272:14,15
job 1:24
johnson 6:5 13:1

johnson.com 6:11
joined 25:4,16 102:22
joke 75:12 78:25
josh 12:23 207:20
joy 258:22
judge 29:1 39:18 39:21,21 40:8,15 40:22 41:3,20 58:3 168:14,14,23
judge's 168:14
judges 40:3,3 134:24,25 135:12
judgment 208:20 281:15,20
judicial 32:15,15 38:23 46:1,8 47:22 48:9 49:1 49:17 50:9
julie 3:9 12:9
july 108:24 110:1
jumped 29:16
june 78:20
junior 149:15
juries 134:24
jurisdiction 20:20
jurisdictions 169:7
jury 169:12
justification 186:9 186:12 206:9 214:2
justified 38:16 82:23 83:4 216:1
justify 28:9
juvenile 37:10
jveroff 3:21

k

kadel 21:17 22:1 31:1,22
kagay 1:23 2:24 11:19 289:20
kang 3:5 12:11,11
katelyn 3:5 12:11
kathleen 3:8 12:2 14:18
keep 38:17 217:12
keeping 104:9 196:5
kelly 5:18 13:4 286:19
ken 90:10,20
keohane 22:8
kept 114:11,12
key 45:1 46:17 213:3
khartnett 3:20
kid 124:2,5 132:21 217:11 273:12
kids 100:23 118:22,23 126:3,4 157:6,9 166:16,17 176:4,8,9 235:7 238:12,12 271:13 273:4
kill 257:16 258:15
killed 257:25 258:23
kimberlee 7:19 11:17
kind 23:22 27:8 28:9,11 43:4 53:16 69:12 71:9 94:16 102:9 107:3 111:8 114:24 116:23 119:20 130:9 135:19 137:7,7 169:9 208:7 211:7,21 212:14,15 215:25 216:10 218:11 262:12
kinds 60:18 220:14
kkang 3:17
kmorgan 5:23
knew 30:19,21 34:23 121:23 211:2 225:21
know 14:13,22 15:16 16:18 17:19 18:7,17 20:15,20 27:16 30:20 31:11 32:20 35:17,19 37:16 38:13,21 39:1 40:7 41:10 42:13,15,18,21 43:24 46:18 47:11 54:12,24 55:19,22 59:9 60:11,17 61:21 63:16 64:3 64:12 66:18,19 67:18 68:1,10 74:1,16 76:12 77:15,18 78:4,5,7 78:10,15 84:21 85:14,19,24 88:17 89:7 90:14 91:18 92:11 93:19,23 94:10,18 95:1,3,16 95:21 96:18,22 98:14,17 99:8 100:5 101:4,18 103:11,15,21 106:2,9,11 107:12 107:17 113:11 114:14,15,15,16 115:11 117:10,22 118:2,3,3,3,4,11 118:11,13,18 119:15,17 122:25 123:17 124:13 125:16 126:6 128:7 129:19 131:4,5,10,11,11 131:15,18 132:7 132:12,21 133:1 133:19,20,21 134:16,17,20,20 134:21 136:6 137:13 139:13,17 140:7 141:14 142:5,7,8 144:2 145:19,21,23,25 146:13 147:2,11 147:21,23 149:22 150:24 151:11 153:4 154:2,11,16 155:8 156:13 157:5,8,10,16 158:22 159:13,15 159:17 160:14 163:20 165:12 168:21 169:10 170:7,17 172:18 173:15 174:7,9,11 175:1,9,12 179:5,7 179:9,10,11,15,16 179:16,18 181:7 181:10 182:3,14 183:9,19 184:13 187:23 188:16,24 190:14 191:22 192:11,17 193:25 194:1,3,13,18 196:24 200:6 201:7,8 202:3,5 203:3 208:19,19 208:21 209:19 213:2 215:16 216:14,17,21,22 216:22,23,24 217:24 220:5

223:3,9,20 224:3 224:21,23 228:23 229:3 230:5,6,21 232:7 233:16,16 233:22 234:16 235:7 237:16,19 238:3 239:16 242:10,14 245:1 248:11,12,15,16 249:1,8,11,21 250:19 253:2 257:25 264:17 266:11,16,17,21 269:4,22,23,25 271:10,16,22 272:10,11,13 273:4,21 274:18 277:14 278:10 279:24 280:19 281:5,16,21 284:13 285:8,15
knowing 117:9 118:5
knowledge 17:9 22:18 31:10 32:4 32:17,18 33:11,23 34:2,20,24,25 42:11,16 45:18,19 46:19,21 56:20 58:5 72:8 130:11 132:5,23,24 143:9 143:10 147:10,10 155:16 161:25 193:19 204:14 228:23 240:14 243:5 252:18,22
knowledgeable 32:13 66:22 80:1
known 35:4,5 42:22 43:25,25 47:6,6 48:3,3,4,5 56:20,20 71:15,16 130:9,15 131:23 131:24 133:23,24 245:13 279:5,5 280:4,15,15,20 281:14
knows 117:21 154:11 173:17 175:9 176:14 189:11,22 263:5 280:14 281:13

l

l 6:6 15:2 135:20 212:21
labeled 242:8
labels 199:18
lack 42:16 133:3 143:9 212:14 247:10
lacking 189:24 190:6
lacks 173:24
ladies 74:20
lainey 1:16 2:17 13:15
lambda 4:4 12:20 12:21
lambdalegal.org 4:11,12
landing 29:1
landmark 168:19
landscape 233:15
language 163:4 164:22 165:12,16 165:18,20 194:10 195:8 198:18,21 199:7 221:23 223:7 266:19
large 106:7 126:10 144:3 275:23
largely 127:22
larger 148:7,17 154:24 165:4 166:2,5 235:19
late 87:18 195:15
latest 103:16
law 3:12 4:7,19 5:7,19 6:7,18 7:7 13:16 14:19 32:14 66:22 143:11 145:21,23,25 146:6 158:17
lawrence 4:18 13:17 225:15
lawsuit 142:24
lawyer 33:3 34:16 52:25 53:19
lawyers 45:3,21 58:2 69:8 253:2
layperson 89:6
lead 47:13 160:9 162:1 255:16,18 255:21
leaders 115:12
leads 162:3 242:18
learn 74:18 96:24 125:21
learned 69:6 99:3 137:11
leave 220:24
leaves 183:12
lectures 89:20
lectureship 88:21
led 89:10 96:2 101:15 239:13
left 83:1 110:20 111:16,18 112:7 258:15,16
legacy 261:4,10
legal 4:4 11:18 12:20 48:1 66:23 68:23 69:5,14 73:15,18 125:13 125:14 126:20 168:15,20 196:5 287:15
legally 38:14 132:13
legislators 218:12
legislature 134:25 218:5
legitimacy 81:12 83:12 147:6
legitimate 152:11
length 182:3 209:13 220:21
lens.captivate.fm 256:10
lesbi 232:4
lesbian 232:4,11
lesbians 223:24
letter 138:21 139:6,7 140:20,23 179:3 182:20 183:8 208:21 210:23 211:9 260:23 261:2,3 265:16
level 36:13 98:12
levine 1:19 2:21 8:3,12,16 11:10 13:15,22 14:3 15:1,5 16:11 36:11 47:16 51:19 57:10 63:11,13 64:6,7,8 69:2 70:2 70:19 75:23 92:4 95:1,5 108:10 111:3,3,5 156:2 180:12 184:22 203:19 218:4 219:9 222:8

223:12 229:8 252:6,11 255:2 256:12,13 258:3 259:5 260:24 262:15 264:20 265:20 267:9 268:3,11 269:8 270:3,23 272:2 273:10 275:13 278:14 279:10 280:6 283:11,13 286:7,17,22 287:3 287:8,12,13 288:4 288:15
levine's 183:23 184:1 186:24 251:16
lgbtq 113:20 118:1 118:25
liaison 52:2
library 92:12 258:21
lichenstein 283:11
lichtenstein 285:17
life 46:20 79:19 84:7,10,11 128:25 129:18 131:19 138:24 149:22 158:1,2 171:10,17 171:19,20,22 172:2,8,9,19,24 173:6,9 174:1,15 174:16 179:13,17 189:4,4,5,16 191:3 191:19 195:4,11 199:1 200:10 203:22 206:5 208:16 210:19 217:1,2,8,9 222:22 223:11 225:4 228:25 229:6,9 230:3 232:10,12 232:19 258:17 259:2 262:9 270:15 274:6 277:3,4,7,9 282:7
lifelong 190:17
lifespan 272:23
lifestyle 271:9
lift 74:16
light 251:21 268:21
likelihood 117:5
limit 96:12
limitations 38:15 132:24 133:9 136:18 212:2 277:13
limited 58:5 176:11 179:6 245:14
lindsay 251:4,19
line 78:12 82:24 105:17 144:25
lisa 90:10,22 232:2 242:12
list 87:20 92:4 168:7 195:5 237:20
listed 26:23 87:21 92:22 170:19
listen 140:4 147:8
listening 50:8 80:20
litem 45:21
literal 60:13
literature 31:11 32:5 101:12 156:20 158:12 171:14 172:3 175:9,10 202:3 225:4,24,24
litigation 168:3 170:1
little 34:18 51:7,9 53:2 75:9 78:24 122:9 127:17 135:23 179:4 212:21,22 223:21 223:24 231:14
littman 200:12
live 143:3 210:3 258:17 276:7 281:10
lived 234:20 245:21
liver 214:11
lives 83:16 160:7 189:6,7 193:2 244:17 264:6 281:10
living 25:13 128:23 129:11 140:5 190:9,10 222:17
llp 12:3,8,10,12,18 14:19
located 24:14
london 125:1
long 27:23 46:20 58:16,17,18 67:21 70:9 80:21 101:23 102:5 110:2 114:23 115:19 117:7 131:21 133:3,12,14 146:14 153:18 157:23 174:18 179:21 195:3,4 209:11,12 234:20 235:12,13 238:18 276:22
longer 97:4 101:2 101:3 154:9 164:22 196:4 209:15 222:13
look 35:3 70:5,11 92:25 122:25 135:10 144:14,16 149:19 151:21,24 151:24 152:2 161:2 163:12 170:18 172:3 181:17 217:23 219:2 222:6 242:23 243:23,23 244:3 263:6 283:14
looked 72:20 97:14 102:14,14 193:11 215:7
looking 69:8 91:25 144:11,14 214:21
loop 186:21
loose 283:21 285:10
lose 145:14
losing 36:4
loss 38:11 55:5
lot 54:15 76:7 85:2 86:3 172:25 200:20 232:4 233:22
lots 17:6 56:5 69:7 230:7 275:7
love 89:23,23 225:3 234:11 238:4
loving 89:25
lower 183:22 184:7,24,25 186:25 187:8,15

lunch 105:17 148:21,24 152:21 155:18,19,22
lung 57:1
lungs 214:11
lwilkinson 4:22
lying 39:21 40:1

m

m 3:6 106:19 135:20
m.d. 8:17
machine 289:7
maia 4:6 12:21
maintain 239:14
major 162:1,3 180:14 213:2 215:9 220:2
majority 24:7 75:7 97:19 190:10 223:18
making 70:13 107:15 132:19 134:8,12,19,23 135:1,7 169:14 173:10,14 189:3 195:18 212:14 243:21 252:22 275:22 276:9
malady 226:18 227:19
male 16:5 25:9,12 38:6 129:10 139:16 142:20 143:5 145:6 147:15 149:16 174:10 193:6,12 193:22 194:5 204:17,18
maleness 223:2
males 25:13 223:20 232:14
man 109:24 257:14 258:20
manifestation 162:15
manifestations 181:20 271:24,25
manner 251:24 253:25
mansion 83:19
mantle 98:15
march 1:20 2:24 11:1,4 24:13 140:18 218:6
marciano 90:10 90:22
marked 51:2 63:3 63:4 69:24 70:2 217:21,25 256:21 258:11 260:14 261:21 263:11 265:11 267:1,22 268:25 269:13 270:8 271:2 272:18 275:4 278:4,23 279:18
market 137:8
marriages 244:1
married 221:25 243:25
mas 262:25
masculine 223:24
massachusetts 3:15 24:15 26:2 28:7 167:24 168:12,13
mastectomies 25:11 49:12
mastectomy 180:10
master's 97:21 263:14
match 19:17 150:19 189:8
matches 19:12
mate 234:11
material 126:21 199:19 203:11
materials 59:23 61:1,9 126:24
mathematical 185:23
matter 11:11 14:6 16:10,14,22 21:16 22:1 23:25 26:11 28:13,24 32:16 33:14,17,23 34:8 34:15 35:7,13,25 36:3 38:3,4,19 39:9,10 43:4 47:17 48:18 52:1 52:12,21,24 53:8 53:21,23 54:19,20 56:13 57:10 59:24 61:15 62:19 64:19 65:6,25 67:6 69:8 69:14 70:3,22 71:17 72:17,21 95:12 107:8 114:25 139:15 146:18 209:15 246:19 280:24
matters 26:1 31:2 31:3,13 32:24 35:12 41:10 42:14 45:20 69:15 126:20 168:20 171:22
mccuskey 6:16 7:5
mean 19:9,11,17 43:24 45:21 46:8 46:25 53:12 55:20 61:20 70:10 78:4 81:14 85:5 87:9 91:4 101:17 105:17 114:12 118:23 123:24 129:2 134:21 142:16 143:17 150:14 152:10 162:12,13,14 169:5 179:5,21 209:24 224:18 228:25 230:17 238:9 240:12 265:25 278:9
meaning 37:14 45:25 46:7 91:6 95:24 277:23
means 52:2 64:13 67:20 73:13 118:5 177:1 212:5 225:2 271:8
meant 73:9 103:11
measure 267:17 267:18
measured 96:12
measurement 212:6
measurements 96:8 136:16
mecha 136:16
medal 25:22
media 11:9 287:14
medical 22:24 23:2,16,17 25:17 27:21 30:24 47:13 73:6,8,12,15,18 74:18,19,25 75:6 75:11 82:9 83:2,2 83:6 89:11,12 117:6 134:13,15 134:15 135:3,7 142:9 189:19

