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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO**

PAM POE, by and through her
parents and next friends, et al.

Plaintiffs,

v.

RAÚL LABRADOR, in his official
capacity as Attorney General of the State
of Idaho, et al.

Defendants.

Case No. 1:23-cv-00269-BLW

**COMBINED MEMORANDUM OF
LAW IN OPPOSITION TO MO-
TION FOR PRELIMINARY IN-
JUNCTION AND IN SUPPORT
OF MOTION TO DISMISS**

TABLE OF CONTENTS

TABLE OF AUTHORITIES.....	iv
INTRODUCTION	1
BACKGROUND.....	3
I. Gender dysphoria is a psychiatric diagnosis	3
II. “Transitioning” minors inflicts irreversible harms and unknown risk	5
A. Taking cross-sex hormones before puberty causes sterility	5
B. The neurological effects of suppressing puberty are unknown	6
C. Puberty blockers and cross-sex hormones cause other harms.....	7
III. No reliable science evidence justifies medical transition for minors.....	7
A. Medical ethics require benefits outweigh the risks.....	7
B. European Authorities find benefits do not outweigh the risks.....	8
C. Detransitioners cast significant doubt on Plaintiffs’ claims.....	9
IV. Idaho enacts the Vulnerable Child Protection Act	10
STANDARD OF DECISION	10
ARGUMENT	11
I. The Court lacks subject matter jurisdiction	11
II. Plaintiffs fail to demonstrate a likelihood of success on the merits	12
A. The Act does not discriminate by sex or transgender status	13
1. The Act does not discriminate based on sex.....	13
2. The Act does not discriminate based on transgender status	15
B. Parents have no right to experimental and harmful treatments	17

C. The Act satisfies any level of scrutiny	19
D. Plaintiffs’ experts’ opinions are unreliable	24
III. Plaintiffs have not met the remaining preliminary-injunction factors.....	27
IV. The scope of Plaintiffs’ requested relief is inappropriate	29
CONCLUSION.....	31

TABLE OF AUTHORITIES

CASES

<i>Abigail All. for Better Access to Developmental Drugs v. von Eschenbach</i> , 495 F.3d 695 (D.C. Cir. 2007).....	19
<i>California v. Azar</i> , 911 F.3d 558 (9th Cir 2018).....	12, 27
<i>Coalition for the Econ. Equity v. Wilson</i> , 122 F.3d 718 (9th Cir. 1997).....	27
<i>Daniels-Feasel v. Forest Pharms.</i> , 2021 WL 4037820 (S.D.N.Y. September 3, 2021), <i>aff'd</i> , 2023 WL 4837521 (2d Cir. July 28, 2023)	24
<i>Dobbs v. Jackson Women’s Health Organization</i> , 142 S. Ct. 2228 (2022).....	<i>passim</i>
<i>Doe v. Snyder</i> , 28 F.4th 103 (9th Cir. 2022)	16
<i>Doe 1 v. Thornbury</i> , 75 F.4th 655 (6th Cir. 2023)	28
<i>Drakes Bay Oyster Co. v. Jewell</i> , 747 F.3d 1073 (9th Cir. 2014).....	28
<i>East Bay Sanctuary Covenant v. Barr</i> , 934 F.3d 1026 (9th Cir 2019).....	29
<i>EEOC v. Freeman</i> , 778 F.3d 463 (4th Cir. 2015).....	24
<i>Eknes-Tucker v. Gov of Alabama</i> , No., 22-11707, ___F.4th___ 2023 WL 5344981 (11th Cir. August 21, 2023).. <i>passim</i>	
<i>Ex parte McCardle</i> , 74 U.S. 506.....	11
<i>Ex parte Young</i> , 209 U.S. 123 (1908).....	11

<i>Geduldig v. Aiello</i> , 417 U.S. 484 (1974).....	13
<i>Godecke v. Kinetic Concepts, Inc.</i> , 937 F.3d 1201 (9th Cir. 2019).....	10
<i>Gonzales v. Carhart</i> , 550 U.S. 124 (2007).....	19
<i>Hecox v. Little</i> , Nos. 20-35813, 20-35815, ___F.4th___ 2023 WL 5283127 (9th Cir. August 17, 2023) <i>passim</i>	
<i>In re Lipitor</i> , 892 F.3d 624 (4th Cir. 2018).....	24
<i>In re Lipitor</i> , 185 F. Supp. 3d (D.S.C. 2016)	26, 27
<i>In re Zolof</i> , 26 F. Supp. 3d 449 (E.D. Penn. 2014)	24
<i>Karnoski v. Trump</i> , 926 F.3d 1180 (9th Cir. 2019).....	3, 16
<i>Latta v. Otter</i> , 771 F.3d 496 (9th Cir. 2014).....	27
<i>Lopez v. Candaele</i> , 630 F.3d 775 (9th Cir. 2010).....	11
<i>L.W. v. Skrmetti</i> , 73 F.4th 408 (6th Cir. 2023)	<i>passim</i>
<i>Newman v. Lance</i> , 129 Idaho 98, 922 P.2d 395 (Idaho 1996).....	12
<i>Planned Parenthood Greater Northwest v. Labrador</i> , No. 1:23-cv-00142-BLW, ___F.Supp.3d___, 2023 WL 4864962 (D. Idaho July 31, 2023)	11
<i>Parham v. J. R.</i> , 442 U.S. 584 (1979).....	18

<i>Raidoo v. Moylan</i> , 75 F.4th 1115 (9th Cir. 2023)	19
<i>Reed v. Reed</i> , 404 U.S. 71 (1971).....	12
<i>Rink v. Cheminova, Inc.</i> , 400 F.3d 1286 (11th Cir 2005).....	24
<i>Roman v. Wolf</i> , 977 F.3d 935 (9th Cir. 2020).....	27
<i>Rosen v. Ciba-Geigy Corp.</i> , 78 F.3d 316 (7th Cir. 1996).....	26
<i>State v. Summer</i> , 139 Idaho 219, 76 P.3d 963 (Idaho 2003).....	12
<i>Tingley v. Ferguson</i> , 47 F.4th 1055 (9th Cir 2022)	22
<i>Trump v. Hawaii</i> , 138 S. Ct. 2392 (2018).....	21
<i>Tuan Anh Nguyen v. Immigration Naturalization Services</i> , 533 U.S. 53 (2001).....	14
<i>Twitter, Inc. v. Paxton</i> , 56 F.4th 1170 (9th Cir. 2022)	11
<i>United States v. Hansen</i> , 143 S. Ct. 1932 (2023).....	30
<i>United States v. Virginia</i> , 518 U.S. 515 (1996).....	14
<i>United States v. Wilson</i> , 484 F.3d 267 (4th Cir. 2007).....	26
<i>Washington v. Glucksberg</i> , 521 U.S. 702 (1997).....	17, 18
<i>Winter v. Nat. Res. Def. Council, Inc.</i> , 555 U.S. 7 (2008).....	10

STATUTES

Idaho Code § 18-1506.....	10
Idaho Code § 31-2227.....	12
Idaho Code § 31-2604.....	12

OTHER AUTHORITIES

Academie Nationale de Medecine of France, Medicine and gender transidentity in children and adolescents, February 25, 2022	9
Attorney General Opinion No. 23-1	11
Diagnostic and Statistical Manual of Mental Disorders 5-TR (“DSM-5”).....	3,
Guidelines from the World Professional Association for Transgender Health (WPATH) and the Endocrine Society	5, 30
<i>Health services for children and young people with gender dysphoria</i> , Ugeskr Læger 2023; 185; V11220740 (July 3, 2023).....	9
Senate Chamber Session Day 78 (March 27, 2023) https://tinyurl.com/3ebfbknt	22
Swedish Socialstyrelsen Support 2022	21
Testimony of Dr. Roger Hiatt, February 7, 2023, House Judiciary, Rules & Administration Hearing https://tinyurl.com/59jt7376	23
The Cass Review, Independent Review of Gender Identity Services for Children and Young People: Interim Report at 33 (February 2022) http://tinyurl.com/5s55653n	4

INTRODUCTION

Idaho's Vulnerable Child Protection Act regulates specific medical treatments for a specific psychiatric diagnosis in a specific age group. In particular, it prohibits the use of medical interventions (like puberty blockers and cross-sex hormones) and surgical interventions (like mastectomies and penectomies) as a treatment for gender dysphoria in minors. The Act permits the use of mental health therapy to treat gender dysphoria in minors. And the Act permits adults to obtain any intervention.

The reason for prohibiting these interventions for minors is clear: The interventions provide no proven benefit, impose lifelong and irreversible harm, and carry significant unknown risks. The harms include not only near-certain sterilization and lack of sexual function, but also increased chances of heart disease, stroke, blood clots, breast and uterine cancer, liver dysfunction, hypertension, and osteoporosis. The unknowns include a complete lack of evidence regarding long-term outcomes for the current patient population and *total* uncertainty regarding the neurological and cognitive effects resulting from the suppression of healthy puberty in adolescents. No benefit from these interventions has been reported in any reliable study. And not a single systematic review—the highest form of medical evidence—has ever demonstrated reduced death by suicide from these interventions.

Governments around the globe have taken note. Specifically, public health authorities in Europe have acknowledged that the risks associated with these interventions outweigh any demonstrated benefits. Several states in the U.S. have likewise acknowledged the danger of these interventions and corresponding lack of proven benefit and prohibited the practice of this experimental medicine on minors.

Two federal courts of appeals have concluded that such commonsense regulations are likely constitutional. The Eleventh Circuit Court of Appeals recently vacated a preliminary injunction against Alabama’s law protecting minors from these interventions. And the Sixth Circuit Court of Appeals stayed preliminary injunctions against similar laws in both Tennessee and Kentucky.

The reasoning of those decisions shows why Idaho’s Vulnerable Child Protection Act is likewise constitutional. Specifically, the Act is not subject to heightened scrutiny merely because it acknowledges biological differences that must be considered in the medical context. The Act is not subject to heightened scrutiny absent some showing of invidious discrimination—which cannot be made here. Lastly, the Parent Plaintiffs’ claims fail because parents do not have a substantive Due Process right to obtain for their children puberty blockers, cross-sex hormones, and surgeries that are prohibited by state law. One cannot conclude that these interventions are “deeply rooted in our Nation’s history.”

Moreover, even if the Act were subject to heightened scrutiny, it easily passes. The Act serves the compelling government interest of protecting minors from harmful and unproven medical interventions. And a prohibition on those interventions is necessary to adequately serve that compelling interest because almost nothing is known about the long-term consequences associated with them. In addition, the existence of detransitioners—those who have transitioned but later come to identify with their sex—offers living proof that, as Plaintiffs’ experts conceded, providers cannot know who has a “true” need for these interventions ahead of time.

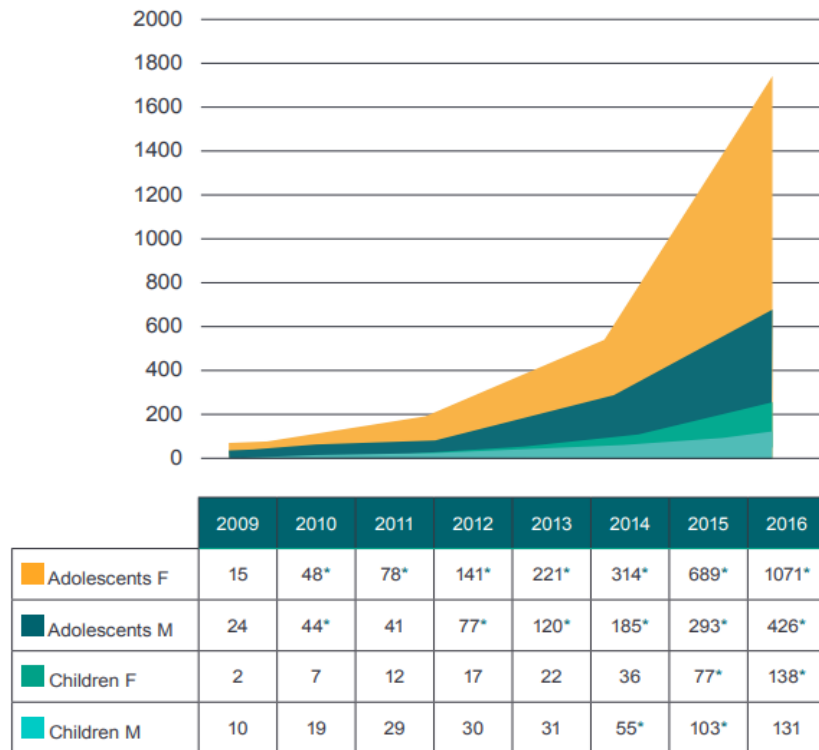
Finally, even if Plaintiffs are entitled to injunctive relief, they have offered no justification for either statewide relief or an injunction against the Act in all its applications. Therefore, if the Court enters an injunction, it should limit the scope of that injunction to Plaintiffs and their providers.

BACKGROUND

I. Gender dysphoria is a psychiatric diagnosis.

There are two human sexes—male and female. Malone Decl. (“Malone”) ¶ 59. An individual’s sex is an objective and biological fact that cannot be changed. *Id.*; Weiss Decl. (“Weiss”) ¶ 34. Distinct from “sex,” an individual’s “gender identity” is his or her personal sense of being male or female. *See* Malone ¶ 62. Individuals “identify as transgender” when their sex is different from their gender identity. *Karnoski v. Trump*, 926 F.3d 1180, 1187 n.1 (9th Cir. 2019). “Gender dysphoria,” in contrast, is a specific psychiatric diagnosis defined by diagnostic criteria set out in the *Diagnostic and Statistical Manual of Mental Disorders 5-TR* (“DSM-5”). Cantor Decl. (“Cantor”) ¶ 109. Although its definitions vary slightly for children, adolescents, and adults, all cases are characterized by a strong and lasting desire to be the opposite sex and “clinically significant” distress that impairs the individual’s ability to function in daily life. *Id.*

In the last decade, the number of minors diagnosed with gender dysphoria has exploded. Cantor ¶ 64; Malone ¶ 15. This explosion has disproportionately affected adolescent natal females. Malone ¶ 16. The following chart displays the number of minors, distinguished by sex, referred to the UK’s Gender Identity Services clinic between 2009 and 2016:

Figure 1: Sex ratio in children and adolescents referred to GIDS in the UK (2009-16)

AFAB = assigned female at birth; **AMAB** = assigned male at birth

***Indicates** $p < .05$ which shows a significant increase of referrals compared to the previous year

Source: de Graaf NM, Giovanardi G, Zitz C, Carmichael P (2018).³²

The Cass Review, Independent Review of Gender Identity Services for Children and Young People: Interim Report at 33 (Feb. 2022), *available at* <http://tinyurl.com/5s56653n>.

Health authorities in the UK, Sweden, and Finland have noted this phenomenon is “unexplained,” with this group of “later-presenting birth-registered female teenagers” now the “current predominant cohort” of minors with gender dysphoria. Cantor ¶¶ 64-65. Some researchers posit that “social contagion,” meaning the “well-established psychological concept defined as the spread of behaviors, attitude and affect through crowds and other types of social aggregates from one member to another,” may be a “factor in both the rise of new cases and the demographic shift

towards females.” Malone ¶¶ 16-17. Others have noted the correlation between this increase and social media. Cantor ¶¶ 287-89.

II. “Transitioning” minors inflicts irreversible harms and unknown risk.

Psychotherapy is an accepted approach to treating gender dysphoria. Cantor ¶¶ 16, 290. Advocates of so-called “gender-affirming care,” however, also endorse medically and surgically “transitioning” as a treatment for minors with gender dysphoria. These interventions cause known harms and carry unknown risks.

A. Taking cross-sex hormones before puberty causes sterility.

The protocol for *medical* interventions to treat gender dysphoria calls for the suppression of an adolescent’s natural puberty. As Plaintiffs explain, under the guidelines from the World Professional Association for Transgender Health (WPATH) and the Endocrine Society, providers prescribe GnRH agonists (puberty blockers) to suppress an adolescent’s natural puberty. Dkt. 32-1 at 4. This suppression allegedly prevents the distress associated with going through natural puberty when the adolescents’ gender identity is not consistent with their sex. *See id.*

Next, as Plaintiffs also explain, providers prescribe cross-sex hormones. *See id.* This means that natal females take testosterone, and natal males take estrogen. *Id.* Adolescents who are prescribed cross-sex hormones for this purpose “will require continuing treatment with cross-sex hormones for life.” Cantor ¶ 224.

It is a near certainty that treatment in accordance with either the WPATH or Endocrine Society Guidelines will result in sterility. It is essentially indisputable that taking cross-sex hormones without first going through puberty will sterilize a person. Cantor ¶ 205; Malone ¶ 118; Weiss ¶ 116. Relatedly, these individuals may never be

able to achieve an orgasm. Cantor ¶ 208; Weiss ¶ 115. Even for those who begin such treatment at a later stage of puberty, “no studies at all have been done” regarding “when, ... or with what probability either males or females can achieve healthy fertility if they later regret their transition” and cease treatment. Cantor ¶ 206. “Infertility is frequent in those females treated with testosterone even if not given puberty blockers.” Weiss ¶ 134. And the “hormonal and surgical treatment pathway” will sterilize a person. Malone ¶ 19.

There are no established fertility options for minors who undergo medical transition. For minors who take cross-sex hormones without going through puberty, “no viable fertility preservation options exist.” Cantor ¶ 205. The “fertility options” for natal females who have been exposed to cross-sex hormones are so uncertain “that mouse studies are being done to try to understand how to mitigate the harm.” Weiss ¶ 135. In addition, when natal females undergo a so-called “gender-affirming mastectomy,” Connelly Decl. ¶ 26, “it is functionally irreversible” and “breast-feeding a child will never be possible.” Cantor ¶ 207.

B. The neurological effects of suppressing puberty are unknown.

Pubertal hormones “drive important stages of neural development.” Cantor ¶ 209. As UK health authorities have put it, a “further concern” regarding pubertal suppression “is that adolescent sex hormone surges may trigger the opening of a critical period for experience-dependent rewiring of neural circuits underlying executive function,” meaning “maturation of the part of the brain concerned with planning, decision making and judgment.” *Id.* (quotations omitted).

“To date, there has been very limited research on the short-, medium- or longer-term impact of puberty blockers on neurocognitive development.” *Id.* (quotations omitted). Given this lack of knowledge, many “have expressed concern that blocking the process of puberty during its natural time could have a negative and potentially permanent impact on brain development.” Cantor ¶ 212.

C. Puberty blockers and cross-sex hormones cause other harms.

In addition to near-certain infertility, medicalized transition causes additional harms. These harms include “increased risks of heart disease, stroke, blood clots, breast and uterine cancer, liver dysfunction, hypertension, and osteoporosis.” Malone ¶ 24; *see also* Cantor ¶¶ 214-225; Weiss ¶¶ 133, 136-49.

III. No reliable science evidence justifies medical transition for minors.

Because the “fundamental objective of medicine is to enhance an individual’s health and well-being,” a medical intervention is justified only when its probable benefits outweigh its probable risks. Malone ¶ 40. Systematic reviews of the evidence—including those by European health authorities—have concluded that the evidence does not show the benefits of medically or surgically “transitioning” minors outweigh the risks. European health authorities concluded that the experience of “detransitioners” casts doubt on the safety and efficacy of these treatments.

A. Medical ethics require benefits outweigh the risks.

Any particular medical treatment cannot simply be labeled “safe.” Cantor ¶ 70. Instead, a medical treatment is appropriate only when the probable benefits outweigh the probable risks associated with the treatment. Cantor ¶ 71. Under this risk-benefit analysis, serious risks associated with a particular treatment cannot be

justified “without evidence of correspondingly greater benefit.” Cantor ¶ 52. Therefore, no medical intervention that carries risks should be used unless there is “a higher degree of certainty regarding its benefits.” Malone ¶ 40. Given the significant irreversible risks—including sterility—of medically and surgically transitioning minors, these interventions cannot be justified unless there is a high degree of certainty regarding their benefits. *Id.* ¶¶ 40-42.

B. European Authorities find benefits do not outweigh the risks.

Several European countries have concluded that the demonstrated benefits do not clearly outweigh the risks. *Id.* ¶¶ 124-30. In particular, health authorities in Sweden and the U.K. have engaged in systematic reviews of the evidence surrounding these treatments. Cantor ¶¶ 78-85. This means the health authorities engaged in “a comprehensive analysis of the entire body of evidence” surrounding the “transition” of minors, rather than focused on “individual research studies alone.” Malone ¶ 27. The point of the systematic review is to “minimiz[e] opportunities for bias in gathering and evaluating research evidence.” Cantor ¶ 40. A systematic review is the highest form of medical evidence. *Id.*

Every systematic review of medically and surgically transitioning minors shows a “low” or “very-low” degree of certainty in mental-health improvement. Malone ¶ 28. No systematic review has ever demonstrated reduced death by suicide resulting from these treatments. *Id.* After Swedish health authorities conducted their systematic review, they concluded that the “risks of puberty suppressing treatment with GnRH-analogues and gender-affirming hormonal treatment currently outweigh the possible benefits.” Cantor ¶ 28 (quotations omitted). UK health authorities have

said “it is an unanswered question whether the evidence for the use and safety of [puberty blockers] is strong enough as judged by reasonable clinical standards.” *Id.* ¶ 19 (quotations omitted). Health authorities and researchers in Finland, Norway, France, and Denmark have expressed similar caution. *Id.* ¶¶ 21-24, 29-33; Malone ¶ 129. Meanwhile, in the United States, the FDA has not approved the use of puberty blockers or cross-sex hormones as a treatment for gender dysphoria. *L.W. v. Skrametti*, 73 F.4th 408, 418 (6th Cir. 2023) (noting “the FDA is not prepared to put its credibility and careful testing protocols behind the use” of these drugs for this purpose).

C. Detransitioners cast significant doubt on Plaintiffs’ claims.

With the rise of minors being diagnosed with gender dysphoria has come the rise of “detransitioners”—those who have previously undergone some form of “gender-affirming” treatment but later come to identify with their natal sex. Malone ¶ 12. At least two recent studies suggest the medical detransition rate among youth who underwent gender transitions in recent years may be as high as 30%—and that is only within a few years of beginning transition. *Id.* ¶ 34. A study based on a highly reliable dataset from the U.S. military healthcare system similarly showed that nearly 30% of youth who commenced medical transition discontinued it within the first four years. *Id.* ¶ 35. The existence of detransitioners has been part of the basis for caution throughout the world. Cantor ¶ 29 (citing Press Release, Academie Nationale de Medecine of France, Medicine and gender transidentity in children and adolescents, February 25, 2022); Malone ¶ 129 (citing Status Article, *Health services for children and young people with gender dysphoria*, Ugeskr Læger 2023; 185: V11220740 (July 3, 2023)). The unexplained fact of those who transitioned as minors and later came

to identify with their natal sex casts doubt on the entire practice of “youth transgender medicine.”

IV. Idaho enacts the Vulnerable Child Protection Act.

This past spring, Idaho passed a law to protect children and adolescents from the dangers of these unproven medical and surgical interventions. The Vulnerable Child Protection Act (the Act) makes it a crime to perform particular surgical or medical interventions on minors “for the purpose of attempting to alter the appearance of or affirm the child’s perception of the child’s sex if that perception is inconsistent with the child’s biological sex.” *See* Idaho Code § 18-1506(c)(3). The Act will go into effect on January 1, 2024.

Plaintiffs filed this lawsuit in May. *See* Dkt. 1. The Plaintiffs are two minors and their respective parents. *Id.* ¶¶ 6-7. They allege they are currently receiving care that will be prohibited by the Act in January. *Id.* Plaintiffs filed this motion for a preliminary injunction in July. *See* Dkt. 32.

STANDARD OF DECISION

A motion to dismiss under Rule 12(b)(6) may seek dismissal based on “the lack of a cognizable legal theory or the absence of sufficient facts alleged under a cognizable legal theory.” *Godecke v. Kinetic Concepts, Inc.*, 937 F.3d 1201, 1208 (9th Cir. 2019). “A plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of the equities tips in his favor, and that an injunction is in the public interest.” *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7,

20 (2008). And a court cannot grant a preliminary injunction if it lacks subject matter jurisdiction. *See Ex parte McCardle*, 74 U.S. 506, 514.

ARGUMENT

I. The Court lacks subject matter jurisdiction.

At the outset, Plaintiffs’ claims against the Attorney General and the members of the Idaho Code Commission fail for lack of subject matter jurisdiction. These Defendants have Eleventh Amendment immunity, and the *Ex parte Young* exception applies only if they are “clothed with some duty in regard to the enforcement of the laws of the state, and ... threaten and are about to commence proceedings ... to enforce against parties affected [by] an unconstitutional act.” *Ex parte Young*, 209 U.S. 123, 155–56 (1908). And proving a justiciable controversy in the pre-enforcement context also requires a threat: for standing, “whether the prosecuting authorities have communicated a specific warning or threat to initiate proceedings,” *Twitter, Inc. v. Paxton*, 56 F.4th 1170, 1174 (9th Cir. 2022), and for ripeness, a “specific and credible threat of adverse action.” *Lopez v. Candaele*, 630 F.3d 775, 781 (9th Cir. 2010).

Plaintiffs do not meet these standards as to the Attorney General and the Code Commission Defendants. As the Attorney General has recently explained, he lacks authority to enforce Idaho criminal law absent a referral by county prosecutors, and Plaintiffs do not allege that any such referral has occurred, much less that the Attorney General has made any threat of enforcement.¹ *See* Formal Att’y Gen. Op. 23-1;

¹ The Attorney General recognizes that the Court has recently rejected this argument but he asserts it here to preserve his immunity defense. *Planned Parenthood v. Labrador*, ___ F.Supp.3d ___, 2023 WL 4864962, at *7 (D. Idaho July 31, 2023).

Idaho Code § 31-2227; Idaho Code § 31-2604; *Newman v. Lance*, 922 P.2d 395, 399 (Idaho 1996); *State v. Summer*, 76 P.3d 963, 968 (Idaho 2003). And there is even less of a connection to the members of the Idaho Code Commission, which has *no* enforcement authority of any kind, nor do Plaintiffs allege otherwise. The mere act of publication of the code is not enforcement, and it has no nexus to Plaintiffs’ purported harm. Dkt. 1 ¶ 123. In fact, the only claim they assert against the members of the Code Commission—that the law is void for vagueness—is not even one on which they seek a preliminary injunction. *See* Dkt. 1, Count III.

II. Plaintiffs fail to demonstrate a likelihood of success on the merits.

Plaintiffs fail to demonstrate a likelihood of success on the merits—the “most important” preliminary-injunction factor—for several reasons. *California v. Azar*, 911 F.3d 558, 575 (9th Cir. 2018) (quotations omitted). First, the Act is not subject to heightened scrutiny because it does not discriminate on the basis of either sex or transgender status. Second, even if the Act were subject to heightened scrutiny, it is constitutional given the compelling interest served by the Act and the fact that the treatments at issue offer no proven benefit, impose numerous long-term irreversible harms, and carry risks that are completely unknown.

A. The Act does not discriminate by sex or transgender status.

1. The Act does not discriminate based on sex.

Under the Equal Protection Clause, sex discrimination is a “preference to members of either sex over members of the other.” *Reed v. Reed*, 404 U.S. 71, 76 (1971). The Act clearly does not violate this constitutional principle because it applies to both males and females the same. Instead, as the Eleventh Circuit held with

respect to a similar law, the Act “is best understood as a law that targets specific medical interventions for minors, not one that classifies on the basis of any suspect characteristic under the Equal Protection Clause.” *Eknes-Tucker v. Gov. of Ala.*, No. 22-11707, --- F.4th---, 2023 WL 5344981, at *15 (11th Cir. Aug. 21, 2023).

Moreover, a statute regulating *medical procedures* does not trigger heightened scrutiny when it acknowledges sex-based distinctions. As the Supreme Court recently explained, “[t]he regulation of a medical procedure that only one sex can undergo does not trigger heightened constitutional scrutiny” absent a showing of “‘invidious discrimination against members of one sex or the other.’” *Dobbs v. Jackson Women’s Health Org.*, 142 S. Ct. 2228, 2245–46 (2022) (quoting *Geduldig v. Aiello*, 417 U.S. 484, 496 n.20 (1974)). “In *Geduldig*, the Supreme Court stated that a classification based on pregnancy is not per se a classification based on sex, even though ‘it is true that only women can become pregnant.’” *Hecox v. Little*, Nos. 20-35813, 20-35815, ___ F.4th ___, 2023 WL 5283127, at *11 (9th Cir. Aug. 17, 2023) (quoting *Geduldig*, 417 U.S. at 496 n.20). Here, the Act regulates two *separate* “medical procedure[s] that only one sex can undergo,” *id.*, because a natal female “cannot transition through use of estrogen” and a natal male “cannot transition through use of testosterone,” *L.W.*, 73 F.4th at 419. The Act does not trigger heightened scrutiny simply because it acknowledges these biological distinctions.

It is true the Act “mentions the word ‘sex.’” *Id.* But as the Sixth Circuit recently asked with respect to a similar law, “how could it not?” *Id.* “That is the point of the existing hormone treatments—to help a minor transition from one gender to another.” *Id.* Thus, the Act “refers to sex only because the medical procedures that it

regulates—puberty blockers and cross-sex hormones as a treatment for gender dysphoria—are themselves sex-based.” *Eknes-Tucker*, 2023 WL 5344981 at *16.

Plaintiffs’ sex-stereotyping argument fails for a similar reason. Dkt. 32-1 at 14–15. First, “[p]hysical differences between men and women are . . . enduring.” *United States v. Virginia*, 518 U.S. 515, 533 (1996). They are “not a stereotype.” *Tuan Anh Nguyen v. INS*, 533 U.S. 53, 68 (2001). And this enduring biological reality explains *why* the “regulation of a medical procedure that only one sex can undergo does not trigger heightened constitutional scrutiny.” *Dobbs*, 142 S. Ct. at 2245–46.

Second, the diagnosis of gender dysphoria turns *expressly* on sex stereotypes. For example, the criteria for pre-pubertal children asks whether the child has shown a preference “for the toys, games, or activities *stereotypically* used or engaged in by the other gender.” Dkt. 32-6 ¶ 18 (emphasis added). For boys, it asks if the child rejected “*typically masculine* toys, games, and activities” and demonstrated an “avoidance of rough-and-tumble play.” *Id.* (emphasis added). For girls, it asks whether the child rejected “*typically feminine* toys, games, and activities.” *Id.* (emphasis added). Thus, the Act “targets certain medical interventions for minors meant to treat the condition of gender dysphoria,” which is expressly diagnosed based on gender stereotypes. *Eknes-Tucker*, 2023 WL 5344981 at *17. But the Act *itself* “does not further any particular gender stereotype.” *Id.* Instead, it simply regulates particular interventions for a *diagnosis* that turns on gender stereotypes. *Id.*

Third, Plaintiffs’ examples of medical procedures that, they say, demonstrate sex-based discrimination only undermine their argument. Specifically, Plaintiffs highlight treatments for gynecomastia in natal males and polycystic ovarian

syndrome (PCOS) in natal females. *See* Dkt. 32-1 at 15. But neither gynecomastia nor PCOS are *psychological* disorders. As Plaintiffs' own expert admitted, gynecomastia is "diagnosed clinically by physical exam" and "does not turn on the presence or lack thereof of psychological distress." Connelly Dep. ("Ex. A") 247:6-8, 14-17. Similarly, Plaintiffs' expert admitted that the diagnosis for PCOS "is not dependent o[n] psychological distress." Ex. A 248:1-6. Thus, treatments for gynecomastia and PCOS do not "affirm" the gender of a patient to treat psychological distress; rather, they treat *physical* conditions. In contrast, and also as Plaintiffs' expert admitted, the purpose of prescribing puberty blockers and cross-sex hormones is to treat the *psychological* condition of gender dysphoria. Ex. A 70:12-25. Plaintiffs provide no example of a treatment permitted in Idaho that "affirms" the gender of a natal male as male or a natal female as female to treat *psychological distress*. Therefore, permitting treatments for gynecomastia and PCOS does not reflect any sort of sex-based discrimination in the Act's regulation of medical interventions as a treatment for gender dysphoria in minors.

2. The Act does not discriminate based on transgender status.

The Ninth Circuit has "held that heightened scrutiny applies to laws that discriminate on the basis of transgender status" because transgender persons are a "quasi-suspect class." *Hecox*, 2023 WL 5283127 at *11. While Defendants dispute that holding and reserve their right to challenge it *en banc* or before the Supreme Court, even if it were correct, it would not apply here based on the testimony of Plaintiffs' own experts. That is because the Act regulates medical and surgical treatments for a particular psychiatric diagnosis—gender dysphoria—that Plaintiffs' experts say

is not the same as transgender status. Brady Dep. (Ex. B”) 71:12-14 (individual can be “transgender without having gender dysphoria”). Regulating treatment for a psychiatric diagnosis does not classify based on identity.

First, Ninth Circuit precedent does *not* establish that regulation of treatments for gender dysphoria constitute discrimination based on transgender status. To be sure, a law may not be drafted with “seemingly neutral criteria that are so closely associated with the disfavored group that discrimination on the basis of such criteria is, constructively, facial discrimination against the disfavored group.” *Hecox*, 2023 WL 5283127 at *10 (cleaned up). But the Ninth Circuit has expressly reserved the question whether the regulation of “gender dysphoria” is so “closely correlated with being transgender” that a regulation related to gender dysphoria “constitutes discrimination against transgender persons.” *Karnoski*, 926 F.3d at 1201 n.18; *see also Doe v. Snyder*, 28 F.4th 103, 114 (9th Cir. 2022) (treating as an open question whether “disallowing gender reassignment surgery should be treated as discriminating against transgender persons”).

Second, even if transgender identity were equivalent to having gender dysphoria, that still does not suggest heightened scrutiny applies to the regulation of *specific treatments* for gender dysphoria. It does not trigger heightened scrutiny to “restrict[] a specific course of medical treatment that, by the nature of things, only gender non-conforming individuals may receive.” *Eknes-Tucker*, 2023 WL 5344981 at *17. As the Ninth Circuit explained in *Hecox*, if “a classification based on pregnancy is not per se a classification based on sex, even though it is true that only women can become pregnant.” *Hecox*, 2023 WL 5283127 at *11 (cleaned up). For the same reasons, then, a

classification based on a gender dysphoria is not per se a classification based on transgender status *even if* only transgender persons can be diagnosed with gender dysphoria. Therefore, just as the regulation of a procedure that only one sex can undergo “does not trigger heightened constitutional scrutiny” absent proof of invidious discrimination against members of one sex, *Dobbs*, 142 S. Ct. at 2245–46, so too “the regulation of a course of treatment that only gender nonconforming individuals undergo would not trigger heightened scrutiny unless the regulation were a pretext for invidious discrimination against such individuals.” *Eknes-Tucker*, 2023 WL 5344981 at *17. And as explained in more detail below, there is no plausible basis to conclude that the Act is a mere pretext for invidious discrimination. In sum, the Act does not discriminate by sex or transgender status, and heightened scrutiny does not apply.

B. Parents have no right to experimental and harmful treatments.

Hidden away in the Due Process Clause, the Parent Plaintiffs purport to have discovered a constitutional right to obtain puberty blockers, cross-sex hormones, and gender-transition surgeries for their children. But their analysis falls well short of the Supreme Court’s requirements for a substantive Due Process right. That test requires that the right is “fundamental” or “deeply rooted in this Nation’s history and tradition.” *Washington v. Glucksberg*, 521 U.S. 702, 720–21 (1997). “But the use of these medications in general—let alone for children—almost certainly is not ‘deeply rooted’ in our nation’s history.” *Eknes-Tucker* 2023 WL 5344981 at *10. The “earliest-recorded uses of puberty blocking medication and cross-sex hormone treatment for purposes of treating the discordance between an individual’s biological sex and sense of gender identity did not occur until well into the twentieth century.” *Id.*

In light of this history, the Parent Plaintiffs seek to raise the level of generality for the right they are asserting. They primarily rely on principles discussed in the Supreme Court’s decision in *Parham v. J.R.*, 442 U.S. 584, 602 (1979), regarding the right of parents to make medical decisions for their children. *See* Dkt. 32-1 at 23. But because courts seek to “exercise the utmost care whenever” they “are asked to break new ground in th[e] field” of substantive Due Process, they require “a careful description of the asserted fundamental liberty interest.” *Glucksberg*, 521 U.S. at 721. And “*Parham* does not at all suggest that parents have a fundamental right to direct a particular medical treatment for their child that is prohibited by state law.” *Eknes-Tucker*, 2023 WL 5344981 at *12.

Indeed, there is not even a “historical recognition of a fundamental right of *adults* to obtain the medications at issue for themselves.” *Id.* at *13 n.18. Therefore, “it would make little sense for adults to have a *parental* right to obtain these medications for their children but not a *personal* right to obtain the same medications for themselves.” *Id.* It would make little sense to find a parental right to a pharmacological treatment that the FDA has not even approved to treat gender dysphoria. *L.W.*, 73 F.4th at 418. This perhaps explains why the United States does not endorse this argument. *See* Dkt. 45 at 1 n.2. And the cases Plaintiffs cite “applying the fundamental parental right in the context of medical decision-making do not establish that parents have a derivative fundamental right to obtain a particular medical treatment for their children as long as a critical mass of medical professionals approve.” *Eknes-Tucker*, 2023 WL 5344981 at *13; *see also L.W.*, 73 F.4th at 417-18 (citing *Abigail All. for Better Access to Dev. Drugs v. von Eschenbach*, 495 F.3d 695, 703 (D.C. Cir. 2007))

(en banc)). Thus, Plaintiffs “have not shown that a right to new medical treatments” such as these “is deeply rooted in our history and traditions and thus beyond the democratic process to regulate.” *L.W.* 73 F.4th at 417.

C. The Act satisfies any level of scrutiny.

The Act, “like other health and welfare laws, is entitled to a strong presumption of validity.” *Dobbs*, 142 S. Ct. at 2284. And “[j]udicial deference is especially appropriate where ‘medical and scientific uncertainty’ exists.” *L.W.*, 73 F.4th at 417 (quoting *Gonzales v. Carhart*, 550 U.S. 124, 163 (2007)). Because the Act does not trigger heightened scrutiny for reasons already explained, it is subject only to rational-basis review, which “is a paradigm of judicial restraint.” *Raidoo v. Moylan*, 75 F.4th 1115, 1121 (9th Cir. 2023) (quotations omitted). And the Act clearly satisfies that standard, which “is highly deferential to the government” and asks only whether “some conceivable legitimate purpose could have supported it.” *Id.*

Nevertheless, the Act satisfies any level of scrutiny that might be applied. Even if strict scrutiny applies, the Act survives, since States “have a compelling interest in protecting children from drugs, particularly those for which there is uncertainty regarding benefits, recent surges in use, and irreversible effects.” *Eknes-Tucker*, 2023 WL 5344981 at *13. And the unknown long-term effects of these treatments, when combined with the impossibility of identifying who will persist in their identity as transgender, underscores that the Act’s ban is necessary to *adequately* serve the compelling interest of protecting children and adolescents.

Here, the seriousness of the unknowns is staggering. For example, Plaintiffs’ expert Dr. Connelly forthrightly admitted that she does not “think there’s enough

data to draw conclusions about adverse effects on brain development in patients treated with medical interventions.” Ex. A 208:5-8. In addition, Dr. Connelly also admitted she is not aware of a single study suggesting that natal females who transition during adolescence will be able to achieve pregnancy. Ex. A 253:16-20. And even from a clinical perspective, Dr. Connelly has no idea what the long-term outcomes are for her patients because over 90% of them move to different providers by the time they are 22 years old. Ex. A 66:8-13. And her clinic does not even attempt to contact them. Ex. A 67:23-25. To her knowledge, not a single one of her patients who has received medical interventions has ever conceived a child. Ex. A 258:25-259:2.

Moreover, the unexplained existence of detransitioners and those who regret their transition also justifies the need for a ban. Critically, as Plaintiffs’ expert Dr. Connelly admitted, it is not possible to identify those who will detransition ahead of time. Ex. A 84:21-23; *see also id.* 271:15-22 (agreeing that it would “be unrealistic to predict or eliminate” gender-related regret “that results from a change in gender identity”). Plaintiffs’ experts generally treat the existence of detransitioners as an inconvenient fact to be minimized—stating that there has been a “weaponization of information on regret,” Ex. A 269:3-15, or that regret “has been woefully politicized.” Ex. B. 190:17-25. But no amount of downplaying the tragic stories of detransitioners can undermine the fact that they are living proof of the lack of evidence to justify using these interventions on minors.

Because the Act satisfies strict scrutiny, it necessarily satisfies intermediate scrutiny. That standard asks whether the Act “serves important governmental objectives” and the alleged “discriminatory means employed are substantially related to

the achievement of those objectives.” *Hecox*, 2023 WL 5283127 at *13 (quoting *Virginia*, 518 U.S. at 516). Here, the State of Idaho clearly “has an ‘exceedingly persuasive justification’ for regulating these drugs” and surgeries given the “potentially uncertain risks,” the “uncertainty about how to tell which patients need these interventions for this purpose and which don’t.” *Eknes-Tucker*, 2023 WL 5344981 at *21 (Brasher, J., concurring). Thus, “even if [Idaho’s] statute triggered intermediate scrutiny, it would likely survive that heightened scrutiny.” *Id.*

Plaintiffs assert that the Act would fail even rational-basis review. Specifically, both Plaintiffs and the United States assert that the Legislature enacted the Act out of animus. But “[o]n the few occasions where” the Supreme Court has held that a law fails rational basis, the “common thread has been that the laws at issue lack *any* purpose other than a bare . . . desire to harm a politically unpopular group.” *Trump v. Hawaii*, 138 S. Ct. 2392, 2420 (2018) (cleaned up) (emphasis added). Given the state of scientific evidence regarding these treatments, it is impossible to suggest that the Act lacks *any* purpose other than a bare desire to harm transgender persons. As Swedish health authorities have concluded, the “risks of puberty suppressing treatment with GnRH-analogues and gender-affirming hormonal treatment currently outweigh the possible benefits.” Cantor ¶ 28 (citing Swedish Socialstyrelsen Support 2022 at 10-12). The law clearly has a rational basis.

In support of their animus argument, Plaintiffs and the United States cite two statements from Senator Tammy Nichols. But of course, “[s]tray remarks of individual legislators are among the weakest evidence of legislative intent.” *Tingley v. Ferguson*, 47 F.4th 1055, 1087 (9th Cir. 2022). Indeed, the evidence of legislative intent

demonstrates beyond doubt that Idaho legislators were motivated by their concern regarding the lack of benefit and the harm associated with these treatments: The United States itself acknowledges that Idaho legislators deem these treatments “dangerous,” “experimental, irreversible, and medically unnecessary.” Dkt. 45 at 16, 17 n.38 (quotations omitted). Moreover, “[e]ven when an argument about legislative motive is backed by statements made by legislators who voted for a law,” courts should be reluctant “to attribute those motives to the legislative body as a whole.” *Dobbs*, 142 S. Ct. at 2256. “What motivates one legislator to make a speech about a statute is not necessarily what motivates scores of others to enact it.” *Id.*

In any event, the statements that Plaintiffs and the United States highlight are far from probative. For one, they came *after* the law was enacted. Moreover, Plaintiffs’ assertion that Senator Nichols’s support for this law was motivated by animus is belied by the public record. Before the bill was passed, Senator Nichols noted that the Act addressed a “very sensitive topic.” Senate Chamber Session Day 78 (Mar. 27, 2023)(<https://tinyurl.com/3ebfbknt>) 3:08:23-3:08:24. Specifically, she highlighted that many children diagnosed with gender dysphoria may have other underlying mental health conditions that should be treated with therapy rather than medical intervention. *See id.* 3:08:45-3:12:10. Senator Nichols also discussed the experience of a transgender individual who came to Idaho to describe the adverse effects the individual suffered as a result of these treatments. *See id.* 3:12:15- 3:12:32. The Senator’s thoughtful consideration of this “sensitive topic” is not a desire to harm transgender individuals.

In a footnote, the United States cites certain statements from Senator Ben Adams and Representative Bruce Skaug relating to a child’s mental state and gender dysphoria. Dkt. 45 at 19, n.45. The United States says these statements demonstrate animus because they “did not refer to or cite any medical or scientific support.” *Id.* But this argument ignores the testimony offered at the hearings on these bills—namely, that providing medical interventions to affirm a child or adolescent’s gender identity, rather than mental health therapy to treat the gender dysphoria, is harmful, not helpful. *See, e.g.,* Testimony of Dr. Roger Hiatt, February 7, 2023, House Judiciary, Rules & Administration Hearing, 24:07-24:21 (<https://tinyurl.com/59jt7376>) (“Efforts to medicalize a psychiatric disorder robs otherwise healthy children of the opportunity to rediscover their innate biology and instead doom them to a lifetime as medical patients in pursuit of an impossible dream.”). As noted by one individual who had transitioned as an adult and, after many complications, is transitioning back, children with gender dysphoria “need help, they need mental care help, not gender-affirming help.” February 7, 2023, House Judiciary, Rules & Administration Hearing, 18:15-18:20. In sum, given the compelling interest served by the Act and the fact that the long-term outcomes and harms are completely unknown, the Act satisfies any level of scrutiny.

D. Plaintiffs’ experts’ opinions are unreliable.

As set forth above, the totality of the scientific literature shows that the risks of the procedures banned by the Act far outweigh their benefits. And Plaintiffs’ experts opinions to the contrary are unreliable. Although the Rules of Evidence do not technically apply at the preliminary injunction stage, the serious defects in Plaintiffs’

experts' methodologies would preclude them from satisfying the reliability requirements of Rule 702. This absence of reliable scientific proof too is a reason Plaintiffs cannot show they are likely to succeed on the merits.

First, Plaintiffs' experts show a shocking lack of familiarity with the medical evidence surrounding these interventions. “[S]ound scientific methodology requires that a scientist consider all of the scientific evidence when making causation determinations,” *In re Zolof*, 26 F. Supp. 3d 449, 463 (E.D. Penn. 2014), and “expert testimony that ‘cherry-picks’ relevant data” should be excluded. *EEOC v. Freeman*, 778 F.3d 463, 469 (4th Cir. 2015) (Agee, J., concurring) (collecting cases); *In re Lipitor*, 892 F.3d 624, 634 (4th Cir. 2018); *Rink v. Cheminova, Inc.*, 400 F.3d 1286, 1293 n.7 (11th Cir. 2005). But not only did Dr. Brady not consider contrary evidence, she has never even read a *single* publication from any European health authority regarding the treatment for gender dysphoria. Ex. B. 203:4-7. Indeed, at her deposition, she could not recall *ever* reading a research publication that disagreed with her conclusions. Ex. B. 133:13–18. Nor had she ever read a systematic review relating to the treatment of gender dysphoria. Ex. B. 137:5–10. Dr. Connelly, for her part, said she had read one systematic review but could not “remember the title of it.” Ex. A 118:11–15. Neither of them cited these reviews in their declarations. It is frankly “alarming” that Plaintiffs’ experts engaged in this “biased reliance on favorable sources” while ignoring systematic reviews by European medical authorities that “could not be more relevant” to their opinions. *Daniels-Feasel v. Forest Pharms., Inc.*, 2021 WL 4037820, at *12 (S.D.N.Y. Sept. 3, 2021), *aff’d*, 2023 WL 4837521 (2d Cir. July 28, 2023).

Second, Dr. Connelly and Dr. Brady either misunderstand or overstate the conclusions that can be drawn from the studies they cite. At her deposition, Dr. Brady could not recall whether *any* study of medical and surgical interventions, including those she cites, controlled for whether the participants were receiving mental-health therapy. Ex. B. 49:6-12. Where, as here, a critical question is whether the more intrusive interventions of medical and surgical interventions are necessary given the less intrusive option of mental-health therapy, the failure to control for mental-health therapy is a confounding variable that forecloses any reliable conclusion. Cantor ¶¶ 179-81; *see* Ex. B. (161:4-11) (agreeing that, all else being equal, providers should “prefer the less invasive procedure”). Relatedly, in her declaration, Dr. Brady asserts there are “no scientific studies demonstrating that non-medical treatments alone” are effective in the treatment of gender dysphoria. Brady Decl. ¶ 41. But not “only do such studies exist, Dr. Brady cited one herself in her declaration.” Cantor ¶ 290 (highlighting Dr. Brady’s reliance on the Costa study, which found that “psychotherapy” was “effective in improving mental health”). With respect to Dr. Connelly’s opinion, when Swedish researchers conducted a systematic review, they “excluded due to high risk of bias” many of the studies that Dr. Connelly cites as her leading authorities. *Compare* Cantor Table 1 at 33-34 (noting exclusion by Swedish researchers of Achille, Allen, de Vries, and López de Lara studies), *with* Connelly Decl. ¶ 32 n.7 (relying on those same studies).

Third, it is no answer for Dr. Connelly and Dr. Brady to say they are relying on their clinical experience. Ex. A 288:6-16; Ex. B. 141:11-19. In “evidence-based medicine, opinion based on clinical experience” is “the *least* reliable source of medical

knowledge.” Cantor ¶ 54. Compared to other forms of evidence, “non-systematic recollections of unstructured clinical experiences with” individuals “in an uncontrolled setting” is “the most subject to bias.” *Id.* Indeed, it was reliance on this anecdotal evidence that led to development of evidence-based medicine. *See id.* Thus, an expert who grounds an opinion in clinical experience must “explain how his experience leads to the conclusion reached, why his experience is a sufficient basis for the opinion, and how his experience is reliably applied to the facts.” *United States v. Wilson*, 484 F.3d 267, 274 (4th Cir. 2007). Plaintiffs’ experts make “no attempt to do this,” *In re Lipitor*, 185 F. Supp. 3d 786, 806 (D.S.C. 2016), and their opinions are little more than “unscientific speculation offered by a genuine scientist.” *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 318 (7th Cir. 1996).

The distinction between clinical expertise and reported data is perhaps most stark with respect to Dr. Connelly’s testimony. In her declaration, she states that her clinic sees “dramatic improvements” when patients “begin gender-affirming medical care” as measured by the anxiety-screening tool GAD-7 and the depression-screening tool PHQ-9. Connelly Decl. ¶ 31. But in an article published with data from her clinic that measured anxiety and depression using the GAD-7 and PHQ-9, the data showed that, between first and second visits at the clinic, the average scores indicating both anxiety and depression *increased* for patients on cross-sex hormones and *decreased* for patients who were *not* on cross-sex hormones. Ex. A 189:23-190:13; 191:8-23. In other words, the published data shows precisely *the opposite* of what Dr. Connelly reports seeing in her declaration. And even if these recorded changes were not statistically significant, that fact in and of itself refutes Dr. Connelly’s claim of seeing

“dramatic improvement” at her clinic when patients “begin gender-affirming medical care.” Connelly Decl. ¶ 31. Plaintiffs’ experts’ reliance on their unsupported clinical judgment is all the more troubling because their “opinion runs contrary to the published literature” in systematic reviews, which they fail to even cite. *In re Lipitor*, 185 F. Supp. 3d at 806.

III. Plaintiffs have not met the remaining preliminary-injunction factors.

Although likelihood of success on the merits “is the most important factor” when analyzing a request for injunctive relief, *California v. Azar*, 911 F.3d at 575 (quotations omitted), Plaintiffs invoke the Ninth Circuit precedent that “serious questions going to the merits” are sufficient to obtain an injunction when “the balance of hardships tips sharply towards the plaintiff.” *See* Dkt. 32-1 11 (citing *Roman v. Wolf*, 977 F.3d 935, 941 (9th Cir. 2020)). But even accounting for this standard, Plaintiffs have still failed to show they are entitled to a preliminary injunction.

Idaho “will suffer irreparable harm from its inability to enforce the will of its legislature, to further the public-health considerations undergirding the law, and to avoid irreversible health risks to its children.” *L.W.*, 73 F.4th at 421; *see also Latta v. Otter*, 771 F.3d 496, 500 (9th Cir. 2014) (noting authority for the proposition “that ‘a state suffers irreparable injury whenever an enactment of its people or their representatives is enjoined’” (quoting *Coal. for Econ. Equity v. Wilson*, 122 F.3d 718, 719 (9th Cir. 1997))). Moreover, as catalogued above, Plaintiffs have failed to provide evidence showing that the benefits of these treatments outweigh the harms associated with them. Indeed, the *entire point* of the Act is to *prevent* irreparable harm to children and adolescents from these specific interventions. Idaho acknowledges that

Plaintiffs disagree about how best to treat gender dysphoria in minors, but Idaho’s “elected representatives made these precise cost-benefit decisions” in adopting the Act. *L.W.*, 73 F.4th at 421. Finally, timing does not favor Plaintiffs because the Act does not go into effect until January 1, 2024. That provides Plaintiffs time to draw down their medication, which “‘lessens the harm’ to minors ‘who wish to continue receiving treatment.’” *Doe 1 v. Thornbury*, 75 F.4th 655, 657 (6th Cir. 2023) (per curiam) (quoting *L.W.*, 73 F.4th at 421).

“When the government is a party,” the balance of equities and public-interest “factors merge.” *Drakes Bay Oyster Co. v. Jewell*, 747 F.3d 1073, 1092 (9th Cir. 2014). Here, Idaho’s “interests in applying the law to its residents and in being permitted to protect its children from health risks weigh heavily in favor of the State at this juncture.” *L.W.*, 73 F.4th at 421–22. If the Act is enjoined, untold numbers of children in Idaho will face lasting harm and irreversible damage to their bodies. Plaintiffs have not shown they are entitled to an injunction imposing that harm to the public.

IV. The scope of Plaintiffs’ requested relief is inappropriate.

Even if this Court concludes that Plaintiffs are entitled to injunctive relief, Plaintiffs have failed to demonstrate that the scope of relief they request is appropriate. As an initial matter, Plaintiffs’ remedial argument seemingly conflates two distinct questions—whether Plaintiffs are entitled to a *statewide* injunction and whether Plaintiffs are entitled to an injunction against enforcement of the statute in *all*

applications. This conflation is ultimately irrelevant, however, because Plaintiffs have failed to demonstrate an entitlement to either form of relief.

With respect to the question of statewide relief, an “injunction must be narrowly tailored to remedy the specific harm shown.” *East Bay Sanctuary Covenant v. Barr*, 934 F.3d 1026, 1029 (9th Cir. 2019) (quotations omitted). Plaintiffs would be entitled to an injunction throughout the State of Idaho only if “such breadth was necessary to remedy” Plaintiffs’ “harm.” *Id.* To obtain an injunction of that scope, Plaintiffs’ request must be “supported by the record as it stands.” *Id.* at 1028. The relief they seek is access to particular medical interventions, which could be provided by an injunction prohibiting enforcement of the Act against Plaintiffs and their providers. And the two premises of their request for that relief are flawed.

First, Plaintiffs speculate that providers would not know who the Plaintiffs are. Dkt. 32-1 at 28. But Plaintiffs provide no support for this speculation, and the Court’s grant of leave for *them* to proceed anonymously cannot be used to leverage relief for non-parties. Moreover, the injunction runs against *Defendants*, and the Court could enter a protective order disclosing the identity of Plaintiffs and their Providers to ensure Defendants comply, so a statewide injunction is not “necessary.” Second, Plaintiffs worry that “the institutions where” providers “work may implement policies prohibiting” the relevant care. Dkt. 32-1 at 28. But institutions may *already* prohibit the relevant care, which has nothing to do with any injunctive relief from this Court. Plaintiffs’ speculative assertions are not “supported by the record” and come woefully short of showing a statewide injunction is “necessary to remedy” Plaintiffs’ harm. *East Bay Sanctuary Covenant*, 934 F.3d at 1028–29.

With respect to whether Plaintiffs are entitled to facial, as opposed to as-applied relief, “litigants mounting a facial challenge to a statute normally must establish that *no set of circumstances* exists under which the statute would be valid.” *United States v. Hansen*, 143 S. Ct. 1932, 1939 (2023) (cleaned up). Plaintiffs do not argue the Act is unconstitutional in *every* circumstance. Nor could they, since the substance of their constitutional claims turn entirely on WPATH and Endocrine Society guidelines. Even the guidelines that Plaintiffs champion impose limitations on gender-affirming medical and surgical interventions. *See* Dkt. 32-1 at 3–5.

Thus, even under Plaintiffs’ theory, the Legislature may clearly regulate the provision of interventions not in accordance with those guidelines. This regulation would include prohibiting the provision of any medical or surgical interventions to any child before puberty, Dkt. 32-1 at 3; providing any interventions to individuals who are not formally diagnosed with gender dysphoria under the DSM-V, *id.*; or providing interventions when an individual’s co-occurring mental-health issues may interfere with diagnostic clarity or the ability to provide informed consent, *id.* at 4–5. And the concern that providers may not strictly follow the guidelines is not merely hypothetical: Plaintiffs’ own expert stated that, in her opinion, “there may be extenuating circumstances” where “different care may be provided that may not be included in the guidelines.” Ex. A 103:25–104:14. Plaintiffs are entitled to neither statewide relief nor an injunction against the Act in all applications.

CONCLUSION

The Court should deny an injunction and dismiss the Complaint.

DATED: September 5, 2023.

STATE OF IDAHO
OFFICE OF THE ATTORNEY GENERAL

By: /s/ Lincoln D. Wilson
LINCOLN DAVIS WILSON
Chief, Civil Litigation and
Constitutional Defense

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on September 5, 2023, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which sent a Notice of Electronic Filing to the following persons:

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By: /s/ Lincoln D. Wilson

LINCOLN DAVIS WILSON

Dr. Kara Connelly August 28, 2023

UNITED STATES DISTRICT COURT
DISTRICT OF IDAHO

PAM POE, by and through her) Case No.
parents and next friends,) 1:23-cv-00269-CWD
Penny and Peter Poe; PENNY)
POE; PETER POE; JANE DOE, by)
and through her parents and)
next friends, Joan and John)
Doe; JOAN DOE; JOHN DOE,)
)
Plaintiffs,)
)
v.)
)
RAÚL LABRADOR, in his)
official capacity as the)
Attorney General of the State)
of Idaho; JAN M. BENNETTS, in)
her official capacity as)
County Prosecuting Attorney)
for Ada, Idaho; and the)
INDIVIDUAL MEMBERS OF THE)
IDAHO CODE COMMISSION, in)
their official capacities,)
)
Defendants.)
_____)

REMOTE VIDEOTAPED DEPOSITION OF KARA CONNELLY, M.D.
MONDAY, AUGUST 28, 2023**EXHIBIT
A**

Reported By: Amy E. Simmons, CSR, RDR, CRR, CRC

Page 1

Dr. Kara Connelly August 28, 2023

1 REMOTE VIDEOTAPED DEPOSITION OF KARA CONNELLY, M.D.

2
3 BE IT REMEMBERED that the remote videotaped
4 deposition of KARA CONNELLY, M.D., was taken via Zoom
5 videoconference by the attorney for the Defendants before
6 Associated Reporting & Video, a Veritext company, Amy E.
7 Simmons, Idaho CSR No. 685, California CSR No. 14553,
8 Washington CSR No. 22012915, Oregon CSR No. 22-009, and
9 Notary Public in and for the County of Ada, State of
10 Idaho, on Monday, the 28th day of August, 2023,
11 commencing at the hour of 10:08 a.m. Mountain time in the
12 above-entitled matter.

13
14
15 APPEARANCES (remotely):

16 For the Plaintiffs: AMERICAN CIVIL LIBERTIES UNION

By: Li Nowlin-Sohl, Esq.

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Dr. Kara Connelly August 28, 2023

I N D E X
E X A M I N A T I O N

KARA CONNELLY, M.D. PAGE

By: Mr. Ramer.....9

Ms. Nowlin-Sohl.....287

E X H I B I T S

NO. PAGE

Exhibit 1. Curriculum Vitae, Kara Jean 14
Connelly, MD, MCR (15 pages)

Exhibit 2. Expert Declaration of Kara 17
Connelly, MD (24 pages)

Exhibit 3. "A New Virtual Reality: Benefits 41
and Barriers to Providing Pediatric
Gender-Affirming Health Care
Through Telehealth," Hedrick
(6 pages)

Exhibit 4. Users' Guides to the Medical 120
Literature, Guyatt (545 pages)

Exhibit 5. "Grade Guidelines: 3. Rating the 130
Quality of Evidence," Balshem
(6 pages)

Exhibit 6. "Grade Guidelines: 4. Rating the 134
Quality of Evidence -- Study
Limitations (Risk of Bias)," Guyatt
(9 pages)

Exhibit 7. "Endocrine Treatment of 139
Gender-Dysphoric/Gender-Incongruent
Persons: An Endocrine Society
Clinical Practice Guideline,"
Hembree (35 pages)

Page 5

Dr. Kara Connolly August 28, 2023

1	E X H I B I T S (continued)		
2	NO.		PAGE
3	Exhibit 8.	"Hormone Therapy, Mental Health,	149
4		and Quality of Life Among	
5		Transgender People: A Systematic	
6		Review," WPATH (16 pages)	
7	Exhibit 9.	"Potential Suppression for	155
8		Transgender Youth and Risk of	
9		Suicidal Ideation," Turban	
10		(15 pages)	
11	Exhibit 10.	"Access to Gender-Affirming	155
12		Hormones During Adolescence and	
13		Mental Health Outcomes Among	
14		Transgender Adults," Turban	
15		(15 pages)	
16	Exhibit 11.	The Report of the U.S. Transgender	156
17		Survey, 2015 (302 pages)	
18	Exhibit 12.	Pediatric Endocrine Society	164
19		Position Statement (2 pages)	
20	Exhibit 13.	"Changes in Anxiety and Depression	180
21		from Intake to First Follow-Up	
22		Among Transgender Youth in a	
23		Pediatric Endocrinology Clinic,"	
24		Cantu (5 pages)	
25	Exhibit 14.	Endocrine Society Webpage Printout	168
		(2 pages)	
	Exhibit 15.	"Growing Evidence and Remaining	204
		Questions in Adolescent Transgender	
		Care," de Vries (3 pages)	
	Exhibit 16.	Consensus Parameter: Research	208
		Methodologies to Evaluate	
		Neurodevelopment Effects of	
		Pubertal Suppression in Transgender	
		Youth," Chen (12 pages)	
	Exhibit 17.	Sweden Summary, "Care of Children	224
		and Adolescents with Gender	
		Dysphoria" (6 pages)	

Dr. Kara Connelly August 28, 2023

1	E X H I B I T S (continued)		
2	NO.		PAGE
3	Exhibit 18.	Sweden Appendix 2 (2 pages)	230
4	Exhibit 19.	"Independent Review of Gender Identity Services for Children and Young People: Interim Report," The Cass Review, Dated February 2022 (112 pages)	236
5			
6			
7	Exhibit 20.	"Evidence Review: Gonadotrophin Releasing Hormone Analogues for Children and Adolescents with Gender Dysphoria," NICE (131 pages)	241
8			
9			
10	Exhibit 21.	"Evidence Review: Gender-Affirming Hormones for Children and Adolescents with Gender Dysphoria," NICE (156 pages)	262
11			
12	Exhibit 22.	"Regret After Gender-Affirming Surgery: A Multidisciplinary Approach to a Multifaceted Patient Experience," Jedrzejewski (9 pages)	275
13			
14			
15	Exhibit 23.	OpenPaymentsData.CMS.gov Printout (3 pages)	
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

Dr. Kara Connelly August 28, 2023

P R O C E E D I N G S

THE VIDEOGRAPHER: All right. We are on the record and we are recording. Today's date is August 28, 2023. The time is 10:08 a.m. Mountain time.

For the record, this is the videotaped deposition of Dr. Kara Connelly. It's taken by the Defendants in the matter of Poe, et al., vs. Labrador, et al. It's Case No. 1:23-cv-00269-CWD. It is in the United States District Court for the District of Idaho.

The videotaped deposition is being held remotely via Zoom videoconference. The videotaped deposition is being recorded by Chris Ennis and reported by Amy E. Simmons of Associated Reporting & Video, a Veritext Company.

And if counsel will please state their appearances and any stipulations for the record.

MR. RAMER: John Ramer on behalf of the Idaho Attorney General's Office.

MS. NOWLIN-SOHL: Li Nowlin-Sohl on behalf of Plaintiffs.

MS. COOPER: Leslie Cooper, Plaintiffs.

MR. MAY: Philip May from the law firm of

1 Groombridge Wu Baughman & Stone on behalf of the
2 Plaintiffs.

3 MR. WILSON: Lincoln Wilson for the Idaho
4 Attorney General's Office.

5 MR. DROZ: Rafael Droz, Idaho Attorney
6 General's Office.

7 MR. REED: Dayton Reed, Ada County
8 Prosecutor's Office.

9 MX. PARSONS: Casey Parsons from the
10 Wrest Collective for the Plaintiffs.

11 THE REPORTER: I think we still need
12 Mr. Green and Ms. Kennedy.

13 MS. KENNEDY: Dana Kennedy for Plaintiffs
14 from Paul Weiss.

15 MR. GREEN: Aaron Green, Attorney
16 General's Office, Defendants.

17 THE VIDEOGRAPHER: And if the court
18 reporter will please swear the witness.

19

20 EXAMINATION

21 BY MR. RAMER:

22 Q. All right. Good morning, Dr. Connelly.
23 My name is John Ramer. I'm representing the Idaho
24 Attorney General's Office in this case.

25 Have you ever been deposed before?

1 A. No.

2 Q. Okay. So I'm sure counsel has covered
3 much of this with you extensively, but I'll just
4 cover some ground rules just to make sure we're
5 all on the same page.

6 Basically, as you almost certainly know,
7 I'll ask you questions. If you don't understand a
8 question, please just ask for an explanation;
9 otherwise I'll assume you understood it and are
10 answering the question I asked.

11 Our discussion is going to be
12 transcribed, as you likely know. And so I'll need
13 you to respond verbally rather than shaking your
14 head yes or no.

15 And I will do my best not to interrupt
16 you, and I'd ask that you do your best not to
17 interrupt me just so the court reporter will be
18 able to record my questions and your answers and
19 we'll have a cleaner transcript.

20 Your counsel may object to a question
21 that I ask. And unless your counsel instructs you
22 not to answer the question, you should go ahead
23 and provide an answer.

24 And then we can take breaks whenever you
25 want. I kind of plan on every hour or so, and

1 then I assume we'll take a little bit longer break
2 for lunch.

3 And one thing for Li, I'm East Coast, so
4 just helping me keep track of West Coast lunchtime
5 will be helpful.

6 But the one thing is if you do want to
7 take a break, just let me know. My only request
8 is that you would answer a question that's on the
9 table and then we'll go and take the break.