191:25 196:25 208:9,9 210:9 211:10 228:22 234:7 246:23
medically 27:9,11 27:14,17 28:3 131:19
medication 20:7 20:12 186:17
medicine 74:9,15 74:23 81:24,25 83:19 87:22,25 93:8,9,9,10 98:21
meet 38:9 58:16 58:18 116:17 118:14,17
meeting 90:1 101:2,4 115:24 182:17 284:8
meetings 202:6
member 93:2,24 94:1 97:2,18 99:2 99:10,14,16 107:1 107:17 149:12
members 89:13 106:5 246:22 255:19,24
membership 97:11,20
memory 195:17
men 204:18 225:16,18 227:10 233:6
men's 225:17
mental 79:23 84:10 88:16 100:2 100:21 158:23 160:4 238:5
mentally 82:15 173:5,25 188:18
mention 113:8,18 156:9,9 163:16
mentioned 44:18 56:10 106:25 107:1 125:10 127:3,3 140:12 163:11,14 176:19 203:14 211:17 227:17 246:3 255:14 261:2
merely 161:8 199:1 206:7 214:3
met 58:14 99:20 99:20 141:7 188:5 272:14,15 284:24 285:14
method 172:2,3 179:7,8,18 184:23 201:5 248:1,2
methodologic 130:6
methodology 130:15
methods 136:19 137:15 179:20 186:25 201:1 247:6,17,20
middle 80:24 145:1 205:8 238:16 245:8 249:3 250:4
mind 31:18 32:9 55:23 84:13 92:16 157:25 216:12
mindful 199:10
minor 87:10 91:7 138:9,12 141:3,4 141:23 142:3 192:21
minority 224:19 244:23 246:11
272:23,25 273:3,8
minors 87:9 116:14 130:23 165:5,9 166:2,6,10 167:13 208:25 209:1
minuses 222:5
minute 83:9 212:19
mischaracterizes 169:15 250:7 251:11 254:12
mischaracterizing 250:10
misconstrue 208:6
miserably 139:9
misleading 230:2
misread 137:22
missed 187:13
missing 34:25 187:8 191:16 283:3
misstated 92:23
mistake 227:21 228:1,3
mistaken 226:10 226:17 227:1,19
mistakes 40:4
misunderstand 248:12
misunderstands 248:6
misunderstood 276:17
mitch 7:16
mixing 135:6
model 121:6 143:24,24 144:18 181:4,8,9 182:2,5 182:6,8,8,11,12 183:3,18 186:5,5,8
186:11,12 202:15 202:15,16,20 203:4,8,12,18,18 203:20 204:6,10 205:2,5,17 206:2 208:4,8,12
models 8:19 180:19 181:2 198:7,11 201:10 202:1 203:3 208:3
modern 71:18 225:24
modest 106:6 229:4
modesty 229:2
modify 96:3
mom 273:6,13 274:20
moment 26:23 46:5 50:21 51:1 55:15 56:1 70:5 201:8 256:24 274:8
month 15:13 24:21 166:13 180:8 257:20
monthly 167:1,4
months 30:2 38:18 77:25 89:3 110:7 113:1 136:13,14 179:22 180:7,8 210:4 242:25 275:20,21
morally 132:14
morass 135:8
morgan 5:18 13:4 13:4 286:19,19
morning 12:2,7,9 12:11,13,15,19,23 12:25 14:3,4 128:21 129:3

235:5 246:3
mother 1:6 2:6 11:12 21:6 85:16 169:14 197:3,4
mothers 239:16
motion 8:13 64:9 65:20 66:7 67:7 164:17 251:17
motivation 276:20
motivations 171:1
mount 283:22 284:21
mourning 140:2
mouth 139:21 163:1 230:15 257:15 266:17
move 194:20 196:13 198:2
moves 75:1
moving 167:18
multicultural 130:18
multiple 89:15,15 124:23 125:11 127:3 130:18 200:9 234:21
multisite 130:17
multitudes 256:11
murder 82:17
music 148:13
mzelkind 4:12

n

n 15:1,2 23:5 106:19 190:14 256:12
naive 68:23 217:17
naivety 69:13,14
name 11:17 14:18 14:24 15:16 23:5 28:5,10 35:18,19 40:19 41:6 78:23 92:24 109:10,10 109:13,15,16,16 110:22,25 111:4 122:23 197:22 214:12 237:6 271:16 289:15
named 39:10 88:20 103:3
names 147:24
narrative 50:2
narrow 279:22 280:13
narrowly 151:21
natal 142:20,20,21 142:22 143:2,5 149:16 151:25 152:3 232:8,13,14
nation 168:19
national 120:23
natural 171:22
naturally 177:6 215:5
nature 15:20 16:21 34:2 38:3 71:15 74:25 94:18 95:3 96:5 128:13 176:6 182:13 195:1
navigating 232:19
ncaa 147:23
ne 4:20
near 140:23
nearly 191:19
necessarily 43:11 190:24
necessary 27:9,9 27:11,14,17 28:3 146:20 265:16
necessity 27:22
neck 258:24
need 16:15 18:1,16 18:20 47:7 60:22 75:10 77:13 79:4 80:22 91:17 95:21 96:9,12 104:4 114:24 130:16 132:16 136:9 144:15 164:18 182:18,19 205:3 229:2 254:4 283:16,17
needed 57:16 96:9 112:5
needs 76:1 144:2 172:7 174:18 221:10 284:12
negative 39:20 74:4 84:10 117:19 130:2 139:21 158:13 163:3
neither 185:9 289:11
nets 286:1
neurologist 79:1
neurology 78:22
neutral 253:25
never 24:8 26:18 30:7 34:21 39:16 40:9,20 42:18 45:3 77:17,17 78:5,7 88:6,8 92:21 114:2,13 115:14 126:14,15 141:7 170:13 209:2,4 228:11 241:16 242:17 271:23 272:13,14 272:15
new 4:10,10 16:3,4 16:5,6 60:6 75:5 112:1 180:9 182:7 188:3 203:20 209:3 242:17 243:4 250:22 263:23 266:11
newborn 196:18 197:1,2
newborns 196:22
newly 213:13
newspaper 143:1
nice 192:5
night 20:9,12
nih 79:21 197:17 197:21
nimh 79:21
nine 220:7,16 258:14,18
ninth 41:4,5
nodding 19:1
non 38:7 191:18 223:15,17
nonjudicial 44:21
nope 145:17
normal 217:16 264:4
norsworthy 40:15 41:21 170:15
north 21:16 22:1 31:2 32:24 72:21
nosewor 170:15
noseworthy 39:11 40:15 41:17,25 170:17
note 110:14,18 211:21,25
noted 287:17 288:7
notes 78:19 179:3
noteworthy 168:17,17

notice 70:25
noticed 198:18 213:13 214:18
noticing 12:1
notion 48:13,13,16 83:8,13 161:11 173:23 227:20 237:24 244:15
notions 31:20 84:15
notwithstanding 60:24 284:23
novel 54:24
novels 56:7
november 60:5 77:9 88:3
nowadays 134:23 215:13
number 8:10 11:16 25:1 56:4 88:12 96:12,20 100:6,8 111:14 126:9,10 160:6 161:20 202:21 206:2 268:19 287:14
numbers 77:6 128:8,9 136:1 165:4 166:2,6
numerator 185:9 185:9,19,21 187:9 187:17
numerical 86:8
numerous 194:14 235:3
nursery 197:1

o

o 23:5 37:24 135:20
o'clock 148:20
o'malley 256:1,14
oak 257:16
oaks 6:8
oath 13:23 20:1 289:6
obese 271:20,21 272:5,7
object 54:10 61:16 81:9 109:3 152:22 186:15 193:14 213:19 226:25 236:8,12 250:2 262:23 263:1
objected 36:4 185:3 225:12,13
objecting 38:11 120:2,15 132:25 201:1,2 205:22
objection 14:8,11 14:12 27:15 37:12 40:13 41:15 48:10 48:22 49:3,19 50:1,12 55:13 57:21 59:25 60:24 66:1,17 67:9,17 68:6,14,17,19 69:12 83:21,25 85:12 86:15 103:9 106:14 111:13 119:3,22 128:3 134:10 141:9,25 146:3 150:12 151:20 153:2 154:20 158:19 159:12 161:19 162:24 163:9 169:15 170:6 171:4 180:24 183:4,5,20 184:3,4 184:11 187:1 192:3 195:15 196:23 200:19 205:20 206:19 213:22 221:22 222:15 224:8 226:11,19 227:7 228:17 229:20 230:24 231:9,13 231:25 232:21 234:4 240:23 241:6,24 242:9 243:11 246:20 247:8,19,23 249:5 249:6,17,23 250:7 250:9 251:11,25 253:15 254:12,13 259:9 263:8 264:24 267:12 268:5,22 269:18 285:1
objections 11:24 14:8,11 41:20
objective 31:9 92:19 93:7,11 104:11
objectively 132:10
objectivity 104:2
objects 18:1 199:1 237:9
obligations 36:12 36:19 82:22,23 95:3
obnoxious 226:4 227:3
observing 193:21
obstetrics 197:2
obvious 259:25
obviously 16:9 159:15 194:9 205:7
occasionally 273:22
occasions 25:12
occur 160:20 214:13
occurrence 85:9
occurrences 137:10
occurring 214:13 246:7,9,10
occurs 75:3 233:6 233:7
offending 223:5
offensive 223:4
offer 30:22 73:7 94:25 202:9
offered 25:24 26:19 45:2 107:11 115:6
offering 31:9 63:21
office 13:11
officer 25:9
official 1:11,13 2:12,13
officials 170:3
oftentimes 126:21
oh 27:4 29:20 35:11 37:15 73:25 76:9,19 97:4,19 106:22 110:6 127:16 138:20 141:18 153:12 157:22 162:4 166:23 168:25 169:8 201:14 203:7 217:11 218:23 219:9,19 258:10
ohio 139:12
okay 14:20,22 15:20 20:11 21:11 23:14 35:11 50:19

50:25 54:6 62:16 63:1,14 64:18 65:5,9 67:13 70:23 73:11 75:21 77:8 78:17 91:11 91:18,25 92:23 97:2,17 100:25 107:25 110:10 111:6 119:9 123:9 140:5 142:5 143:11 144:10 151:17 156:7 158:15 163:6 166:22 170:10 178:12 182:22 194:19 198:2 201:18 202:11,23 203:1,7 207:24 211:6 212:18 218:7,10,19 219:23 237:10 253:21 255:22 256:6,17 257:10 259:23 260:5 265:9 266:18 275:10 283:8,18

old 84:22,22 93:21 132:1,2,3 134:2,3 134:3,4 140:3,12 147:3,3,4,4 149:11 150:7 151:17 186:14 220:6,7,7 220:11,12,13,16 220:16 221:7 234:22,22 235:7 249:2,13 250:3,14 250:24,24,24 264:2

older 80:24 85:7 89:8 93:10 209:9 234:21 250:19

once 47:4 87:15 88:22 140:21 143:23 166:23 167:5 195:25

one's 84:17,17 116:8 215:9 281:22

ones 130:2 241:12

ongoing 114:3

online 60:7 245:13 263:7

onset 215:2

open 69:22 148:11

openly 284:1

operated 136:1,2

operationalize 215:22

opine 41:11

opinion 42:10,19 42:24 43:1 49:17 49:24 55:4 56:7 56:18 59:24 61:2 61:15 63:21 68:25 79:20 107:11 150:17 151:3,9,12 151:13 155:16 157:12 163:17,22 164:1 170:12 186:4,7,10 224:6 230:4 248:10 249:1,12,21 250:2 250:10,12 251:3

opinions 45:3,20 95:12 96:17 152:10 250:8 252:1 254:15 283:7

opportunity 23:7 208:13 214:15 217:6

oppose 251:22 252:13

opposed 132:8 160:15 161:18 173:4 193:12 236:20 247:5,16 248:18,24

opposing 36:1

opposite 117:12 156:24 193:1

opposition 33:21 34:13 65:19 66:6 67:7

option 133:5 202:12

options 133:4 202:9 226:21

oral 37:14 42:7 43:8,16 45:9 46:1 46:8 48:7

oranges 180:17

order 47:7 96:9,13 112:5 185:7,7 253:12

ordinary 282:10

organ 214:9,12

organization 39:1 92:19 93:6,7 94:19 98:11,12 103:1 107:4 122:3 122:4,6 149:14 255:3,7,9 266:6 284:14,18,19

organizations 120:14 147:25

organized 151:5 285:15

organizers 115:12

organizes 149:14

orgasm 234:16

orient 53:6

orientation 215:22 223:19 224:5 231:24 232:6,8,9 233:11,16,18

orientations 233:23

origin 199:3

original 167:16 193:10,10,15 223:3 230:20 264:14 277:22

origins 79:23

ostrich 134:6

ought 115:24 117:2,15,16 168:21 189:7 262:12 263:20 270:14

outcome 11:21 38:13 39:20 96:13 149:7 155:2 169:19 174:18 188:22 190:12 222:14 224:3 239:19

outcomes 101:23 102:5 133:12 157:2 238:1,9 271:25

outlier 120:2 264:1

outside 59:15,18 231:25 254:14

overall 176:22

overcome 86:6 275:9

overcoming 275:8

overdose 139:11 139:18,18

oversimplify 264:16

p

p 15:1 256:12
p.m. 2:23 108:7 155:21,24 207:14 207:17 254:21,24 286:3,6 287:11,17
page 8:10 17:17,20 63:8,25 64:1,4,4,5 64:5,7,23 65:10,10 65:11 70:16 71:1 75:17,18,18 78:14 78:19 91:11,22,23 92:4 108:16 137:16,18 143:15 143:19 156:4 164:8 167:19 194:22 197:19 198:3 201:10,22 201:23 203:12 205:2 212:25 213:8 218:13,15 218:22 235:11,14 282:23 283:2
pages 1:25 55:21 70:8 74:17
paid 32:23 33:1 253:10
pain 26:6
panels 90:14
paper 99:13 101:8 101:9 107:5 109:9 109:20,21 174:8,9 197:24,25 228:20 229:10,15 230:6,7 239:23 260:19 266:20
papers 56:14 60:2 60:11 107:6 133:11 170:8
paradigm 198:14 198:23 199:10
paragraph 55:23 92:24 108:15,17 108:21 110:15,18 137:17,19 140:7 143:16,20,25 144:7,15,19 145:1 145:14,20 148:23 148:25 156:5,11 156:17 164:8,10 164:21 165:18,19 167:19,19,25 168:4 170:16 171:7,8,10 187:21 187:22 192:18,20 193:23 194:21,22 196:6 197:8,15,16 197:16 198:13,22 200:12,15 201:21 202:13,17,25 203:13,14 204:13 205:1 207:6 212:21,24 213:8 219:14 229:15 235:10,21 243:14 245:7,8 282:20,23 283:9,10,20
paragraphs 164:5 220:1 236:2,3 237:17 240:16 283:14
paralegal 12:21
paraphilia 225:8 227:6,9
paraphrasing 229:17
pardon 29:20 76:7 95:20 153:7 274:12
parent 85:20,21 86:1 120:11 122:19,20 127:9 127:15 128:17 197:5 240:11 271:10
parent's 122:23 240:12,13,13,14
parental 38:11 128:14 199:11
parents 35:13 36:3 36:7,8 37:20 38:6 38:10,17,24 85:5,7 85:15 116:15,20 117:1,1,9,17 118:7 120:11,12,22,22 120:23,24,24 121:4,5,7,10,16,21 122:2,6 123:4,11 123:22 124:21 125:5,8 127:2,22 127:23,24 128:2,4 129:22 130:1,24 130:25 132:5,11 133:23 139:13,25 141:9,18 147:1 152:2 165:10 167:7 169:3 201:5 201:6 203:24 204:3,4 206:25 209:21,22 210:16 210:21 221:14 238:3 239:13 240:3,4,6 249:16 259:3 279:4,6
part 36:10 55:24 61:9,14 71:17 81:5,5 82:5 98:18 98:18,19 103:7,12 104:18,18 112:14 113:1,15 114:20 144:17 151:1,2 168:24 171:8 197:1,4 200:7 205:14 219:4,5 233:14 238:6 247:12 252:17 275:25
partially 170:24 260:7
participant 99:22
participants 2:22 11:5
participate 96:15 149:4 151:4 153:14 154:24 233:10
participated 49:11 77:16
participating 152:1 154:25
participation 31:11 32:6 42:8 43:3 146:11 156:23 169:18 252:13 253:13
particular 27:24 32:3 33:25 36:3 38:23 41:8 52:6 54:19 56:21 60:12 60:14 72:4,10 79:17 80:3 101:3 117:13 131:4,21 138:3 165:23 199:21 242:17 249:9
particularly 120:25
parties 11:7 14:9 94:22 289:13
partner 234:11

parts 125:2
party 11:20 36:1 46:10,12,13 47:24 47:25 48:8 49:2 49:18,25
pass 193:1 238:5 281:15,20
passage 219:3,12
passion 263:22 269:25
passionate 235:7 277:15
passionately 282:5
paste 72:16,17
pathway 16:23 195:11 223:11,14 223:17 227:12
pathways 226:1
patient 15:24 16:2 17:7,8,10 27:25 38:8,9 63:20 82:17,19,21,22 83:1 85:16 86:3,6 86:23,25 91:2,4,9 108:22 109:2,8,9 109:14 110:3,4,12 114:24 116:15 124:23 127:1,4,9 127:15 138:9,12 138:21,24 139:4,8 140:11 142:3 176:19 182:17 183:6 203:21 208:12,16 209:20 210:15,17 225:20 228:1,20 231:6 239:13 241:7 258:3
patient's 138:22 141:12 210:20,22 230:15
patients 63:24 82:22 84:15 85:1 85:3,7,10 86:10,11 86:13 87:2,11,18 89:2,4 90:16,25 100:16 127:16,21 136:1 138:3 141:23 167:3,6 173:11 174:4,6,12 174:24 175:5,7,24 176:2,21 177:16 177:24 178:17 179:7,19 183:16 183:18,22 184:22 184:23 186:24 187:12 188:9,14 198:25 203:20,23 206:25 221:3 222:12 230:23 231:19 233:21 236:24 238:10 239:18 244:4 284:2,7 285:9
patterns 102:2 171:21 223:24
pause 178:3 213:10 214:1,3,7 214:19,24 215:25 216:11
paused 215:11 217:12
pdf 64:2
pediatric 174:2 176:7
pediatrician 86:2 176:2
pediatrics 146:7 147:18 148:6,7 172:22 176:4,9 196:25
peers 215:9,18,19 220:11,13
pejorative 226:22
pelet 3:6 12:13,14
penalty 288:5
pending 76:20,21 178:10 249:18
pennsylvania 218:5
people 24:24 25:4 26:6,7 30:18 32:10,14 33:7 36:6 45:18 46:23 68:19,25 69:7 74:23 75:3 78:4 80:4,5 83:15,17,21 96:16 97:21,22,23 98:5,6,15 100:8,10 100:13 101:25 103:24 104:24,24 106:5,15 107:3,11 107:16 114:1,9,14 114:23 115:23 117:15 118:5,11 118:18 122:22 123:8,14,16 124:25 125:1,1 126:1,16 128:5 129:13,16,25 130:10 131:9 133:15 135:21,23 135:24 136:2,4 140:7 141:7 148:12 152:15 154:3 155:5 159:21,25 160:12 160:15 161:4 163:13 171:18 172:18 174:3 176:4 177:4,9,12 179:8,9,15 181:9 182:14,14 189:11 190:24 191:6,8,13 191:15,18,19,25 192:13 202:9 206:1 208:14 209:9,17,25 210:2 211:15 214:23 215:13 216:3,4 221:24,25 222:1,7 222:8 223:13 225:7 226:8,10,17 227:15,18 228:25 229:1,5 230:2 231:23 232:9,17 232:18 233:11,15 233:22,25 234:25 236:11,19 238:8 241:4 242:21 243:9,24,25 244:1 244:10,18,20,24 245:3,3 246:2,5,10 246:11,25 247:2,3 247:5,7,16,25 248:16,19,25 250:19 252:19,24 254:10 257:24 262:5 263:16,20 267:6,7,16 268:1 268:12 269:3 272:11,12 273:22 274:2 280:20 281:2,3,10 282:4 284:22 285:13
people's 80:21 97:9
perceived 182:18 237:20
percent 73:10,13 73:19 74:20,24 75:11 79:22 123:14 175:7

177:12,15 247:5 247:16 248:16
percentage 243:24 267:16 275:24
perception 137:2 137:5
perfectly 83:4
performances 82:1
performed 211:8
performing 120:7
period 44:6 112:9 140:15 155:17 176:23 190:13 197:6 209:8 210:8 210:10 211:7
periodically 167:7
periods 175:5
perjury 288:5
permissible 239:3
permission 66:4 285:13
permit 251:18
permitted 27:3 42:25 145:8 147:16
permitting 150:6
perpetual 140:2
perplexed 253:22
person 19:12 21:7 25:24 26:14,16,17 27:19 29:2,6 37:15,15 50:11 54:12,15 66:20 74:11 82:15 90:21 124:2 130:8 138:25 139:1,2,11 139:23 140:11,20 140:22 141:10 149:18 150:8 161:25 162:2,2,4 172:24 173:4,5,25 174:3,8 178:20 180:7 182:23 183:9,9 188:19 195:12 206:5 210:16 211:1 215:10 221:6,12 221:25 222:18,23 222:25 223:11 224:17,18 228:23 229:21,25 230:11 230:21 233:7 234:21 240:17 246:23 248:5 262:6 263:4,14 270:13 271:19 274:6,18 276:14 276:19 281:13
person's 140:24 149:20 189:1 230:4 232:7 235:21
persona 38:7
personal 16:19 69:11 233:18
personality 126:3
personally 68:18 111:17 123:5 126:15
persons 45:21
perspective 46:20 46:21 151:25 152:1,2,5 153:13 171:11,17,22 172:2,5,13,24 174:16,16 179:14 191:3 212:15 213:17 229:6 281:1,2
perspectives 152:12,14
perturbed 120:25
pervasive 160:8
perverse 236:19
phase 66:11,19 67:16,19
phases 67:18
phenomenon 72:16 124:15 166:7 197:2 220:8 220:9,10 240:8 241:16
phrase 21:21 194:1,3,4,5,8 195:20 266:16
phrases 175:19 195:22,23
physical 199:12 271:9,24
physically 91:3
physician 62:23 74:12 174:17 282:10
physicians 173:21
physiology 42:14 56:25 189:1 224:12 234:10,13
pi 165:19 193:5,19
pick 148:24
picture 271:21
pictures 272:12
piece 77:9 211:19
pike 172:16
pill 20:9
pioneers 256:11
pittsburgh 74:13
place 11:7 48:22 75:5 114:9 195:7 256:15 268:7 289:4
placed 50:22 289:6
plaintiff 1:7 2:7,21 3:3 4:3 11:11 12:4 12:8,10,12,14,16 12:18,20,24 19:22 21:6 64:15 142:6 144:13
plaintiff's 8:13 32:22 64:9 65:20 67:7
plaintiffs 54:3 171:1
plan 83:16 113:1
play 42:25 144:13 149:11 150:6,8,19 157:13 162:20 199:16 249:4,16 256:17,19 258:8 260:12 261:19 262:20 263:10 265:9 266:24 267:20 268:23 269:11,15 270:6 270:25 272:16 274:4 275:2,18 278:2,21 279:15 279:16
played 45:2 257:5 257:11,18 258:13 259:5,8 260:16 261:23 262:24 263:13 265:13 267:3,24 269:2,9 269:21 270:10 271:4 272:20 275:6 278:6,25 279:20
playing 151:17,18 158:8,16 249:14 263:1
plead 262:1,11

please 11:24 13:19 14:22,24 18:7,17 18:25 27:12 29:12 29:21 34:5 46:13 49:23 51:1 58:11 70:5 73:22 91:18 96:4 102:19 132:22,22,23 149:9 152:24 153:10 156:13 164:5 165:24 184:19 185:6 190:2 228:10,10 252:3,4 256:19 258:8 260:12 261:20 262:20 263:10 265:10 266:24 267:21 268:23 269:11 270:6,25 272:17 275:3 278:3,22 279:17
pleasing 54:17
pleasure 234:15
pllc 5:17 6:5 13:1
plus 70:9
pluses 222:5
podcast 77:16,20 78:10 255:14,16 256:4,13 259:14 259:16,19 260:11 260:25 262:16 263:5 264:21 265:5,21 267:10
podcasts 77:19 78:1
point 14:21 45:3 62:1 71:21 82:5 83:7 105:16,18 124:1 135:9 148:20 159:20,24 160:5 186:20,22 212:10,13 217:19 240:20 254:4 258:1 275:15
pointing 254:16
points 213:3
policies 147:25
policy 162:20
political 32:3 135:6 148:18 200:21
politically 226:3
politicians 134:8 134:14,20,21 135:11
politics 111:11,22
pool 243:16
pop 201:19
popular 225:4
population 30:25 160:23 190:19,22 191:6,11,12 234:16
portion 94:15,20 95:24 205:25
portions 91:24
portray 221:11
pos 95:4
pose 118:13
poses 160:12
position 30:21 32:10 33:24 40:16 47:18 82:16 130:12 175:3 248:6,7,8 270:18
positive 29:25 74:3 84:9 117:19 128:18,20 129:13 158:13
possession 40:5
possibilities 185:12,14 221:7
possibility 95:5 187:10 209:7 215:15 235:1
possible 183:16,21 183:25 184:7,9,17 184:21,24 185:1 186:24 221:20 227:17 242:16
possibly 183:13 194:15 214:20 244:11,15
postcard 179:4
postmortem 139:13
postoperative 271:20
postpartum 273:6 273:13
potential 37:20 163:12 165:6 166:3
potpourri 97:23
pounds 277:5
power 233:10 264:13
powerful 195:23
practical 96:13
practice 64:16 82:10 84:24 85:9 111:4 113:23,24 124:11 125:12,21 137:3 176:24 181:25 186:10 206:18,20,22 246:7 257:12,14 264:11,12
practices 90:3 126:19 188:2 283:7
practicing 84:7 175:2 280:22 281:25
practitioner 105:3 128:18
practitioners 129:23 135:15 144:24 176:10 203:4 205:5 206:17
pre 275:24 276:10
preber 44:4,15
prebu 43:21
preceded 101:21 275:19
precedent 101:14 101:17,21,24 102:2,6,10 103:7
precedents 69:9
precedes 276:4
precipitate 155:3 155:3
preclude 198:24
precluded 170:25
predeclaration 275:24
predetermined 212:5,5
predict 155:1 162:7 222:5 241:12 277:11
predispose 271:9
preexisting 161:13
prefer 27:17 135:3 135:4 148:24 159:17 196:3
preferable 35:8
preference 195:20
preferred 222:14
prejudicial 112:1