10 Does that all make sense?

11 A. Yes.

12 Q. And besides counsel, is anyone in the
13 room with you?

14 A. No.

15 Q. And do you have any documents open in
16 front of you?

17 A. No.

18 Q. And what did you do to prepare for this
19 deposition?

20 A. I met with the attorney team, and I did a
21 lot of reading of articles and documents online.

22 Q. What kind of documents online did you
23 read?

24 A. It was reviewing the standards of care,
25 clinical practice guidelines, other policy

1 statements. And a lot of the articles that I
2 reviewed were online.

3 Q. And did you speak with anyone other than
4 counsel about your deposition?

5 A. No.

6 Q. Okay. And, Dr. Connelly, do you consider
7 yourself to be an expert?

8 A. Yes.

9 Q. And in what field or fields of study do
10 you consider yourself to be an expert?

11 A. I consider myself an expert in pediatric
12 endocrinology.

13 Q. And are you a psychiatrist?

14 A. No.

15 Q. Are you a psychologist?

16 A. No.

17 Q. I've got a series of these, just to warn
18 you.

19 Are you a neurologist?

20 A. No.

21 Q. Are you a surgeon?

22 A. No.

23 Q. Are you a social worker?

24 A. No.

25 Q. Are you a urologist?

1 A. No.

2 Q. Are you a gynecologist?

3 A. No.

4 Q. Are you a bioethicist?

5 A. No.

6 Q. Are you an expert in cognitive
7 development?

8 A. I have experience in cognitive
9 development, but I don't really consider myself an
10 expert in that field.

11 Q. And could you briefly describe your
12 current position?

13 A. Yes. I am an associate professor at
14 Oregon Health & Science University and a pediatric
15 endocrinologist at Doernbecher Children's
16 Hospital.

17 Q. And could you just walk me through your
18 professional background at a high level of
19 generality since you received your MD?

20 A. Yes. I received my MD from the
21 University of Texas Health Science Center at San
22 Antonio in Texas and subsequently completed my
23 pediatric residency at OHSU Doernbecher Children's
24 Hospital. And following that, completed my
25 fellowship in pediatric endocrinology at the same

1 institution. And a few years after that completed
2 a master's in clinical research.

3 Q. And are you board certified?

4 A. Yes.

5 Q. In what?

6 A. In pediatric endocrinology.

7 MR. RAMER: Okay. I'm about to make my
8 first attempt at emailing an exhibit.

9 Okay. I believe I have just sent what I
10 will describe as Connelly Exhibit 1.

11 Just let me know when you all have
12 received it.

13 THE REPORTER: I've received it.

14 MS. NOWLIN-SOHL: Still waiting on it.

15 All right. We have it.

16 (Deposition Exhibit No. 1 was marked.)

17 MR. RAMER: Great.

18 Q. (BY MR. RAMER) And, Dr. Connelly, does
19 this appear to be a copy of your CV?

20 A. Yes.

21 Q. And is it up-to-date?

22 A. Yes. Well, that version is up-to-date as
23 of April of this year.

24 Q. Okay. Are there any developments since
25 April that should be included on here?

1 A. No significant developments.

2 Q. On page 2 of the CV under
3 "Certification," it's about halfway down the page.
4 Do you see that?

5 A. Yes.

6 Q. It states that your certification for
7 general pediatrics expired in 2020; is that
8 correct?

9 A. That's correct.

10 Q. And why did you not renew it?

11 A. It's not a requirement for my position to
12 be board certified in pediatrics or to continue
13 the board certification as long as I maintain
14 board certification in my specialty.

15 Q. And then on page 4, for the top you list
16 pending funding from Nike for a transgender
17 athlete study.

18 Do you see that?

19 A. Yes.

20 Q. What is that?

21 A. That is a multicenter study that is
22 currently in preparation. It has not begun
23 recruiting participants. And it is currently in
24 the process of obtaining IRB approval.

25 Q. What's it going to study?

1 A. It's basically going to look at athletic
2 performance of youth who identify as transgender
3 compared to youth who identify as cisgender.

4 Q. And then on your CV on page 9, middle of
5 the page, there's a section for "Service."

6 Do you see that?

7 A. Yes.

8 Q. And it states you were a member of the
9 Endocrine Society from 2011 to 2015; is that
10 right?

11 A. Yes.

12 Q. And why did you cease being a member?

13 A. My membership in professional
14 organizations, I've had to basically select the
15 ones that I'm going to maintain and continue as an
16 active participant. And that's been the Pediatric
17 Endocrine Society, the World Professional
18 Association for Transgender Health, the Oregon
19 Pediatric Society. And then intermittently I've
20 been a member of the Endocrine Society, but it
21 hasn't been continuous.

22 MR. RAMER: And I've just tried to send
23 what I'll call Connelly Exhibit 2. And if you'll
24 just let me know when you receive it.

25 Maybe it just sent.

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Okay. I've been
2 hitting refresh and still don't have it.

3 MR. RAMER: I figure it takes a long time
4 to get from the East Coast to the West Coast, but
5 I don't think that's how it works.

6 MS. NOWLIN-SOHL: All right.

7 (Deposition Exhibit No. 2 was marked.)

8 Q. (BY MR. RAMER) Okay. And, Dr. Connelly,
9 does this appear to be the expert declaration that
10 you submitted in this case?

11 A. Yes.

12 Q. And how did you come to be involved in
13 this case?

14 A. I was contacted by an attorney with the
15 ACLU and -- asking me if I would be willing to
16 participate.

17 Q. And what were you asked to do?

18 A. I was asked to be -- serve as an expert
19 witness.

20 Q. And did you personally draft this
21 declaration?

22 A. Yes.

23 Q. And did anyone help you with the drafting
24 process?

25 A. No.

1 Q. Did you personally identify all the
2 studies that you cite in this declaration?

3 A. Yes.

4 Q. And did you speak with anyone other than
5 counsel about the contents of this declaration?

6 A. I showed it to one of my colleagues that
7 I work with in my clinic to look at it for clarity
8 and grammar. But all of the content was written
9 by me.

10 Q. And who was that colleague?

11 A. It was our clinic social worker.

12 Q. And what's that colleague's name?

13 A. Their name is Jess Guerrero.

14 Q. Guerrero. And, Dr. Connelly, I think you
15 said you are the medical director of the
16 Doernbecher Gender Clinic; is that right?

17 A. Yes.

18 Q. And you actually founded the clinic,
19 correct?

20 A. Yes.

21 Q. And we'll discuss in more detail later,
22 but at a high level of generality, could you
23 explain what the gender clinic does?

24 A. Yes. It's an interdisciplinary clinic
25 that provides holistic, comprehensive medical and

1 mental health care to gender-diverse youth from
2 childhood all the way through young adulthood.

3 Q. And what led you to found the clinic?

4 A. I began working with transgender and
5 gender-diverse youth during my training and
6 especially during my fellowship.

7 Our clinics had been -- in pediatric
8 endocrinology had been caring for transgender
9 youth for a number of years, and my mentors
10 trained me in providing gender-affirming care for
11 youth.

12 And as I began to develop an interest and
13 more of an expertise in the area, I realized that
14 we needed more resources and a more comprehensive
15 program, and, in particular, integrated behavioral
16 health.

17 Q. And I think it's implied in the word
18 "youth," but does the clinic serve a particular
19 age group?

20 A. Yes. The clinic will see children of all
21 ages. No medical interventions are provided prior
22 to puberty.

23 And then we'll continue to see
24 adolescents through late adolescence and in some
25 cases young adulthood until we're able to

1 successfully transition their care to an adult
2 provider.

3 Q. So is it fair to say 100 percent of your
4 patients are below the age of 18?

5 A. Not 100 percent. 100 percent of new
6 patients that establish care with us are under 18,
7 but we continue to follow them into -- some of
8 them into their early 20s if we have difficulty
9 transitioning their care to an adult provider.

10 Q. And then in your -- turning to your
11 declaration, I'd like to look at page 2,
12 paragraph 10, third sentence.

13 And you state that your clinic had 993
14 patients in 2022; is that right?

15 A. That's correct.

16 Q. And do you have more patients now than in
17 prior years?

18 MS. NOWLIN-SOHL: Objection to form.

19 THE WITNESS: Can you clarify what you
20 mean by "now"?

21 Q. (BY MR. RAMER) Okay. Did you have more
22 patients in 2022 than you did in prior years?

23 A. Yes.

24 Q. All right. How much would you estimate
25 your patient population has grown over the last

1 five years?

2 A. Do you mean like a percentage growth?

3 Q. Sure.

4 A. Or a number of growth?

5 So five years ago, 2017, I'd estimate
6 that we saw about 500 patients. I can't say for
7 certain exactly how many patients.

8 Q. Yeah, that's fair. An estimate of 500 is
9 what you said; is that right?

10 A. Yes.

11 Q. And of the 993 patients that you
12 reference in paragraph 10, had all those patients
13 been diagnosed with gender dysphoria?

14 A. Not all of them.

15 Q. Okay. What percentage of those patients
16 would you estimate were diagnosed with gender
17 dysphoria?

18 A. I'd say at least 90 percent.

19 Q. And at your clinic, do you have patients
20 who were diagnosed with gender dysphoria during
21 childhood?

22 A. Yes.

23 Q. And just to confirm we're on the same
24 page, what do you understand "childhood" to mean?

25 A. I generally understand "childhood" to

1 mean prior to the onset of puberty, or prior to
2 adolescence.

3 Q. And when you say "the onset of puberty,"
4 do you equate that with Tanner Stage II?

5 A. Yeah. Yes, I do.

6 Q. And do you have patients who were
7 diagnosed after Tanner Stage II but before they
8 turned 18?

9 A. Yes.

10 Q. And if I called that period between
11 Tanner Stage II and 18 years old "adolescence,"
12 would you understand what I mean?

13 A. Yes, generally.

14 Q. And so you don't have any -- because of
15 the -- sorry, start again.

16 Because of the ages of your patients that
17 you treat, you don't have any who were diagnosed
18 with gender dysphoria after 18, correct?

19 A. That is correct.

20 Q. And of the patients in your clinic, which
21 diagnosis would you estimate is more common,
22 childhood or adolescence?

23 A. In my clinic, adolescence is more common.

24 Q. Can you estimate a percentage of patients
25 that were diagnosed in adolescence as opposed to

1 childhood?

2 A. I'd estimate approximately two-thirds.

3 Q. And of the -- of your patients, what
4 percentage would you estimate are natal females?

5 MS. NOWLIN-SOHL: Objection to form.

6 THE WITNESS: Can you please specify what
7 you mean by "natal females"?

8 Q. (BY MR. RAMER) I think you'd probably
9 describe it as "female assigned at birth."

10 For the purposes of our discussion today,
11 if I use the phrase "natal female," you can deem
12 it as female assigned at birth, and the same for
13 natal males.

14 Does that make sense?

15 A. Yes. Okay.

16 Q. And so the question is, of your patients,
17 what percentage would you estimate are natal
18 females?

19 MS. NOWLIN-SOHL: Same objection.

20 THE WITNESS: In our clinic, I would
21 estimate also about two-thirds are patients who
22 were assigned female at birth.

23 Q. (BY MR. RAMER) And is the ratio the same
24 for patients who have been formally diagnosed with
25 gender dysphoria as for your patients as a total?

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: Can you clarify that
3 question?

4 Q. (BY MR. RAMER) Yeah, it's a bad
5 question.

6 Basically am I correct -- you said about
7 90 percent of your patients have been diagnosed
8 with gender dysphoria; is that right?

9 A. Yes.

10 Q. Okay. And has that ratio -- sorry, going
11 back, you said about two-thirds you'd estimate
12 were natal females, correct?

13 A. Correct.

14 Q. Has that ratio been steady since you
15 opened the clinic?

16 A. It has been steady.

17 Q. And of your patient population, what
18 percentage would you estimate receive puberty
19 blockers?

20 A. Of the total patient population, what
21 percentage received puberty blockers?

22 Q. Yes.

23 A. Regardless of sex assigned at birth?

24 Q. Correct. Just total percentage, what do
25 you estimate -- let me rephrase.

1 Of your total patient population, what
2 percentage would you estimate receive puberty
3 blockers?

4 A. I would estimate approximately 20 to
5 25 percent.

6 Q. And of your total patient population,
7 what percentage would you estimate receive
8 cross-sex hormones?

9 A. I would estimate approximately 80 to
10 85 percent.

11 Q. And of your total patient population,
12 what percentage would you estimate receive
13 surgical interventions?

14 A. The -- it is very, very rare for our
15 patients to have surgeries under the age of 18, so
16 do you mean -- you mean also including those over
17 18?

18 Q. No. I think for purposes of this
19 question, just under 18 years old.

20 A. What percentage receive surgery?

21 Q. Correct.

22 A. I'd estimate probably about 5 percent or
23 less. And those are -- the overwhelming majority
24 are top surgery.

25 Q. And could you clarify what you mean by

1 "top surgery"?

2 A. Mastectomy, or removal of the chest
3 tissue.

4 Q. And that's a procedure that would take
5 place -- sorry.

6 That's a procedure that would be
7 conducted on natal females, correct?

8 A. That is a procedure that would be
9 conducted on individuals assigned female at birth.

10 Q. Do you have neuro-diverse patients?

11 A. Can you clarify what you mean by
12 "neurodiverse"?

13 Q. Well, as a clinician, what's your
14 understanding of the term "neurodiverse"?

15 A. Well, I think there are a lot of
16 different conditions that can be included in that
17 phrase. Some people think of neurodiversity as
18 simply somebody who falls on the autism spectrum
19 disorder or carries a diagnosis of autism. A lot
20 of other clinicians also include ADHD in that
21 category.

22 And so in my definition, I have the more
23 broad -- I use the more broad definition,
24 including individuals who have been diagnosed with
25 a condition such as autism spectrum disorder or

1 ADHD and carry that diagnosis.

2 Q. Okay. So if we view the term
3 "neurodiverse" to include autism spectrum disorder
4 and ADHD, do you have neurodiverse patients?

5 A. Yes.

6 Q. And what percentage of your total patient
7 population would you estimate is neurodiverse?

8 A. I am not sure if I can give a very
9 accurate estimation.

10 Q. Can you state whether it's less than
11 25 percent?

12 A. Yes.

13 Q. Can you state whether it's less than
14 10 percent?

15 A. I was originally going to say less than
16 15 percent, but again, I can't say with certainty.

17 Q. And you mentioned autism spectrum
18 disorder.

19 Do you have patients who have autism
20 spectrum disorder?

21 A. Yes.

22 Q. And what percentage of your total patient
23 population would you estimate have autism spectrum
24 disorder?

25 A. Again, that would be difficult for me to

1 say with certainty, but with a formal diagnosis of
2 autism spectrum disorder, less than 5 percent.

3 Q. So turning back to your declaration,
4 going to page 8, paragraph 28, I'm just going to
5 read that paragraph. And my first question is
6 going to be if I read it correctly.

7 "Gender-affirming medical interventions
8 are not indicated for all individuals who present
9 for care. Overall, about one-third of our patient
10 population continues to see our team for support
11 without accessing medical interventions."

12 Did I read that correctly?

13 A. Yes.

14 Q. So does this mean that two-thirds of your
15 patient population does access medical
16 interventions?

17 A. Yes.

18 Q. In the second sentence, when you say
19 "patients receive support without accessing
20 medical interventions," what kind of support are
21 you referencing?

22 A. That can include mental health care and
23 support and connecting the patients and their
24 families with resources.

25 Q. What kind of resources?

1 A. It can be support groups. It can be also
2 connecting them with resources for certain pieces
3 of clothing that can be used to conceal secondary
4 sex characteristics that are not congruent with
5 the young person's gender identity but who are not
6 moving towards starting medical interventions.

7 Q. And when you say clothing to conceal
8 secondary sex characteristics, what are you
9 referring to?

10 A. Generally something called a chest
11 binder.

12 Q. And what is a chest binder?

13 A. There are various different kinds and
14 styles, but it's generally a piece of clothing
15 that is made out of compression fabric to give the
16 appearance of a flatter chest.

17 Q. And so that would be something natal
18 females who have gender dysphoria would use; is
19 that right?

20 A. If someone is generally -- most of the
21 time someone assigned female at birth who has
22 chest tissue, but it can be used in other
23 populations as well. I know cisgender boys who
24 have more chest tissue than they desire who also
25 use similar devices.

1 Q. Are those patients in your clinic?

2 A. No, not in my gender clinic.

3 Q. And you know -- sorry, I just want to
4 understand.

5 So you know -- what I call natal males
6 you would call males assigned at birth that wear
7 chest binders?

8 A. There are some patients who have a
9 condition called gynecomastia, which is the
10 presence of breast tissue in someone who was
11 assigned male at birth. And in some cases, they
12 do pursue clothing to give the appearance of or
13 compression clothing such as binder-type clothing
14 items to give the appearance of a flatter chest.

15 Q. And you had mentioned mental health care.
16 What does that entail at your clinic?

17 A. We have a pediatric psychiatrist who is
18 part of our program and a pediatric social worker,
19 both of whom are trained and experienced in
20 working with pediatric and young adult patients
21 and providing mental health.

22 So the mental health care that we provide
23 is -- encompasses comprehensive, psychological
24 evaluations, psychosocial assessments, assessment
25 of suicidal risk. It's provision -- in some cases

1 provision of ongoing therapy. And it's
2 essentially providing any psychosocial support
3 that's needed throughout the time that they're
4 receiving care in our clinic.

5 Q. And so are there individuals who are
6 diagnosed with gender dysphoria who receive only
7 mental health care at your clinic?

8 A. Yes.

9 Q. And what is the purpose of that mental
10 health care?

11 A. In a lot of cases, it's helping them to
12 explore what their -- explore their gender
13 expression and whether medical interventions are
14 going to be beneficial for them in helping them to
15 decide which -- in some cases which medical
16 interventions. So if medical interventions would
17 be beneficial, and, if so, which medical
18 interventions. And then helping them understand
19 or develop realistic expectations for what those
20 interventions can provide.

21 Q. What is a situation where medical
22 interventions would not be beneficial?

23 A. It may be in a situation where either --
24 if an individual has received the diagnosis of
25 gender dysphoria but may not meet all the criteria

1 for initiation of medical interventions as
2 described by the clinical practice guidelines that
3 we follow, or if the individual doesn't appear to
4 have realistic expectations about what the medical
5 interventions can and can't do, those are
6 situations where we might -- our mental health
7 providers might be working with the youth more
8 extensively to help them in determining whether
9 medical interventions would be beneficial for
10 them.

11 Q. And what did you mean when you were
12 discussing how patients may not have realistic
13 expectations of medical interventions?

14 A. In some cases, patients may think that,
15 for example, hormones will pause certain body
16 changes that hormones can't do. So one of our
17 roles is to help them understand what different
18 medical interventions realistically can do so that
19 they can better understand what to expect if they
20 are to move forward with medical interventions.

21 Q. Can you provide an example of a situation
22 where a patient had an unrealistic expectation of
23 how hormones would have an effect?

24 A. Yes. I can give several examples.

25 In one -- in the case of pubertal

1 suppression for individuals assigned male at
2 birth, I have seen -- I have had patients who have
3 thought that if they have already started going
4 through their endogenous puberty and experiencing
5 deepening of the voice from endogenous
6 testosterone, they have thought that puberty
7 blockers alone could raise the pitch of the voice.

8 Q. And I think -- did you say you had
9 several examples?

10 A. Another example similar to individuals
11 assigned male at birth who've undergone some of
12 the pubertal changes related to endogenous
13 testosterone such as deepening of the voice
14 thinking that estrogen could raise the pitch of
15 the voice.

16 Q. Do you have any that aren't related to
17 voice pitch?

18 A. There are some youth assigned female at
19 birth who may have expectations around specific
20 body shape changes that -- and hopes of body shape
21 changes that testosterone may not be able to
22 pause.

23 Q. What kind of body shape changes?

24 A. It can be just changes in the shape of
25 the hips, for example.

Dr. Kara Connelly August 28, 2023

1 Q. And what you're saying is the patients
2 think it will have that effect, but it actually
3 does not? Is that what you're saying?

4 A. In what -- the patients may have specific
5 thoughts about what testosterone can cause in
6 terms of how their body shape may change that is
7 not always realistic. So we spend a great deal of
8 time helping them understand that.

9 Q. When a patient is diagnosed with gender
10 dysphoria, in your professional opinion, should
11 providers discuss nonmedical options for gender
12 affirmation with as much emphasis as medical
13 options?

14 MS. NOWLIN-SOHL: Objection to form.

15 THE WITNESS: In my professional opinion,
16 I believe that nonmedical options should be
17 discussed as well as medical options.

18 Q. (BY MR. RAMER) And so do you agree that
19 providers should place equal value on nonmedical
20 options and medical options?

21 MS. NOWLIN-SOHL: Objection to form.

22 THE WITNESS: And can you specify what
23 you mean by "nonmedical options" in this case?

24 Q. (BY MR. RAMER) I guess if somebody asked
25 you, "What are nonmedical options for treating

1 gender dysphoria?" how would you respond?

2 A. It depends on -- so there are
3 some -- well, I guess as I described before,
4 things like chest binders and the use of an
5 affirmed name and pronouns and essentially
6 different ways of affirming a young person's
7 gender identity that doesn't involve prescribing
8 medications or taking medications is how I
9 describe medical options.

10 Q. Do you think mental health therapy --
11 excuse me.

12 Do you think mental health care is a
13 medical intervention?

14 MS. NOWLIN-SOHL: Objection to form.

15 THE WITNESS: I don't generally think of
16 mental health care as a medical treatment.

17 Q. (BY MR. RAMER) So let's take that, that
18 nonmedical interventions include the items you
19 listed, which is it fair to broadly describe those
20 as social transition? Sorry, let me rephrase.

21 The items you listed about pronouns and
22 clothing, is it fair to describe that as broadly
23 understood as social transitioning?

24 MS. NOWLIN-SOHL: Objection.

25 THE WITNESS: I think that some people

1 use that term, but not always.

2 Q. (BY MR. RAMER) Okay. Well, let me come
3 at it another way.

4 Let's say medical interventions. Assume
5 for the purposes of my question that medical
6 interventions include the use of puberty blockers
7 and cross-sex hormones.

8 Do you agree that the provider should
9 place equal value on nonmedical interventions and
10 medical interventions?

11 MS. NOWLIN-SOHL: Objection to form.

12 THE WITNESS: And for nonmedical
13 interventions, are you including mental health
14 care or the nonmedical interventions that I
15 described earlier?

16 Q. (BY MR. RAMER) For purposes of my
17 question, let's include both the nonmedical
18 interventions you described and mental health care
19 under the category of nonmedical interventions.

20 And in the category of medical
21 interventions, we're including puberty blockers
22 and cross-sex hormones.

23 And my question is this: Do you agree
24 that a provider should place equal value on
25 nonmedical interventions and medical

1 interventions?

2 MS. NOWLIN-SOHL: Objection to form.

3 THE WITNESS: Well, the care that we
4 provide, and I believe should be provided, is
5 individualized.

6 And mental health care is always a
7 component of the care provided for the diagnosis
8 of gender dysphoria. But what that looks like is
9 different for different individuals.

10 And the medical and nonmedical
11 interventions we discuss with every single
12 patient. But I can't -- it's hard for me to say
13 that one is emphasized more or equally than
14 another. It's just that we always discuss -- so
15 every patient that we see in our program receives
16 mental health care and discussion of medical and
17 nonmedical options.

18 And just to clarify, when I think about
19 medical options, medical options include more than
20 just puberty blockers and cross-sex hormones.

21 Q. (BY MR. RAMER) Understood. And when I
22 asked the question, I was creating the
23 hypothetical. So I did not intend to suggest that
24 that's what you thought that that included.

25 And just to confirm I understand your

1 answer, you are unable to say whether a provider
2 should place equal value on nonmedical
3 interventions and medical interventions; is that
4 correct?

5 MS. NOWLIN-SOHL: Objection;
6 mischaracterizes testimony.

7 THE WITNESS: I can say that medical
8 interventions and nonmedical interventions should
9 be discussed with every patient.

10 Q. (BY MR. RAMER) And are you able to say
11 that the provider should place equal value on
12 nonmedical interventions and medical
13 interventions?

14 MS. NOWLIN-SOHL: Objection to form;
15 asked and answered.

16 THE WITNESS: I think that all I can say
17 is that all interventions should be discussed and
18 that care is delivered in an individualized manner
19 according to who the patient is.

20 Q. (BY MR. RAMER) And so it's fair to say
21 that you cannot say as you sit here that the
22 provider should place equal value on medical
23 interventions and nonmedical interventions,
24 correct?

25 MS. NOWLIN-SOHL: Objection to form;

1 mischaracterizes testimony; asked and answered.

2 Q. (BY MR. RAMER) You can answer the
3 question. Sorry. I didn't know if you were
4 thinking or --

5 A. Oh, yeah. I'm just thinking about how to
6 explain better.

7 All I can say is that all options should
8 be discussed, both medical and nonmedical.

9 Q. We'll move on.

10 Could you describe the process at your
11 clinic when you -- start again.

12 Just at a high-level generality, could
13 you describe the process at your clinic when you
14 receive a new patient or referral?

15 A. Yes. Every new patient referral has a
16 dedicated phone intake with our clinic social
17 worker. And the social worker during that time is
18 determining who the young person is and what
19 they're seeking.

20 Subsequently, some of our patients will
21 meet with our pediatric psychologist.

22 And then some of them will go on to have
23 the interdisciplinary -- what we call the team
24 visit that includes a medical provider and a
25 behavioral health provider in the same visit.

1 Q. And I think you were using the word
2 "some."

3 Does that mean that some do not progress
4 to that phase?

5 A. That is correct.

6 Q. And you mentioned the phone intake call.
7 What happens during that call?

8 A. During that call, the social worker is
9 gaining an understanding of who the patient is and
10 who their family is, what they are -- what they
11 are looking for, what supports they need, what
12 supports they have already obtained, getting a
13 sense of what their school environment is like,
14 what their support system looks like, getting a
15 basic understanding of mental health, and then
16 connecting them with resources when necessary or
17 indicated and then discussing the options moving
18 forward if they want to continue with our program.

19 Q. And you may have said this, but is
20 it -- did you say the social worker is the one who
21 conducts the intake phone call? Is that right?

22 A. That's correct.

23 MR. RAMER: Okay. Now I'm about to try
24 sending another exhibit that -- I will call this
25 Connelly Exhibit 3.

1 (Deposition Exhibit No. 3 was marked.)

2 MR. RAMER: And just let me know when you
3 receive it.

4 Still nothing?

5 MS. NOWLIN-SOHL: Yeah, still nothing.

6 THE REPORTER: I did receive it.

7 MS. NOWLIN-SOHL: I think the Wi-Fi in
8 this room is a little slow. My phone just let me
9 know that it's coming, but it hasn't showed up on
10 the computer yet.

11 Okay.

12 Q. (BY MR. RAMER) And, Doctor, do you
13 recognize this document?

14 MS. NOWLIN-SOHL: Sorry. The email is
15 here -- there's the PDF. Okay.

16 THE WITNESS: Yes.

17 Q. (BY MR. RAMER) And are you an author of
18 this article?

19 A. Yes.

20 Q. And what is this article about, just as a
21 general matter?

22 A. Generally this was looking at how we
23 continued to provide care in the beginning of the
24 COVID-19 pandemic using telehealth or virtual
25 visits.

1 Q. And I'd like to go to page 145, which I
2 believe is just the second page of the article.
3 And I want to look at the right column. And below
4 in bold, there's "Materials and Methods."

5 And below that it says "Clinical model
6 and transition to telehealth."

7 And I just want to read the first
8 sentence, and my question will be if I read it
9 correctly.

10 "Since 2017, the DGC has provided
11 multidisciplinary care to TGD youth, including a
12 dedicated intake phone call and psychosocial
13 screening with social work before initiating care
14 with an endocrinologist in person at the clinic."

15 And did I read that correctly?

16 A. Yes.

17 Q. And is DGC the Doernbecher Gender Clinic?

18 A. Yes.

19 Q. And does TGD stand for transgender and
20 gender diverse?

21 A. Yes.

22 Q. And what is the psychosocial screening?

23 A. That basically entails what I described
24 that the social worker does during the intake
25 phone call.

1 Q. What does it screen for? I believe --
2 you may have mentioned this, but just to -- with
3 respect to -- let me start again.

4 With respect to mental health, does it
5 screen for anything?

6 A. No formal screening or diagnoses are
7 made.

8 Q. And how long does an intake call
9 typically take?

10 A. About 45 minutes.

11 Q. And what --

12 A. Sometimes longer.

13 Q. Sorry. I didn't mean to cut you off.

14 A. I'm sorry. Sometimes longer.

15 Q. And what is the end product from the
16 intake phone call?

17 A. Can you specify what you mean by "the end
18 product"?

19 Q. Yeah. So when the social worker conducts
20 the intake phone call, does the social worker
21 write a report or send an email or fill out a form
22 as the end product for the call?

23 A. The social worker just documents their
24 conversation in the patient's medical record.

25 Q. So is the social worker making a

1 recommendation about anything?

2 A. No.

3 Q. I'd like to go back to your declaration
4 and specifically to page 9, paragraph 31 in the
5 first sentence. And I'll read it and ask if I
6 read it correctly.

7 "In our clinic when adolescents present
8 for care, they often present with high degrees of
9 anxiety, depression, and suicidal ideation."

10 Did I read that correctly?

11 A. Yes.

12 Q. And so that anxiety, depression, and
13 suicidal ideation is not detected during the
14 psychosocial screening; is that right?

15 MS. NOWLIN-SOHL: Objection to form.

16 THE WITNESS: The patients may -- may
17 discuss diagnoses that they have received from
18 mental health providers outside of our clinic. If
19 they have received a diagnosis of depression or
20 anxiety, then that is part of the intake is
21 getting that history.

22 Q. (BY MR. RAMER) Well, when you say
23 "intake" there, you mean part of the psychosocial
24 screening?

25 A. Yes. The psychosocial screening is what

1 we generally call the intake, the psychosocial
2 intake.

3 Q. Okay. I understand. I understand.

4 And in the same paragraph in your
5 declaration, in the third sentence -- I'll read it
6 and ask if I read it correctly.

7 It says "Most of these mental health and
8 social challenges are linked to gender dysphoria
9 and experiences of minority stress."

10 Did I read that correctly?

11 A. Yes.

12 Q. Are there ever mental health and social
13 challenges that are not linked to gender dysphoria
14 or experiences of minority stress?

15 A. Yes.

16 Q. And can you provide some examples of
17 that?

18 A. Yes. The patients may have mental health
19 diagnoses or stressors that are not linked to
20 gender dysphoria.

21 Q. Does that include anxiety?

22 A. That can include anxiety. It can include
23 a variety of different mental health conditions.

24 Q. And so a patient could be diagnosed with
25 gender dysphoria and have a separate mental health

1 condition that is not linked to gender dysphoria;
2 is that right?

3 A. That is possible.

4 Q. And if a patient has anxiety or
5 depression that is not linked to gender dysphoria
6 or minority stress, what does your clinic do?

7 A. Can you just help to clarify like what --
8 what specifically you mean by what do we do?

9 Q. Fair. If a patient has anxiety or
10 depression that is not linked to gender dysphoria
11 or minority stress, how does your clinic approach
12 that anxiety or depression and treat it?

13 A. Yeah. So again, every patient is -- the
14 care that's provided is individualized, so it
15 depends on the patient and the situation.

16 But generally our program will -- and it
17 depends on at what phase and who is working with
18 the patient at that given moment in time, but what
19 that can entail is understanding -- trying to gain
20 an understanding of where that might be coming
21 from or what it's related to and working with
22 outside therapists or mental health providers when
23 they're involved in the young person's care.

24 Q. And if a patient has anxiety or
25 depression that is not linked to gender dysphoria

1 or minority stress, do you resolve those mental
2 health issues before proceeding with medical
3 interventions?

4 MS. NOWLIN-SOHL: Object to form.

5 THE WITNESS: We -- can you clarify what
6 you mean by "resolve"?

7 Q. (BY MR. RAMER) As a clinician, do you
8 have an understanding of what it means to resolve
9 a mental health issue?

10 A. I'm not a -- I wouldn't consider myself a
11 mental health provider, and so I don't have a
12 great definition of it.

13 It would seem to me that "resolve" would
14 mean there are no symptoms of depression or
15 anxiety if something has resolved.

16 MR. RAMER: We've been going for almost
17 an hour. Do you want to take a break or keep
18 going? Either way.

19 THE WITNESS: I can take a break.

20 MR. RAMER: Li, does that sound good?

21 MS. NOWLIN-SOHL: Yeah, that's fine.

22 MR. RAMER: Ten minutes?

23 MS. NOWLIN-SOHL: Yeah.

24 MR. RAMER: Okay. So we'll be back
25 at -- well, we're about to hit 1:03 -- I'm sorry,

Dr. Kara Connelly August 28, 2023

1 that's East Coast. So we'll be back at 13 after
2 the hour.

3 MS. NOWLIN-SOHL: Sounds good.

4 MR. RAMER: Okay.

5 THE VIDEOGRAPHER: Okay. So the time is
6 11:03 a.m. Mountain time, and we are off the
7 record.

8 (Break taken from 11:03 a.m. to 11:17 a.m.)

9 THE VIDEOGRAPHER: All right. So we are
10 recording. The time is 11:17 Mountain time, and
11 we are back on the record.