preliminary 8:14 64:9 65:20,25 66:6,10,19 67:8,16 67:19,24,25 213:15
prelude 276:18
premed 74:13
premised 237:23
premorbid 161:2
prenatally 206:6
preparation 59:19 60:15 62:9
prepare 53:20 58:8,10,21 67:15 70:23
prepared 97:21 199:20 218:11 263:14
preparing 71:4 73:1 165:24
prepubertal 43:9 43:17,21 44:4,6,11 44:15,18,25 45:13 45:14 86:21,22,24 87:2 90:25 91:1 157:6,9
prerog 134:1
prerogative 134:1
pres 24:10
prescribe 140:19
prescribed 123:6 123:12,13 138:1 138:11,15,18 141:2,6,7,10
prescription 23:21 115:25
presence 59:15
present 7:15 11:22 24:23 33:11,22 56:19 114:1 118:22 122:3 149:5 160:13 208:18
presentation 8:19 90:8 229:22 262:7
presentations 90:15,19
presented 20:25 29:15 39:18 40:6 88:17 90:12 120:18 165:7 186:14 273:18,20
presenting 56:18 90:2 154:4,7,14 165:5 166:3
preserve 131:19 239:21
preserves 14:8
pressure 100:10 110:11
presume 35:18 68:8,11 115:11 142:11,14,19 143:4 153:23 188:22
presuming 248:17
pretend 131:5 147:6
pretending 147:2
pretty 124:22 225:9
prevent 20:4 94:23 158:9 276:23
preventing 36:7 158:8
previous 45:19 68:19 71:19 107:8 172:19 195:21 205:24,25 228:24
previously 21:13 26:23 34:1 48:7 48:25 52:11 167:20 221:4,13
primarily 83:17 173:10 221:9
principle 115:18 217:10 233:24 234:6,24 239:21
principles 47:12 75:3 281:21
prior 17:11 42:6 43:7,15 45:12 71:9,12 136:17 195:7 274:10,20 276:12 289:5
prison 16:2 23:7 24:24 27:3 32:7 49:5
prisoner 15:15 16:10 22:10,23 23:2,4,6,16,25 24:1,10,14 25:17 25:21 26:9,20 27:14 28:4,11,18 29:10,13 39:10,19 49:8 170:20
prisoners 22:20 23:23 24:16 30:1 49:12
prisons 26:2
private 233:18 257:14
privilege 14:9
privileged 82:6
privileges 25:6
privy 96:22
probably 15:17 25:1 42:13 55:21 72:21 74:16,21,21 76:2 88:25,25 90:17 99:4 100:5 103:17 110:6,6 112:24 121:7 128:6 137:17 166:16,18 172:23 176:11 185:13,14 194:13 196:24 197:24 217:9 223:21 224:15,17 230:9 237:4 275:21 276:9 285:19
problem 69:2 86:6 100:22 120:20 130:15 151:16 160:9 177:17,18 178:1 186:14 267:25 276:2
problematic 276:25
problems 23:10 85:23 89:24 97:10 121:2 122:13 160:19 161:13 189:19 199:2 244:22 246:5 272:9 276:11
procedures 180:11 192:25
proceed 94:16
proceeding 11:24 36:19 46:1,9 47:22 48:9 49:1 49:17 50:10
proceedings 36:18 47:24 125:13 289:3,5,7
proceeds 205:17
process 38:14 54:22 60:16 67:21 79:18 80:3 81:6 105:7 116:18 196:21 221:6,9

284:22 285:3
processes 32:3 48:1 60:10 63:23 66:23 68:23 80:2 84:18 85:8 94:8 215:5 220:15 229:9
product 59:12 68:22 101:6 112:8
productive 282:6
professional 92:1 92:5,7 93:5 95:2 98:5,7 102:25 107:21 125:21 127:1 133:22 135:4 158:24 178:20 274:17 284:17
professionals 88:17 100:2,22 125:17 126:18 177:5 189:12
professor 87:21 112:20
profound 189:5
profoundly 225:13
program 26:8 74:13,14 90:18 102:23 110:21,22 111:1 112:4,4 113:20 114:6 118:1 119:1
programs 112:5 118:7,16
progress 169:19
prohibited 154:24 158:25
prohibiting 251:9
prominent 284:1
promise 221:17
promised 139:3,23
promote 205:10 247:18,20
pronouns 14:23 15:3
proof 242:15,18 242:20
proper 35:14
proportion 203:4
proposing 217:17
proposition 213:2
prove 74:22 133:16,18 217:18 217:19 241:22
provide 16:23 18:21 25:5 63:19 72:15 88:9 96:10 115:10 119:1 130:24 143:8 170:12 183:8
provided 15:23,25 33:4 47:17 57:17 71:15 105:4,6 119:10,20 139:20 167:20 259:7
providing 26:5 42:15,20 97:9 100:14 104:14 110:23 135:16 137:3 165:8 166:9 167:12 170:4 208:9 259:20 284:15 285:12
provision 23:22
provisionally 106:23
prudent 204:12
psychi 80:17
psychiatric 15:23 16:1,9 37:17 39:15 89:22 100:15 112:16 120:17,18 135:24 160:19,24 161:3 186:14 190:17,21 228:22 244:22
psychiatrist 66:21 69:3 78:25 79:16 80:1,20 84:3,3 171:18 172:17 222:8 257:19 263:24 277:9 280:18
psychiatrists 78:24 79:16 83:22 84:5
psychiatry 78:22 79:10 80:6 83:14 83:20 84:8 88:13 112:14 113:11,13 113:14 114:10 229:5 257:13 263:19
psycho 276:1
psychoanalysis 80:6
psychodynamic 80:6
psychologic 261:5 261:11
psychological 30:25 100:15 161:13 199:12,15 215:8 271:25
psychologically 27:18,25 31:8
psychologist 63:19
psychology 16:3 80:7,13 82:14,18 84:14
psychopathology 79:22 276:4
psychosocial 117:7 133:12 200:10 215:17 220:10,15 244:3 246:2
psychotherapeutic 63:22,23 138:5 149:6 156:25 180:1,13 186:16 209:16 270:14
psychotherapy 99:14,18,18 107:10 124:25 135:25 139:1 165:8 166:10 167:13 181:3,8 182:10,12 183:2 186:5,11 202:15 203:8,12,18 204:16 208:4,8,10 208:14 212:1 255:19 270:20
puber 220:5
pubertal 214:12 215:18,19 216:14 216:18
puberty 87:9 91:6 93:16 95:15 156:22 213:9,10 213:18,22 214:1,2 214:4,5,9,10,10 215:2,23 216:15 216:16 217:16 218:14,21,25 219:8 220:6
public 69:4,4 148:12 248:10 272:11

publication 76:3 94:6 101:15 103:17 189:10 201:1
publications 45:19 107:8 114:17 236:3
publicly 95:25
publish 100:18 175:16,24 176:17 177:21
published 56:15 60:2,5 76:25 94:7 94:7,23 104:12 109:20 114:15 122:15 133:11 174:7,9 175:12 190:11 211:18
puerile 215:11,17 215:23 220:11
pull 108:15 282:15
purpose 80:13
purposes 19:10 31:7 46:7 80:15 85:16 149:17
pushing 279:2
put 14:6 65:18 77:18 99:13 101:12 159:13 163:7,8 195:2 217:3,21 223:13 223:16 277:19
putting 162:25 172:10 195:10 223:10 230:15
puzzled 240:16
pyscho 63:23

q

quadruple 98:3
qualification 213:17
quality 126:24
quarter 58:20
question 18:2,6,12 18:20 24:3 27:20 28:2 34:21 35:22 38:2 39:24 41:22 43:11,21 44:1,9,22 45:1,6,7,11,16,25 46:13,18 48:11 49:14,20,23 50:18 52:18 53:2,4,5 54:23 57:13 58:1 58:2,24 60:13,20 61:18,24 66:12,15 66:24 67:1,11 68:2 72:2,10 76:18,21 78:3,9 80:8 85:14,25 86:7 87:8 92:11 93:22 94:4,5,16,16 95:18 96:9 97:1 97:16 104:5,6 105:8 106:8,16 108:15 110:8 111:13 114:2 118:10 119:6 120:9,22 124:19 125:11 126:23 134:12,16 136:21 136:23,24 137:12 137:19 138:13 145:13 147:5,7 150:4,22 151:1,2 151:10 152:13,24 153:3,5,11,23 154:22 155:13 156:12 157:7 159:18 163:25 164:13 165:15,22 168:24 171:9 172:6 173:12,20 176:16 178:8,10 178:16 179:12 184:19 185:4,8,11 185:22,23,23 187:3,4 191:20 193:14 194:17 195:17 203:7 206:16 207:6 209:10 211:6,11 212:20 213:16,20 218:10,14,17,20 218:23 219:1,4,6 221:13 224:9 232:15 236:1 237:19 238:19,21 239:2,12,25 244:13 249:18 253:18 256:18 259:13 260:10 261:17 285:7
questioner 207:22
questioning 80:15 105:18 113:9 132:19 174:15 286:9
questions 17:21,22 46:7 47:8 53:11 55:4 59:6 75:15 87:3 90:24 91:12 92:20 94:11 95:23 105:21 114:19 130:6 137:13 148:17,23 150:16 151:1 164:2,6 192:19 196:7 218:12 241:15 268:22 282:13 286:8,13,18,21,25 287:5
quickly 221:16 270:11 274:2
quite 46:22 56:23 136:7 186:22 229:4 260:17 284:1
quote 46:24 89:9 100:8 106:5 114:8 148:1 213:10 223:10 228:10 229:16 284:1
quoted 40:21 41:3 79:20 168:20 194:3 285:11
quotes 171:25 172:4,5
quoting 230:1

r

r 15:2,2 37:24,25 197:23,23
rafferty 146:8
rafters 273:6,14 274:21
raise 43:24
raised 43:23 142:24 174:14
raising 179:12 191:20 192:10
ran 112:2
randomized 270:17
range 98:5 159:22 160:1 195:3
ranges 98:7
rapid 114:22 115:10,21 116:1,5 116:16,23 119:1 119:10,20,25 120:7,15,25 121:6 124:11,16 135:16 137:3
rapidity 127:17

rapidly 114:21 125:6 220:13
rarely 178:21
rate 183:22 184:1 184:8,9,22,25 185:2,8,11,22 190:17 192:15 206:7 242:25 243:1,5
rates 183:17 185:17,18 186:25 187:8,11 190:19 190:20,21 271:6
ray 225:6
rbrooks 4:21
reach 177:8,8
reached 38:22
reacted 214:7
read 46:14,16 54:18,24 56:14 60:1 66:14,16 68:25 69:7 96:6 96:16 104:24 125:13,22 137:21 137:24 143:1 144:3,6,25 145:1 145:10,13,20 152:24 153:1 156:18 164:5,23 165:1,25 169:11 170:8 192:23 194:23 195:8,9,25 196:15 198:22 199:9 202:5 204:13 205:6,8,9 219:11,14,20 228:20 230:6 236:22 237:19 239:22 243:14 245:8 281:16 285:17,19 288:5
reader 195:25
reader's 172:12
reading 72:24 95:13 205:7,8 214:25 283:24
ready 145:19
reality 221:11
realize 118:19 134:13 135:8
realized 214:25
really 17:3,4 29:5 32:9 42:18 50:6 55:1 60:10 81:11 86:5 95:16 98:10 98:13,16 102:11 104:4 107:11,13 114:9 123:17 128:7 134:18 139:21 141:17 180:16 181:16,21 185:10 194:17 200:6,23 201:2 202:4 209:14 211:2 236:10,15 246:7 248:12 264:10 271:8 277:7
rearranged 77:5
reason 17:2 27:19 145:6 147:15 156:8 162:11 170:14 174:22 177:3 193:8 199:6
reasonable 73:5,7 73:8,12 95:18 158:23 174:17
reasonably 20:10
reasons 130:16
reassignment 16:25 23:8 27:5 28:22 29:4,7,10,13 29:19 49:6 109:18 135:21 177:11 190:13,16 191:1 260:21
reassurance 125:23
rebuttal 37:22 59:3 61:19 62:4,7 62:11
recall 21:15,19,25 22:4,11 26:11,24 27:2 35:9,10 50:14,16 61:3 62:22 66:9 68:7,9 83:10,11 87:7 110:2,9 127:6 194:16 218:8,9 226:12 255:4 256:13 274:25 285:20
receive 24:1 25:17 25:22
received 31:14 36:15
receives 106:2
receiving 284:8
recertified 79:2
recess 51:15 108:5 155:22 207:15 254:22 286:4
reco 26:9
recog 173:19
recognize 141:11 141:11 173:19 252:19 261:7 272:24
recognized 114:19 148:8 225:18
recognizes 244:18
recommend 121:13 130:22 131:14 205:10
recommendation 23:12 24:17 25:16 25:21 28:16,25 39:16 40:2 49:9 132:1,4,6,20 138:21 139:6,7 190:15 210:18 266:5
recommendations 15:24 16:21,23 17:9 28:6 118:8 121:13
recommended 23:5,25 24:5,9,24 25:15,23 26:10,19 27:2 28:2 49:5 132:18 138:1,8,15 138:18 141:2,6 209:2,4 210:9,14
recommending 117:16 208:9
recommends 125:7
reconcile 161:11 251:23 252:6,12 252:17 254:7
reconsidering 60:7 210:19 211:19
reconstituted 266:9
record 11:3,8,23 14:6,7,25 36:25 46:16 48:22 51:13 51:16 55:9 66:16 102:17 108:3,6 137:22 153:1 155:20,23 169:16 207:14,16 251:14 254:7,20,23 256:7

256:9 263:4 268:7 285:25 286:2,5 287:11 289:6
recorded 11:9 19:12,18
recording 11:6 259:11 260:24
records 142:9 191:15
recross 286:9
recruited 52:4
reduce 277:19
redundancy 195:22 196:2
reexamine 90:3
refer 61:1 109:14 150:2 164:19 167:25 172:1 183:9 200:12 229:14 260:10
reference 41:5 168:7 192:21 237:3,12 275:22 276:9
referenced 28:13 256:6
referred 126:17 246:15
referring 19:21 26:10 34:11 61:5 64:16 73:21 120:3 144:22,23 147:19 219:1 258:4 266:1
refers 73:19 172:21
refine 136:22
refinement 71:18
refinements 72:6
reflection 69:13
reflections 60:3 77:10
refresh 50:23 69:19
refusal 183:11
refuse 183:8
refused 38:8
regarding 21:18 21:20,23 22:2 45:13 90:15 170:1
regardless 105:11 238:4 240:18
regular 167:9
reidentified 38:12
reinforce 151:6
reinforces 154:1
reinforcing 151:14
reinhardt 3:10 12:15,16
reisbord 7:16 257:1,4,7,10 258:9
rejected 169:12
related 11:20 42:17 43:4 44:25 82:9
relationship 146:6 146:6 180:1 243:18
relationships 236:18,21 239:10 239:14,22 243:10 243:10 244:2,5 245:5
relative 191:18 280:25 289:12
relatively 211:3
relevance 71:20 72:19 173:20
relevant 32:21 49:14 57:19,25 165:22 199:25
relief 31:5
religious 31:20
rely 61:10,13 221:9 264:17 277:12,13
remains 36:16 75:9,9
remarks 218:11
remember 18:10 23:11 42:19 53:11 53:14,15 75:10 123:1 194:1 274:23
remind 19:5
reminded 56:24 219:5
reminding 179:4
remorse 139:22
remote 2:20
remotely 2:22 11:5
remove 132:2 277:25
removed 116:9 164:24 165:12 195:13,14 199:6 214:5,6
renamed 110:19
repaginating 75:18
repeat 21:20 27:12 29:12 32:12 46:13 47:4 53:4 73:22 152:17,20 157:7 175:18 190:2 195:23 207:2 261:7,9 268:22 281:24
repeatedly 23:23 24:5 187:4
rephrase 18:8 43:11 80:7
replaced 193:23 225:9
report 37:17,22 42:1,7,10 43:8,16 45:9 53:1,11,12,17 53:20,23,24 54:6,8 55:10,11 58:14,22 59:3,10,16,24 61:1 61:10,22 62:4,5,8 67:23 68:25 70:3 70:14,20,23 71:5,8 71:9,12,13,18,19 71:24 72:1,4,6,14 72:17,20,22 73:1 75:15,16 79:20 92:24 96:3 108:14 128:17 137:20 143:17 144:11 164:3,14,23 165:13,16,18,20 175:11 180:19 188:1 193:20 198:3,17 199:7,20 220:21 281:16 282:14
reported 1:23 83:1 125:4
reporter 2:25 11:19 13:19 18:25 46:14 51:3 66:14 69:25 152:23,25 218:1 256:22 258:12 260:15 261:22 263:12 265:12 267:2,23 269:1,14 270:9 271:3 272:19 275:5 278:5,24 279:19 289:2
reports 61:19 69:7 71:15 72:9,11,12

96:25 124:23 127:4,25 128:5,14 129:13 131:7,8 135:17 204:15 269:5
represent 12:3 65:15 95:1 130:8 148:12 163:24 164:20 198:19
representation 124:10
representative 218:20 219:7
representatives 173:19
representing 13:1 13:11,14 33:9 34:16 94:22 165:15
represents 116:21 128:15 245:21
reproductive 234:9 235:2
republished 200:18
repudiate 277:24
reputation 130:9
request 110:12
requesting 166:6
require 92:25
required 266:5
requirements 136:23 146:20 147:1 196:5
requires 74:15 116:12 134:6 146:1
reread 58:14
research 98:2,9 122:9,24 158:7,12 161:21 175:24 211:25 212:3
researcher 225:16
reserve 87:22,24 88:21 110:15,21 286:8
reside 210:3
residency 112:16
resident 80:13 89:1 112:23
residents 88:12,24 89:11,12 113:14 263:18,19
resisting 125:9
resocialized 145:3 146:2,5
resolved 38:21,24 39:3
resources 183:10
respect 52:7 132:23 170:25 210:22 233:19
respected 93:11 107:16 137:14
respectfully 281:22
respond 96:6 238:18 254:11
responded 184:24
responding 103:10
response 216:14 216:18 218:14
responses 96:24 162:16
responsibility 133:22,22 189:11 235:4 279:1
responsible 132:14,15 183:3 252:21
restart 128:25
restate 43:10
restatement 200:23
result 79:23 161:8 180:4
retained 51:19,22 51:24 57:10 68:4 287:15
retention 57:14
rethinking 139:15
retrospective 154:13
return 154:4 204:16,19 214:5 221:15 222:17
returned 258:16
returning 174:10
reversed 214:17
reversibility 214:24 218:21
reversible 214:4 215:12,14 219:9
review 58:21 59:3 59:19 60:14 62:11 90:5 126:21 127:5
reviewed 59:7,9 59:16 61:2,8,22 62:7,18 73:1 142:9
reviewing 187:25
reviews 104:11
rgreen 7:11
rhetoric 216:1
rich 214:8
richard 266:6
rid 177:4 201:19 266:12
right 36:25 49:16 51:4,12 53:1 54:9 57:7 59:8 63:3 67:13 68:10 73:25 74:5 85:17 90:23 92:2 108:2 119:2 124:6 127:10,15 128:12 140:23 157:6 159:6 163:15 174:15 181:6 182:1 185:18 191:7,9,10 192:8 201:6 203:16 207:10 209:17 211:23 212:12,16,21 213:3 216:23,24 218:24 229:9,24 230:18 250:21 255:17 256:1 279:24 283:3,10 284:6 285:20 286:8
rights 38:11 135:7 246:24 248:18,24 250:18,23 251:22 253:23
rigorous 267:25 268:12
ring 170:5
ringing 62:24 63:2
rise 98:11
risen 111:3,4,5
risk 74:2,3 117:7 158:3 195:3 224:13,14
risks 46:25 221:8 223:9
road 4:20
robert 63:13
roberta 7:6
rochester 211:5
roger 4:17 13:13 63:6 286:12

rogers 6:17 13:7,7 287:3,4
role 77:10 107:4 107:15 130:22 138:20 143:6 174:10
roles 189:2
romance 233:9 234:22
romances 246:6
romantic 235:23 236:18,20 243:9 243:18
room 29:23 139:12 178:10 197:2
rose 45:3
rotated 80:12
rotation 196:25
rounds 88:20 114:1
route 217:15
row 89:22
rule 36:22 82:24 268:8
rules 17:17,20 151:19 177:20
run 27:23 133:14 149:11 153:18,18 179:21 250:3 251:4,19 276:22
runaway 238:11
running 251:9
ruth 109:17,19,20 109:21,25 258:6 260:20
ruth's 260:23 261:3,4,10
rutherford 109:13 109:15,19,25 258:6

s

s 15:1 23:5 37:24 98:3 256:12
sadly 139:10,10
sadness 160:8
safe 195:2
safer 59:4 61:20 73:2 187:23 188:22 281:18 284:11 285:3
safer's 61:8,14 62:11 187:25 188:2,16 283:21 285:8
salaried 111:16
salient 75:9
sampling 129:21
sand 134:7
sanity 222:19
sasha 90:10,20 255:25
satisfy 284:22
satisfying 245:4 285:10
save 131:19
saved 40:5
saw 17:7 82:21 86:24 91:1,3 139:2 167:5 271:15,21 273:13
saying 26:24 80:19 95:17 124:5 127:4 129:19 131:12 132:9,17,22,24 133:11 136:6,8 143:17 155:5 180:10 189:20,24 190:1,7 192:2,4 197:3 214:22 220:18 226:21 235:5 248:13 260:8 264:10 267:5 271:5 276:17
says 63:8 64:1,4,6 64:7 75:20 76:10 91:16 125:4 137:23 143:23 149:15 197:17 241:8
scandinavia 177:18
scanning 202:21
scene 98:18,19,19
schema 202:1
school 1:10 2:11 6:14 7:3 13:8 74:18,19 87:22,25 88:9 145:4,22 147:23 149:13,14 149:15 196:25 249:3,15 250:4,6 287:4
science 30:17,23 32:13 42:22 47:6 47:13 74:1 75:1,1 75:6 98:16,16 117:3,21,22 118:2 132:7 134:18 135:10,13 143:9 186:2 189:11,13 189:22 243:5 252:2,19 277:12 277:13,14 282:2
sciences 277:13
scientific 47:12 71:16 73:5,16,25 92:20 93:12 97:3 97:5 98:10,13 99:6 101:22 102:4 117:5 124:8 129:21 130:14 132:4,6 133:7 135:5,14,17 137:7 137:14 156:19 185:23,24 186:8 212:2 248:9 264:8 280:12
scientifically 57:24 104:10 206:3 212:16 224:3
scope 14:10 231:25 254:15
screen 63:5 91:23 108:18 143:22,25 156:15 164:10 201:16,19 235:16
screening 135:23
scroll 76:2,15
scrolling 63:12 76:4,5
scrutiny 264:8
se 45:22 85:4 88:6 89:17 111:24 134:17 202:4
sealed 35:17,20 44:3
searched 25:8
second 92:16 144:25 168:24 192:23 197:14 212:22 219:5
secondary 1:10 2:11 6:14 7:3 13:8 146:17 287:4
section 198:2,6 201:9,22 211:24 235:19
sectional 160:21 181:17 189:17,23 190:6,8 191:2 243:24

sectors 248:11
see 21:14 50:20 63:11 64:1,3,21 65:1,2,3,11,12,12 81:7 85:8,19,23 86:6 87:6 108:25 118:5 130:10,13 131:12,17 132:11 133:8 134:3,13,24 138:6 143:21 144:12,20 146:11 146:21 147:4 148:15 149:25 150:3 153:24 154:10 155:10 157:3 166:25 167:2,6 168:1,5,9 171:18 172:18 176:7 178:4,14 179:16 180:5,11 181:20 182:7 191:4 196:10,19 197:18 198:9 199:22 200:14 204:22 207:21 210:20,21 213:11 215:23 217:6,18 217:24 218:2,4,18 220:2,9,11 222:4 222:23,24 223:1 225:20 233:22 234:10 235:14,24 241:14 245:17 247:2 248:13,16 257:19,22 263:21 264:5,9,15 269:6 270:1,20 271:12 273:5 274:1 278:9 280:16 283:1,1 284:5
seeing 84:22,25 89:3,8 90:25 182:23
seek 29:10,13 249:13
seeking 22:20,24 23:2,16 33:7 130:2 171:2 251:4 254:2,9 274:19
seen 87:2,14,18 90:17 96:2 126:24 129:16 166:19,23 167:4 209:3 246:6 276:11
sees 60:25 89:2
segm 99:1,2,2,4,15 99:16 100:12 101:4,11 103:12 103:14,15 104:6,8 104:12,19 105:2 105:24 106:2,10 106:21 107:2,21 255:2,17,21,23,24 259:7,14,16 260:10
select 72:11
selected 71:19 112:2
selection 59:12 130:4,7,15,20
self 225:3 276:7,8
seminar 112:25 113:7 263:18
seminars 88:9,12
sends 113:14
sense 18:9 47:12 69:11 71:16,23 89:5 101:8 103:16 107:10 114:22 148:18 160:8 169:10 210:2
224:12 229:12 234:1 247:6
sensibilities 138:23
sensitive 195:19 196:2
sent 99:7 122:8,13
sentence 55:22 108:21 137:23 145:1 156:18 192:23 193:3 197:14,14 205:6,7 226:13 228:11 245:23 247:13 279:13 283:25 284:6
sentences 214:25
separate 60:10 173:21 189:21
separated 84:17
separately 209:20
separating 152:12
separation 273:2
september 15:9 17:13 21:17 22:1 140:23
sequence 214:13 259:8
sequentially 164:4
series 72:11 96:19 107:6 137:12 244:3 256:11
serious 160:4 172:15
service 88:16 137:4 210:14
services 25:14 26:5 97:9 100:15 100:15 110:23 115:6 148:3 166:6
session 59:18 183:7
set 75:2,3 104:14 106:7 151:22 181:5 236:1 245:14 282:2 284:3,10,11,24 289:4
sets 128:4
setting 43:2 44:20 182:2
settings 230:9
seven 89:21 132:1 134:2,3,3 147:3 170:18 250:24 287:14
seventh 285:15
severe 161:18
sex 16:25 19:12,18 23:7,21 27:5,8 28:22 29:3,6,10,13 29:19 49:6 88:10 89:23 93:17 98:1 98:10 109:18 135:21 138:2,8,11 139:16 149:5 156:25 177:11 182:19,25 190:12 190:16 191:1,18 196:9,16,22 197:9 197:11 217:14,15 223:3,3,4 224:14 233:9 236:11 257:24 258:19 260:21
sexual 60:6 88:23 89:24 97:9,22 98:8 199:3,12 200:3 215:9,20,21 224:19 231:24 232:7,9 234:10,15

235:23 236:8 237:4 246:10 260:19 272:25 277:23 278:7
sexuality 97:3,6 97:23,24 113:2 257:21
sexually 180:15 236:16
shaking 19:1
shame 231:8,12,18
shannon 6:17 13:7 287:3
shape 200:10
shaped 274:3
share 50:20
shared 256:3
shares 212:2
sharing 34:24 126:2
sharp 172:23
shoals 4:20
shocked 68:25
short 51:10 116:22 117:6 136:3 153:17,24,24 196:3 276:22
shortened 272:22
shorter 175:5 196:3 277:14
shortest 211:7
shorthand 2:25 14:11 289:1,7
show 39:25 76:16 248:7
showed 272:12
shower 25:7
showing 135:15 143:25 175:16
shown 160:22 195:1
shows 162:6
shumaker 109:13
shuman 6:16 7:5
shumanlaw.com 6:22 7:11
sic 15:19 18:6 37:24 39:11 133:17 145:4 172:10 190:14 199:1,13
sick 271:14
side 32:15,22 33:6 33:9 49:18,25 50:10,11 57:23 117:19,19 143:7 149:12 150:25 184:8 186:2 254:2 282:1
sides 32:19 58:2 129:20
siefert 37:24,25 38:4
signature 70:15 289:20
signed 28:5,10 64:24 164:25
significant 23:9 189:19
signs 274:20
similar 35:13 114:5 165:15 175:19 232:23 233:1
similarity 72:22
similarly 154:18
simple 152:13 155:11 161:15
simplest 72:13
simplicity 277:20
simplify 67:1
simply 68:1 120:18 131:24 143:22
simultaneous 157:20 252:7
sinai 283:22 284:21,25
sitting 75:25 89:3 200:2 257:15 268:18 285:8
situation 41:23 183:2 186:20 203:21 204:11
situations 210:6
six 84:22 87:4,6 89:3 136:13,14 179:22 180:7,8 242:25 250:24 265:14
skepticism 134:22
skeptics 264:18
slashed 258:24
sleeping 20:9
slicer 6:16 7:5
slide 271:15
slow 103:22
slowly 21:22 261:9
small 136:1
smaller 144:6
smile 73:17 75:12 159:14
social 116:7 138:2 141:1,2,8,10,22 142:3 148:8,17 156:21 158:1,22 160:8 161:1,4 189:2 215:8 246:5 246:24
socialization 35:2 209:2
socialize 117:11 146:20
socializing 180:8
socially 34:18 194:11 250:5
societal 31:25
societies 92:1,5 98:6
society 42:22 92:8 92:18,21 93:5 97:2,5 98:1,2,4,10 98:20 99:10 102:25 148:11 160:20 173:18,19 215:6 224:17,19 244:17,18,24 245:2
soft 29:1
solution 276:24 277:1
solutions 11:18 287:15
solved 177:18
solvency 112:6
solving 160:9
somebody 32:16 74:14 129:5 221:20 263:21 273:21 274:14 279:23
somewhat 32:13 68:21 253:7
son 34:17 197:4
soneeya 23:5,24 28:13 30:8 49:7 49:21
soon 207:8
sophisticated 216:8 220:18
sorry 20:23 23:6 23:25 25:3 26:10