12 Q. (BY MR. RAMER) Okay. Doctor, I just
13 wanted to start by asking you a hypothetical
14 question.

15 And the hypothetical is this: If there
16 are two treatments for a condition and the
17 treatments are equally effective, all else being
18 equal, should the provider prefer the treatment
19 that carries fewer risks?

20 MS. NOWLIN-SOHL: Object to form.

21 THE WITNESS: That's a difficult
22 hypothetical to imagine. I think in all
23 treatments, the risk -- potential risks and
24 benefits are weighed and discussed.

25 Q. (BY MR. RAMER) So why is it a difficult

1 hypothetical to imagine?

2 A. Well, because the benefits are not
3 included in that hypothetical.

4 Q. Well, I tried to ask it by saying the
5 treatments were equally effective, but I can
6 restate it with the word "benefits."

7 And so the question is this: If there
8 are two treatments for a condition and their
9 benefits are equal, all else being equal, should
10 the provider prefer the treatment that carries
11 fewer risks?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: I think it's also hard to
14 kind of characterize all risks as just a single.
15 I think risks are different in terms of what, I
16 guess -- yeah, risk category and what the risk is.
17 So it's difficult to put it all in one category.

18 Q. (BY MR. RAMER) What do you mean "it's
19 difficult to put it all in one category"?

20 A. Well, risks that -- different risks can
21 carry different weight, so it's hard to say that
22 one thing carries more risks than another. It
23 depends on what the risks are.

24 Q. That's fair. And for purposes of just
25 the hypothetical -- and it's a hypothetical for a

1 reason, just to understand the concept as opposed
2 to understand practice on the ground.

3 And so the hypothetical is just you have
4 two treatments. The benefits are the same. The
5 costs or risks, whichever word you prefer, are
6 greater with one than the other.

7 Should the provider prefer the treatment
8 that has fewer risks?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: Well, one of the ethical
11 principles that we follow as medical providers is
12 to do no harm. And so we will always try to
13 pursue treatments that will not cause harm to the
14 patient.

15 Q. (BY MR. RAMER) Got it. I just want to
16 go back to where we left off at the break. And I
17 asked a question, and we kind of got hung up on
18 the word "resolve." And so I want to ask the
19 question a different way.

20 So we were discussing situations where a
21 patient has anxiety or depression that is not
22 linked to gender dysphoria or minority stress.

23 Do you recall that discussion?

24 A. Yes.

25 Q. And my question is this: When a patient

1 has anxiety or depression that is not linked to
2 gender dysphoria or minority stress, do you
3 address those mental health issues before
4 proceeding with medical interventions?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: And can you specify what
7 you mean by "address"?

8 Q. (BY MR. RAMER) What would you understand
9 that term to mean as a clinician in this context?

10 A. Well, I think it can mean several
11 different things. It can mean treat or it can
12 mean acknowledge. It can mean evaluate further.
13 It depends on the -- the way it's defined.

14 Q. What do you think the term means when
15 it's used in the Endocrine Society guidelines?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: Can you specify where in
18 the guidelines?

19 Q. (BY MR. RAMER) Yeah, I'll go to -- just
20 in your declaration, go to page 6. And I think
21 it's -- it's in paragraph 22, but at page 6,
22 there's a little C before the relevant passage.
23 And I'll just read it, and my first question will
24 be whether I read it correctly.

25 "Any coexisting psychological, medical,

1 or social problems that could interfere with
2 treatment, e.g., that may compromise treatment
3 adherence, have been addressed such that the
4 adolescent's situation and functioning are stable
5 enough to start treatment."

6 Did I read that correctly?

7 A. Yes.

8 Q. And so what do you think the word
9 "addressed" means there?

10 A. I -- in that context, I interpret it to
11 mean that the coexisting psychological, medical,
12 or social problems have been acknowledged and
13 evaluated to the extent that the mental health
14 provider can ascertain that they are not
15 inhibiting in the individual's ability to make
16 complex cognitive decisions about treatment
17 options.

18 Q. And so you think -- just to confirm, you
19 think that this part of the Endocrine Society
20 guidelines goes to whether the adolescent can make
21 proper decisions; is that right?

22 A. This part of the guidelines are
23 pertaining to any coexisting psychological,
24 medical, or social problems that could interfere
25 with their ability to make decisions.

1 Q. And that's what you think this part of
2 the guidelines is saying is that you need to
3 address those conditions so that the
4 adolescent -- let me rephrase.

5 It's saying that you need to address
6 those conditions to ensure the adolescent can make
7 good decisions; is that right?

8 MS. NOWLIN-SOHL: Object to the form.

9 THE WITNESS: It's saying that if there
10 are any coexisting psychological, medical, or
11 social problems that could interfere with
12 treatment, that they have those -- have been
13 acknowledged and assessed and to ensure that they
14 are not interfering with the individual's ability
15 to make complex, cognitive decisions.

16 Q. (BY MR. RAMER) Are you familiar with the
17 term "diagnostic overshadowing"?

18 A. Not really.

19 Q. Okay. When an individual reports -- at
20 your clinic, when an individual reports distress
21 resulting from gender incongruence, do employers
22 at your clinic explore other possible causes of
23 that distress?

24 A. Can you specify which specific providers?

25 Q. Any providers.

1 A. Our mental health providers, that's part
2 of their psychological evaluation.

3 Q. And what do they do to explore those
4 other possible causes of distress?

5 A. Well, I'm not the psychologist so I can't
6 say for certain, but it's part of their -- it's
7 part of their evaluation and the way that they can
8 make those determinations.

9 Q. And what, if anything, do you change in
10 your protocol when dealing with a patient who has
11 autism spectrum disorder?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Can you be more specific?

14 Q. (BY MR. RAMER) With respect to what?

15 A. You said what do you change. With
16 respect to what? What did you mean by --

17 Q. Sorry, yes. Let me phrase it this way:
18 If a patient has autism spectrum disorder, is
19 their treatment exactly the same as any other
20 patient at your clinic?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: Well, every patient is
23 treated as an individual, so every patient
24 receives individualized care. And so that can
25 look different from patient to patient.

1 If a patient has the diagnosis of autism
2 spectrum disorder, the -- then the mental health
3 provider who is working with that patient or our
4 psychologist may contribute more information about
5 the patient and the care that they're seeking and
6 the way that they communicate and receive
7 communication and information.

8 So it can really vary from person to
9 person.

10 Q. (BY MR. RAMER) At your clinic, are
11 patients with autism spectrum disorder eligible to
12 receive puberty blockers?

13 A. Are you asking if a patient has autism
14 spectrum disorder and meet the criteria -- and
15 have the diagnosis of gender dysphoria and meet
16 the criteria for treatment outlined in the
17 guidelines and standards of care, if care would be
18 considered for that patient?

19 Q. I think I was with you up until the very
20 end of "care would be considered."

21 I think, yes, let's say everything else
22 is equal, but the patient has autism spectrum
23 disorder.

24 Are they able to receive puberty blockers
25 at your clinic?

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: I can say that patients
3 would not be denied puberty blockers simply
4 because they have autism spectrum disorder.

5 Q. (BY MR. RAMER) And I'd like to return to
6 Exhibit 3, Connelly Exhibit 3. And I'd like to go
7 back to page 145, right column again.

8 And it's actually going to be right below
9 the sentence we previously read in the "Materials
10 and Methods" section. And I'm just going
11 to -- it's going to be the second full sentence.
12 And I'll read it, and my first question will be if
13 I've read it correctly.

14 "In October of 2019, the DGC transitioned
15 from a multidisciplinary clinic to a fully
16 interdisciplinary model in which every new patient
17 meets with endocrinology, psychology, and social
18 work simultaneously during their first medical
19 appointment to develop individualized patient and
20 family-centered treatment plans."

21 Did I read that correctly?

22 A. Yes.

23 Q. And is this generally what occurs at your
24 clinic?

25 A. Yes.

Dr. Kara Connelly August 28, 2023

1 Q. And you refer to the first medical
2 appointment; is that right?

3 A. Yes.

4 Q. And could you describe what that first
5 medical appointment is like for a patient?

6 A. Yes. The first medical appointment --
7 well, prior to the start of the medical
8 appointment, the interdisciplinary team meets to
9 discuss what is already known about the patient
10 and family and the information that's been
11 obtained in the intake and any -- in the
12 psychological evaluation.

13 And then when the patient and family are
14 brought into the room, we gather medical history
15 about the patient and family and determine what
16 questions they have and then discuss different
17 treatment options depending on what they're
18 seeking.

19 Q. And how long does a visit typically last?

20 A. Average, an hour.

21 Q. And back in Exhibit 3, the very next
22 sentence -- I'll read it and ask if I read it
23 correctly.

24 "For adolescent patients, these
25 appointments include dedicated time for the

Page 57

1 patient to meet with the endocrinologist and
2 social worker alone while caregivers meet with
3 psychology for assessment of overall family
4 needs."

5 Did I read that correctly?

6 A. Yes.

7 Q. And why do adolescent patients have
8 dedicated time to meet with the endocrinologist
9 alone?

10 A. Well, these are for adolescents. And
11 generally as medical providers or as adolescent
12 medical providers, we always reserve part of the
13 appointment time to discuss topics that they may
14 want to discuss confidentially.

15 And again, that can look different from
16 person to person, patient to patient.

17 Q. Is the information from this dedicated
18 meeting with the endocrinologist alone ultimately
19 shared with caregivers?

20 A. It depends.

21 Q. What does it depend on?

22 A. It depends on basically what is in the
23 patient's best interest.

24 Q. And so there's times where in your
25 judgment it's in the patient's best interest to

1 not disclose something to a caregiver?

2 A. If we have concerns about how it may
3 impact their safety, then yes.

4 Q. And what do you mean by that?

5 A. What do I mean by if it may impact their
6 safety?

7 Q. Correct. What do you mean by you're
8 concerned about how it may impact their safety?

9 A. If disclosing information that was shared
10 with the medical provider confidentially may pose
11 a risk to the patient.

12 Q. A risk of what?

13 A. Of harm. Of physical harm.

14 Q. So you're referring to physical harm by
15 the caregiver on the patient; is that right?

16 A. That's an example.

17 Q. Have there been situations where you've
18 determined that disclosing confidential
19 information would put the patient at risk of harm
20 from a caregiver?

21 A. It's rare, but yes, it has happened.

22 Q. Do you call the police in that situation?

23 A. It depends.

24 Q. Have you ever?

25 A. I have never called the police.

1 Q. Has anyone -- to your knowledge, has
2 anyone at your clinic ever called the police in
3 that situation?

4 A. No.

5 Q. Okay. So is it correct that the first
6 medical appointment results in I think what you
7 called a treatment plan?

8 A. I don't believe that I used those words.

9 Q. Okay. I guess in -- so in Exhibit 3, the
10 second sentence we read, it refers at the very end
11 of the sentence to individualized patient and
12 family-centered treatment plans.

13 What is a treatment plan?

14 A. That can be a variety of -- it can look
15 different from person to person, but basic
16 detailing any next steps, if any further tests
17 need to be done, medical tests, laboratory
18 evaluations, imaging pertaining to their medical
19 history or their family medical history, any other
20 information that they need that we will kind of
21 help to share with them. So it really just is
22 kind of detailing next steps if indicated.

23 Q. For any patients, does the treatment plan
24 from the first medical visit call for the
25 administration of puberty blockers?

Dr. Kara Connelly August 28, 2023

1 A. It's very rare, and -- it's very rare,
2 but it can.

3 Q. For any patients, does the treatment plan
4 from the first medical visit call for the
5 administration of cross-sex hormones?

6 A. It's also very rare, but it can.

7 Q. How would you define "very rare" as
8 you're using it?

9 A. I would say probably less than 2 percent
10 of the time.

11 Q. So just so I understand what you're
12 saying, you're saying less than 2 percent of the
13 time a patient will begin puberty blockers or
14 cross-sex hormones after the first medical visit?

15 MS. NOWLIN-SOHL: Objection;
16 mischaracterizes the testimony.

17 THE WITNESS: What do you mean by
18 "after"? Do you mean at the time of the first
19 visit or immediately after or later at some point?

20 Q. (BY MR. RAMER) Like, what was the
21 2 percent number you just gave?

22 A. The 2 percent is if any treatments will
23 be initiated immediately after the first visit and
24 before the second visit.

25 Q. Okay. So you're saying -- I'm just

Page 61

1 trying to make sure I understand.

2 So you're saying only 2 percent of
3 patients will initiate puberty blockers or
4 cross-sex hormones before the second visit?

5 A. Correct.

6 Q. What medication does your clinic use -- I
7 guess that should be plural.

8 What medications does your clinic use for
9 cross-sex hormones?

10 A. Testosterone and estradiol.

11 Q. And is there a particular brand you use?

12 A. No.

13 Q. Do you recall what company produces those
14 drugs?

15 A. No.

16 Q. What medication does your clinic use for
17 puberty blockers?

18 A. We use leuprolide acetate and histrelin
19 implants.

20 Q. And is there a particular brand you use?

21 A. The brands that are available for
22 leuprolide acetate can be dependent on insurance
23 coverage, but generally the brandings are Depot,
24 Lupron, and Eligard.

25 Q. And do you recall what company produces

1 those drugs?

2 A. I can't say with certainty what company
3 produces them.

4 Q. After the first medical visit, do you
5 require patients to return to your clinic for
6 follow-up examinations?

7 MS. NOWLIN-SOHL: Object to the form.

8 THE WITNESS: Can you specify "follow-up
9 examinations"?

10 Q. (BY MR. RAMER) Yeah, sorry. That's not
11 supposed to be a trick question. I just -- do the
12 patients have follow-up visits?

13 A. Yes.

14 Q. At your clinic?

15 A. Yes.

16 Q. And how often are those follow-up
17 appointments?

18 A. Generally every three months.

19 Q. And I think you previously mentioned
20 this, but I just want to confirm. And just
21 correct me if my understanding is wrong.

22 As a general matter, your clinic treats
23 patients until they turn 18, except for those
24 patients who have not yet transferred to another
25 provider; is that right?

1 And so in other words, the reason you
2 would have a patient in your clinic who is over 18
3 years old is because they have not yet transferred
4 to a provider for adults; is that fair?

5 A. Yes. Generally that is correct, but
6 there can be some circumstances where they may be
7 in our care for a bit longer than 18.

8 Q. But that's not the general practice; is
9 that right?

10 A. Correct.

11 Q. And do you stay in formal communication
12 with your patients after they turn 18?

13 A. If they are still engaged in care in our
14 clinic, then yes.

15 Q. And what percentage of your patients
16 receive care elsewhere after they turn 18?

17 A. Do you mean gender-affirming care?

18 Q. Well, I guess at the gender clinic -- I
19 guess any treatment at the gender clinic, yeah.

20 A. But you said "care elsewhere." Are you
21 specifically saying gender-affirming care
22 elsewhere?

23 Q. Yeah, let's do that for this question.
24 So of your patients who are -- who turn 18, what
25 percentage no longer receive gender-affirming

1 health care from your clinic?

2 A. It's definitely the minority. So the
3 majority of patients when they turn 18 continue to
4 receive care through our clinic.

5 Q. Sorry. Could you say that answer again?

6 A. Yeah. The majority continue to receive
7 care after their 18th birthday through our clinic.

8 Q. So the majority of your patients stay on
9 with the clinic after they turn 18?

10 A. Yes.

11 Q. I guess I don't know what I'm missing. I
12 thought that you generally treat patients until
13 they're 18, and then the idea was that they
14 then -- you know, they're adults at 18, so they go
15 elsewhere to receive treatment.

16 But you're saying now that that is
17 incorrect; the majority stay with you? Is that
18 right?

19 A. So we only see new patients who are
20 younger than age 18 who establish with us.
21 Generally the majority of patients will still be
22 in the process of -- still receiving care with us
23 after they turn 18. And it's when they're older
24 that their care is transferred to an adult
25 provider.

1 Q. And when you say "older," approximately
2 what age?

3 A. I'd say approximately average of 20. But
4 we have some patients that are in their 20s when
5 they successfully transfer to an adult provider.

6 Q. So let's say for patients of yours by the
7 time -- let me rephrase.

8 Of your patient population, by the time
9 patients turn 22 years old, what percentage do you
10 estimate are still receiving treatment at your
11 clinic?

12 A. I can't say for certainty, but I'd
13 probably estimate less than 10 percent.

14 Q. And for the other approximately
15 90 percent, does your clinic stay in formal
16 communication with them?

17 A. Can you specify what you mean by "formal
18 communication"?

19 Q. Well, do you communicate with them at
20 all?

21 A. If they reach out after they've made that
22 transfer to an adult provider and have difficulty
23 continuing to access care through that provider or
24 getting refills on their prescriptions, they may
25 request refills, in which case we would

1 communicate formally with them to bring them back
2 in for another visit and again attempt to transfer
3 care to an adult provider.

4 Q. Do you communicate with your patients
5 when they do not reach out to you in the first
6 instance?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: Can you specify which
9 patients we're talking about?

10 Q. (BY MR. RAMER) Yeah. Sorry. I was
11 talking about the universe we were just
12 discussing, which is those who have progressed on
13 to other care providers.

14 And I had asked you if you stay in formal
15 communication, and I think you described an
16 example where they reach out to you for help in
17 some way, shape, or form.

18 And my question is do you formally
19 communicate with that universe of patients,
20 meaning those who have gone on to receive care
21 elsewhere, when they have not reached out to you
22 in the first instance?

23 A. We don't have a protocol of contacting
24 patients who have already successfully transferred
25 care to an adult provider. But we do have

1 patients that are seeing adult providers, and
2 those providers communicate with us about the
3 patients.

4 Q. And I think in your declaration you have
5 said that you have personally delivered care to
6 over 700 patients with gender dysphoria; is that
7 right?

8 A. Yes.

9 Q. And were all of those patients under the
10 age of 18?

11 A. At the time that they establish with our
12 clinic, yes.

13 Q. And when did you in your practice first
14 begin treating children or adolescents for gender
15 dysphoria?

16 A. Do you mean in what year or what stage of
17 my professional development?

18 Q. Both.

19 A. In my pediatric endocrinology fellowship
20 under the supervision of the attending physicians.

21 Q. And when was that, approximately, in
22 terms of a year?

23 A. I started in 2010, so between 2010 and
24 2013.

25 Q. And do you personally prescribe puberty

1 blockers and cross-sex hormones?

2 A. Yes.

3 Q. And at what age do you prescribe puberty
4 blockers?

5 MS. NOWLIN-SOHL: Object to the form.

6 THE WITNESS: That depends on pubertal
7 stage.

8 Q. (BY MR. RAMER) And so at what pubertal
9 stage do you prescribe puberty blockers?

10 A. Tanner II.

11 Q. Do you prescribe puberty blockers or
12 cross-sex hormones to patients who identify as
13 nonbinary?

14 A. Yes, I have.

15 Q. Do you still?

16 A. Yes. Yeah.

17 Q. The primary purpose of gender-affirming
18 care is to reduce the distress associated with
19 gender dysphoria, correct?

20 A. Yes.

21 Q. And reducing the distress associated with
22 gender dysphoria is the only purpose of
23 gender-affirming care, correct?

24 MS. NOWLIN-SOHL: Object to form.

25 THE WITNESS: That is not how I would

1 define gender-affirming care.

2 Q. (BY MR. RAMER) Could you elaborate on
3 that?

4 A. Well, gender-affirming care can entail
5 many different aspects of care or treatment and
6 can be alleviating distress if gender dysphoria is
7 present, but it generally means affirming
8 someone's gender identity at that moment in time.

9 Q. Okay. I understand. So let me ask this
10 question: Reducing gender dysphoria -- start
11 again.

12 Reducing the distress associated with
13 gender dysphoria is the only purpose of providing
14 puberty blockers and cross-sex hormones, correct?

15 MS. NOWLIN-SOHL: Object to form.

16 THE WITNESS: The main purpose of any
17 medication, including puberty blockers and
18 hormones, would be to alleviate distress
19 associated with gender dysphoria.

20 Q. (BY MR. RAMER) So you said "main
21 purpose."

22 Are there other purposes of prescribing
23 puberty blockers and cross-sex hormones with
24 respect to gender-diverse youth?

25 A. No, I can't think of any.

1 Q. And so the effect of treatment -- sorry.

2 And so the effect of puberty blockers and
3 cross-sex hormones on reducing the distress
4 associated with gender dysphoria is the outcome
5 that matters the most when analyzing these
6 treatments, correct?

7 MS. NOWLIN-SOHL: Object to the form.

8 MR. RAMER: That's fair. Never mind.
9 Listen, I think we've already answered the
10 question.

11 Q. (BY MR. RAMER) Have you ever prescribed
12 puberty blockers to a patient who was not formally
13 diagnosed with gender dysphoria under the DSM-V?

14 A. Only if it was a patient with a different
15 diagnosis, central precocious puberty.

16 Q. Apart from central precocious puberty,
17 have you ever prescribed puberty blockers to a
18 patient who is not formally diagnosed with gender
19 dysphoria under the DSM-V?

20 A. No.

21 Q. Why not?

22 A. Well, I follow the clinical practice
23 guidelines and established standards of care that
24 require that an individual be diagnosed with
25 gender dysphoria prior to initiating treatments.

1 Q. And have you ever prescribed cross-sex
2 hormones to a patient who is not formally
3 diagnosed with gender dysphoria under the DSM-V?

4 A. No.

5 Q. Are you familiar with the term "gender
6 incongruence"?

7 A. Yes.

8 Q. What is your understanding of that term?

9 A. It's a term that refers to a patient
10 whose gender identity does not match the sex that
11 was assigned to them at birth.

12 Q. And so is it different from gender
13 dysphoria?

14 A. Gender dysphoria is the distress that is
15 experienced by someone's gender identity that is
16 not in alignment with the sex that was assigned to
17 them at birth.

18 Q. I guess -- so it's possible for someone
19 to be gender incongruent but not be suffering from
20 gender dysphoria, correct?

21 A. Well, I think it depends on where the
22 definition of "gender incongruent" is coming from.

23 Q. I guess under your definition was what I
24 was asking.

25 A. Well, I -- usually when I hear the term

1 "gender incongruent," I generally will think about
2 the origin being the ICD-11 code.

3 And I can't remember the specific words
4 that are used and whether "distress" is included
5 in the definition.

6 Q. If the phrase "gender incongruence" does
7 not -- let me rephrase.

8 If the phrase "gender incongruent" is
9 defined without reference to clinically
10 significant distress, do you agree that it means
11 something different from gender dysphoria?

12 A. If the definition does not include the
13 "distress," then yes, I would say that's different
14 from gender dysphoria.

15 Q. Sorry. I didn't mean to cut you off.

16 And if the definition of "gender
17 incongruence" does not include clinically
18 significant distress, you would not prescribe
19 puberty blockers or cross-sex hormones to treat
20 gender incongruence, correct?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: I have only prescribed
23 puberty blockers or cross-sex hormones for
24 patients who have been diagnosed with gender
25 dysphoria.

1 Q. (BY MR. RAMER) Do you assess a patient's
2 developmental readiness when describing whether to
3 prescribe puberty blockers or cross-sex hormones?

4 A. Our multidisciplinary team does together.

5 Q. And how does your team make that
6 assessment?

7 A. Well, it involves the different
8 disciplines using their finer expertise in
9 assessing that individual patient.

10 Q. And what specifically does your team
11 assess?

12 A. About develop -- sorry. I forgot what
13 you --

14 Q. Sorry, yeah. When you're assessing a
15 patient's developmental readiness for a particular
16 intervention, what does your team assess?

17 A. Well, again, I'm not the pediatric
18 psychologist who is the one conducting the
19 assessments, so I can't say for certain all of the
20 different tools and measures that she uses, but
21 she uses her expertise and knowledge and expertise
22 in child and adolescent development in determining
23 their developmental stage and ability to
24 participate in decision-making.

25 Q. Okay. So the pediatric psychologist

1 makes that determination; is that right?

2 A. Yes.

3 Q. And that's beyond your area of expertise;
4 is that what you're saying?

5 MS. NOWLIN-SOHL: Objection;
6 mischaracterizes testimony.

7 THE WITNESS: The pediatric psychologist
8 is the one with the expertise in child and
9 adolescent development and is the person who makes
10 a determination about developmental readiness.

11 Q. (BY MR. RAMER) Right. All I'm asking is
12 the proper way to assess for developmental
13 readiness is something that is beyond your
14 expertise? Or is it not?

15 A. I would not say that it's my expertise to
16 make that assessment.

17 Q. Well, so I understand the pediatric
18 psychologist makes the assessment.

19 And my question is do you know how to
20 make that assessment?

21 A. About developmental readiness?

22 Q. Correct.

23 A. My role is to -- is to assess their
24 physical developmental readiness. And we as an
25 interdisciplinary team come together to determine

1 overall developmental readiness with our different
2 disciplines' expertise contributing.

3 Q. And all I'm asking is just the
4 developmental readiness that you described is
5 determined by the pediatric psychologist.

6 That determination is not something that
7 you make, correct?

8 A. Correct.

9 Q. And the process for making the
10 determination that the pediatric psychologist
11 makes is something that is beyond your individual
12 expertise, correct?

13 A. Correct.

14 Q. I'd like to go back to your declaration,
15 which I guess is Connelly Exhibit 2. And I'd like
16 to go to page 5 and paragraph 21.

17 And this paragraph you're talking about
18 puberty blockers, correct?

19 A. Correct.

20 Q. And I'm going to read the second sentence
21 and ask if I read it correctly.

22 It says "These medications have been used
23 successfully to delay pubertal changes in youth
24 with central precocious puberty."

25 Did I read that correctly?

1 A. Yes.

2 Q. And you'd already mentioned central
3 precocious puberty, but could you just explain
4 what that is?

5 A. Yes. That is when the brain activates
6 puberty at an age that is younger or earlier than
7 is what is determined to be a normal age range.

8 Q. And what is that normal age range?

9 A. Well, for individuals assigned female at
10 birth, it's generally age 7 is the youngest that
11 is considered normal for starting puberty.

12 And for individuals assigned male at
13 birth, that's generally age 9.

14 Q. And so is it -- just so I understand, if
15 the individual starts puberty before those ages
16 you just listed, that is what constitutes central
17 precocious puberty; is that right?

18 A. Yes.

19 Q. And do you prescribe puberty blockers
20 every time a child falls within that definition?

21 A. No.

22 Q. Is there a typical age where a child
23 would be diagnosed with central precocious puberty
24 but you would not prescribe puberty blockers?

25 A. It's not so much of age, chronological

1 age, but we look at pubertal stage and we look at
2 skeletal age and development.

3 Q. And when you say you "look at pubertal
4 stage and skeletal age and development," what
5 specifically are you assessing in making the
6 determination whether to prescribe puberty
7 blockers?

8 A. For central precocious puberty?

9 Q. Yes.

10 A. So we want to -- basically we will assess
11 pubertal stage in terms of Tanner staging and how
12 far along they are in puberty at the time they are
13 given the diagnosis.

14 And we look at how much maturation has
15 happened at the growth plates by pubertal hormones
16 to determine if there's benefit to suppressing
17 puberty at that time.

18 Q. And just as a general matter, when is
19 there benefit to suppressing puberty at that time?

20 A. Again, it's different for everyone
21 because it depends on where -- what their growth
22 patterns look like and what their family pubertal
23 development patterns are.

24 But if we determine that treatment is
25 going to result in an improvement in height

1 outcome, that's generally what we're looking at.

2 And if we -- if the patient is far enough
3 along in puberty that it does not appear that
4 treatment is going to result in a benefit in final
5 height outcome, then we may not use prescribed.

6 Q. Sorry. And this is my own ignorance of
7 this.

8 The last part you said -- is it that if
9 they are far along enough then you won't
10 prescribe?

11 A. It depends -- again, it depends on the
12 patient, but if they are far enough -- if they are
13 far enough along in puberty -- and I can give you
14 an example if that would be helpful.

15 Q. Yes, please. I'm clearly adrift here.

16 A. Yeah. So if a patient who is assigned
17 female at birth has achieved menarche, or their
18 first menstrual cycle, and we look at their
19 skeletal age or the age of their growth plates and
20 determine that starting puberty blockers is really
21 not going to result in a benefit of -- resulting
22 in improved height outcome, then we may consider
23 not using puberty blockers.

24 Q. Okay. So I think I understand.

25 So the idea is central precocious

1 puberty, one of the outcomes if you did not treat
2 it is they would have a reduced height profile; is
3 that right?

4 A. In some cases.

5 Q. But right. Right. But that is one of
6 the animated concerns, just as a general matter;
7 is that fair?

8 A. Yes.

9 Q. So same paragraph, same sentence in your
10 declaration that I had previously read.

11 Could you explain the relevance of the
12 points you're making here?

13 A. Can you -- I'm sorry. Can you clarify?
14 Of that same sentence?

15 Q. Yeah. I guess put, you know, less
16 directly, why are we talking about central
17 precocious puberty in your declaration?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: It's another population or
20 another diagnosis that the medications have been
21 used in demonstrating the effectiveness of
22 suppressing endogenous sex steroid production.

23 Q. (BY MR. RAMER) Are you talking about
24 central precocious puberty solely with respect to
25 effectiveness? Or something else?

1 MS. NOWLIN-SOHL: Object to the form.

2 THE WITNESS: The medications have been
3 used successfully to delay pubertal changes for
4 youth who have central precocious puberty.

5 Q. (BY MR. RAMER) Okay. So when your
6 declaration is discussing central precocious
7 puberty, the relevance of that discussion is
8 solely the fact that puberty blockers have been
9 effective in delaying the onset of puberty; is
10 that right?

11 MS. NOWLIN-SOHL: Objection
12 mischaracterizes the testimony. And also
13 objection to the extent this calls for a legal
14 conclusion.

15 THE WITNESS: The statement that is in
16 this paragraph is that they have been used
17 successfully to delay pubertal changes.

18 Q. (BY MR. RAMER) Okay. So same paragraph,
19 final sentence. And I'll just read it and again
20 ask if I read it correctly.

21 It says "If treatment is stopped,
22 endogenous puberty resumes."

23 Did I read that correctly?

24 A. Yes.

25 Q. When you diagnose a patient with gender

1 dysphoria, how do you determine when that child
2 should begin puberty blockers?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: Can you clarify the
5 question?

6 Q. (BY MR. RAMER) Yeah. I guess do you
7 prescribe puberty blockers at Tanner Stage II?

8 MS. NOWLIN-SOHL: Object to the form.

9 THE WITNESS: I wouldn't prescribe
10 puberty blockers if they have not yet reached
11 Tanner Stage II.

12 Q. (BY MR. RAMER) Would you ever prescribe
13 them when the patient reaches Tanner Stage II?

14 A. Yes.

15 Q. And just as an approximation, at what age
16 does that stage typically occur?

17 A. At what age does Tanner Stage II occur?

18 Q. Correct.

19 A. For individuals assigned female at birth,
20 it's approximately -- it's an average of 10 to 10
21 and a half years.

22 And for individuals assigned male at
23 birth, it's around 11 to 11 and a half.

24 Q. And how long -- I guess let me rephrase.
25 Under the guidelines, how long does the

1 individual remain on puberty blockers?

2 MS. NOWLIN-SOHL: Object to the form.

3 THE WITNESS: Can you specify which
4 guidelines?

5 Q. (BY MR. RAMER) Is it different for the
6 WPATH guidelines versus the Endocrine Society
7 guidelines?

8 A. I just wanted to be sure. I didn't know
9 what specific guidelines. But you mean Endocrine
10 Society and WPATH?

11 Q. Or any other relevant ones. I'm just
12 trying to understand, in this treatment when they
13 receive puberty blockers to treat gender
14 dysphoria, how long do they typically remain on
15 puberty blockers?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: It depends on the patient,
18 and -- it depends on the patient and whether they
19 go on to start hormones or not.

20 Q. (BY MR. RAMER) If they do go on to start
21 hormones, at what age does that typically occur?

22 A. I would say around 14, but sometimes
23 older.

24 Q. So if a patient started puberty
25 blockers -- sorry, let me try that again.

1 If the patient is on puberty blockers
2 from Tanner Stage II for, let's say, two and a
3 half years and then treatment is stopped, is it
4 correct that the patient will be going through
5 endogenous puberty two and a half years later?

6 A. So if a patient is on puberty blockers
7 but not on cross-sex hormones and the puberty
8 blockers are stopped, then yes, endogenous puberty
9 begins again.

10 Q. Is an individual's gender identity
11 expected to evolve over time?

12 MS. NOWLIN-SOHL: Object to the form.

13 THE WITNESS: I wouldn't use the word
14 "expect." It's not expected. I think that some
15 people can have a shift in their gender identity.

16 Q. (BY MR. RAMER) When you say "some
17 people," what do you mean by that?

18 A. I think that for some people, it's
19 possible that their gender identity can shift over
20 time.

21 Q. Can you identify those people ahead of
22 time or no?

23 A. No. But I would say that the
24 overwhelming majority of the patients that I have
25 worked with have not experienced a shift in their

Dr. Kara Connelly August 28, 2023

1 gender identity.

2 MR. RAMER: And we're coming up on an
3 hour. I kind of have a good stopping point here.

4 Do you want to take, I guess, five
5 minutes this time?

6 MS. NOWLIN-SOHL: Yes. That sounds good.

7 MR. RAMER: Let's call it -- we're about
8 to hit 12, so we'll call it 17 after the hour?

9 MS. NOWLIN-SOHL: Yeah.

10 MR. RAMER: Okay.

11 THE VIDEOGRAPHER: Okay. So the time is
12 12:11 p.m. Mountain time, and we are off the
13 record.

14 (Break taken from 12:11 p.m. to 12:18 p.m.)