34:7 35:11 37:7 37:14 50:6 55:17 58:17 76:11 78:8 81:8 95:10 97:17 99:17 102:13 104:3,3 108:23 118:9,24 119:9,24 121:15 124:19 126:11,13 127:19 140:10,12,14,19 143:16 149:9 150:16 151:14 157:7,22 166:23 169:8 170:3 174:21 175:18 178:7,12 181:14 188:18 190:4 196:8,12 197:14 201:11,14,18,21 203:7 206:14 212:18,21,22 213:4,24 219:10 222:11 226:25 231:17 237:1 238:11,13 244:12 248:23 258:10 259:6,18 260:7 261:10 265:2 267:20 274:11

sort 71:18 98:8 102:19 103:25 122:4 190:2 210:7 210:23 222:3

sought 31:5 35:14

sounded 152:14

sounds 17:18 115:21 133:1

source 111:24 125:3 161:16 181:23 197:15

sources 125:12 248:3

southern 11:14

speak 18:24 21:22 161:8 201:1 217:5 217:5 231:17 243:5 272:11 281:22

speaking 113:3 157:20 252:7 260:25 264:20 265:20 286:12,13

special 25:6 80:22 107:2

specialized 79:12 80:9,11,16 81:1,3 81:4,10,13 83:8,13

specializes 172:25

specialty 83:23 93:9 125:6

specific 21:14 41:22 55:3,3,20 58:24 68:9,11 72:25 118:10 195:17

specifically 59:6 67:15,20 110:9

speculate 184:12

speculation 159:12 183:4 184:5 185:4 186:2 187:1 247:11

spell 14:24

spend 71:4 83:16 85:2,3,4 88:24 89:3 143:10 172:22 209:18,19

spent 75:7 86:3 194:13

spoken 126:15,17 163:2 188:9,14

sponsors 101:5

spontaneous 266:15

spontaneously 266:22

sport 144:13 149:11,12

sports 42:3,8,25 43:3,5 81:24,25 144:14 150:19 157:13 158:8 159:9 251:20

spring 37:5,6

srogers 6:22

sruti 4:5 12:20

sswaminathan 4:11

stability 224:11

stable 234:11 244:2,5 245:4

staff 28:8 211:12 273:20

stage 65:25 193:5 193:19 198:17 206:5 213:15 217:1

stages 84:18

stamp 278:10,11 278:16,18

stamps 278:12

stand 30:17 59:12 204:24 219:25 253:5,7 259:7 268:17

standard 73:21,24 103:2 266:3

standards 39:23 118:13 225:25 265:15 266:10 283:21 284:4,9,10 284:10,11,14,16 284:16,23,24 285:10

standing 269:18

stands 263:8

start 14:5 21:23 123:10 213:1

started 110:12 218:25 219:8

starting 12:6 50:25 102:9 139:1 201:9 215:20 217:4

starts 63:7 75:17 198:3 237:6

state 1:9,12,14 2:9 2:12,14 5:4,16 11:13,22,24 13:12 14:24 21:9,18 22:2,6 30:17,23 31:10 32:3,8,13,16 32:18,20,23 33:1,2 33:23 34:24 42:11 46:19 47:6,17 56:19 64:20 83:2 83:2,6 117:3 126:5 134:18,25 139:12 149:13 164:16 170:3 215:11 221:16 228:24,24,24 286:16 288:11 289:2

stated 84:4 163:22 163:23 174:21 221:4 222:20,21

statement 35:10 167:11 204:24 243:22 251:21 265:22 267:9,15 268:3 269:8 270:3 270:23 272:2

273:10 275:13,20 275:21
statements 214:21 252:22 262:15,18 264:23 265:7 268:16,17 278:15 279:10 280:7
states 1:1 2:1 103:24 104:15 120:7 124:12,16 125:3 135:16 147:22 177:19,19 177:20,22
stating 47:5
statistical 74:4
statistics 130:14
status 107:15 246:13
statute 251:18
stay 54:19
stella 255:25
stephen 1:19 2:21 8:3,11,16 11:10 13:22 15:1 64:6,8 106:18,18 256:11 287:12,13 288:4 288:15
steptoe 6:5,11 13:1
sterilizing 180:11 180:14
stick 205:14
sticking 45:24
stigma 158:21 161:8
stigmatizes 158:17
stimulate 54:18
stimulating 54:22
stint 105:17
stomach 162:22
stop 88:2 100:22 153:10 182:23 252:3,4 276:14
stopped 97:17
stopping 210:19
stories 80:21 236:23 239:10,12
story 124:22
straight 51:10 232:18
straightforward 238:19
strategies 101:11
street 3:13 4:8 5:20 6:19 7:8
strength 74:15
strengths 136:18
stress 244:23 272:23 273:3,8
stressful 272:24
strictly 255:10
strike 214:19
strikes 240:17
strong 132:19 248:9 266:7
student 88:16 128:25 129:1 210:12,14 251:4 252:14 254:3
students 89:11,12 145:6 147:15 253:14
studies 75:4 96:7 96:11,13 129:25 130:16,18,18 133:16,18 177:14 177:15,21 189:17 189:23 190:6,8 242:19,23,24 244:21 268:1,12 271:6
study 32:5 97:3,5 98:10 129:24 135:14,17,18,19 135:21 136:17 146:7 160:21 162:6 175:11,16 177:10 190:11,14 190:15 191:3,3,8 191:11,15,15 200:13,23 242:15 270:17 285:12
stutler 1:12 2:13 6:4 13:3 286:24
sub 60:19 181:3,3
subcommittee 93:3 96:19,23 99:13,18,24 101:1
subcommittees 94:1,3
subject 17:3,4 30:20,20 34:23 85:17 95:14 113:5 160:4 161:12 163:22
subjective 107:14
subjects 280:17
submission 60:11 71:22 253:25
submit 42:1 50:13 66:9 67:23 72:1 253:12
submitted 31:4 37:17,22 39:15 40:20 42:12 47:23 47:24 48:8,18 49:1,17,24 50:10 54:7,8 55:10 61:19 63:17 64:15 64:19 65:24 67:7 68:15,24 70:21 71:10 164:15 193:18 198:16 213:15 251:3,9,17 253:25 254:1
submitting 65:7
subparagraphs 192:19
subscribed 289:14
subsequent 41:8 84:7,10 214:25
subsequently 38:12 69:6
subspecialties 83:20
substance 57:5 58:12 120:19 160:10
substantiate 189:25
subtle 215:3
subtract 72:18
successful 264:6 274:5 282:6
sue 38:25
suffer 244:25
suffering 79:22 108:22 110:4 172:20 239:16 244:19
suggested 225:5
suggesting 247:7
suggestion 61:17
suggests 46:22
suicide 36:5 109:21 139:19 140:6 183:1,12,17 183:22 184:1,22 186:25 187:11 190:17 192:1,14 260:23
suite 5:21 6:20 7:9
summaries 96:6
summarize 189:14 208:11 226:21

summarized 169:23
summarizing 146:9 163:3 170:15
summary 189:20 202:8 213:3
sunday 58:14 128:21 129:3
superintendent 1:12,14 2:13,14 5:14 6:4 13:2,6 286:20,24
supervise 273:22
supervising 82:14
supervisor 257:20 257:20
supplemental 61:14,22
supplementation 277:22
support 8:12 46:9 46:11,18 47:2,3,18 47:21,24,25 48:8 48:14,16,18,24 49:1,11 50:7 64:8 64:13,15 65:24 99:5 148:4 182:20 190:6,9 203:23,24 238:4 249:2,16 251:9,17 254:1
supported 138:1 138:16,19 141:2,8 141:22 142:2 189:13 204:7 210:9 250:6
supporter 99:8
supporting 47:9,9 48:2 180:9 253:22
supportive 46:23 46:25 117:18 209:7 246:13
supports 173:22
supposed 263:16
supposition 225:6
sure 17:16,20 21:1 43:13 44:9 46:15 53:6 66:13 70:13 76:17 77:22 84:23 94:14 104:12 114:10 120:3 122:7 125:18 134:20 140:25 149:1 150:5 156:4 170:19 174:4 176:1 179:17 186:21,22 201:17 208:6 214:16 216:4 228:6,6 237:15 246:17 267:6,16 277:17 278:9 280:18
surgeon 177:11,13 208:21
surgeries 189:19
surgery 17:1 23:8 24:2,5 25:12 27:3 27:5,7,8,10,13 28:3,17,22 29:4,7 29:11,14,19 39:20 49:6 109:18 131:14,15,17 133:10,13,14 135:21 136:4,5 138:3 171:2 177:11,12 178:19 180:10 190:13,16 191:1,9,10,12,13 191:16 192:16 224:15 260:21 271:19 272:6,8 284:23 285:9
surgical 30:24 192:24 234:18,19 246:24 284:2 285:13
surgically 277:25
surprised 119:12 127:17
surreptitiously 141:14
surrogates 97:22
surrounding 57:13
survey 201:5,6 236:9
susan 6:6 12:25 48:21 286:22
susan.deniker 6:11
swaminathan 4:5 12:19,20
swear 13:19
sweden 103:21 190:23
swedish 190:11
symposium 90:2
system 258:21 281:25
systematic 175:4,6 175:15,17,23,25 176:11,15 212:4
systems 32:7 189:8

t

t 15:1,2,2 37:25 256:12
tab 258:8,9 260:12 261:19 267:20 278:21
take 11:7 18:15,21 30:21 33:23 37:11 44:6 51:5,10 55:17 70:5 75:5 76:25 105:16,21 139:8 141:14 143:19 144:16 148:21 172:6 191:17 207:7 220:23,25 227:23 227:23 229:6 234:24 235:3 254:19 264:13 277:25 280:23 281:3 282:22 285:23
taken 2:21 11:10 157:23 182:24 289:3
takes 246:19
talented 152:3
talk 56:15 78:4 80:5 85:15 88:22 89:24 99:13 121:7 121:15,22,22 122:16,18 124:4 126:1 128:21 137:21 141:15 146:4 171:10 181:15,25 182:3 182:18 187:22 201:10 208:13 209:6 213:8,17 220:20 221:20,24 221:25 222:1,7,8 256:8 258:22 272:12
talked 100:20 113:22,24 121:4,5 122:17 124:7,25 125:20,25 126:12 126:14,22 187:19 214:23 271:23 274:17

talking 27:24 77:9 85:5 86:4 92:12 99:25,25 100:17 108:13 114:25 127:8 139:3 146:25 147:11 156:8 166:14,15 179:22 180:6,13 180:16,17 181:21 182:1,7 196:8 208:2 209:23 210:4 211:22 215:1,2,3 216:4 220:4,8 234:12 235:1 236:9 238:16 283:20
talks 77:18 235:22 235:23
tapped 25:8
taste 139:21
taught 40:21 88:6 88:12 100:13 263:22 264:11 281:2
tavistock 168:8
teach 88:8,13,19 88:19 100:1 113:4 113:6,7 132:25 133:2,22,23 223:6
teacher 89:16
teaching 88:4,7 89:5,7 90:6 112:25
team 115:13 149:4 150:9 151:15,18 153:14 158:16 159:9 161:17 162:21 163:14,18 188:4 249:3,14 250:4 251:6,10,20 252:14
teams 150:19 156:24 157:14 158:8,13
technical 231:12
teenage 100:7 172:14
teenager 86:18 129:10 132:9 234:19
teenagers 118:23 122:7,8 170:22 173:14 209:5
teens 93:18 147:12 165:11
tell 16:20 38:21 48:4 50:22 56:1 56:12,23 68:11 74:10,19,23 82:12 89:19 109:10 113:12 115:1 123:4 124:22,22 132:4 139:10,10 140:8,8 163:21 207:2 223:6 224:16 249:11 251:15 254:5 260:4 273:17 274:7,8,24
telling 35:4 123:21 153:10 208:21,22 237:18 250:15,16 260:2 274:9,9 277:9
temperamental 198:24 199:11
template 72:5
temporary 275:7
ten 100:6 136:15 173:15 176:13 216:5 245:6
tenable 248:8
tend 158:1 167:2 245:10
tends 125:7
term 25:18 27:17 27:18,21 28:8 31:19 46:20 50:7 81:9,11 86:15 101:23 102:1,5,6 107:13 117:6,7 119:24 131:21 133:3,12 136:4 146:14 153:24,25 171:13,15,16,24 174:18 195:3 216:11 226:4,24 227:2 265:23 266:13
terminology 14:10 192:22
terms 19:9 23:20 31:19 56:18 66:25 67:21 80:7 85:25 86:8 104:10 117:4 148:17 209:24
terrible 125:8 180:4
terribly 229:22
testi 34:12
testified 13:24 22:23 23:2,15 24:1 26:18 28:17 28:25 30:5 33:17 35:12 52:23 82:2 137:2 157:10 169:20 181:11 184:17 192:11 206:24 219:13 250:13 268:14
testify 28:21,21,23 35:7 46:19 80:22 250:13
testifying 19:25 20:1,5 30:7,11,16 34:13,18,20 35:2 218:9 252:3 289:6
testimonies 40:25
testimony 15:21 20:8,13 22:13,17 24:4 30:10 31:3 32:9,25 33:4,12,20 33:22 34:7,12 35:11 36:1 37:1,4 37:8,11,19 39:4,13 39:14 40:10,12,21 40:23 41:3,6,9,13 41:23 42:6,7 43:4 43:7,8,15,16,22 44:22,23 45:1,4,8 45:9,11,13,22,25 46:1,2,7,8,9 47:16 47:23 48:5,7,18 49:1 50:10 54:6 57:17,19 60:15 68:19 102:8 106:21 167:21 170:23 171:1 175:14 186:23 218:5,8 219:12,25 220:17 232:1 251:8,13,23 252:12 253:12 254:8,14 268:14 287:12 288:8
testing 191:24
testosterone 56:25
texas 33:14 52:21 170:1
text 159:14
textbook 74:14
thank 13:18 14:16 15:5 16:16 17:15