15 THE VIDEOGRAPHER: All right. So we are
16 recording. The time is 12:18 p.m. Mountain time,
17 and we are back on the record.

18 Q. (BY MR. RAMER) Dr. Connelly, I'd like to
19 go back to your declaration, and specifically to
20 page 14 and paragraph 50 and first sentence. And
21 I'll read it and ask if I read it correctly.

22 "Gender-affirming hormone therapy may
23 have an impact on future fertility potential
24 although treatment can be tailored to minimize
25 that risk if maintaining fertility is important to

Page 85

1 the family and there are options for fertility
2 preservation."

3 Did I read that correctly?

4 A. Yes.

5 Q. And what are the options for fertility
6 preservation you mention there?

7 A. Well, that depends on what gonads the
8 person was born with. But generally sperm
9 preservation or cryopreservation or ovocyte
10 cryopreservation.

11 Q. Sorry, could you say those again. So
12 cryopreservation is one; is that right?

13 A. Sperm cryopreservation, which is
14 essentially freezing sperm, and ovocyte
15 cryopreservation is freezing eggs from ovarian
16 tissue.

17 Q. Are there any other options for fertility
18 preservation other than those two?

19 A. Well, the other options may involve
20 development of an embryo after the sperm or eggs
21 are retrieved and then freezing embryos.

22 Q. When you -- sorry, go ahead.

23 A. Sorry. I was going to say those are much
24 less often sought, especially in younger patients.

25 Q. What are much less often sought?

1 A. Freezing embryos.

2 Q. And in describing that option, you had
3 mentioned retrieving.

4 Are you saying retrieving from the
5 cryopreservation or retrieving from the
6 individual?

7 A. Can you remind me what I said?

8 Q. Well, I don't know if I know. So the --
9 we had the sperm cryopreservation.

10 I think you said ova cryopreservation.

11 And then the third one you had mentioned
12 embryos. And I just didn't understand what that
13 was. Could you just explain that a little bit?

14 A. Yeah. The embryos are -- the embryos are
15 formed if either a sperm or an egg is obtained and
16 fertilized at the time that they are obtained and
17 prior to freezing.

18 Q. I see. Have you ever had a patient
19 pursue that option?

20 A. No. Not -- no, not a patient in my care.

21 Q. And what do you tell your patients about
22 the options for fertility preservation?

23 A. Do you mean regardless -- it's a little
24 different depending on what gonads they have,
25 whether they have testicles or ovaries.

1 Q. Let's start with one and then do the
2 other.

3 A. Okay. So for individuals who were born
4 with testicles, the options include preserving
5 sperm and freezing sperm.

6 And one of the ways of obtaining sperm is
7 through ejaculation.

8 And another way can be what's called
9 testicular extraction where a urologist -- I don't
10 know the specifics of the procedure, but it's
11 something that -- a procedure that a urologist
12 performs. And then the sperm is frozen until
13 later, if they desire to use it later on.

14 Q. And then what about the other categories?

15 A. So for individuals who are born with
16 ovaries, that generally involves freezing eggs.
17 And so that -- again, it happens in a reproductive
18 endocrinology and then fertility clinic, so I'm
19 not the provider that does the procedures, but
20 generally involves development of the eggs and
21 then the retrieval through a procedure and then
22 freezing the eggs.

23 Q. And what do you tell your patients about
24 the likelihood of those options being successful?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: Can you specify which
2 option?

3 Q. (BY MR. RAMER) Let's assume -- am I
4 right we're talking about cryopreservation for
5 both?

6 A. Yes.

7 Q. And unless there's a distinction, which
8 please -- a relevant distinction, just please tell
9 me.

10 All I'm wondering is when you are
11 discussing this with patients, what do you tell
12 them about the prospect that either form of
13 cryopreservation will ultimately be successful if
14 they want to have children later in life?

15 MS. NOWLIN-SOHL: Object to form.

16 THE WITNESS: And are you defining
17 "successful" as resulting in a baby or a
18 pregnancy?

19 Q. (BY MR. RAMER) Sure, a healthy pregnancy
20 or a healthy birth in the context of, you know,
21 those with testicles.

22 MS. NOWLIN-SOHL: Object to the form.

23 THE WITNESS: So we're just talking about
24 those with testicles?

25 Q. (BY MR. RAMER) No. I was trying to

1 bring them both in, but let's just take them one
2 at a time.

3 For those with ovaries, what do you say
4 about the prospect of achieving a successful,
5 healthy birth later in life?

6 MS. NOWLIN-SOHL: Object to the form.

7 THE WITNESS: Well, there is -- for
8 individuals who were born with ovaries and have
9 not started any cross-sex hormones -- is that the
10 population that you are referring to?

11 Q. (BY MR. RAMER) Sure. Yeah. Let's start
12 there. Yeah.

13 A. There has been research that has shown
14 that preserving eggs has been successful in the
15 future in resulting in a healthy pregnancy.

16 Q. In -- I mean, not to quiz you. As you
17 sit here, do you know -- is there a particular
18 article you're thinking of, or --

19 A. I can't -- I can't say. I don't know
20 what particular article.

21 Q. Are these fertility options that we just
22 discussed, are these fertility options discussed
23 in the WPATH guidelines?

24 A. I believe so.

25 Q. Are they discussed in the Endocrine

1 Society guidelines?

2 A. I believe so. I don't recall in what
3 amount of detail.

4 Q. Switching gears a little bit, does your
5 clinic perform surgeries on adolescents?

6 A. No.

7 Q. So you just -- you refer adolescents for
8 surgeries; is that right?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: Patients that have been
11 seen in our clinic are referred -- in some cases
12 are referred out to surgeons that are not
13 affiliated with our clinic.

14 Q. (BY MR. RAMER) Yeah. I was just trying
15 to understand -- we discussed that for some
16 patients gender-affirming surgery is indicated.

17 And all I was trying to understand is if
18 it's indicated, is the surgery done at your
19 clinic? Or is the patient referred to a surgeon
20 somewhere else?

21 A. The patient is referred to a surgeon
22 somewhere else.

23 Q. And for patients who have been referred
24 for surgery from your clinic, are any of
25 them -- sorry. Let me rephrase that.

1 For patients who have been referred for
2 surgery from your clinic, have any of those
3 patients received a form of surgery other than top
4 surgery as you've described it?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: Can you be more specific
7 about what types of surgeries?

8 Q. (BY MR. RAMER) Well, I guess let's start
9 there.

10 What types of surgeries has your clinic
11 referred patients for?

12 A. Well, so you're specifying
13 gender-affirming surgeries?

14 Q. Right.

15 A. Okay. Well, we've had patients that have
16 pursued surgeries, and a lot of the times they
17 don't require a referral from our clinic.

18 We've had patients who had been seen in
19 our clinic that have accessed surgeries with
20 outside surgeons.

21 Q. Okay. So taking the kind of technical
22 concept of a referral out of the equation, what
23 types of gender-affirming surgeries have patients
24 of your clinic received?

25 A. And do you mean of all ages or just

1 patients that had been seen in our clinic?

2 Q. Could you explain the distinction you're
3 drawing there?

4 A. You mean any patient who has ever been
5 seen in our clinic?

6 Q. No. I mean for patients who are under 18
7 years of age who have received a gender-affirming
8 surgery, what kind of surgeries have they received
9 while under 18?

10 A. Okay. So while under 18.

11 Almost all of them have been top
12 surgeries. And I can think of one person who has
13 had a vaginoplasty.

14 Q. And could you explain what a vaginoplasty
15 is?

16 A. It is the creation of a vulva and vaginal
17 canal.

18 Q. What is it created from?

19 A. That depends on the surgical technique
20 that's used.

21 Q. What does it depend on?

22 A. It can depend on the surgeon and the
23 technique that the surgeon determines would be the
24 best for that patient. I can't -- I'm not the one
25 that makes the decisions about what technique is

1 used.

2 Q. Could you just explain an example of what
3 you mean by different techniques would result in
4 the vaginoplasty being the -- just explain what
5 you mean by "different techniques."

6 A. Well, the surgeons can use different
7 types of tissue to create the vaginal canal.

8 Q. Can you give some examples of types of
9 tissue that can be used to create the vaginal
10 canal?

11 A. In some cases it can be the genital skin.
12 And some surgeons I believe have used colon tissue
13 and some surgeons have used something called the
14 peritoneum.

15 Q. What is that?

16 A. And some surgeons have used skin grafts.

17 Q. What was the -- peritoneum?

18 A. Yeah. It's -- again, not being the
19 surgeon and the expert in the -- in that anatomy,
20 it's difficult for me to explain how that's used.
21 It's intraabdominal, in the abdomen.

22 Q. And you said, I believe, you're aware of
23 one vaginoplasty; is that right?

24 A. One patient who had vaginoplasty under
25 the age of 18.

1 Q. And for the other examples of surgery in
2 that category, you said almost all were
3 gender-affirming chest surgery; is that right?

4 A. Correct. Yeah.

5 Q. And is there -- are there any other forms
6 of surgery other than those two types that you're
7 aware of?

8 A. That our patients have accessed under age
9 18?

10 Q. Correct.

11 A. No.

12 Q. At your clinic, of the natal females who
13 are diagnosed with gender dysphoria, what
14 percentage would you estimate receive a
15 mastectomy?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: Are you still referring to
18 under age 18?

19 Q. (BY MR. RAMER) Yes.

20 A. So I'm just going to make sure that I
21 understand your question.

22 For patients who were assigned female at
23 birth that are under age 18, what percentage
24 pursue or complete mastectomy?

25 Q. Sure.

1 A. Under the age of 18?

2 Q. Yes.

3 A. Because we have some patients who attempt
4 to pursue surgery under the age of 18 but don't
5 actually have surgery until they're 18 or older.
6 That's the majority.

7 Q. And what do you mean by they "attempt to
8 pursue" it?

9 A. They start seeking visits or consultation
10 with a surgeon, but by the time they actually
11 complete the surgery, they're over 18.

12 Q. Okay. I see. And so of patients at your
13 clinic who are natal females which you describe as
14 female assigned at birth, are under age 18, and
15 have been diagnosed with gender dysphoria, what
16 would you estimate is the percentage of those
17 patients for whom gender-affirming top surgery is
18 clinically indicated?

19 A. Can you clarify what you mean by
20 "clinically indicated"?

21 Q. What do you understand that phrase to
22 mean?

23 A. Well, I would say -- I would probably
24 interpret that phrase as meeting criteria for
25 surgery, but I'm not the one that's usually making

1 that assessment.

2 Q. Okay. Maybe I -- all I'm trying to
3 understand is your patients who are under 18 and
4 were assigned female at birth, how many of them
5 receive gender-affirming chest surgery while under
6 18?

7 A. It's a very small number.

8 Q. Can you give me an estimate?

9 A. I would say probably less than 5 percent
10 in that population.

11 Q. All right. I want to just look at your
12 declaration again, and page 8 and paragraph 26.
13 And second sentence kind of covers some of what
14 we've been talking about, but I'll just read it
15 and ask if I read it correctly.

16 It says "If surgical services are
17 offered, they are almost always gender-affirming
18 chest surgeries for youth assigned female at
19 birth, also known as gender-affirming mastectomy."

20 Did I read that correctly?

21 A. Yes.

22 Q. And you say "almost always."

23 And my question is are there surgical
24 services offered to youth under 18 that are not
25 gender-affirming mastectomies?

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: I'm sorry. Can you repeat
3 the question?

4 Q. (BY MR. RAMER) Yes, sorry. In this
5 sentence, you say, "If surgical services are
6 offered, they are almost always gender-affirming
7 chest surgeries for youth assigned female at
8 birth."

9 And in that sentence, you say "almost
10 always." And you've mentioned vaginoplasty.

11 And my question is, are there other
12 surgical services offered to youth under 18 that
13 are not gender-affirming mastectomies or
14 vaginoplasties?

15 MS. NOWLIN-SOHL: Same objection.

16 THE WITNESS: Not that I'm aware of.

17 Q. (BY MR. RAMER) Is a mastectomy
18 reversible?

19 MS. NOWLIN-SOHL: Object to the form.

20 THE WITNESS: I don't know if I can
21 accurately answer that question since I'm not the
22 surgeon.

23 Q. (BY MR. RAMER) Do you talk to your
24 patients about gender-affirming mastectomies?

25 A. I do in basic terms, but acknowledging

1 that I'm not a surgeon and that the surgeon will
2 be the one to counsel them on potential benefits
3 and risks.

4 Q. Okay. So you are unable to answer the
5 question of whether a mastectomy is reversible; is
6 that right?

7 MS. NOWLIN-SOHL: Objection;
8 mischaracterizes testimony.

9 THE WITNESS: Can you specify what you
10 mean by "reversible"?

11 Q. (BY MR. RAMER) What do you understand
12 "reversible" to mean in this context?

13 A. To return to the original state.

14 Q. Okay. Taking that definition, is a
15 mastectomy reversible?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: A mastectomy cannot replace
18 the chest tissue that's been removed.

19 Q. (BY MR. RAMER) Sorry. Could you say
20 that again?

21 A. A mastectomy cannot replace the chest
22 tissue that has already been removed.

23 Q. Isn't the mastectomy the removal of the
24 tissue?

25 A. Yes. Yes. So the mastectomy -- with

1 mastectomy, after it has occurred, the chest
2 tissue that's been removed cannot be replaced,
3 cannot be reintroduced onto the body.

4 Q. And sorry, this is for my own -- is the
5 first T in that word pronounced, so it's
6 "mastectomy"?

7 A. Yes.

8 Q. Okay. After a natal female, which you
9 described as assigned female at birth, receives a
10 gender-affirming mastectomy, will she
11 ever -- sorry. Let me rephrase.

12 After a natal female, also described as
13 assigned female at birth, receives a
14 gender-affirming mastectomy, will that individual
15 ever be able to breastfeed a child?

16 A. That depends on the type of surgery
17 that's performed.

18 Q. Can you say more about that?

19 A. Well, again, I'm not a surgeon, but my
20 understanding is there are some surgeries that are
21 characterized as top surgeries where not all of
22 the chest tissue is removed. And it depends on
23 the patient.

24 Q. Why would not all of the chest tissue be
25 removed?

1 A. Again --

2 MS. NOWLIN-SOHL: Objection; foundation.

3 THE WITNESS: I can't say for certain
4 because I'm not the surgeon having these
5 conversations with patients.

6 Q. (BY MR. RAMER) So I guess if the
7 question is after a natal female receives a
8 gender-affirming mastectomy, will that individual
9 ever be able to breastfeed a child, if that is the
10 question, is the answer to that question beyond
11 the scope of your expertise?

12 A. I would not consider it within my scope
13 of expertise to be able to determine if someone is
14 able to breastfeed after they've had
15 gender-affirming top surgery.

16 Q. Okay. So same -- back in your
17 declaration, same paragraph which is on -- we're
18 on page 8, paragraph 26, and it is the sentence
19 after the one we were just discussing. And I'll
20 just read it and ask if I read it correctly.

21 It says "Under the Endocrine Society
22 guideline, genital surgery is not recommended to
23 patients under age 18."

24 Did I read that correctly?

25 A. Yes.

1 Q. And does the category of genital surgery
2 include more than just a vaginoplasty?

3 A. Meaning other genital surgeries other
4 than vaginoplasty options?

5 Q. I guess are there other genital surgeries
6 other than vaginoplasty?

7 A. There are, yes.

8 Q. Okay. What are those?

9 A. There are -- there's something called a
10 vulvoplasty.

11 Q. And what is that?

12 A. That is the creation of the external
13 vulva without the creation of a vaginal canal.

14 Q. And like our discussion of the
15 vaginoplasty, does the tissue used for that
16 procedure vary based on the technique the surgeon
17 uses?

18 A. I believe so.

19 Q. In the next sentence in this paragraph,
20 I'll read it and ask if I read it correctly.

21 It says "The WPATH standards of care do
22 not provide an age delineation for vaginoplasty,
23 but strongly caution about the need to ensure that
24 the patient has the maturity to make this
25 decision."

Dr. Kara Connelly August 28, 2023

1 Did I read that correctly?

2 A. Yes.

3 Q. And do the WPATH standards caution
4 against any genital surgery for a patient under 18
5 other than a vaginoplasty?

6 MS. NOWLIN-SOHL: Objection to form.

7 THE WITNESS: I would need to read that
8 section, but I don't believe that it is specific
9 to only vaginoplasty.

10 Q. (BY MR. RAMER) And a surgeon could
11 perform a vaginoplasty on a patient under 18 and
12 still be in compliance with the WPATH guidelines,
13 correct?

14 A. If all of the other criteria are met,
15 including that -- ensuring that the patient has
16 the maturity to make the decision.

17 Q. And would that surgeon be in compliance
18 with the Endocrine Society guideline?

19 MS. NOWLIN-SOHL: Objection to form.

20 THE WITNESS: The Endocrine Society
21 guideline -- in the Endocrine Society guideline,
22 it states that general surgery is not recommended
23 to patients under 18 but doesn't specify that it
24 cannot be performed.

25 Q. (BY MR. RAMER) So when the Endocrine

1 Society's guidelines do not recommend something,
2 is it your testimony that you could still perform
3 that procedure and be in compliance with the
4 Endocrine Society guideline?

5 MS. NOWLIN-SOHL: Objection to form.
6 Objection; mischaracterizes testimony.

7 THE WITNESS: The guidelines are,
8 create -- the guidelines are a set of
9 recommendations and that -- for clinicians and
10 practitioners to follow.

11 And there may be extenuating
12 circumstances when something may -- or different
13 care may be provided that may not be included in
14 the guidelines.

15 Q. (BY MR. RAMER) In your professional
16 opinion, should there be age limits on
17 gender-affirming surgeries?

18 MS. NOWLIN-SOHL: Objection to form.

19 THE WITNESS: Can you be more specific
20 about types of surgeries?

21 Q. (BY MR. RAMER) I guess does your answer
22 vary based on the type of surgery at issue?

23 A. Generally, yes, but I also think that
24 it's more than just chronologic age.

25 Q. The "generally, yes," can you clarify

1 what you were saying yes to?

2 A. I follow the Endocrine Society guidelines
3 in that general surgery is not recommended under
4 the age of 18, whereas there may be situations
5 where patients can benefit from gender-affirming
6 top surgery under the age of 18.

7 Q. So do you think there should be maturity
8 limits on the availability for gender-affirming
9 surgeries?

10 MS. NOWLIN-SOHL: Objection to form.

11 THE WITNESS: Can you explain what you
12 mean by "maturity limits"?

13 Q. (BY MR. RAMER) Well, I guess what do you
14 mean is distinct from chronological age when you
15 answered the prior question?

16 A. Well, I think that maturity is definitely
17 a factor that needs to be taken into account as
18 one of the factors.

19 Q. And why is that?

20 A. Well, again, going back to criteria for
21 accessing different aspects of gender-affirming
22 medical care, one of the criteria is that the
23 individual has reached a level of maturity where
24 they're able to make complex, cognitive decisions
25 about the different treatment options.

Dr. Kara Connelly August 28, 2023

1 Q. And do you agree with that limitation?

2 MS. NOWLIN-SOHL: Object to the form.

3 THE WITNESS: What do you mean by
4 "limitation"?

5 Q. (BY MR. RAMER) That to receive a
6 gender-affirming surgery, a patient should
7 demonstrate an appropriate level of maturity.

8 A. I'm in agreement with the statement
9 that's in the Endocrine Society guidelines about
10 having a level of maturity where they are able to
11 make complex cognitive decisions.

12 Q. And should the maturity -- I'll call it a
13 limit. Let's just say -- let me rephrase it.

14 Do you think a patient should need to
15 demonstrate a different level of maturity to
16 access cross-sex hormones, for example?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I don't know that I'm able
19 to answer what specific level of maturity and how
20 that -- and again, it's an assessment that's
21 performed by the behavioral health expert to
22 determine if the patient is of the maturation
23 where they can make a complex cognitive decision
24 specific to that intervention. So I think it
25 depends on the person.

Dr. Kara Connelly August 28, 2023

1 Q. (BY MR. RAMER) If a patient is mature
2 enough to proceed with cross-sex hormones, is the
3 patient mature enough to decide to proceed with
4 the gender-affirming surgery?

5 MS. NOWLIN-SOHL: Object to the form.

6 THE WITNESS: I don't think that I can
7 agree with that statement.

8 Q. (BY MR. RAMER) Why not?

9 A. Because again, every patient is
10 approached as an individual. And their maturity
11 may be -- their reaching different levels of
12 maturity may occur at different time points.

13 Q. Well, can you think of a situation where
14 an individual would be mature enough to decide to
15 take cross-sex hormones but not be mature enough
16 to decide to undergo a gender-affirming surgery?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: Well, again, I think it
19 goes back to the gender-affirming surgery -- the
20 psychological evaluation and determining the
21 patient's ability to understand -- not only the
22 ability to understand the different interventions
23 and their level of maturity to make complex
24 cognitive decisions, but also taking into whether
25 the assessment is that the different interventions

1 will result in -- will benefit them, will result
2 in a benefit to them, and whether they fully
3 understand the potential benefits and potential
4 risks.

5 And with the potential benefits and
6 potential risks being different for hormones
7 versus surgeries, then I think it -- they have to
8 be assessed separately.

9 Q. (BY MR. RAMER) So in theory, a patient
10 could be mature enough to decide to use cross-sex
11 hormones, but not mature enough to decide to
12 undergo a gender-affirming surgery; is that right?

13 MS. NOWLIN-SOHL: Object to form.

14 THE WITNESS: I don't know if I can say
15 it's all just their level of maturation because,
16 again, it's all of the other components that go
17 into the psychological evaluation that are taken
18 into account when determining if a patient would
19 benefit from a specific intervention.

20 Q. (BY MR. RAMER) So I understand that
21 point that just because a patient is mature enough
22 does not mean that they're automatically going to
23 receive the intervention.

24 But my question is specifically about the
25 maturity component of that assessment.

1 And what I'm trying to understand is in
2 theory, can a patient actually be mature enough to
3 decide to undergo cross-sex hormones but not
4 mature enough to decide to undergo a
5 gender-affirming surgery?

6 MS. NOWLIN-SOHL: Same objection.

7 THE WITNESS: I think it depends on how
8 maturity is defined and assessed.

9 Q. (BY MR. RAMER) And how do you define and
10 assess maturity?

11 A. Well, again it's primarily done by the
12 behavioral health expert when they're doing their
13 evaluation and working with the patient to
14 determine their level of maturity to be able to
15 make different decisions.

16 Q. Okay. So is it fair to say this
17 assessment of the level of maturity to decide to
18 pursue a particular treatment is beyond your level
19 of expertise?

20 MS. NOWLIN-SOHL: Objection.

21 THE WITNESS: Can you repeat the
22 question?

23 Q. (BY MR. RAMER) Is it fair to say that
24 the determination of a patient's maturity with
25 respect to deciding whether to undergo an

1 intervention is beyond the scope of your
2 expertise?

3 MS. NOWLIN-SOHL: Same objection.

4 THE WITNESS: I would not be making that
5 determination without the assessment of the
6 behavioral health provider.

7 Q. (BY MR. RAMER) And so is the answer,
8 then, that yes, it is beyond your individual
9 expertise?

10 MS. NOWLIN-SOHL: Objection.

11 THE WITNESS: Well, I would say that it's
12 a shared -- a shared -- it's shared between the
13 medical provider and myself and the behavioral
14 health provider.

15 Q. (BY MR. RAMER) Right. I guess what I'm
16 getting at is I was asking you these questions
17 about maturity, and I think the response is you
18 are not the one who is assessing the maturity and
19 determining the maturity level, and so that
20 suggested that it was potentially beyond the scope
21 of your expertise. And that was why I asked the
22 question.

23 And am I right in thinking that your last
24 answer was that it's joint expertise with you and
25 the others on the team? Is that right?

1 A. I would say that I'm not the only one
2 that's assessing someone's level of maturity and
3 making decisions about these different treatments
4 and that it is shared expertise.

5 Q. And so then is it fair to say that you
6 individually could not determine the maturity
7 level of the patient with respect to pursuing a
8 particular treatment?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: I would not make a
11 determination that a patient was developmentally
12 or -- and the level of maturity without the
13 expertise of a behavioral health provider to say
14 that someone should pursue a certain intervention.

15 Q. (BY MR. RAMER) Okay. So changing gears
16 a bit here, stick with your declaration. And I'd
17 like to go to page 2, and specifically
18 paragraph 9. And my question relates to the
19 second sentence. And I'll read it and ask if I
20 read it correctly.

21 You state, "I have attended specialized
22 training sessions on these topics and routinely
23 review the literature to remain knowledgeable of
24 and familiar with all emerging research."

25 Did I read that correctly?

Dr. Kara Connelly August 28, 2023

1 A. Yes.

2 Q. And could you describe the process you
3 use to routinely review the literature?

4 A. Well, I have a system in place with
5 our -- kind of the national literature library, or
6 libraries, to alert me when new literature is
7 released or published within these different
8 topics or fields.

9 Q. And so is that how you determine which
10 papers to read is that alert?

11 A. That's one of them. I also might learn
12 of new publications or research from other
13 professional organizations or other professional
14 colleagues.

15 Q. Any other ways that you determine what
16 papers to read?

17 A. Anytime a patient or family has a
18 question about any particular topic, then I will
19 usually go and review the literature to make sure
20 that my guidance is up-to-date.

21 Q. Are there particular authors you trust in
22 this field?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: Can you be more specific?

25 Q. (BY MR. RAMER) Are there particular

1 researchers that you deem experts in the field?

2 MS. NOWLIN-SOHL: Same objection.

3 THE WITNESS: I think there are many, but
4 it depends on what specific area of the field
5 you're referring to.

6 Q. (BY MR. RAMER) Well, I guess -- just to
7 simplify, are you familiar with the name Annelou
8 de Vries?

9 A. Yes.

10 Q. Do you consider Annelou de Vries an
11 expert in the field?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Again, can you specify to
14 what aspect of the field?

15 Q. (BY MR. RAMER) I mean, I guess what
16 literature are you routinely reviewing?

17 A. Well, I review literature pertaining to
18 outcomes related to different medical and
19 nonmedical interventions, but also literature that
20 may be pertaining to mental health outcomes or
21 psychological outcomes. So it really depends.

22 And that particular researcher I know has
23 many publications of her work that I have read.

24 Q. And do you have any reason to think
25 Annelou de Vries is not an expert on topics on

Dr. Kara Connelly August 28, 2023

1 which de Vries publishes?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: I can't say. I don't have
4 any reason to believe that.

5 Q. (BY MR. RAMER) To believe that de Vries
6 is not an expert? Is that right?

7 A. I would say that I believe that de Vries
8 has a lot of expertise.

9 Q. Are you familiar with the name Diane
10 Chen?

11 A. Yes.

12 Q. And does Diane Chen have a lot of
13 expertise?

14 A. I would say so, yes.

15 Q. How do you determine what papers or
16 articles are reliable?

17 A. Well, there are a lot of factors that I
18 look at when I'm making that determination.

19 Q. Can we run through them? Like what
20 factors?

21 A. Yeah. So a lot of it can be reliance
22 upon the methodology, the sample sizes, the type
23 of study, what the outcomes are, other variables
24 that may be impacting or playing a role in the
25 outcome, any potential bias. And that's just --

Page 114

Dr. Kara Connelly August 28, 2023

1 Q. What do you mean by "bias"?

2 A. There are some -- bias is generally
3 something that can impact the way that results are
4 interpreted.

5 Q. Can you be a little more specific? What
6 do you mean by that?

7 A. Yeah, like scientific study design,
8 generally researchers will do their best to reduce
9 elements of bias that may influence their results.

10 Q. Do you think the existing literature
11 lacks granularity around the cause of gender
12 dysphoria?

13 MS. NOWLIN-SOHL: Object to form.

14 THE WITNESS: I'm sorry. I don't
15 understand the question.

16 Q. (BY MR. RAMER) Is there something in
17 particular you don't understand it or just the --

18 A. Granularity.

19 Q. Are you familiar with the term
20 "confounding variable"?

21 A. Yes.

22 Q. And can you explain your understanding of
23 that term?

24 A. Yeah. The way that I explain everything,
25 think of it as something, again, that is -- it's a

1 variable that can have an influence on an outcome.

2 Q. What do you mean by "influence"?

3 A. It can have -- it can have an influence
4 separate from a variable that is being studied as
5 producing outcome.

6 Q. And are you familiar with the term
7 "selection bias"?

8 A. Yes.

9 Q. And can you explain your understanding of
10 that term?

11 A. My understanding of that term is bias
12 that's introduced in a research study related to
13 the population that's being studied not being
14 representative of the larger population and the
15 way that the participants are included.

16 Q. Are you familiar with the term
17 "systematic review"?

18 A. Yes.

19 Q. Could you explain your understanding of
20 that term?

21 A. Yes. Systematic review and the way that
22 I explain it is when a team of researchers review
23 and obtain all -- or establish a question that
24 they want answered through the systematic review
25 and then have a series of techniques for

1 identifying existing literature and determining
2 which of those articles meet their specific
3 inclusion criteria, and then coming together again
4 using their process to summarize and in some cases
5 draw conclusions based on the literature that
6 exists.

7 Q. What is the value of a systematic review
8 of literature as compared to some other form of
9 review of literature?

10 MS. NOWLIN-SOHL: Object to form and
11 foundation.

12 THE WITNESS: Can you specify what you
13 mean by "other form"?

14 Q. (BY MR. RAMER) I guess have you ever
15 heard of a narrative review of literature?

16 A. That's not a term that I'm very familiar
17 with.

18 Q. Let me try a different way of just --
19 what is the point of the systematic review -- let
20 me rephrase.

21 Why do researchers conduct systematic
22 reviews?

23 A. Well, I think it can depend on what the
24 researcher's identified purpose is. But generally
25 it can serve as bringing together existing

1 literature and comparing findings or
2 summarizing -- attempting to summarize findings.

3 Q. And have you ever conducted a systematic
4 review?

5 A. No.

6 Q. Have you ever studied a systematic review
7 carefully?

8 A. Can you specify "studied carefully"?

9 Q. Have you ever read a systematic review?

10 A. Yes.

11 Q. As you sit here today, are you able to
12 name any specific systematic reviews relating to
13 literature in your field that you have read?

14 A. I have read a systematic review. I
15 cannot remember the title of it, that is -- that
16 pertains to existing literature about
17 gender-affirming care for youth.

18 Q. Any others other than that one?

19 A. Not that I can think of at the moment.

20 Q. Are you familiar with the term
21 "evidence-based medicine"?

22 A. Yes.

23 Q. And can you explain your understanding of
24 that term?

25 A. Yes. The way that I explained that is

Dr. Kara Connelly August 28, 2023

1 medicine that is guided by published evidence.

2 Q. And have you taken any particular courses
3 on evidence-based medicine?

4 A. I may have had a course as part of the
5 curriculum for my master's in clinical research,
6 but I can't recall if they were titled that.

7 MR. RAMER: I'm going to try and send
8 another exhibit. Let's see here. I think this is
9 the Wi-Fi on my end. It's hung up in my outbox.
10 There we go.

11 MS. NOWLIN-SOHL: We're waiting on it.

12 MR. RAMER: Okay. It's a little bit
13 larger of a file, so it may take a second.

14 MS. NOWLIN-SOHL: Have others received it
15 yet?

16 THE REPORTER: I did receive it.

17 MR. RAMER: Still waiting?

18 MS. NOWLIN-SOHL: Yeah. I'm hitting the
19 refresh button, but still nothing.

20 MR. RAMER: All right. I wonder if we
21 still haven't received it, if we should just break
22 for a minute.

23 MS. NOWLIN-SOHL: I mean, are you at a
24 good spot? Does it make sense to stop for lunch
25 now?

Page 119

Dr. Kara Connelly August 28, 2023

1 MR. RAMER: Sure. We can do that.

2 MS. NOWLIN-SOHL: Sorry.

3 MR. RAMER: No. No problem. And maybe
4 I'll just send a couple in advance for the next.
5 I assume you still haven't got --

6 MS. NOWLIN-SOHL: I have not. It's not
7 on my phone either.

8 MR. RAMER: Okay. So showing 3:12, how
9 long would you like for lunch?

10 MS. NOWLIN-SOHL: Should we go to 4:00
11 Eastern?

12 MR. RAMER: Sure. That works for me.
13 Does that work for -- yeah, okay. All right.
14 Let's do that.

15 MS. NOWLIN-SOHL: All right. Sounds
16 good. We'll see you then.

17 THE VIDEOGRAPHER: So the time is
18 1:12 p.m. Mountain time, and we are off the
19 record.

20 (Lunch break taken from 1:12 p.m. to 2:03 p.m.)

21 THE VIDEOGRAPHER: Okay. So we are
22 recording. The time is 2:03 Mountain time, and we
23 are back on the record.

24 (Deposition Exhibit No. 4 was marked.)

25 Q. (BY MR. RAMER) Hello, Dr. Connelly.

1 A. Hello.

2 Q. Do you have what I've described as
3 Connelly Exhibit 4 in front of you?

4 A. Yes.

5 Q. And I assume you're able to read through
6 this whole document at lunch? That's a joke.
7 It's a joke.

8 A. Oh.

9 Q. But do you recognize this document?

10 A. I do not.

11 Q. Do you recognize the lead author's name,
12 Gordon Guyatt?

13 A. I may have seen it before, but I can't
14 remember where.

15 Q. Okay. I'm just going to ask a couple of
16 questions about just the discussion of concepts in
17 this. And I'll direct you there. I'm not going
18 to ask you about the contents of the entire
19 document.

20 A. Okay.

21 Q. And the first point I want to discuss is
22 actually in the preface of this, so it's Roman
23 Numeral 26, XXVI.

24 MS. NOWLIN-SOHL: Do you know what page
25 of the PDF that's on?

Dr. Kara Connelly August 28, 2023

1 MR. RAMER: I can try to find that. So
2 27 of the PDF.

3 MS. NOWLIN-SOHL: Okay. We are on
4 page 27.

5 Q. (BY MR. RAMER) Okay. And the first full
6 paragraph, second sentence, I'm just going to read
7 it and ask if I read it correctly.

8 It says "We have added a fundamental
9 principle to the hierarchy of evidence and the
10 necessity for value and preference judgments:
11 that optimal clinical decision-making requires
12 systematic summaries of the best available
13 evidence."

14 Did I read that correctly?

15 A. Yes.

16 Q. And do you agree that optimal
17 decision-making requires systematic summaries of
18 the best available evidence?

19 MS. NOWLIN-SOHL: Objection; foundation.

20 THE WITNESS: I would say that systematic
21 summaries of the best available evidence are
22 definitely important contributions to clinical
23 decision-making.

24 Q. (BY MR. RAMER) When you say "important
25 contributions," I take it to mean that you do not

Dr. Kara Connelly August 28, 2023

1 think that optimal clinical decision-making
2 requires systematic summaries of the best
3 available evidence; is that fair?

4 A. I think --

5 MS. NOWLIN-SOHL: Objection;
6 mischaracterizes the testimony.

7 THE WITNESS: The optimal clinical
8 decision-making can include systematic summaries.

9 Q. (BY MR. RAMER) But does not require it?
10 Is that your testimony?

11 A. I don't know if I would say that it
12 requires systematic summaries.

13 Q. Okay. So you disagree with this
14 statement; is that right?

15 MS. NOWLIN-SOHL: Objection; form.

16 THE WITNESS: In some cases -- systematic
17 summaries are not always available. So with that
18 in mind -- and I believe that clinical -- optimal
19 clinical decision-making can be performed if
20 systematic summaries are not available.

21 Q. (BY MR. RAMER) What about if systematic
22 summaries are available?

23 A. Then I would say that the systematic
24 summaries should be included in all of the
25 evidence that's used in clinical decision-making.

1 Q. What do you understand the phrase
2 "hierarchy of evidence" to mean?

3 A. Is that in this sentence? Or in this
4 paragraph?

5 Q. Sorry, yeah. It's in the -- it is in the
6 sentence before the colon. It says "We have added
7 a fundamental principle to the hierarchy of
8 evidence."

9 Are you familiar with that term, the
10 "hierarchy of evidence"?

11 A. It can mean -- it could mean different
12 things.

13 Q. Like what?

14 A. I can explain what my understanding of
15 hierarchy of evidence is.

16 Q. Please.

17 A. It is categorization of different types
18 of evidence as -- in terms of validity and
19 reliability.

20 Q. And I think next in this, I'd like to go
21 to -- and this is the only other page we'll go to
22 in this. It's page 15. And I'll see if I can
23 find what that is in the PDF. Looks like it is 44
24 of the PDF.

25 MS. NOWLIN-SOHL: Okay.

Dr. Kara Connelly August 28, 2023

1 Q. (BY MR. RAMER) Are you there?

2 A. Yes.

3 Q. And I'm just going to read the first
4 sentence of the first full paragraph and ask if I
5 read it correctly.

6 It says "Returning to the hierarchy of
7 therapy, noting the limitations of human
8 intuition, EBM places the" --

9 MS. NOWLIN-SOHL: Hold on. Do you see
10 that?

11 THE WITNESS: No. Am I in the wrong
12 paragraph?

13 MR. RAMER: Are you on page -- what page
14 are you on?

15 MS. NOWLIN-SOHL: Okay. We just hadn't
16 scrolled far enough down. We're there.

17 MR. RAMER: Gotcha. I'll start that
18 again.

19 Q. (BY MR. RAMER) "Return to the hierarchy
20 of therapy, noting the limitations of human
21 intuition, EBM places the unsystematic
22 observations of individual clinicians lowest on
23 the hierarchy."

24 Did I read that correctly?

25 A. Yes.

Page 125

1 Q. What is your understanding of what "the
2 unsystematic observations of individual
3 clinicians" means?

4 MS. NOWLIN-SOHL: Objection; foundation.

5 You can also look at this document if you
6 need to.

7 THE WITNESS: Yeah, I think it's hard for
8 me to understand. I'm not familiar with the term
9 "unsystematic observations of individual
10 clinicians," and I can't comment without reading
11 more of the context.

12 Q. (BY MR. RAMER) Okay. Do you see the
13 figure on the same page, Figure 2-3?

14 A. Yes.

15 Q. Were these the categories you were
16 describing when you were discussing the hierarchy
17 of evidence earlier?

18 A. No.

19 Q. Are you familiar with the term
20 "observational study"?

21 A. Yes.

22 Q. And what do you understand an
23 observational study to be?

24 A. An observational study is looking at a
25 treatment and its outcome without the researcher

1 entering any influence or variable. So it's
2 simply observing the outcome of a particular
3 treatment that's been -- the patient has received.

4 Q. And are you familiar with the "Multiple
5 patient randomized trial"?

6 A. I can only assume what that is referring
7 to. I generally don't see that term that's
8 just -- in the way that it's listed.

9 Q. What would you assume it's referring to?

10 A. A randomized trial.

11 Q. And can you describe what a randomized
12 trial is?

13 A. Randomized trial is when there are two --
14 or at least more than one treatment that's being
15 investigated, and patients are randomly assigned
16 to one or more of the treatment groups without
17 them knowing or choosing what group they're
18 assigned to.

19 Q. And can you explain why a randomized
20 trial would rank higher in the hierarchy of
21 evidence than an observational study?

22 MS. NOWLIN-SOHL: Objection; foundation.

23 THE WITNESS: The main difference between
24 the two is that patients are randomly assigned to
25 treatment groups rather than other ways that they

Dr. Kara Connelly August 28, 2023

1 are given treatment. And so the way that the
2 studies are interpreted can be different in terms
3 of the validity and reliability.

4 Q. (BY MR. RAMER) How can they be different
5 in terms of validity and reliability?

6 A. It depends on the -- it depends on the
7 patient population, the treatments being studied,
8 and the size of the -- the sample sizes of the
9 studies that may play a role in the way that they
10 are viewed in terms of validity and reliability.

11 Q. Sorry. I just want to clarify that.

12 So the reason that randomized trials
13 would potentially be deemed more reliable has to
14 do with the patient population and the sample
15 size? Is that what you said?

16 A. No. That's not what I said. The
17 randomized trials, the factor that may influence
18 the way that it's interpreted in terms of validity
19 and reliability is the fact that the samples
20 are -- the patients are randomized to the
21 different treatment groups rather than having
22 a -- rather than -- yeah, rather than not being
23 randomly assigned to different treatment groups.

24 But if there's a large observational
25 study, it's difficult -- you can't always compare

1 and say that every single randomized trial is
2 stronger evidence than an observational study.
3 There's a lot of factors that play into that
4 determination.

5 Q. And still looking at this figure at the
6 bottom, are you familiar with the term "clinical
7 experience"?

8 A. Yes.

9 Q. And are you able to explain why clinical
10 experience is at the bottom of the hierarchy of
11 evidence?

12 A. At the bottom of this figure, hierarchy
13 of evidence?

14 Q. Correct.

15 A. I can only assume what that is meaning to
16 say is that it can be more difficult to make -- to
17 draw conclusions about populations based on one
18 person's clinical experience.

19 Q. Do you agree with that principle?

20 A. I think in a lot of cases, that can be
21 accurate.

22 Q. Are you familiar with the term "GRADE
23 methodology"?

24 A. Yes.

25 Q. And could you explain your understanding

1 of that term?

2 A. My understanding of the term is a system
3 that is used to classify different types of
4 evidence.

5 Q. Have you ever attempted to apply the
6 criteria specified by the GRADE methodology?

7 MS. NOWLIN-SOHL: Object to the form.

8 THE WITNESS: In my own practice? Or
9 in --

10 Q. (BY MR. RAMER) Ever.

11 MS. NOWLIN-SOHL: Same objection.

12 THE WITNESS: I have not ever used the
13 GRADE methodology in -- while writing a paper.

14 Q. (BY MR. RAMER) I guess why did you use
15 the qualifier "while writing a paper" at the end
16 there?

17 A. I wasn't sure what you mean by using. I
18 think generally the GRADE methodology is used
19 when -- for example, writing clinical methods
20 guidelines. I have not done that.

21 MR. RAMER: Okay. And then I think
22 we'll -- we should have Connelly Exhibit 5. Let
23 me know if that's not the case.

24 MS. NOWLIN-SOHL: Yes, we do.

25 (Deposition Exhibit No. 5 was marked.)

Dr. Kara Connelly August 28, 2023

1 Q. (BY MR. RAMER) Okay. And, Doctor, have
2 you seen this article before?

3 A. I have not.

4 Q. Okay. I am just going to ask you about
5 some concepts in it, specifically page 402. It's
6 the second page of the document, and in the upper
7 left of that page, there's a box labeled "Key
8 Points."

9 And the third bullet down, I'd just like
10 to read and ask if I read it correctly.

11 It says "The optimal application of GRADE
12 requires systematic review of the impact of
13 alternative management strategies on all
14 patient-important outcomes."

15 Did I read that correctly?

16 A. Yes.

17 Q. Are you familiar with the term
18 "patient-important outcome"?

19 A. That's not a term that I am all that
20 familiar with. I'm not sure what refers to in
21 this -- or what this paper is referring to with
22 those -- with that statement.

23 Q. Okay. As a general matter, based on your
24 understanding of GRADE, GRADE is a method for
25 rating the strength of evidence to predict the

Page 131

1 outcome of a particular intervention, correct?

2 A. Yes.

3 Q. And I'd like to go, same document,
4 page 404, so two pages later. And at the top,
5 there's Table 2, and it's entitled "Significance
6 of the four levels of evidence."

7 Do you see that?

8 A. Yes.

9 Q. Are you familiar with this concept of the
10 GRADE quality levels that's represented in the
11 table, just as a general matter?

12 A. Yes.

13 Q. And basically the GRADE methodology calls
14 for the assignment of one of those quality levels
15 to the body of evidence that's being assessed,
16 correct?

17 A. I think that's generally how it's applied
18 or used.

19 Q. And I just want to -- looking in that
20 table at the "Quality level low," I just want to
21 read the current definition, which is in the
22 second column and ask if I read it correctly.

23 It says "Our confidence in the effect
24 estimate is limited. The true effect may be
25 substantially different from the estimate of that

1 effect."

2 Sorry, I read it wrong. Let me try
3 again.

4 "Our confidence in the effect estimate is
5 limited. The true effect may be substantially
6 different from the estimate of the effect."

7 Did I read that correctly?

8 A. Yes.

9 Q. And below that is "Very low," and I'll
10 read the definition for that, which says "We have
11 very little confidence in the effect estimate.
12 The true effect is likely to be substantially
13 different from the estimate of effect."

14 Did I read that correctly?

15 A. Yes.

16 Q. Okay. On this same page at the bottom,
17 there's Table 3. And it's entitled "A summary of
18 GRADE's approach to rating quality of evidence."

19 Do you see that?

20 A. Yes.

21 Q. And in the first column, it talks -- you
22 see it's labeled "Study design"?

23 A. Yes.

24 Q. And then the second column over you have
25 "Initial quality of a body of evidence"; is that

1 right?

2 A. Yes.

3 Q. And then the next two columns, the first
4 one is entitled "Lower if," correct?

5 A. Yes.

6 Q. And the second one is entitled "Higher
7 if," correct?

8 A. Yes.

9 Q. Do you know what those two columns are
10 saying?

11 A. I can't say for certain. I'm not
12 familiar -- I haven't seen those two columns
13 before.

14 MR. RAMER: Okay. We'll move on to
15 Connelly Exhibit 6.

16 (Deposition Exhibit No. 6 was marked.)

17 Q. (BY MR. RAMER) And are you familiar with
18 this document?

19 MS. NOWLIN-SOHL: Hang on real quick,
20 sorry. They came in in the wrong order in my
21 email.

22 MR. RAMER: All right.

23 MS. NOWLIN-SOHL: So this is GRADE
24 guidelines 4?

25 MR. RAMER: That's correct.

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Okay.

2 THE WITNESS: I'm sorry. What was the
3 question?

4 Q. (BY MR. RAMER) Are you familiar with
5 this document?

6 A. No.

7 Q. Okay. I'll just ask limited questions on
8 this.

9 On page 409, which I think is the third
10 page of the document, in the right column, there
11 is section 7.1. And I'm just going to read the
12 sentence that starts below that and runs over onto
13 the next page and ask if I read that correctly.

14 It says "Ideally observational studies
15 will choose contemporaneous comparison groups
16 that, as far as possible, differ from intervention
17 groups only in the decision (typically by patient
18 or clinician) not to use the intervention."

19 Did I read that correctly?

20 A. Yes.

21 Q. Why would one ideally include a
22 comparison group?

23 A. The comparison group can reduce the risk
24 of bias like I was talking about earlier.

25 Q. And then on the next page, 410, the first

Page 135

1 full paragraph, I'm going to read the first two
2 sentences this time and ask if I read those
3 correctly.

4 It says "An alternative approach is to
5 study only patients exposed to the intervention, a
6 design we refer to as a case series (others may
7 use 'single group cohort'). To make inferences
8 regarding intervention effect, case series must
9 still refer to results in a comparison group."

10 Did I read that correctly?

11 A. Yes.

12 Q. Do you agree that to make interventions
13 regarding intervention effects, case series must
14 still refer to results in a comparison group?

15 A. I think that referring to results in a
16 comparison group can increase the reliability of
17 the inferences of the intervention effects.

18 Q. So in other words, you do not think a
19 case series must refer to results in a comparison
20 group in order to make inferences; is that
21 correct?

22 A. Having the comparison group improves the
23 ability to make the inferences.

24 Q. Do you think you can make inferences
25 regarding intervention effects from a case series

1 when there is no comparison group?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: I think that it's possible
4 to make inferences about intervention effects, but
5 those inferences are more reliable than the
6 comparison group that's used.

7 Q. (BY MR. RAMER) Are you familiar with the
8 term "lost to follow-up"?

9 A. Yes.

10 Q. Can you explain your understanding of
11 that term?

12 A. Well, do you mean in a research setting
13 or --

14 Q. Yes, in a research setting.

15 A. I think different research groups or
16 different research studies may refer to it
17 differently, but I generally think of it as
18 participants in a research study that did not
19 complete the study or did not complete the --
20 yeah, the study measures.

21 Q. And so now I'd like to return to your
22 declaration, and specifically page 3, paragraph
23 15, in the first sentence. And typical drill,
24 I'll read it and ask if I read it correctly.

25 You state, "The Endocrine Society, in

1 partnership with the Pediatric Endocrine Society
2 and WPATH, have published clinical practice
3 guidelines for the treatment of gender dysphoria
4 that are based on systematic reviews of research
5 and the expert opinions of clinicians in the
6 field."

7 Did I read that correctly?

8 A. Yes.

9 Q. I'd just like to talk through the
10 Endocrine Society guidelines and the WPATH
11 guidelines one at a time. And I'll start with the
12 Endocrine Society guidelines.

13 And in this sentence, you say that these
14 guidelines are based on systematic reviews of
15 research; is that right?

16 A. Yes.

17 Q. And what do you mean by that?

18 A. That means that systematic reviews may
19 have been included in addition to research studies
20 that may not fall under the definition of
21 systematic reviews.

22 Q. What do you mean when you say "may have
23 been included"?

24 A. I would have to look back at all of the
25 references of the guidelines, but that systematic

1 reviews may have been a part of how those clinical
2 practice guidelines were established.

3 Q. And specifically with respect to the
4 Endocrine Society guidelines, what systematic
5 reviews are you referring to?

6 A. I can't say without looking -- again,
7 looking at the references.

8 MR. RAMER: Okay. I think you should
9 have, Li, the Connelly Exhibit 7.

10 (Deposition Exhibit No. 7 was marked.)

11 MS. NOWLIN-SOHL: The Endocrine Society
12 guidelines?

13 MR. RAMER: Yes. Well, I'll ask
14 Dr. Connelly.

15 Q. (BY MR. RAMER) Are these the Endocrine
16 Society guidelines?

17 A. Yes.

18 Q. Okay. And these are what you're
19 referring to in your declaration, correct?

20 A. Yes, just making sure this is the -- yes,
21 the version from 2017.

22 Q. Did you help draft these?

23 A. No.

24 Q. And I'd like to go to -- so you likely
25 know the pagination is a little odd on these. I'd

Dr. Kara Connelly August 28, 2023

1 like to go to 3873, and specifically the left
2 column.

3 And there's a bold header that says
4 "Commissioned systematic review."

5 Do you see that?

6 A. Yes.

7 Q. And I'm just going to read the first
8 sentence and ask if I read it correctly.

9 It says "The task force commissioned two
10 systematic reviews to support this guideline."

11 Did I read that correctly?

12 A. Yes.

13 Q. And are these the systematic reviews
14 you're referencing in your declaration?

15 A. Yes.

16 Q. And have you ever read these systematic
17 reviews?

18 A. I cannot say that I -- I cannot recall
19 that I have, but I would need to see what the
20 titles of them are.

21 Q. Well, do you recall what the subject was
22 of the two systematic reviews?

23 A. No.

24 Q. Turning to the sentence after the one I
25 just read, I'll read it and ask if I read it

1 correctly.

2 It says "The first one aims to summarize
3 the available evidence on the effect of sex
4 steroid use in transgender individuals on lipids
5 and cardiovascular outcomes."

6 Did I read that correctly?

7 A. Yes.

8 Q. Do you have an understanding of how
9 lipids and cardiovascular outcomes are potentially
10 relevant to your field?

11 A. Yes.

12 Q. How?

13 A. Some treatments could potentially have an
14 impact on lipids and cardiovascular outcomes.

15 Q. What kind of impact?

16 A. Well, some treatments can change -- can
17 have an impact on the different types of lipids
18 and cholesterol. Some lipids can have an impact
19 on blood pressure. Some treatments may have an
20 impact on -- well, those are the two main ones
21 that I can think of.

22 Q. Is it fair to say when you're saying
23 "impact," you mean harmful impact?

24 A. Not necessarily.

25 Q. Why not necessarily?

1 A. Well, it depends on the -- there are some
2 treatments that may have -- that may raise the
3 risk of some cardiovascular outcomes and some
4 treatments that may lower the risk of some
5 cardiovascular outcomes, depending on the
6 individual, their family history, and the
7 medication that's involved.

8 Q. Returning to 3873 and now the right
9 column, the very top, the first full sentence,
10 I'll read it and ask if I read it correctly.

11 It says "The second review summarized the
12 available evidence regarding the effect of sex
13 steroids on bone health in transgender individuals
14 and identified 13 studies."

15 Did I read that correctly?

16 A. Yes.

17 Q. And do you have an understanding of what
18 relevance bone health has to your field?

19 A. Yes.

20 Q. And what is that?

21 A. Sex steroid hormones have differing
22 impacts on bone development in general.

23 Q. In what sense?

24 A. The different -- well, they both --
25 both -- well, estrogen and testosterone both

1 impact acquisition of bone, but they can have
2 different effects on what part of the bone
3 structure they impact.

4 Q. And what do you mean by that?

5 A. So there's two types of bone, cortical
6 bone and trabecular bone. And there are different
7 hormone receptors on the different parts of the
8 bone.

9 So different hormones can impact one or
10 both parts of the bone depending on which hormone
11 it is.

12 Q. Did either of these two systematic
13 reviews assess the effectiveness of treatment on
14 patients' mental health?

15 A. I don't know.

16 Q. Did either of these two systematic
17 reviews assess the effectiveness of puberty
18 blockers to reduce gender dysphoria?

19 A. I can't answer that. I haven't --
20 without reading them.

21 Q. You don't know that as you sit here
22 today?

23 A. I can't say what the systematic
24 reviews -- what the outcomes were, the specific
25 outcomes of both systematic review studies without

1 reviewing them.

2 Q. Well, I guess I'm not asking for the
3 specific outcome. I'm asking what they actually
4 assessed.

5 And the question is did either of these
6 systematic reviews assess the effectiveness of
7 puberty blockers to reduce gender dysphoria?

8 A. I am not sure.

9 Q. Did either of these systematic reviews
10 assess the effectiveness of cross-sex hormones to
11 reduce gender dysphoria?

12 A. Can you repeat that question?

13 Q. Did either of these systematic reviews
14 assess the effectiveness of cross-sex hormones to
15 reduce gender dysphoria?

16 A. I also -- I'm not sure without looking at
17 the reviews.

18 Q. Did either of these systematic reviews
19 assess the effectiveness of surgeries to reduce
20 gender dysphoria?

21 A. I don't know that either without reading
22 them.

23 Q. If you had been tasked with drafting
24 these guidelines, would you have commissioned
25 systematic reviews to assess those topics?

1 MS. NOWLIN-SOHL: Objection; form,
2 foundation, speculation.

3 THE WITNESS: If I had been commissioned
4 as part of the team that was putting these
5 guidelines together, I would work with the team of
6 experts in determining whether the systematic
7 reviews should be performed. I can't say how that
8 decision was made.

9 Q. (BY MR. RAMER) We'll move on to the
10 WPATH guidelines and specifically -- just going
11 back to your declaration discussion of those,
12 page 3, paragraph 15.

13 I'm just going to read the second
14 sentence of paragraph 15 and ask if I read it
15 correctly.

16 You state "The first version of the WPATH
17 guidelines known as the standards of care was
18 published in 1979, and the most recent version,
19 version 8, was released in 2022."

20 Did I read that correctly?

21 A. Yes.

22 Q. And you called them guidelines and then
23 note that they are known as the standards of care;
24 is that right?

25 A. Yes.

1 Q. Is there a distinction between clinical
2 guidelines and the standard of care?

3 MS. NOWLIN-SOHL: Objection to the extent
4 that that calls for a legal conclusion.

5 THE WITNESS: I think some people use
6 those terms interchangeably when talking about the
7 WPATH standards of care.

8 Q. (BY MR. RAMER) Okay. I understand that.
9 I'm just asking in your field, or as a clinician,
10 is there a distinction between clinical guidelines
11 and a standard of care?

12 MS. NOWLIN-SOHL: Objection to the extent
13 that that calls for a legal conclusion.

14 THE WITNESS: If -- I'm sorry. Can you
15 repeat the question again?

16 Q. (BY MR. RAMER) Is there a distinction
17 between clinical guidelines and a standard of
18 care?

19 MS. NOWLIN-SOHL: Same objection.

20 THE WITNESS: They're -- I think that
21 there's a lot of ways that the word "guidelines"
22 are applied. And in the case of this sentence,
23 it's used interchangeably with "standards of
24 care."

25 Q. (BY MR. RAMER) Okay. So as a clinician,

1 you don't think there's a distinction between, as
2 a general matter, clinical guidelines and standard
3 of care; is that right?

4 MS. NOWLIN-SOHL: Objection;
5 mischaracterizes the testimony and to the extent
6 that it calls for a legal conclusion.

7 THE WITNESS: Can you repeat the question
8 again?

9 Q. (BY MR. RAMER) I guess the question is
10 just this: Is there a distinction as a general
11 matter between clinical guidelines and a standard
12 of care?

13 MS. NOWLIN-SOHL: Same objection.

14 THE WITNESS: I think it just -- I think
15 it depends upon which clinical guideline is being
16 referred to and the way that that clinical
17 guideline was established, if it's a -- there can
18 be different ways that clinical guidelines are
19 established, and so it depends on what -- which --
20 what type of guideline is being referred to.

21 Q. (BY MR. RAMER) Well, then what is a
22 standard of care?

23 MS. NOWLIN-SOHL: Objection to the extent
24 that that calls for a legal conclusion.

25 THE WITNESS: Do you mean what is a

1 standard of care in WPATH's definition? Or --

2 Q. (BY MR. RAMER) No. I just mean as a
3 general matter as a clinician, when somebody is
4 talking about the standard of care, what does that
5 mean?

6 MS. NOWLIN-SOHL: Same objection.

7 THE WITNESS: I think it can be used as
8 what is -- what is considered best practice for a
9 patient population.

10 Q. (BY MR. RAMER) If somebody said that a
11 standard of care was more authoritative than
12 clinical guidelines, would that statement make
13 sense?

14 MS. NOWLIN-SOHL: Object to form.

15 THE WITNESS: Would it -- I don't think
16 that I can make sense of that.

17 Q. (BY MR. RAMER) So same paragraph in your
18 declaration, back to the first sentence. And we
19 already discussed this in the context of the
20 Endocrine Society guidelines, but you state that
21 the WPATH guidelines are based on systematic
22 reviews of research, correct?

23 A. Yes.

24 Q. And with respect to the WPATH guidelines,
25 what systematic reviews are you referring to here?

Dr. Kara Connelly August 28, 2023

1 A. I can't say for certain what systematic
2 reviews.

3 Q. That you're referring to in paragraph 15?

4 A. Yes, without reading the references.

5 Q. And as you sit here today, do you know
6 whether WPATH commissioned a systematic review
7 during the development of the current guidelines?

8 A. I am not sure if they -- I'm not sure.

9 MR. RAMER: So we'll go to -- Li, we'll
10 go to Connelly Exhibit 8, I believe. It should be
11 Baker, article by Baker.

12 (Deposition Exhibit No. 8 was marked.)

13 MS. NOWLIN-SOHL: Okay. We have it.

14 Q. (BY MR. RAMER) And, Dr. Connelly, have
15 you seen this article before?

16 A. Not that I can recall.

17 Q. Okay. Let's go to page 2 and
18 specifically right column under the bold "Search
19 Strategy and Selection Criteria."

20 Do you see that?

21 A. Yes.

22 Q. And I'll just read the first sentence and
23 ask if I read it correctly.

24 It says "This review is one of a series
25 of systematic reviews on gender-affirming care

1 conducted for WPATH to inform the eighth revision
2 of the Standards of Care."

3 Did I read that correctly?

4 A. Yes.

5 Q. And do you recall reading this article
6 before?

7 A. This article?

8 Q. Correct.

9 A. No.

10 Q. I want to skip to page 12. And under the
11 bold discussion, first paragraph, last sentence,
12 I'll read it and ask if I read it correctly.

13 It says "It was impossible to draw
14 conclusions about the effects of hormone therapy
15 on deaths by suicide."

16 Did I read that correctly?

17 A. Yes.

18 Q. Do you have any reason to disagree with
19 that statement?

20 MS. NOWLIN-SOHL: Object to form;
21 foundation.

22 THE WITNESS: I can't comment without
23 looking at the specific studies that they are
24 referring to.

25 Q. (BY MR. RAMER) Are you aware of any

1 systematic reviews that have been able to draw
2 conclusions about the effect of hormone therapy on
3 suicide?

4 A. I am not aware of systematic reviews that
5 have drawn that -- or conclusions around that.

6 Q. Is the adolescent chapter of the eighth
7 version of the Standards of Care based on a
8 systematic review?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: I can't say for certain
11 whether it's based on a systematic review.

12 Q. (BY MR. RAMER) I'd like to go to the
13 same article, page 7.

14 And is page 7 turned so you can actually
15 read it?

16 A. Yeah.

17 Q. And so this is a table that -- I'm just
18 going to read the title at the top. It says
19 "Effects of Gender-Affirming Hormone Therapy on
20 Quality of Life Among Transgender People"; is that
21 right?

22 A. Yeah.

23 Q. And if you look at the very small font at
24 the bottom below the table where it lists
25 abbreviations, do you see about three-quarters of

1 the way down the line it says "QOL" is the
2 abbreviation for quality of life?

3 A. On the first line of the abbreviations?

4 Q. Correct. It's about three-quarters of
5 the way down the line.

6 A. Yes.

7 Q. And going back up to the table, there are
8 six columns.

9 And do you see the second column labeled
10 "Transgender Population"?

11 A. Yes.

12 Q. And of the studies in this table, all of
13 them except one involved adults, correct?

14 A. I can't see where ages were included or
15 reported.

16 Q. So if you look down in the bottom study
17 of the table, I'm going to pronounce it "Achille."
18 I don't know if that's how you pronounce it, but
19 do you see for that study, the transgender
20 population is girls and boys?

21 A. Yes.

22 Q. And the study above Achille, the
23 transgender population is women and men?

24 A. Yes.

25 Q. Is it fair to say that Achille is

Dr. Kara Connelly August 28, 2023

1 children and adolescents and the study above is
2 adults?

3 MS. NOWLIN-SOHL: Objection; foundation.

4 THE WITNESS: I would have to look at the
5 way that their study populations are defined with
6 regards to age.

7 Q. (BY MR. RAMER) And for Achille, if you
8 go to the final column which is labeled
9 "Findings," do you see where it states -- I'll
10 read it and ask if I read it correctly. It says
11 "Mean QOL scores did not change."

12 Did I read that correctly?

13 A. Yes.

14 Q. Okay.

15 MR. RAMER: It's a little early, but it's
16 time for kind of another wave of exhibits. Do you
17 want to take a break now? Because I -- for the --
18 you know, I don't want to sit on the clock while
19 waiting for documents to come through on the email
20 server, so do you want to take ten minutes now and
21 then I can send a wave of exhibits and we can
22 reconvene?

23 MS. NOWLIN-SOHL: We don't have a
24 preference. We're happy to keep going, but if you
25 think that they're quite large exhibits and you

Page 153

Dr. Kara Connelly August 28, 2023

1 want to take a break, we can do that as well.

2 MR. RAMER: I think let's do that and
3 just keep the flow going. Makes sense.

4 MS. NOWLIN-SOHL: Okay.

5 MR. RAMER: So maybe top of the hour, how
6 about?

7 MS. NOWLIN-SOHL: Sounds good.

8 MR. RAMER: Okay.

9 THE VIDEOGRAPHER: Okay. So the time is
10 2:50 p.m. Mountain time, and we are off the
11 record.

12 (Break taken from 2:50 p.m. to 3:00 p.m.)

13 THE VIDEOGRAPHER: All right. So we are
14 recording. The time is 3:00 p.m. Mountain time,
15 and we are back on the record.

16 Q. (BY MR. RAMER) Dr. Connelly, I'd like to
17 return to your declaration, and specifically to
18 page 10, paragraph 32, and in particular,
19 footnote 7.

20 And in footnote 7, you cite an article
21 where the lead author is Turban; is that right?

22 A. Yes.

23 Q. And do you recall where the authors
24 obtained the data that they used in that study?

25 A. Yes. I believe it was the U.S. Trans

1 Health.

2 Q. The U.S. what?

3 A. Trans Health Survey.

4 Q. And on the next page of your declaration,
5 paragraph 34, footnote 8, you cite another Turban
6 article here, right?

7 A. Yes.

8 Q. And do you recall where the authors
9 obtained the data that they used for that article?

10 A. I can't remember for certain, but I
11 believe it was also from the U.S. Trans Health
12 survey.

13 Q. So I agree.

14 MR. RAMER: Exhibits 9 and 10, Li, for
15 you, were sent solely to establish that. So I
16 think we'll deem those as included, but I'm not
17 going to bring them up to ask questions.

18 Does that make sense?

19 MS. NOWLIN-SOHL: Yeah, that's fine. I
20 haven't looked at them. So those are the two
21 Turban studies?

22 MR. RAMER: Correct. And Dr. Connelly is
23 correct about where the data came from for that.

24 MS. NOWLIN-SOHL: Okay.

25 (Deposition Exhibit Nos. 9 and 10 were marked.)

Dr. Kara Connelly August 28, 2023

1 MR. RAMER: Okay. So we'll skip to --
2 should be Connelly Exhibit 11.

3 Did you receive that one? It's a larger
4 one.

5 MS. NOWLIN-SOHL: Yes.

6 MR. RAMER: Great.

7 (Deposition Exhibit No. 11 was marked.)

8 MS. NOWLIN-SOHL: So are you introducing
9 the two Turban articles to be marked as exhibits?

10 MR. RAMER: Yes, correct, just to keep
11 the numbering.

12 And so do we have Connelly Exhibit 11?

13 MS. NOWLIN-SOHL: We do.

14 Q. (BY MR. RAMER) Okay. And, Doctor, is
15 this the survey you were referencing?

16 A. Yes.

17 Q. And do you recall how this survey was
18 conducted?

19 A. I can't recall the specifics.

20 Q. I'd like to turn to page 25. Just let me
21 know when you're there.

22 A. Okay.

23 Q. And in the right column, there's a big
24 blue Roman Numeral IV with a header.

25 Do you see that?

Page 156

Dr. Kara Connelly August 28, 2023

1 A. Yes.

2 Q. And I'm just going to read the first
3 sentence below that header and ask if I read it
4 correctly.

5 It says "The survey was produced and
6 distributed in an online-only format after a
7 determination that it would not be feasible to
8 offer it in paper format due to the length and the
9 complexity of the skip logic required to move
10 through the questionnaire."