21:11 22:19 37:7 39:4 40:11 41:12 41:25 42:23 44:22 45:24 51:11 57:7 60:22 63:6 67:3 68:4 69:17 72:3 72:23 75:13,21 77:12 78:13 79:6 80:8 83:7 89:18 90:11 100:25 108:8,11 112:12 120:9 124:7 136:24 137:16 140:10 141:20 144:10 155:25 161:10 164:2 167:10,18 176:19 187:18 197:8 200:1 207:3,19,23 211:13,17 217:20 219:22 220:20 228:12 239:6 245:7 254:16,18 254:25 259:13 261:18 263:9 265:23 267:13,19 268:8,21 269:20 275:1 282:12 285:22 286:7,11 286:17,21 287:1,6 287:8,10,16

thanks 258:10

theater 148:13

theirs 134:4

theoretical 84:17 185:12,13

theory 181:9 244:24

thera 124:1

therapeutic 85:20

therapeutics 47:14

therapist 120:16 259:1

therapy 89:9 98:2 143:24 144:18 156:20 180:20 202:20 204:6 205:2,5 246:2

thereof 42:16 289:10

thin 271:18

thing 72:14 77:15 77:19 83:18 117:14 121:10 124:6 125:4,5,9 137:22 146:24 148:16 169:9 191:23 200:6 201:15 214:3 230:17 240:7 250:22 279:14

things 17:6 23:18 23:23 54:16 56:5 71:24,25 74:7,20 81:4 86:5 90:5 101:5,12 112:8 127:18 131:11,11 132:18 143:1 146:9 148:11 158:22 180:23 181:22 186:3 196:3 197:9 199:23 200:22 202:2,7 205:4 206:25 207:1 210:5 214:17 221:24 222:24 227:21 248:17 250:12,20 253:8 259:11,24,25 264:14 265:5 268:19 271:9,23 277:11 279:25 280:22

think 20:14 23:13 24:21 25:23 27:5 27:7,23 33:1 35:3 36:14,21,22 37:23 39:22 41:13 43:6 44:20 45:17,17 46:5,20,21 48:5 52:1,13,23 53:25 54:2,3,16,25 55:8 55:14,15 56:9 61:17 62:1,13 63:18 65:8 67:13 68:20,24 69:6 70:8 72:7,8,18 73:3,14,17,23 76:6 77:5,21 79:20 82:4 83:17 84:16 88:7 89:6 92:18 93:21 97:1 99:16 99:19 101:15 102:7,8,22 103:18 104:5,8,13 106:10 107:18,20,25 108:12 109:19 111:2 112:10 113:18 114:9,16 114:18,19 117:1 117:13,16,22,23 121:8 122:21 125:2 127:4,11 129:4,8 130:10 131:13 132:16 134:8,24 135:19 135:25 136:24 138:23 140:22,23 141:9,18 144:5 146:7,16,22 147:7 147:20,20 148:5,6 148:20 149:10,10 149:17,18,24 150:1,6 151:9 152:19,19 153:17 153:20,25 154:11 154:21 155:14,15 156:3 157:16,25 158:5,15,20,23 160:3,6,11 161:2,7 161:20,22 162:11 163:13,16 165:22 168:17 170:20 171:16 172:4,4 173:16,18 174:21 176:6,20 177:21 177:25 178:7,9 180:16,17 181:11 181:16,21 182:14 185:14 187:10,21 188:20 189:10 190:5 195:24 197:6,22 199:8,24 202:2,8,10,12 204:7 205:2 206:2 206:14,15,24 212:10 215:13 216:8,12,20 217:9 217:17 220:8,17 221:4 224:2,12,15 225:8,23,25 226:15,17,24 227:2,5,20 228:12 228:21 229:19,25 230:6,7,10 231:23 232:2,8 233:5,14 235:13 236:16 237:5 238:9 239:22 240:6 242:25 244:7 245:23 247:3,6 248:12 250:17,17

250:19,23 252:21 253:4,6,16,17,17 254:17,19 255:18 256:16 260:20 262:6,12 263:4 264:1,1 266:1 267:4 269:23 270:13 272:9,24 272:24 273:18 274:22 275:18 276:16,17 279:1 279:14,23 280:1,2 280:25 282:8 284:12,13 285:24
thinking 71:17 154:5 157:24 174:18 193:20 250:18 277:4
thinks 248:6 270:12
third 24:12 90:21 139:18 152:4 156:18
thorough 15:25 105:6 116:17 125:17,18,23
thoroughly 204:11
thought 29:16 34:1 39:21 50:8 67:10 92:21 97:20 98:9,10 103:2 119:9,10 141:13 169:10 187:7,7 210:18 215:25
thoughtful 248:2
thoughts 180:2 233:8 256:3
thousand 74:17
threatened 82:17
three 49:21 54:2,3 90:2 91:8 112:9 113:1,7 180:7 185:13,16 192:6 198:6,11 215:4 216:13 217:4,12 226:21 264:18 265:14 273:7,14
throwaway 238:12
thursday 24:12
time 11:25 18:16 24:9,22 29:17,20 36:25 40:11,24,25 44:7 49:8 51:9 68:24 71:4,25 74:19,22 75:2 84:20 85:2,3,5,14 86:4,24 87:6,25 88:2 90:3 91:1,24 99:11 108:1 110:20 113:25 114:24 116:19 128:14 129:4 137:25 138:24 139:4 140:14 142:2 143:10,19 148:21 154:3 166:20 172:22 194:7 199:22 205:23 206:15 208:13 209:8 210:4 229:5 232:18 237:15 238:18 243:1 253:23 257:4 266:7 267:4 271:20 282:22 286:17 287:1,9,17 289:4
times 15:6 25:2,3 25:15,20 27:10,13 28:10,12 49:21 163:20 173:21 175:5 180:8 190:18 196:1 206:8 246:16 252:24 253:3,8
tingley 63:14 65:6 67:6 167:16
tissue 43:24
title 64:5 89:23 98:12 237:8 255:8
titled 60:3
today 13:15 19:9 20:1,5,10,13,16 34:12 58:8 60:15 60:16 75:25 76:12 76:13 102:1 135:9 146:22 148:3 167:14,15 174:19 174:25 200:2 216:8 246:16 260:9 268:15,18 268:20 275:19 285:8
today's 129:3 216:4 220:17 287:12
told 36:6,22 49:4 49:10 56:22 67:24 71:14 73:10 82:18 82:18,20,21 123:11,17,18,18 128:22 194:13 206:25 207:1 249:8 257:14 258:25 263:15,19 263:19 266:8 274:8
tolerant 240:4
tom 79:21
tomorrow 202:10
top 65:11 194:21 197:19 203:12 213:2 275:19 283:2
topic 60:19 88:23 279:22
toro 3:6 12:13,14
toronto 225:6
total 287:14
totally 101:5 158:14 214:17
touch 223:24
touched 21:12
toughen 162:22
tour 117:3
track 55:1 149:11 249:3,14 250:3 251:6
tradition 186:13 270:20
traditions 96:21
traffic 232:5,11
train 264:15
trained 79:17 80:23
training 79:12 80:9,11,17 81:1,3 81:5,10,13,15 83:8 83:13 84:6 113:15
tran 33:7 221:16 236:16 237:7
trans 24:25 25:13 26:17 30:25 31:11 32:6 34:2 38:6 41:10 42:17 43:9 43:20 56:21 60:4 60:4,8 82:13 100:8 110:23 118:19,19 122:6 129:10 142:11,12 142:15,15,16,17

142:22 143:3 149:16 150:24 151:4,7,8 152:4 154:23 155:4 158:2 160:25 161:3,16 162:19 169:4 172:7 174:8 186:19 200:21 204:7 221:12 224:18 225:4,7,12 227:18 228:2,21 228:24 230:2 234:12 243:6,25 244:16,20 246:4 246:11,12,13,15 246:18,22 247:5,7 247:16,25 253:4 263:20 264:4 274:6 275:23 276:5,12 280:12 280:25

transcribe 19:1

transcribed 289:8

transcript 19:2 94:15,21 95:24 263:7 288:6

transcription 289:10

transfer 23:5,6 29:8,9,11,14,24 49:5

transferred 139:9

transferring 29:2

transform 228:23 228:25

transformation 234:19

transgender 8:20 15:15 16:3,4,6 19:16 42:8 43:3,9 43:17 44:25 45:14 46:3,10,11 48:8 49:2,18,25 50:11 90:4,15 93:17 100:3 101:25 126:5 143:9 146:1 149:4 150:10,18 150:21 151:18 153:14,16,18,19 154:17 157:13,15 158:10,16,18,21 159:8,21,25 160:11,15,15,22 161:12 163:19 169:3 170:4 189:18 191:6,13 191:18,25 192:15 195:11 198:8 203:24 205:11 206:6 211:9 221:21 222:9,11 222:12,14 223:11 223:15,17 224:7 226:9,16,17 227:5 227:10,12 228:12 230:8,11 232:25 232:25 234:1 235:21 237:8,21 237:25 240:18,18 240:22 241:5,8,8,9 241:10 243:4,8,9 243:15 244:18 245:10,11,16,22 246:25 248:19 249:3,13 251:22 253:14,23 254:3 254:10 263:16 265:18,24 266:14 276:4,10,15,18 277:1,18 278:18 281:3

transgendered 101:20 227:15 270:13

transgenderism 168:16 226:1,2 241:16

transgenders 227:14

transition 33:14 33:21 34:14 116:8 119:20 125:9 129:17 131:23 132:1,2 138:2 141:1,3,8,10,13,18 141:22,23 142:3 156:21 158:1 177:4 230:20,23 231:19 268:1,13 269:4 274:19 284:2

transitioned 34:17 34:19 128:23 181:18 230:18 241:12

transitioning 36:8 132:8,9 230:10 250:5

transsexual 225:15 236:9,10 236:16 248:24

transsexuality 234:17

transsexuals 236:13,17

transvestism 225:10

trapped 225:16 277:7

trauma 199:13

treat 194:24 222:10,13 263:16

treated 38:6,6 102:1 135:23 160:16 191:9 263:20

treating 35:6 221:3,5 235:20

treatment 24:6,6,7 24:11 25:10,24,25 26:19,21,24 33:25 36:2 60:8 101:21 101:23 102:3 103:13,14,16,19 104:1,6,9,13,19,25 105:4,5,10 121:1 123:6,13 128:1 130:22 131:4 133:4 134:15 169:4 175:8 210:9 211:4 226:2 269:25 270:1 284:19,20

treatments 101:19 102:5 136:9,12 279:6

tree 257:16

trend 148:14 176:9

trends 148:8,16 222:6

trial 24:8 30:3,6 33:17 37:8

trick 145:16

tried 124:20 201:19 229:13 242:18

trouble 74:22

troubles 262:6

true 22:13,16 74:21,22 166:2,5,9 167:14,15 214:20 214:20,20 217:9

245:1,5 260:9 267:15 276:2 284:16 288:9
trust 216:22 250:15 263:21 264:15 269:24
trustee 117:20
trusting 132:5
truth 68:22 250:16 260:2,6 264:4 274:9
truthful 20:8,13 256:4 260:1 262:18 264:23 265:7,22 267:9 268:3 270:23 272:2 273:10 275:13 278:14 279:10 280:6
truthfully 20:5
try 18:7,10,15 19:7 21:22 27:22 123:2 175:20 177:23 178:22 195:23 212:23 240:3,5 257:4 277:25
trying 30:19 45:7 45:15 46:23 47:11 50:6 53:6 61:12 67:3,5 72:3 81:6 93:4 96:11 100:12 100:14 101:19 103:18,19 118:18 124:14 131:2,12 132:25 133:2 136:22 137:1,6,22 141:20,21 144:11 148:10 150:17 155:13,14 156:7 157:18 161:10,24 167:10,14 172:12 173:1 180:6 204:1 209:14 212:12 223:12 234:24 238:2 247:15 253:6 254:5 260:8 275:15 277:16
tryon 5:6 13:10,10 51:23 52:1,5 170:6 177:25 178:5 183:5,20 184:4 205:20,22 222:15 242:9 249:6 253:15 254:13 262:22,22 263:1,8 264:24 267:12 268:5,7 269:15,17,20 286:15,15
tucson 35:17 38:19
turn 75:16 78:13 91:11 108:12 137:16 143:15 176:4 207:20 235:10
turned 140:22
turning 63:25 65:9 87:20 196:6
twelve 136:14
twice 180:7 195:25
two 17:5,7 31:13 38:18 40:16 55:23 56:14 60:2 86:20 89:10 90:19 91:5 93:13 95:14 99:4 99:20 113:7 123:8 128:1 133:11,15 133:16 136:14 142:4 160:17 176:14 180:22 206:11 209:18,19 209:24 210:1,7,8 212:12 215:4 216:13 217:2 219:4 220:1 232:5 232:11 236:3 237:5 242:24 255:16 259:19 263:18 266:3 275:19,20
ty 18:15
type 119:1
typically 209:17 266:13

u

u.s. 11:14 137:4
uk 103:21 120:24 125:2 135:18 242:23,24
ultimate 49:6
ultimately 33:1 267:17
unable 50:17 54:23 165:17 257:1
unaware 101:5 142:24 158:14 214:8
unchangeable 206:12
unclear 136:25
uncomfortable 252:23 253:1,3,7
undergo 131:23
undergone 133:15
undersigned 289:1
understand 17:24 18:4,13,18,19,22 19:3,14,19,23,25 31:19 34:10 40:24 42:3 46:23 47:16 47:22 48:19 50:7 52:2 53:7 54:20 60:22 61:12 62:3 64:14,17 66:25 67:3,5,20 69:3 84:8,9 93:4 115:12 117:6 124:14 133:7,8,9 145:5 150:14 161:24 165:24 167:11 187:3 190:3 192:9 203:11 208:16,17 209:15 223:12 224:22 229:2 234:15,17 240:19 241:1 248:21 249:19 250:11 253:10,16,19 266:23 276:19 277:17 279:2
understanding 20:24 21:1,2,3,4 30:16 32:12 39:12 45:11 47:1,2 48:24 52:9 58:5 65:22 71:24 73:11 73:12,14 80:20 81:10 84:14,17,19 94:6 98:8 105:1 109:17 115:9 116:12 118:25 119:19 124:15 173:24 206:17 213:24 216:9 240:5 260:21 284:7 285:11
understood 18:12 21:4 30:23 33:4 99:17 110:14 117:4 121:2,3