11 Did I read that correctly?

12 A. Yes.

13 Q. And did you know this was an online
14 survey before you cited the Turban articles?

15 A. Yes.

16 Q. And do you know the age of the
17 respondents in this survey?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: I can't recall the
20 specifics.

21 Q. (BY MR. RAMER) If we could go to page 23
22 and the left column. And below "II," the second
23 paragraph, I'll read the first two sentences and
24 ask if I read them correctly.

25 It says "The study included individuals

1 aged 18 and older at the time of survey
2 completion, as did the NTDS. The study was not
3 offered to individuals under the age of 18 due to
4 limitations created by specific risk factors and
5 recommendations associated with research involving
6 minors."

7 Did I read that correctly?

8 A. Yes.

9 Q. And did you know that the survey was only
10 individuals ages 18 and older before you cited the
11 two Turban articles?

12 A. Yes.

13 Q. Do you think a survey regarding the
14 experience of transgender adults adequately
15 captures the experience of transgender youth?

16 MS. NOWLIN-SOHL: Object to the form.

17 THE WITNESS: I'm sorry. Can you repeat
18 the question?

19 Q. (BY MR. RAMER) Do you think a survey
20 regarding the experience of transgender adults
21 adequately captures the experience of transgender
22 youth?

23 MS. NOWLIN-SOHL: Same objection.

24 THE WITNESS: Can you clarify what you
25 mean by "experience"?

Dr. Kara Connelly August 28, 2023

1 Q. (BY MR. RAMER) Are you familiar with the
2 phrase "lived experience"?

3 A. I've heard the phrase, and I think it can
4 mean different things for different people.

5 Q. Do you think that data from a survey of
6 transgender adults can reliably be used to assess
7 outcomes in transgender youth?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: I think that information
10 that is gathered from transgender adults about
11 their own experience as transgender youth can be
12 valuable.

13 Q. (BY MR. RAMER) Do you think the results
14 of this survey can be used to assess outcomes for
15 transgender youth?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: Can you be a little more
18 specific?

19 Q. (BY MR. RAMER) So you agree the data in
20 this survey only comes from adults, right?

21 A. Correct.

22 Q. And do you think that that data is useful
23 in understanding the needs of transgender youth?

24 A. I think that the transgender adults'
25 reports on their experiences as transgender youth

Dr. Kara Connelly August 28, 2023

1 is -- can be valuable and helpful.

2 Q. Is that what this survey does?

3 A. This survey asks a lot of questions, and
4 one portion or aspect of it is asking transgender
5 adults to -- about questions pertaining to their
6 experiences as transgender youth.

7 Q. Just returning to that same paragraph,
8 I'd like to read the sentence that runs over to
9 the next column, and I'll just ask if I read it
10 correctly.

11 It says "Furthermore, the current
12 experiences and needs of transgender youth often
13 differ those of adults in a number of key areas,
14 including experiences related to education,
15 employment, accessing health care, and updating
16 identity documents and many of these experiences
17 or needs could be adequately captured in a survey
18 that was not specifically tailored to transgender
19 people under the age of 18."

20 Did I read that correctly?

21 A. Yes.

22 Q. And do you agree with that statement?

23 A. I agree with the first portion that
24 current experiences and needs of transgender youth
25 can differ or often differ from those of adults.

Page 160

1 And I don't know how to comment on the
2 second portion that many of these experiences or
3 needs could not be adequately captured in a
4 survey, that portion. It's -- I think what my
5 interpretation of that second part of this
6 sentence is is that the survey was not designed to
7 study the -- was not originally designed to study
8 the experiences of transgender -- current
9 experiences of transgender youth.

10 Q. And what's the consequence of that?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: Can you be more specific?

13 Q. (BY MR. RAMER) That the study was not
14 designed to assess the experiences of transgender
15 youth. Isn't a consequence of that that the data
16 from the study should not be used to assess the
17 current experiences of transgender youth?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: That would not be my
20 interpretation.

21 Q. (BY MR. RAMER) What would your
22 interpretation be?

23 A. I interpret this more as an explanation
24 of the way that the survey was designed and
25 acknowledging that there may have been questions

1 that could be asked of transgender youth that were
2 not asked in a survey that was designed for
3 adults.

4 Q. And switching to -- oh, no, I'm sorry. I
5 have another question. I apologize.

6 Were the respondents to this survey all
7 diagnosed with gender dysphoria?

8 A. I don't know.

9 Q. Do you know how the respondents were
10 selected for this survey?

11 A. I don't recall.

12 Q. Let's go to page 26. Left column, the
13 carryover paragraph. And I'm going to read the --
14 I'm going to read the last two sentences of this
15 paragraph and ask if I read them correctly.

16 "Although the intention was to recruit a
17 sample that was as representative as possible of
18 trans" --

19 MS. NOWLIN-SOHL: Real quick, John, I'm
20 not sure we're on the same spot. You said the
21 left-hand column of page 26?

22 MR. RAMER: Correct. It will be the
23 runover paragraph, so it will be the sentences
24 above the blue Roman V.

25 MS. NOWLIN-SOHL: Okay. We're there.

1 MR. RAMER: And I'll read that, the
2 sentence beginning with "Although."

3 "Although the intention was to recruit a
4 sample that was as representative as possible of
5 transgender people in the U.S., it is important to
6 note that respondents in this study were not
7 randomly sampled, and the actual population
8 characteristics of transgender people in the U.S.
9 are not known. Therefore, it is not appropriate
10 to generalize the findings in this study to all
11 transgender people."

12 Did I read that correctly?

13 A. Yes.

14 Q. And were you aware of this limitation
15 before you cited the Turban studies?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: Can you clarify what you
18 mean by "limitation"?

19 Q. (BY MR. RAMER) I'm referring to the last
20 sentence where it says -- the survey itself says
21 it is not appropriate to generalize the findings
22 in this study to all transgender people.

23 A. Was I aware of that sentence before
24 citing the Turban studies?

25 Q. Were you aware the survey says that it's

1 not appropriate to generalize its findings to all
2 transgender people before you cited the Turban
3 studies?

4 A. I can't say that I recall reading that
5 exact sentence, but -- yeah, I don't -- I can't --
6 I don't recall remembering or reading that exact
7 sentence.

8 Q. And I guess my question isn't so much
9 whether you recall reading that exact sentence.
10 It's more were you aware of that fact?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: The statement that they
13 made in the survey?

14 Q. (BY MR. RAMER) Were you aware that
15 respondents in the study were not randomly
16 sampled?

17 A. Yes.

18 MR. RAMER: And now we'll switch to a new
19 exhibit, which I believe -- let's see what I sent
20 it as. It should be Connelly Exhibit 12.

21 (Deposition Exhibit No. 12 was marked.)

22 THE WITNESS: Okay.

23 Q. (BY MR. RAMER) Doctor, have you seen
24 this document before?

25 A. I may have seen this document, but I -- I

Dr. Kara Connelly August 28, 2023

1 don't see where it was released or who the authors
2 are.

3 Q. Well, I guess that's a question is did
4 you help develop this statement?

5 A. No.

6 Q. Have you helped develop any statement for
7 the Pediatric Endocrine Society?

8 A. No.

9 Q. So under the first paragraph -- and just
10 to confirm, the Pediatric Endocrine Society is the
11 organization that you're a member of, right?

12 A. Correct.

13 Q. Under the first paragraph, the final
14 sentence, I'll read it and ask if I read it
15 correctly.

16 It says "While there continue to be gaps
17 in knowledge about the optimal care for
18 transgender individuals, the framework for
19 providing care is increasingly well established,
20 as is the recognition of needed policy changes."

21 Did I read that correctly?

22 A. Yes.

23 Q. And do you think there are gaps in
24 knowledge about the optimal care for transgender
25 individuals?

Page 165

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: I think that there is
3 information that we still need to learn more
4 about.

5 Q. (BY MR. RAMER) Like what?

6 A. You mean specific examples?

7 Q. Yes.

8 A. Well, an example might be different
9 medications that may be successful for menstrual
10 cycle cessation. Some may be more effective than
11 others in certain populations, is one example that
12 comes to mind.

13 Q. And in the second paragraph below
14 "Background," I'm going to read the last three
15 sentences, so really everything except the first
16 sentence, and ask if I read that correctly.

17 It says "Gender identity was considered
18 malleable and subject to external influences.
19 Today, however, this attitude is no longer
20 considered valid. Considerable scientific
21 evidence has emerged demonstrating a durable
22 biological element underlying gender identity.
23 Individuals may make choices due to other factors
24 in their lives, but there do not seem to be
25 external forces that generally cause individuals

Page 166

1 to change gender identity."

2 Did I read that correctly?

3 A. Yes.

4 Q. And what is your understanding of the
5 statement that "gender identity is durable"?

6 A. I would have to look at the two
7 references that are listed there, that are
8 attached to that statement, that sentence.

9 Q. You don't have an opinion without looking
10 at those references what it means for gender
11 identity to be durable?

12 A. I'm not sure what it means by a "durable
13 biological element."

14 Q. And what's your --

15 A. I would need to look at the two
16 references to know what they are and how that is
17 defined to be able to say whether -- to really say
18 what they're trying to, what they mean by that
19 statement.

20 MR. RAMER: And, Li, did Exhibit 14 -- I
21 realize I'm skipping ahead a bit, but did
22 Exhibit 14 come through?

23 MS. NOWLIN-SOHL: Yes.

24 MR. RAMER: All right. I'd like to pull
25 that up.

Dr. Kara Connelly August 28, 2023

1 (Deposition Exhibit No. 14 was marked.)

2 MS. NOWLIN-SOHL: Okay.

3 Q. (BY MR. RAMER) And, Doctor, I'll
4 represent this is a printout from the Endocrine
5 Society website. And you can see the upper right
6 it says "November 30, 2020."

7 And in the second paragraph, the second
8 sentence -- I'm just going to read that and ask if
9 I read it correctly.

10 It says "The group updated the society's
11 transgender health position statement to provide
12 further background and support on the treatment of
13 transgender minors and developed a new fact sheet
14 focused on ways to improve pediatric care for
15 transgender minors."

16 Did I read that correctly?

17 A. Yes.

18 Q. And then further down on the same page,
19 the very last paragraph, it says "Special thanks
20 to," and then it lists a bunch of names.

21 And then it says "as well as Kara
22 Connelly, MD," and lists a bunch of names, "all of
23 whom participated in the development of these
24 documents."

25 Do you see that?

Page 168

1 A. Yes.

2 Q. So just so I understand, did you
3 participate in the development of this position
4 statement?

5 A. Do you mean the --

6 Q. The previous exhibit we were looking at.
7 Sorry.

8 A. Oh, no.

9 Q. Okay. Do you understand what this would
10 be referencing with respect to the documents that
11 you participated in the development of?

12 A. The special thanks statement? I
13 participated in the development of the new fact
14 sheet.

15 Q. Okay. And does the fact sheet reference
16 a durable biological underpinning to gender
17 identity?

18 A. I can't recall. I would have to look at
19 it again. It's been a few years since I looked at
20 it.

21 Q. And so on this page, for example, they
22 reference the durable biological underpinning to
23 gender identity.

24 And just to clarify, your testimony is
25 that you don't know what that's referring to; is

Dr. Kara Connelly August 28, 2023

1 that right?

2 MS. NOWLIN-SOHL: John, are you still on
3 the web printout, or are you back to the previous
4 exhibit?

5 MR. RAMER: Sorry, yeah. That was
6 unclear. I'm still on the web printout, and you
7 can see there is a numbered list.

8 Q. (BY MR. RAMER) And No. 1 states "There
9 is a durable biological underpinning to gender
10 identity that should be considered in policy
11 determinations."

12 And my question is just similar to one we
13 were discussing, the previous exhibit, is that
14 you, Dr. Connelly, don't know what that means when
15 it says "durable biological underpinning"; is that
16 right?

17 MS. NOWLIN-SOHL: Object to form;
18 mischaracterizes testimony.

19 THE WITNESS: I'm sorry. Can you repeat
20 the question?

21 Q. (BY MR. RAMER) Just to simplify the
22 question, it's just do you know what this is
23 referring to when it says "durable biological
24 underpinning to gender identity"?

25 MS. NOWLIN-SOHL: Object to form.

Page 170

Dr. Kara Connelly August 28, 2023

1 THE WITNESS: I can't say what that is
2 referring to. And there may be more information
3 in other references about what exactly that
4 statement is referring.

5 Q. (BY MR. RAMER) So let's switch back to
6 the previous exhibit, which should be Connelly
7 Exhibit 12.

8 MS. NOWLIN-SOHL: And just to confirm,
9 John, because the numbering on the PDF files are
10 different than the exhibit labeling, this is the
11 one that's numbered 10?

12 MR. RAMER: Yes, that's right, Li. I
13 apologize.

14 MS. NOWLIN-SOHL: No problem. I just
15 wanted to make sure we're looking at the same
16 thing.

17 Q. (BY MR. RAMER) And back in that left
18 column, the paragraph we were previously looking
19 at, the sentence that says -- sorry.

20 The fourth sentence in that paragraph
21 says "Considerable scientific evidence has emerged
22 demonstrating a durable biological element
23 underlying gender identity."

24 I just want to understand, do you think
25 that statement is true?

Page 171

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: I can't say. I can't say
3 whether I think that that's true, again, without
4 knowing what they refer to as "durable biological
5 element."

6 Q. (BY MR. RAMER) And in the last sentence
7 in that paragraph, it says "There do not seem to
8 be external forces that genuinely cause
9 individuals to change gender identity."

10 Do you see that?

11 A. Yes.

12 Q. In your opinion, is it true that
13 individuals do not genuinely change gender
14 identity?

15 MS. NOWLIN-SOHL: Object to form.

16 THE WITNESS: Can you repeat the
17 question?

18 Q. (BY MR. RAMER) Yeah, just in your
19 opinion, is it true that individuals do not
20 genuinely change gender identity?

21 MS. NOWLIN-SOHL: Same objection.

22 THE WITNESS: In my professional opinion,
23 it is that generally there are not forces that
24 cause someone's gender identity to change.

25 Q. (BY MR. RAMER) Does someone's gender

1 identity change?

2 A. I think sometimes someone -- someone's
3 experiences in gender identity can change,
4 although I think it's very, very rare.

5 Q. And do you think that change is genuine?

6 A. Can you explain what you mean by
7 "genuine"?

8 Q. I guess as more a theoretical matter,
9 when somebody's experienced that their gender
10 identity changes, that change is a genuine change
11 in their gender identity, meaning it is not a
12 mistake; is that right?

13 MS. NOWLIN-SOHL: Object to form.

14 THE WITNESS: I'm confused by the
15 question.

16 Q. (BY MR. RAMER) Okay. We'll move on.

17 So same document, the right column. And
18 there's a blue header, "Considerations," and then
19 the second paragraph down.

20 It says "The Endocrine Society's clinical
21 practice guideline on gender dysphoria/gender
22 incongruence provides the standard of care for
23 supporting transgender individuals."

24 Did I read that correctly?

25 A. Yes.

Dr. Kara Connelly August 28, 2023

1 Q. And is that true?

2 MS. NOWLIN-SOHL: Object to form. Object
3 to the extent that it calls for a legal
4 conclusion.

5 THE WITNESS: I think I would say that
6 the Endocrine Society's clinical practice
7 guideline helps to establish what would be
8 considered best practices in the care of
9 transgender individuals.

10 Q. (BY MR. RAMER) So would you be unwilling
11 to say that the Endocrine Society guideline
12 provides the standard of care for supporting
13 transgender individuals?

14 MS. NOWLIN-SOHL: Object to the extent
15 that it calls for a legal conclusion.

16 THE WITNESS: I think that there are --
17 there's -- people use the word "standard of care"
18 in different ways. So I can't say that that would
19 be the -- would be true in every situation that --
20 in every meaning of the word "standard of care."
21 It would depend on how standard of care is being
22 defined.

23 Q. (BY MR. RAMER) And so this statement is
24 issued by the Pediatric Endocrine Society.

25 And how do you think members of the

Page 174

1 Pediatric Endocrine Society would understand the
2 phrase the "standard of care"?

3 MS. NOWLIN-SOHL: Objection; speculation.

4 THE WITNESS: I was not an author of this
5 statement, and I can't -- I can't say what all the
6 members of the Pediatric Endocrine Society or the
7 authors are meaning by this statement.

8 Q. (BY MR. RAMER) Do you recall whether the
9 Endocrine Society guidelines say if they establish
10 a standard of care?

11 A. I don't recall that.

12 MR. RAMER: Let's go back to those
13 guidelines, which I believe are Connelly
14 Exhibit 7. And the file name unfortunately begins
15 with an 8.

16 MS. NOWLIN-SOHL: We have that.

17 MR. RAMER: Okay. And I'd like to go to
18 3895, which should be toward the back.

19 MS. NOWLIN-SOHL: Okay.

20 Q. (BY MR. RAMER) And in the right column
21 under the bold "Acknowledgements," do you see
22 there's a paragraph that begins with "Disclaimer"?

23 A. Yes.

24 Q. And I'm just going to read the third
25 sentence and ask if I read it correctly, which is

Dr. Kara Connelly August 28, 2023

1 "The guidelines cannot guarantee any specific
2 outcome, nor do they establish a standard of
3 care."

4 Did I read that correctly?

5 A. Yes.

6 Q. Okay. We'll next move back to your
7 declaration, and specifically page 9,
8 paragraph 31. And starting with the fourth
9 sentence, I'm just going to read the fourth and
10 fifth sentences and ask if I read them correctly.

11 "While the social and political
12 environments may continue to negatively impact a
13 patient's mental health, we see dramatic
14 improvements in our patients after they begin
15 gender-affirming medical care. Depression,
16 anxiety, self-harm, and suicidal ideations are
17 significantly reduced based on the screening tools
18 PHQ-9 and GAD-7, which patients complete at every
19 visit."

20 Did I read that correctly?

21 A. Yes.

22 Q. And can you just explain what the PHQ-9
23 is?

24 A. Yes. It -- I believe it stands for
25 patient health questionnaire, but I'm not certain.

Page 176

Dr. Kara Connelly August 28, 2023

1 And it is a screening tool for depression,
2 clinical depression.

3 Q. And do you happen to know what the 9
4 means?

5 A. I think it refers to the number of
6 questions that's included.

7 Q. And when a patient completes the PHQ-9,
8 it results in a score; is that right?

9 A. Yes.

10 Q. And essentially the higher the score, the
11 worst patient's depression; is that right?

12 A. The higher the score -- the score
13 determines the -- I can't remember the exact term.
14 The likelihood that a patient has clinically
15 significant depression.

16 Q. And so just as a general matter, a higher
17 score is worse than a lower score; is that right?

18 A. There isn't a way of characterizing it as
19 better or worse just simply based on the number.

20 Q. Can you explain that a little more?

21 A. Yeah. So there -- so clinically
22 significant depression can include several of the
23 different numbers of the score. But if they fall
24 within the same category of the clinically
25 significant depression, one number -- like, a 24

1 or -- I can't remember what the total, what the
2 highest number is, but let's say 22 may not be
3 more significant than a 21.

4 And we also look at the specific
5 questions and the way that those are answered when
6 looking at the score. So we don't just look at
7 the total score to determine how significant
8 someone's depression is.

9 Q. Well, is there a score for the PHQ-9 that
10 serves as a cutoff for particular conclusions?

11 A. I cannot recall that. That's more in the
12 expertise of our behavioral health team members.

13 Q. So I take your point about the 24 versus
14 the 22, you can't make any conclusions.

15 But just as a general matter if somebody
16 scores a zero and somebody scores 22, the person
17 who scores a 22 has more indications of
18 depression, correct?

19 A. The person who scores a 22 would be at a
20 higher likelihood of experiencing clinically
21 significant depression compared to someone who
22 scores a zero.

23 Q. And then could you explain what the GAD-7
24 is?

25 A. Yes. That is a screening tool for

1 determining clinically significant anxiety.

2 Q. So it's kind of like the PHQ-9, but for
3 anxiety; is that right?

4 A. Yes.

5 Q. And in your declaration back in
6 paragraph 31, the sentences we were just talking
7 about, you say you see dramatic improvements in
8 your patients after they begin gender-affirming
9 medical care; is that right?

10 A. Yes.

11 Q. Is that something you studied before?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Can you be more specific?

14 Q. (BY MR. RAMER) Have you ever looked at
15 data to confirm that statement?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: In our clinic?

18 Q. (BY MR. RAMER) Correct.

19 A. I can't say that we have conducted any
20 studies that have -- that have looked at overall
21 improvements in patients after they begin care.

22 MR. RAMER: And, Li, I'd like to go to
23 Connelly Exhibit 13, which has, again,
24 unfortunately an 11 in the file name.

25 MS. NOWLIN-SOHL: Okay.

1 (Deposition Exhibit No. 13 was marked.)

2 Q. (BY MR. RAMER) And, Doctor, do you
3 recognize this article?

4 A. Yes.

5 Q. And did you help author this article?

6 A. Yes.

7 Q. And did the data used in this article
8 come from your clinic?

9 A. Yes.

10 Q. Okay. I'd like to go to page 198, I
11 guess the third page, Table 1.

12 And in Table 1, do you see there's a
13 category for affirmed gender?

14 A. Yes.

15 Q. And for male in that category, does that
16 mean it's an assigned female at birth with a
17 gender identity of male?

18 A. Yes.

19 Q. And so am I reading the table correctly
20 that over 70 percent of the sample were assigned
21 female at birth?

22 A. In this study, yes, 72 percent were --
23 had an affirmed gender of male. And I think in
24 likely all cases, that meant that they had -- we
25 can only -- I can only assume what their assigned

1 sex at birth is because it doesn't specify it
2 here. And some people who are assigned male at
3 birth may still list their gender as male.

4 But I would say yes, the majority are
5 likely assigned female at birth.

6 Q. Does that percentage of 70 percent -- or
7 let me ask it a different way.

8 Is that percentage of 70 percent, in your
9 estimation, reflective of your patient population
10 generally?

11 A. Not generally.

12 Q. Do you think it's higher or lower?

13 A. It's higher in this sample than what we
14 see generally.

15 Q. How much higher, do you think?

16 A. Well, generally I'd say about two-thirds
17 of our patient population are assigned female at
18 birth.

19 Q. And then going to page 197, the left
20 column, and there's the bold header "Methods."
21 And then under "Methods," it says "Participants
22 and procedure." And then I'd like to read the
23 third sentence in that paragraph and ask if I read
24 it correctly.

25 It says "In this clinic, youth do not

1 receive prescriptions for hormone medication
2 management at the initial visit, but many patients
3 initiate medications between their first and
4 second appointments after completing required
5 steps (family receives extensive counseling, signs
6 consent form, completes assessment, and acquires a
7 letter of support from an experienced mental
8 health provider.)"

9 Did I read that correctly?

10 A. Yeah.

11 Q. And is it true that many patients at your
12 clinic begin taking either puberty blockers or
13 cross-sex hormones after only one appointment?

14 A. You mean after one -- after the first
15 medical visit?

16 Q. Is that what "initial visit" refers to in
17 here?

18 A. Yes.

19 Q. So yes, that's what I'm asking.

20 A. Yes. There are a number of patients that
21 initiate medications after their first medical
22 visit, but that may not be the first visit that
23 they had with our team.

24 Q. And over to page 198, back to Table 1,
25 and do you see there's a category toward the

1 bottom of the table that says "Interventions"?

2 A. Yes.

3 Q. And in that category, there's a row that
4 says "Neither hormone blockers or HT."

5 Do you see that?

6 A. Yes.

7 Q. Does "HT" stand for hormone therapy?

8 A. Yes.

9 Q. And hormone therapy can also be described
10 as cross-sex hormones; is that right?

11 A. Yes.

12 Q. And in this table, it says that
13 96.2 percent were not on puberty blockers or
14 cross-sex hormones at the initial visit, correct?

15 A. I have to go back to look to see what
16 exactly initial visit is referring to.

17 Q. What could it be referring to?

18 A. If -- I don't know if that means that
19 they -- when they were seen for that initial visit
20 they were already on treatment or if they were
21 prescribed that treatment following the initial
22 visit.

23 Q. Well, I guess let's move to the second
24 column, then, in that same row. And it looks like
25 by the time of the follow-up visit, the number --

1 excuse me.

2 The percentage that is not on hormone
3 blockers or cross-sex hormones falls to only
4 47.5 percent; is that right?

5 MS. NOWLIN-SOHL: Object to the form.

6 THE WITNESS: I'm sorry. Can you repeat
7 the question?

8 Q. (BY MR. RAMER) Yeah. Just in Table 1,
9 we were just looking at the row that discusses
10 neither hormone blockers or hormone therapy.

11 And we saw that at the initial visit, it
12 says there were -- 96.2 percent of the sample were
13 on neither hormone blockers or hormone therapy,
14 correct?

15 A. Correct.

16 Q. And then when you move over a column to
17 the follow-up, that percentage falls to
18 47.5 percent.

19 Do you see that?

20 A. Yes.

21 Q. So by the time of the follow-up
22 appointment, over half the patients in this sample
23 were on either puberty blockers or cross-sex
24 hormones, correct?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: So is your question what
2 was the percentage of individuals who started who
3 were on therapy by the time of the follow-up
4 visit?

5 Q. (BY MR. RAMER) My question is simply
6 just trying to understand the data on that line.
7 And what it looks like -- and correct me if I'm
8 wrong -- is what it looks like is that at the
9 initial visit, 96.2 percent of the sample were on
10 neither puberty blockers nor cross-sex hormones,
11 but then by the time of the follow-up visit, only
12 47.5 percent were neither on puberty blockers or
13 cross-sex hormones.

14 Am I reading that correctly?

15 A. Yes.

16 MS. NOWLIN-SOHL: The follow-up does not
17 say the initial follow-up.

18 MR. RAMER: Sure.

19 Q. (BY MR. RAMER) And is that percentage
20 reflective of your patient population generally?

21 A. I would say generally no.

22 Q. I'd like to go back to page 197. I guess
23 why would you say that, "generally no"?

24 A. Because generally there are a higher
25 number of patients that are not on cross-sex

1 hormone therapy or puberty blockers at the time of
2 their first follow-up visit.

3 Q. And is that higher number or higher
4 percentage?

5 A. Than this study?

6 Q. I'm asking because I would assume the
7 number is certainly higher because this is just a
8 sample. And my question is about the percentage.

9 A. Yes, a higher percentage than -- in this
10 study are not on cross-sex hormones or puberty
11 blockers at the time of their first follow-up
12 visit.

13 Q. So did you choose -- for this article did
14 you choose a data set that was not representative
15 of your clinic?

16 MS. NOWLIN-SOHL: Object to the form.

17 THE WITNESS: No. This wasn't a sample
18 that was chosen, but it is a sample in this period
19 of time that is different than what our population
20 is now.

21 Q. (BY MR. RAMER) And so how much higher do
22 you think the percentage is now?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: How much higher is the
25 percentage of patients who are not on cross-sex

1 hormones or puberty blockers at the time of their
2 first follow-up appointment?

3 Q. (BY MR. RAMER) Correct.

4 A. I would probably estimate closer to
5 70 percent.

6 Q. So then by the time of the first
7 follow-up, your estimation is that 30 percent are
8 on either puberty blockers or cross-sex hormones;
9 is that right?

10 A. Yes.

11 Q. And is that greater than the 2 percent
12 you mentioned earlier this morning?

13 A. Can you remind me what the 2 percent --

14 Q. It's not important. Sorry. I'll move
15 on.

16 Okay. So page 197, left column, first
17 full paragraph which begins with the phrase "To
18 fill these gaps in the research," do you see that?

19 A. Yes.

20 Q. And in this paragraph, is it fair to say
21 you are listing the aims of this study?

22 A. Yes.

23 Q. And I'm going to read the first aim and
24 just ask if I read it correctly.

25 It says "Describe changes in anxiety and

1 depression and suicidality from intake visit to
2 first follow-up appointment using the PHQ-9 and
3 GAD-7 in TGN youth."

4 Did I read that correctly?

5 A. Yes.

6 Q. And "TGN," does that stand for
7 transgender and gender nonconforming?

8 A. I'm just going to double-check. Yes.

9 Q. And then for the third aim, it says
10 "Examine changes in anxiety and depression from
11 intake to first follow-up among the TGN youth who
12 initiate HT"; is that right?

13 A. Yes.

14 Q. And "HT" there refers to hormone therapy,
15 correct?

16 A. Yes.

17 Q. Okay. I'd like to go back to 198 and to
18 Table 2 now. And in Table 2, that table is
19 entitled "Change in depression and anxiety from
20 initial visit to first follow-up," correct?

21 A. Yes.

22 Q. And so there's kind of four groupings
23 here. The first is PHQ-9 distance. The second is
24 GAD-7 distance. The third is PHQ-9 HT, and the
25 fourth is GAD-7 HT.

1 Do you see that?

2 A. Yes.

3 Q. And my questions are going to relate to
4 the bottom two groups.

5 And starting with the group that's
6 labeled "PHQ-9 HT," is it fair to say this is
7 measuring the PHQ-9 scores for the sample?

8 A. Yes.

9 Q. And in this category, it's broken out
10 between those who have initiated cross-sex
11 hormones and those who have not initiated
12 cross-sex hormones, correct?

13 A. Yes.

14 Q. And then as you move to the columns, is
15 it correct that you're providing the average PHQ-9
16 scores for the initial visit in the first column?

17 A. Yes, it's the mean scores and the
18 standard deviation in the parentheses.

19 Q. And then in the second column, you're
20 providing the mean scores for the follow-up visit;
21 is that right?

22 A. Yes.

23 Q. And for the category of patients who had
24 initiated hormone therapy, this table shows that
25 their PHQ-9 scores on average increased from the

1 initial visit to the follow-up visit, correct?

2 A. The mean score at the follow-up visit of
3 the group as a whole is numerically higher but not
4 statistically significantly higher than at the
5 initial visit.

6 Q. And for the category of patients who had
7 not initiated hormone therapy, this table shows
8 that their PHQ-9 scores on average decreased from
9 the initial visit to the follow-up visit, correct?

10 A. Again, not statistically significant, but
11 the follow-up mean score of the group as a whole
12 was lower than the initial visit mean score of the
13 group as a whole.

14 Q. Why does the lack of statistical
15 significance matter?

16 A. Because with the lack of statistical
17 significance, we can't draw any conclusions about
18 the data and the tables.

19 Q. Right. I want to go down to the group
20 below that for the GAD-7.

21 And this is broken out along the same way
22 as the PHQ-9 group, correct?

23 A. Yes.

24 Q. And this also shows that the average
25 scores of the GAD-7 increased between initial

1 visit and follow-up visit for those who had
2 initiated hormone therapy, correct?

3 A. The average GAD-7 score, there was no
4 statistically significant difference between the
5 initial visit and the follow-up visit.

6 Q. I understand the point about statistical
7 significance.

8 My question is simply the data that you
9 recorded in this study shows that the average
10 score for those who had initiated hormone therapy
11 increased from the initial visit to the follow-up
12 visit, correct?

13 A. The follow-up visit average score is .5
14 higher than the average score at the initial
15 visit -- .1, sorry.

16 Q. And for the category of patients who had
17 not initiated hormone therapy, the average score
18 decreased from the initial visit to the follow-up
19 visit, correct?

20 A. Again, not statistically significant, the
21 average GAD-7 score at the follow-up was .5 points
22 lower than at the initial visit, the average score
23 at the initial visit.

24 Q. And just returning to your declaration,
25 to page 9, paragraph 31, the fourth sentence down,

1 and you say you see dramatic improvements in your
2 patients after they begin gender-affirming medical
3 care.

4 Do you see that?

5 A. Yes.

6 Q. And you also say depression, anxiety,
7 self-harm, and suicidal ideation are significantly
8 reduced.

9 Do you see that?

10 A. Yes.

11 Q. How do you reconcile those statements
12 with the results reported in your own article?

13 A. The article was only over a very short
14 period of time from the initial visit to the
15 follow-up, usually about three months later, and
16 the dramatic improvements that we see take place
17 over a longer period of time.

18 Q. So you do not see dramatic improvements
19 after your patients begin gender-affirming medical
20 care; is that right?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: We do see dramatic
23 improvements in our patients after they begin
24 gender-affirming medical care over time.

25 Q. (BY MR. RAMER) And is that measured

1 anywhere?

2 A. It's not in -- it's measured in the
3 patient's electronic medical records.

4 Q. Is it measured in a format for you to
5 make the conclusion that you see dramatic
6 improvements based on PHQ-9 and GAD-7 scores?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: It's not collated in a
9 database, but it is something that we look at at
10 every single visit, their score and their numbers,
11 the total score, and again, how they answer each
12 of the questions from last visit to this visit,
13 the next visit, and so on.

14 Q. (BY MR. RAMER) And when you say
15 improvement is over a longer term, what kind of
16 length are you talking about?

17 A. Well, it really varies. And so for some
18 patients, it is a shorter period of time.

19 For some patients it might take a longer
20 period of time. It might take six months. It
21 might take eight months. It really depends on a
22 lot of factors.

23 Q. And have you seen a dramatic improvement
24 in a statistically significant measure?

25 A. In our clinic?

1 Q. Correct.

2 A. No. We haven't studied that.

3 Q. Just going back to the exhibit -- let's
4 see what number that is. Oh, Exhibit 13, 11 file
5 name, I'd like to go to page 199. And left
6 column, first full paragraph, second sentence.

7 A. Excuse me, before the next question, can
8 I just clarify my last answer?

9 Q. Sure.

10 A. The question I believe was have we
11 observed a statistically significant difference in
12 our clinic patient population? And -- is that the
13 question? Was that the question?