172:7 187:7
undertaken 129:21 133:15
uneasy 280:4
unfair 155:6,6
unfolded 206:7
unfortunate 261:4 261:10
unfortunately 262:4
unit 11:9
united 1:1 2:1 103:24 104:15 120:7 124:12,16 125:3 135:16 177:19,19,22
units 287:14
universe 159:16
university 74:13 87:22,24 88:23 110:16 111:8,10 111:17,19,23 112:13,15,17,22 112:25 113:3,13 113:19 114:8 118:1,25 139:12 211:5 257:22
unknown 47:8 130:9
unrealistic 155:4,5
unscientific 226:22
unstable 82:15
untreated 191:7
updated 76:1 77:3
updating 77:14
uphold 251:18
uploading 256:7
upset 236:10
url 263:6
use 14:10,23 15:3 18:25 19:9 27:18 45:18 47:21 71:9 89:23 102:1,7 107:13 119:24 130:14 136:16 186:16 192:22 194:4,6 208:20 213:22 221:24 226:4 227:2 254:7 266:13
usual 135:24 176:8 210:2 266:19
usually 31:19 89:2 90:18,19 176:3

v

v 15:2
vague 37:12 40:13 41:15 55:13 85:12 86:15 119:22 120:3 141:25 151:20 153:3 192:3 206:19
valeria 3:6 12:14
validating 235:20
valued 99:16 107:1,3,4,16 238:6 238:7
values 240:13
varies 128:13
variety 162:6,16
various 30:24 32:14 41:1,9,10 54:17 72:12 96:7 100:20 118:6,16 125:2 126:20 148:1,9 157:25 161:13 168:20 199:17 200:21 210:5 214:21,22 235:19 237:20 252:20,24
vary 283:7
vast 24:7 223:18
vegan 276:24 277:18
vegans 275:10,17
vegetarians 275:9 275:16
vein 194:19
venue 121:19
verbal 18:25
veritext 7:16 11:17 287:15
veroff 3:9 12:9,10
version 65:18,19 77:4 164:21 195:7
versions 196:4,4
versus 11:12 15:17 20:19 35:6 37:25 86:18 96:14 135:23 136:2 191:12 220:6,7 222:1 242:8 243:25 281:14
video 8:22,24 9:1 9:3,5,7,9,11,13,15 9:17,19,21,23,25 10:2,4 11:6 37:16 178:12 257:5,11 257:18 258:13 260:16 261:23 262:24 263:13 265:13 267:3,24 269:2,21 270:10 271:4 272:20 275:6 278:6,25 279:20
videoconference 3:1
videographer 7:18 11:3,18 13:18 51:13,16 108:3,6 155:20,23 178:3 207:12,14,16 254:20,23 256:24 257:2 286:2,5 287:10
videotaped 1:19 2:20
view 26:16,17 31:17,21,23 32:19 55:18 57:19 105:3 107:3 111:25 112:1 115:16 117:25 120:6 124:1 130:21 138:20 149:3 154:13 159:20,24 160:5 161:11,12 162:19 163:1,12 173:3 182:10,11 182:12 216:10 255:9 276:13 281:19
viewed 148:17
viewpoint 246:19
views 54:18 95:21 118:4 232:23 233:1 254:8
violate 36:11,19 36:21
virginia 1:2,9,10 1:14 2:2,9,11,15 5:4,5,9,14,20,22 6:9,14,19,21 7:3,8 7:10 11:13,15 13:5,8,11,12 20:22 250:4 286:16,20 287:4

virtual 245:12
virtually 91:4 113:6 126:22
visibly 126:22
visit 210:13
visualizing 196:17
vita 75:20
vitae 60:2
vocabulary 194:10,11
vocation 250:21
volume 1:20 2:21 8:4 288:16
volumes 57:1
vote 250:21
vpeletdeltoro 3:18
vs 1:8 2:8
vulnerable 160:23 160:24

w

w 1:11 2:11
wait 142:17
waiting 181:3 202:15 212:2
walk 202:14 273:5 273:5
walked 273:13
wall 4:8
want 17:16 19:8 21:13 32:16 33:12 34:17 36:11,18,24 43:12 45:10 46:18 47:4 48:22 51:5 52:15 61:4 74:19 95:6 98:19 108:12 108:15 119:17,18 125:16 126:4 143:3 173:21 177:4 179:24 181:13,15 182:18 186:19 196:12 202:3 203:13 205:8 208:5 209:25 210:16 217:13,13 219:19 219:20 220:23 235:5 236:11,13 237:11,16 261:15 268:7 270:11 271:11,11 277:12 277:13 281:6,15 281:20,24 283:14
wanted 33:14 56:15,19 63:19 82:13 98:17 99:5 101:11,12 122:14 137:23 139:4 154:23 158:24 169:9 172:5 187:20 229:15 235:18 257:24 258:19 265:17
wants 142:23 149:11 159:4 183:8 249:4 270:12
washington 64:20 65:23 66:5 164:16
waste 36:24
wasting 237:14
watchful 181:2 202:15 212:2
water 34:4
wave 104:2
way 17:15 28:7 35:6 48:12 54:17 60:23 94:13 136:11 144:1 155:13 163:3 181:17 185:11,24 199:8 216:5 220:18 228:7 232:5,11 234:3 237:24 255:23 276:6 277:2,19
ways 89:15 100:20 160:9 232:10 235:3 252:20
we've 24:23 148:8 187:19 205:3
web 263:6
wednesday 1:20 2:23 11:1 129:3
week 37:23 77:5 89:11 166:14 196:25
weeks 91:8 99:21 210:4 273:7,14
weighted 134:5,6
weighty 116:20,20 117:2
welcome 108:10 156:2 175:11 286:10 287:2,7
welfare 38:25 132:15
went 14:7 74:12 82:20 139:8 156:13 256:7 284:21
west 1:2,9,10,14 2:2,9,10,15 5:4,5,9 5:14,22 6:9,14,21 7:3,10 11:13,15 13:5,8,11,12 20:22 250:4 286:16,20 287:4
western 1:2 2:2 87:21,24 88:5,21 110:15,21
whatsoever 114:2 173:13
wheelhouse 147:9
whereof 289:14
white 6:8
wide 159:22 160:1 195:3
widely 283:7
wider 256:10
widespread 137:3
wilkinson 4:18 13:17
willing 120:17 209:6 243:17 249:15
window 214:16 217:6
windows 214:15
wisdom 132:19 267:5 280:1
wise 117:14 141:13
wish 21:6 253:23
wishes 30:5 38:18
withdrawn 200:18
witness 8:2 13:20 27:16 34:2,4 35:22 36:10,20 40:14 41:16 46:17 48:11 49:4,20 50:2,15,17 51:6,20 54:11 55:14 57:7 57:12,14,16,22 59:1,5,21 60:1 62:1 65:3 66:2,18 67:10,18 68:8,18 70:11,15 76:9,11 76:19 81:8 84:1 85:13 86:17 91:16 94:13,14 102:16 102:18,20 106:15 106:18 109:6,8 111:14 119:4,6

128:4 134:11 144:7 145:13 146:4 150:13 151:21 153:7 154:21 158:20 159:13 161:20 162:25 165:21 168:15 169:17 170:7 171:5 180:25 183:6,21 184:12 187:2 192:4 195:16 196:24 199:20 200:20 205:24 213:21 219:14,19 219:23 221:23 222:16 224:10 226:12,20 227:8 229:21 230:25 231:14 232:2 234:5 238:15,22 239:9 240:25 241:7,25 242:10 243:12 246:21 247:9,12,20 249:8 249:24 250:9 251:13 252:1,11 252:16 253:11,16 254:16 256:23 257:9 259:10 267:15 268:6 283:18 285:2 286:10,14 287:2,7 289:14

witness's 61:5 232:1 250:8 254:15

witnesses 289:5

wolf 168:14,14

woman 16:7 24:25 26:17 122:5 225:3 229:13

women 25:13 30:1 143:3,4 148:9 204:21 232:3,9,12 233:7 259:19

women's 145:9 147:17

wonder 153:20

wondered 57:16 191:14

wondering 172:1 201:13 265:24

wonders 191:22

word 19:16 45:1 46:17 47:1,3,21 64:13 92:15,16 103:10 157:17,24 161:9 214:7,19 215:25 225:2,23 265:15,15

words 25:13 127:12 162:25 193:6,22 230:15 261:8 283:21

work 24:4 26:3 28:6 44:21 52:19 59:12 68:22 72:5 83:6 87:24 88:15 89:8 93:12 94:2,6 94:7 95:8,9,11,13 96:2,5,15 99:23 101:6 105:24 110:22 114:4 138:5 175:4 199:14,16 211:14 232:2 240:4,6,11 242:12 280:17 285:3

worked 52:11,25 53:19 245:6 266:21

working 52:13 84:14 88:2 116:14 256:25 257:24 282:1

works 50:21 51:11 96:19

workshop 40:22 88:15

workshops 88:13

world 73:18 131:3 131:13 133:1,2 166:5 182:6 230:2 254:9

worry 231:6

wow 190:23

wpath 39:23 182:6 284:8,10,12,23 285:10

wpath's 284:3

wrap 98:15

write 53:1 99:12 138:21 139:7 140:19 179:3,3,4 208:20 210:23 261:14 266:5

writer 196:2

writing 60:11,17 103:3 174:13

writings 43:19

written 37:14 39:18 43:18 45:8 45:9 46:1,8 48:7 88:10 114:16 174:13 211:9 263:7

wrong 37:5 74:5 151:13 201:15 216:24 264:2 279:12

wrote 55:21 62:3 109:9,20 121:8 138:25 139:5 140:23 167:16 189:9 225:16 260:19,22 261:2

wvago.gov 5:11

wyant 5:17

x

x 222:9

y

y 23:5 222:9

yeah 53:16 61:6 62:17 63:14 71:3 76:22 77:25 78:16 82:4 86:20 102:16 109:13 136:21 141:20 142:11 161:10 164:11 167:10 190:4 194:4 200:15,16 202:22 206:14 211:24 218:19 227:23,24 228:15 235:12,18 237:12 238:17 246:21 255:24 259:13 262:3 271:17 278:8

year 15:9 17:13 23:8,11 24:13 37:24 77:23 78:2 84:22,22 88:22 89:12 99:4,21 101:19 112:9 121:8 132:1,2,3 133:16 134:2,3,3,4 139:2 140:3,12 147:3,3,4,4 149:11 150:7 151:17 166:14,15 174:8 179:10,11 186:14

190:13 210:11 220:4,6,7,7,11,12 220:13,16,16 234:22,22 235:7 249:2,13 250:3,14 250:24,24,24 258:18 259:15 260:25 262:16 264:21 265:21 267:10 268:4 270:4 280:7
year's 90:1
years 17:5,7 23:23 28:16 31:12 56:4 56:6 63:17 75:8 88:11 89:22 91:5 99:4 100:6 101:21 103:1 129:15 133:16 135:18 136:14,15,15 142:4 153:19,21 165:4 172:14,16 172:16,16 173:6,9 173:16,16,17 174:1,5,6,10,12,25 175:2 176:12,13 176:13,20 179:8 180:3 188:19 214:23 215:4 216:5,13 217:2,12 217:12 228:21 229:11,11,12 236:24 237:5 239:10 244:9 245:6 258:14,23 263:18 265:14 270:20,21 281:11
yesterday 58:15 58:16,19 59:7,19
york 4:10,10 188:3
young 21:7 52:20 52:20 54:5 60:9 74:11 80:23 83:17 83:17 139:1 173:4 174:3 199:14 223:13 228:9
younger 34:8,15 35:13 43:23 44:11 45:12 52:20 53:1 53:12,20,24 54:4,8 55:11,20,24 56:11 98:17 168:3,12,25 169:6,8,13 173:14
youth 60:4 90:4 146:1 149:4 161:12,16 165:3 172:7 232:24 233:1

z

z 106:19 222:9,9
zane 106:19
zeal 263:23
zebra 180:22
zebras 180:18
zelkind 4:6 12:21
zholstrom 3:22
zimmerman 218:20 219:7 220:19
zoe 3:11 12:17
zoom 3:1 96:16 144:4
zucker 90:10,20

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.