14 Q. It may have been. Let's assume that's
15 the question. Go ahead.

16 A. I meant to say that we have not
17 specifically done a study to assess that.

18 Q. Okay. So page 199, left column, first
19 full paragraph, second sentence. I just want to
20 read this and ask if I read it correctly.

21 It says "While some evidence to date
22 lends strong support for symptom improvement over
23 time, the current study suggests changes likely
24 occur gradually and may not begin to occur until
25 several months into treatment."

1 Did I read that correctly?

2 A. Yes.

3 Q. And after you say "some evidence to
4 date," then "strong support for symptom
5 improvement over time," you cite endnote 4 and
6 then endnotes 12 through 16; is that right?

7 A. Yes.

8 Q. And if we flip down to endnotes 12
9 through 16, as you sit here today, do you know
10 whether any of those studies involved individuals
11 under 18 years of age?

12 A. I can't say just looking at the titles.

13 Q. Okay. In the other study you cited in
14 endnote 4, that is de Vries.

15 Do you see that?

16 A. Yes.

17 Q. And we've gone a little over an hour. Do
18 you want to take a break or keep going? Up to
19 you.

20 A. I can keep going.

21 Q. Okay. So on the same article, on
22 page 198, right column, the only full paragraph in
23 that column and the last sentence right before the
24 conclusion, I'm just going to read that and ask if
25 I read it correctly.

1 It says "Similarly, there were no
2 differences in the endorsement of suicidal
3 ideation between initial and follow-up visit for
4 youth who did versus did not initiate
5 gender-affirming hormones."

6 Did I read that correctly?

7 A. Yes.

8 Q. And same page, left column, only full
9 paragraph in that column, the last sentence.

10 It says "Of the 27 (34 percent) youth who
11 endorsed suicidality at intake, 22 (81 percent)
12 continued to endorse suicidality at their
13 follow-up visit, and only 4 (4 percent) no longer
14 endorsed suicidality at follow-up."

15 Did I read that correctly?

16 A. Yes.

17 Q. And are those statements reflective of
18 your -- are those statements accurate?

19 A. Specific to this paper?

20 Q. Yes.

21 A. I'm just going to look back at the
22 tables.

23 Q. Yeah. That's fine. And if you don't
24 know, that's fine. We can move on.

25 A. The only thing, I can't recall where the

Dr. Kara Connelly August 28, 2023

1 actual numbers, the 27 and 34 percent, I just -- I
2 can't find them in the paper.

3 Q. That's fine. That's fine. So moving on
4 from this article, are you familiar with the term
5 "the Dutch studies"?

6 MS. NOWLIN-SOHL: Object to form.

7 THE WITNESS: Can you be a little more
8 specific about what you mean by "the Dutch
9 studies"?

10 Q. (BY MR. RAMER) Just the studies that
11 came out of the Netherlands, sometimes referred
12 to, you know, as establishing the Dutch protocol.

13 MS. NOWLIN-SOHL: Object to form.

14 THE WITNESS: I'm familiar with studies
15 out of the -- reporting on outcomes from the
16 clinic in the Netherlands.

17 Q. (BY MR. RAMER) And going to your
18 declaration, page 10, paragraph 32, note 7, you
19 cite the first citation is the de Vries article,
20 correct?

21 A. Yes.

22 Q. And do you cite another de Vries article
23 in this footnote?

24 A. Yes, there are two.

25 Q. Okay. And these studies came out of the

1 work in the Netherlands that you were previously
2 describing, correct?

3 A. Yes.

4 Q. And in paragraph 32, you cite these
5 studies for the proposition that treatment with
6 puberty blockers and cross-sex hormones is
7 associated with improvement in mental health,
8 correct?

9 A. I'm sorry. Can you tell me again where
10 that is written?

11 Q. Yeah. I'm just looking at -- so on
12 paragraph 32, you have the little footnote 7 at
13 the end.

14 And the way I read it -- and please
15 correct me if I'm wrong -- is that the studies
16 you're citing in footnote 7, you're citing for the
17 proposition that treatment is associated with
18 improvement in mental health.

19 A. Yes.

20 Q. And in the paragraph 32, you're talking
21 about puberty blockers and hormone therapy,
22 correct?

23 A. Yes, but some of the studies look more
24 specifically at one of the treatment -- one of
25 those treatments versus the others, and some

1 looked at both.

2 Q. That's fair. Understood.

3 Do you recall whether the subjects in
4 these two de Vries articles were receiving
5 psychotherapy?

6 A. Can you be more specific about what you
7 mean by "psychotherapy"?

8 Q. What do you understand that term to mean?

9 A. Ongoing -- ongoing therapy throughout the
10 course of their treatment.

11 Q. Yeah, let's go with that.

12 Do you understand the subjects in the
13 de Vries studies to be receiving that?

14 A. I can't recall that.

15 Q. If they were receiving that
16 psychotherapy, do you think that would be a
17 confounding variable in these studies?

18 MS. NOWLIN-SOHL: Object to form;
19 foundation.

20 THE WITNESS: I don't think that that --
21 I wouldn't consider that a confounding variable in
22 these studies.

23 Q. (BY MR. RAMER) And why not?

24 A. I would just think of it as something
25 separate than the different medical interventions

1 that they're undergoing, yeah.

2 Q. If you had a study and the subjects were
3 receiving medical interventions while also
4 receiving psychotherapy at the same time and the
5 study showed an improvement, do you not think that
6 the psychotherapy would be a confounding variable?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: I think it would really
9 depend on how the study was designed.

10 Q. (BY MR. RAMER) In what way?

11 A. Well, if it was being considered a
12 variable, it would have to be -- and, you know, it
13 would have to be something that was consistently
14 done the same way, or differently.

15 It's hard to just characterize it as a
16 confounding variable without knowing what
17 psychotherapy actually entailed.

18 Q. So I guess depending on what the
19 psychotherapy entailed, it could be a confounding
20 variable; is that right?

21 A. I don't know that I could characterize it
22 as a confounding variable without knowing --
23 without really knowing more about what that
24 psychotherapy entailed and how it was being
25 utilized in the patient population.

1 Q. And so lack of knowledge about the
2 psychotherapy would potentially be an indication
3 of a confounding variable, right?

4 MS. NOWLIN-SOHL: Object to form.

5 THE WITNESS: Can you repeat that
6 question?

7 Q. (BY MR. RAMER) I guess I thought your
8 answer was you can't say it's a confounding
9 variable if you don't know what the psychotherapy
10 was; is that right?

11 A. I would say that it would be hard to say
12 that it's a confounding variable without -- yeah,
13 without knowing what that is or what that means to
14 know if it's -- if it is having any influence on
15 the individuals separate from the medical
16 interventions that they are receiving.

17 Q. Well, isn't the point of a confounding
18 variable that you don't know what is influencing
19 what and that's why it's a study limitation?

20 MS. NOWLIN-SOHL: Object to form.

21 THE WITNESS: Are you referring to these
22 specific studies?

23 Q. (BY MR. RAMER) Now I'm just asking in
24 the -- as a concept based on your answer of
25 whether psychotherapy was a confounding variable

1 in these studies.

2 And I guess I'm misunderstanding because
3 the hypothetical -- let me just -- I'll restate
4 it.

5 The hypothetical is you have a study
6 where the subjects were receiving medical
7 interventions at the same time they were receiving
8 psychotherapy, and the study shows an improvement.

9 And my question is can you conclude from
10 that that the medical interventions caused the
11 improvement?

12 MS. NOWLIN-SOHL: Object to the form.

13 THE WITNESS: I don't know that you can't
14 make that conclusion.

15 And again, because the psychotherapy, if
16 it's not part of the study design where we know
17 that all patients are having the same experience
18 and receiving the same treatment in terms of
19 psychotherapy, I don't think that that can be
20 included in drawing conclusions about the outcomes
21 of the medical interventions.

22 Q. (BY MR. RAMER) And what if the
23 psychotherapy was part of the study design and all
24 the patients were receiving psychotherapy?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: What -- and in that case --
2 and then what's the question?

3 Q. (BY MR. RAMER) So backing out, the
4 hypothetical is all the patients are receiving
5 medical interventions; all the patients are
6 receiving the same psychotherapy, and then you see
7 a benefit from those treatments.

8 Can you conclude that the benefit came
9 from the medical interventions?

10 MS. NOWLIN-SOHL: Object to form; asked
11 and answered.

12 THE WITNESS: In that study design, I
13 don't think that you can draw the conclusion that
14 the outcomes or improvements aren't from the
15 medical interventions and -- yeah.

16 Q. (BY MR. RAMER) Okay. Let's go back to
17 footnote 7 of your declaration.

18 Do you want to take a -- we can take a
19 break as well if you --

20 A. Sure.

21 MS. NOWLIN-SOHL: Yeah, let's do that.

22 MR. RAMER: Okay. So I have about 16.
23 Do you want to say 25 after so, like, nine minutes
24 or so?

25 MS. NOWLIN-SOHL: That sounds good.

Dr. Kara Connelly August 28, 2023

1 MR. RAMER: All right. Let's do that.

2 THE VIDEOGRAPHER: Okay. So the time is
3 4:16 p.m. Mountain time, and we are off the
4 record.

5 (Break taken from 4:16 p.m. to 4:27 p.m.)

6 THE VIDEOGRAPHER: All right. So we are
7 recording. The time is 4:27 p.m. Mountain time,
8 and we are back on the record.

9 Q. (BY MR. RAMER) Okay. Dr. Connelly, I'd
10 like to go to your declaration, same page 10,
11 footnote 7.

12 And in this footnote, you also cite a
13 study by Chen, correct?

14 A. Sorry. I'm just looking for it. Yes.

15 MR. RAMER: Okay. And, Li, we sent
16 Connelly Exhibit 15 which has a 12 in the file
17 name.

18 MS. NOWLIN-SOHL: Okay.

19 (Deposition Exhibit No. 15 was marked.)

20 Q. (BY MR. RAMER) Doctor, have you seen
21 this article before?

22 A. Article 10 --

23 Q. Sorry, yes. Partway down starts with
24 "Growing evidence."

25 Have you seen this before?

Dr. Kara Connelly August 28, 2023

1 A. I don't recall seeing this article.

2 Q. Okay. And do you recognize the name of
3 the lead author?

4 A. Dr. de Vries or Dr. Hannema? But yes, I
5 recognize the names.

6 Q. Okay. And toward the bottom, you can see
7 the kind of smaller print below the paragraphs.

8 The date on this is January 19, 2023,
9 correct?

10 A. Yes.

11 Q. And this editorial is reviewing the Chen
12 article that you cite, correct?

13 A. I have to go down to the footnote. Okay.
14 Yes.

15 Q. And I'd like to go down to page 276,
16 which is the second page, and look in the left
17 column, the second full paragraph and the second
18 sentence. I'll read it and ask if I read it
19 correctly.

20 It says "Although overall psychological
21 functioning in the study participants improved,
22 there was substantial variation among
23 participants, a considerable number still had
24 depression, anxiety, or both at 24 months, and two
25 died by suicide."

Page 205

Dr. Kara Connelly August 28, 2023

1 Did I read that correctly?

2 A. Yes.

3 Q. And were you aware of these facts before
4 you cited the Chen article?

5 A. I was -- I read the Chen article, and I
6 would have to go back to the Chen article to be
7 sure that this -- these statements are accurate.

8 Q. And two sentences down, it says -- and
9 I'll read it and ask if I read it correctly.

10 It says "However, other possible
11 determinants of outcomes were not reported,
12 particularly the extent of mental health care
13 provided throughout GAH treatment."

14 Did I read that correctly?

15 A. Yes.

16 Q. What is your understanding of what
17 de Vries and the co-author are saying there?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: What is my interpretation
20 of that sentence?

21 Q. (BY MR. RAMER) What do you understand
22 that sentence to be saying? Yes.

23 MS. NOWLIN-SOHL: Objection; foundation.
24 If you need to look at this article, you can.

25 Q. (BY MR. RAMER) And if you don't know as

Dr. Kara Connelly August 28, 2023

1 you sit here, that's fine.

2 A. Yeah, I don't know what -- I don't know
3 what they're referring to in that statement
4 without looking at the rest of it and seeing how
5 it correlates with the Chen article.

6 Q. All right. And so same editorial right
7 column, second full paragraph that begins with
8 "Finally." And I'll just read this sentence and
9 ask if I read it correctly.

10 It says "Finally, benefits of early
11 medical intervention, including puberty
12 suppression, need to be weighed against possible
13 adverse effects, for example, with regard to bone
14 and brain development and fertility."

15 Did I read that correctly?

16 A. Yes.

17 Q. Do you see where de Vries mentions
18 possible effect on brain development?

19 A. In that sentence?

20 Q. Yes.

21 A. Yes.

22 Q. And what do you know about the risk of
23 adverse effects on brain development from puberty
24 suppression?

25 A. What do I know about adverse effects on

1 brain development?

2 Q. Correct.

3 A. Just in general?

4 Q. Yes.

5 A. I don't think there's enough data to draw
6 conclusions about adverse effects on brain
7 development in patients treated with medical
8 interventions.

9 Q. Is adolescence associated with
10 significant neurodevelopment?

11 A. Can you be more specific about
12 neurodevelopment?

13 Q. Yeah, I guess maybe we'll do it this way.
14 We'll go to Connelly Exhibit 16, which has a 13 in
15 the file name.

16 (Deposition Exhibit No. 16 was marked.)

17 Q. (BY MR. RAMER) And, Doctor, have you
18 seen this article before?

19 A. I don't recall seeing it before.

20 Q. Do you recognize the name of the lead
21 author?

22 A. Diane Chen.

23 Q. Is that the same Chen that you cite in
24 your declaration?

25 A. Yes, I believe so.

1 Q. And I understand you haven't read this,
2 but I just want to make sure I understand the
3 scope of your expert opinion. And I'd like to go
4 to page 254 and specifically the left column.
5 There's the bold "Discussion" header, and then I'd
6 like to read the second sentence, and I'll ask if
7 I read it correctly.

8 It says "However, puberty is a major
9 developmental process and the full consequences
10 (both beneficial and adverse) of suppressing
11 endogenous puberty are not yet understood."

12 Did I read that correctly?

13 A. Yes.

14 Q. And do you agree that the full
15 consequences of suppressing endogenous puberty are
16 not yet understood?

17 A. I think I would need to look at this in a
18 little more depth.

19 Q. Okay. Well, let's go to page 249. And
20 right column, first full paragraph, first sentence
21 and then the italics after that. I'll read it and
22 ask if I read it correctly.

23 "We employed a two-round Delphi procedure
24 to obtain expert consensus regarding the most
25 efficacious research design elements to address

1 the following research question: What, if any,
2 real-world impact does pubertal suppression have
3 on transgender children's cognitive and neural
4 development?"

5 Did I read that correctly?

6 A. Yes.

7 Q. And do you know the answer to that
8 question?

9 MS. NOWLIN-SOHL: Object to form;
10 foundation.

11 THE WITNESS: The answer to the question
12 in italics?

13 Q. (BY MR. RAMER) Correct. Do you know the
14 answer to the question "What, if any, real-world
15 impacts does pubertal suppression have on
16 transgender children's cognitive and neural
17 development?"

18 MS. NOWLIN-SOHL: Same objections.

19 THE WITNESS: I don't think I can
20 formulate an answer to that question without
21 knowing what exactly it's referring to in terms of
22 real-world impact and what specifically it's
23 referring to on cognitive and neural development.

24 Q. (BY MR. RAMER) So what would you need to
25 know?

1 A. I'm not sure what it means by "real-world
2 impact." And then specifically what aspects of
3 cognitive and neural development they're referring
4 to.

5 Q. Do you know what effect pubertal
6 suppression has on an individual's cognitive and
7 neural development?

8 A. I don't know that there is enough
9 published data on that to be able to make a
10 general statement without looking at -- without
11 being more specific.

12 Q. Okay. Let's go to page 248. And left
13 column, the second full paragraph, so it's toward
14 the bottom. And I'm going to read the second
15 sentence and ask if I read it correctly.

16 It says "Animal studies demonstrate
17 pubertal hormones exert broad neuronal influence,
18 including effects on neurogenesis,
19 differentiation, apoptosis, dendritic branching,
20 spine density, and regional gray and white matter
21 volumes."

22 And apart from almost certain
23 mispronunciations, did I read that correctly?

24 A. Yes.

25 Q. And why do you think the authors of this

Dr. Kara Connelly August 28, 2023

1 study are mentioning studies on animals?

2 MS. NOWLIN-SOHL: Objection; speculation.

3 THE WITNESS: I don't know. I can't
4 answer that.

5 Q. (BY MR. RAMER) Do you agree that medical
6 research often begins by studying the effects of
7 research on animals such as rodents?

8 A. Some research studies involve animals,
9 but not all.

10 Q. And you've published studies conducting
11 medical research on rodents before, right?

12 A. Yes.

13 Q. And do you agree that ethical principles
14 often require experiments be done on animals
15 before they are done on humans?

16 A. It depends on -- it depends on what's
17 being studied. Sometimes it may not be either
18 feasible, if we can't develop an appropriate
19 animal model, or may not be appropriate, or may
20 not be generalizable to non -- or to humans.

21 Q. So it's true that in some situations
22 ethical principles would require that experiments
23 be done on animals before they are done on humans,
24 right?

25 A. I don't know that ethical principles

Page 212

1 require that some experiments be done on animals.
2 It depends on -- it depends on what's being
3 studied.

4 Q. Right. And is there any instance where
5 ethical principles would suggest you need to study
6 the effect on animals before you study the effect
7 on humans?

8 A. I guess what do you mean by "ethical
9 principles"?

10 Q. What do you understand that term to mean
11 in the context of medicine?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: It means a wide range of
14 things that are pertaining to ethical principles.

15 Q. (BY MR. RAMER) What do you think the
16 term means in the context of research?

17 A. Again, I think it can -- it means a --
18 there's a lot of things that go into ethical
19 principles of conducting research.

20 Q. Okay. So you've conducted research
21 conducting -- I'm sorry.

22 You've conducted medical research on
23 rodents before, correct?

24 A. Yes.

25 Q. And why did you conduct that research on

1 rodents rather than humans?

2 A. That specific -- the specific projects
3 that I did?

4 Q. Yes.

5 A. Well, it was to look specifically at
6 specific -- changes of different treatments
7 specific to the animals and the outcomes in the
8 animals.

9 Q. So you were conducting that study because
10 you wanted to know the effect on the animals?

11 A. Yes. And it was under the guidance and
12 supervision of my research mentor, who was the
13 principal investigator of the study.

14 Q. And why did you want to know the effect
15 of the treatment on animals?

16 A. We were learning how -- or my research
17 mentor, principal investigator of the study, it
18 was an expert in bone development in rodents. And
19 that was part of his research program to better
20 understand the components of bone development in
21 rodents.

22 Q. Isn't it true the reason you want to
23 understand bone development in rodents is so that
24 you can make conclusions about bone development in
25 humans?

1 A. Not always.

2 Q. Right. But in that study, were you
3 studying rodents for the sake of studying rodents?

4 A. Yes.

5 Q. Okay. I'd like to go to page 253. And
6 right column, the -- it's just unfortunately a
7 block of text. And I'd like to go to the sentence
8 a little over halfway down that begins with "In
9 addition." And I'd just like to read that and see
10 if I read it correctly.

11 It says "In addition,
12 cognitive/behavioral flexibility, a component of
13 executive functioning, should be measured given
14 that studies in rodents show ovarian hormones
15 acting during puberty, program cognitive
16 flexibility by exerting long-lasting effects on
17 excitatory-inhibitory balance in the prefrontal
18 cortex."

19 And did I read that correctly?

20 A. Yes.

21 Q. And do you agree that rodent studies have
22 shown that ovarian hormones can have lasting
23 effects in brain development?

24 A. I am not familiar with the studies
25 looking at -- looking at that specifically in

1 rodents.

2 Q. If a scientist is faced with animal
3 studies reporting that pubertal hormones have
4 long-lasting effects on brain development,
5 shouldn't that scientist conclude there's some
6 possibility that pubertal hormones may also have
7 long-lasting effects on brain development in
8 humans?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: I think it's too hard to
11 make that statement. There are -- there's too
12 many variables that would need to be considered to
13 make that statement.

14 Q. (BY MR. RAMER) Before seeing this
15 article today, were you aware of reference in
16 literature regarding the effect of pubertal
17 suppression on brain development in animals?

18 MS. NOWLIN-SOHL: Sorry, could you repeat
19 that, John?

20 Q. (BY MR. RAMER) Before seeing this
21 article, were you aware of references in
22 literature regarding the effect of pubertal
23 suppression on brain development in animals?

24 A. Not that I can recall.

25 Q. And now that you are aware, does this

1 cause you as a clinician to want to know the
2 answer to the question of whether puberty blockers
3 have long-lasting effects on brain development in
4 a human?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: Can you repeat the
7 question?

8 Q. (BY MR. RAMER) Now that you are aware,
9 does this cause you as a clinician to want to know
10 the answer as to whether puberty blockers have
11 long-lasting effects on brain development in
12 humans?

13 MS. NOWLIN-SOHL: Same objection.

14 THE WITNESS: Having read this statement
15 about studies in rodents and hormones during
16 puberty does not change -- does not have an impact
17 on how I want to know the effects of pubertal
18 suppression on brain development in humans.

19 Q. (BY MR. RAMER) So this doesn't concern
20 you?

21 A. This does not --

22 MS. NOWLIN-SOHL: Objection to form;
23 mischaracterization of testimony.

24 THE WITNESS: This does not have an
25 impact on how I think about that question.

1 Q. (BY MR. RAMER) And why not?

2 A. Well, because I haven't read the study
3 and would need to look at the study to really
4 understand more about that statement.

5 Q. Do you want to learn more about that
6 statement given what we just read?

7 A. Do I want to learn more about ovarian
8 hormones acting during puberty programming
9 cognitive flexibility by exerting long-lasting
10 effects on excitatory-inhibitory balance in the
11 prefrontal cortex?

12 Q. Yes. Does reading that sentence lead you
13 to want to know whether that holds true in humans?

14 A. Well, I want to know if that holds true
15 in humans regardless of what is found in rodents.

16 Q. And do you know if that holds true in
17 humans?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: This exact statement?

20 Q. (BY MR. RAMER) That puberty suppression
21 can have long-lasting effects on brain
22 development, yes.

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: Okay. I'm sorry. I am
25 confused by the question.

Dr. Kara Connelly August 28, 2023

1 Q. (BY MR. RAMER) I guess I'll ask it this
2 way: If you were presented with a study that says
3 pubertal suppression has a long-lasting
4 neurological effect on rodents, as a clinician,
5 would that concern you with respect to prescribing
6 puberty blockers to suppress puberty in humans?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: Again, it would depend on
9 what specific concerns or developmental changes
10 were observed, especially in the recognition that
11 brains of rodents are different than brains of
12 humans and that the changes in rodent brains from
13 pubertal suppression may not be generalizable to
14 the human population.

15 Q. (BY MR. RAMER) Do you think you'll read
16 this study in full after this deposition?

17 A. I was not planning on it.

18 Q. Okay. I'd like to go to page 252. Left
19 column, about halfway down of that paragraph, and
20 there's a sentence that starts with "The effects
21 of pubertal suppression."

22 Do you see that?

23 A. Yes.

24 Q. Okay. I'm just going to read those two
25 sentences and ask if I read them correctly.

1 It says "The effects of pubertal
2 suppression may not appear for several years. Any
3 GnRHa related difference in brain structure is
4 likely to be observed over the long term rather
5 than immediately."

6 Did I read that correctly?

7 A. Yes.

8 Q. And do you agree with those statements?

9 MS. NOWLIN-SOHL: Objection; foundation.

10 THE WITNESS: I would need to read more
11 of this paper to be able to answer that.

12 Q. (BY MR. RAMER) Do you think the question
13 of the effect of pubertal suppression on brain
14 structure is beyond the scope of your expertise?

15 MS. NOWLIN-SOHL: Object to form.

16 THE WITNESS: Can you repeat the
17 question?

18 Q. (BY MR. RAMER) Do you think that the
19 effect of pubertal suppression on brain structure
20 is beyond the scope of your expertise?

21 MS. NOWLIN-SOHL: Same objection.

22 THE WITNESS: I would not consider myself
23 an expert in the effects of pubertal suppression
24 on brain structure.

25 Q. (BY MR. RAMER) Okay. I'd like to go to

Dr. Kara Connelly August 28, 2023

1 page -- and I think it's my last question on
2 this -- page 255, and left column, second full
3 paragraph, third sentence. It starts with the
4 word "Yet."

5 Do you see that?

6 A. Yes.

7 Q. I'm going to read that sentence and the
8 one after and ask if I read it correctly.

9 It says "Yet, evidence suggests an
10 over-occurrence of neurodiversity characteristics,
11 (especially related to autism) among
12 gender-referred youth. The neurodevelopmental
13 impacts of pubertal suppression on neurodiverse,
14 gender-diverse youth might well be different than
15 in neurotypical gender-diverse youth given
16 variations in neurodevelopmental trajectories
17 observed across neurodevelopmental conditions."

18 Did I read that correctly?

19 A. Yes.

20 Q. Is it consistent with your own clinical
21 observations that young people with neurodiverse
22 characteristics such as autism are
23 disproportionately represented in your clinic as
24 compared to the general population?

25 A. I can't say that with certainty. Our

Page 221

1 behavioral health team would be able to answer
2 that more accurately.

3 Q. Are you aware of any study researching
4 the effect of puberty blockers on neurodevelopment
5 in adolescents with neurodiverse characteristics?

6 A. Can you repeat the question one more
7 time?

8 Q. Are you aware of any study researching
9 the effect of puberty blockers on neurodevelopment
10 in adolescents with neurodiverse characteristics?

11 A. I can't think of any studies that looked
12 at that specific question only.

13 Q. Does that mean you think there are
14 studies that look at that question in addition to
15 other questions? Or what do you mean by that?

16 A. Well, I can't think of a study that was
17 only looking at effects of pubertal suppression on
18 the -- on neurodivergent people.

19 Q. I'm getting -- sorry. The "only" is
20 tripping me up a little.

21 What do you mean by you're not aware of
22 studies looking at only that?

23 A. That don't also include individuals who
24 were not neurodivergent.

25 Q. Okay. So the point is you're not aware

Dr. Kara Connelly August 28, 2023

1 of a study that looks at the effect on
2 neurodiverse individuals specifically; is that
3 right?

4 A. Not any that immediately come to mind.

5 Q. I'd like to flip back to your
6 declaration, page 5, paragraph 20, second
7 sentence. And I'll just read it and ask if I read
8 it correctly.

9 It says "While some European national
10 health authorities have issued guidelines
11 recommending caution about providing such care, or
12 providing that such care should occur in clinical
13 research settings, care is provided when deemed
14 appropriate for adolescents."

15 Did I read that correctly?

16 A. Yes.

17 Q. And what European national health
18 authorities are you referring to there?

19 A. Generally -- you mean like which
20 countries?

21 Q. Yeah.

22 A. So Sweden, U.K., and Finland are the ones
23 that primarily come to mind.

24 Q. And why have European national health
25 authorities been recommending caution?

Page 223

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Object to form;
2 foundation.

3 THE WITNESS: I can't say why the
4 authorities have made the decisions that they
5 have. I haven't participated in the -- in the
6 creation of those statements.

7 I've only -- I'm only familiar with the
8 statements that they have made, but not
9 necessarily all of the reasons why they've come to
10 those conclusions.

11 Q. (BY MR. RAMER) Do any of the statements
12 that you've reviewed explain why they've come to
13 those conclusions?

14 A. Some of them have used available data and
15 research to guide their recommendations that care
16 should be -- guide their recommendations about how
17 care should be provided.

18 MR. RAMER: Okay. Let's look at Connelly
19 Exhibit 17, which has a 15 in the file name.

20 (Deposition Exhibit No. 17 was marked.)

21 THE WITNESS: I think we have it.

22 Q. (BY MR. RAMER) Okay. And have you seen
23 this document before?

24 A. I have to look. I haven't seen it in
25 this format. And I can't tell -- I haven't seen

Dr. Kara Connelly August 28, 2023

1 it in this format, and I can't tell what year it
2 was released or where this was obtained.

3 Q. Okay. So in other words, have you seen
4 something similar to this before? Is that what
5 you're recalling?

6 A. I have seen recommendations by the
7 National Board of Health and Welfare in Sweden
8 about the -- their recommendations for the
9 provision of gender-affirming care for youth.

10 Q. I'd like to go to page 3. Do you see
11 there's a bold "Recommendations and Criteria For
12 Hormonal Treatment" in the center of the page?
13 And I'd like to read the first sentence, and then
14 I'll ask if I read it correctly.

15 It says "For adolescents with gender
16 incongruence, the NBHW deems that the risks of
17 puberty-suppressing treatment with GnRH-analogues
18 and gender-affirming hormonal treatment currently
19 outweigh the possible benefits and that the
20 treatment should be offered only in exceptional
21 cases."

22 Did I read that correctly?

23 A. Yes.

24 Q. Is it fair to say that Sweden is
25 recommending caution because the risks of puberty

Page 225

1 blockers and gender-affirming treatment are likely
2 to outweigh the benefits?

3 A. My interpretation of that statement is
4 that the National Board of Health and Welfare
5 has -- or is making the claim that the risks of
6 these treatments outweigh the benefits, and that
7 the care should continue to be provided in
8 exceptional cases and then in research settings,
9 primarily.

10 Q. Do you disagree with the statement here
11 that the risks of puberty blockers and
12 gender-affirming treatment -- am I reading --
13 sorry. I'm omitting a sentence. Let me rephrase
14 that.

15 Do you disagree with the statement here
16 that the risks of puberty-suppressing treatment
17 with GnRH-analogues and gender-affirming hormonal
18 treatment currently outweigh the possible
19 benefits?

20 MS. NOWLIN-SOHL: Objection.

21 THE WITNESS: Yeah, I don't agree with
22 that statement.

23 Q. (BY MR. RAMER) And on what basis do you
24 disagree?

25 A. On the basis of the research that is

1 available.

2 Q. Meaning the articles you cite in your
3 declaration?

4 A. Yes.

5 Q. So looking at the following sentence
6 here, I'll just read it again and ask if I read it
7 correctly.

8 It says "This judgment is based mainly on
9 three factors, the continued lack of reliable
10 scientific" -- excuse me. I'll start again.

11 "This judgment is based mainly on three
12 factors, the continued lack of reliable scientific
13 evidence concerning the efficacy and the safety of
14 both treatments, the new knowledge that
15 detransition occurs among young adults, and the
16 uncertainty that follows from the yet-unexplained
17 increase in the number of care seekers, an
18 increase particularly large among adolescents
19 registered as females at birth."

20 Did I read that correctly?

21 A. Yes.

22 Q. In their third factor they list here
23 refers to an unexplained increase in the number of
24 care seekers, which it says "is particularly large
25 among adolescents registered as females at birth."

Dr. Kara Connelly August 28, 2023

1 Do you see that?

2 A. Yes.

3 Q. Do you agree there's been an unexplained
4 increase in the number of youth seeking this care?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: I can agree that -- I can
7 say that there has been in some clinics an
8 increase in the number of individuals assigned
9 female at birth that are being seen at gender
10 clinics.

11 Q. (BY MR. RAMER) And what is the
12 explanation for that?

13 MS. NOWLIN-SOHL: Object to form.

14 THE WITNESS: Well, I think that there
15 are likely a variety of factors that may influence
16 that, but I've -- I don't know that I can -- that
17 anyone can say with certainty exactly what has led
18 to that.

19 Q. (BY MR. RAMER) So do you agree, then,
20 that it's unexplained?

21 A. I wouldn't say that it's unexplained. I
22 think that, again, there are likely a variety of
23 factors that have been considered as influence --
24 at least partially influencing that.

25 Q. And in that sentence I read, the second

1 factor is the knowledge that detransition occurs
2 among young adults.

3 Do you see that?

4 A. Yes.

5 Q. And do you agree with that statement?

6 MS. NOWLIN-SOHL: Object to form.

7 THE WITNESS: I think that's a -- I
8 wouldn't say that I agree with that statement in
9 the way that it is phrased.

10 Q. (BY MR. RAMER) Do you agree that
11 detransition occurs among young adults?

12 A. I think that some individuals may say
13 that their experience -- that they would
14 characterize their experience as detransitioning.

15 Q. And the first factor listed here is the
16 continued lack of scientific evidence concerning
17 the efficacy and safety of using puberty blockers
18 and cross-sex hormones.

19 Do you see that?

20 A. Yes.

21 Q. I assume you disagree with that
22 statement; is that right?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: Yeah, I would not say that
25 there is a lack of reliable scientific evidence

1 concerning the efficacy and the safety of the
2 treatments.

3 Q. (BY MR. RAMER) And is the basis for that
4 disagreement the articles you cite in your
5 declaration?

6 MS. NOWLIN-SOHL: Object to form.

7 THE WITNESS: Yes.

8 Q. (BY MR. RAMER) So same document, same
9 page, the following paragraph. The first sentence
10 references a systematic review published in 2022
11 by the Swedish Agency for Health, Technology,
12 Assessment, and Assessment of Social Services.

13 Do you see that?

14 A. Yes.

15 Q. Have you read that systematic review?

16 A. Yes.

17 Q. Did you review the appendix? Let me
18 rephrase.

19 Did you review the appendices to that
20 systematic review?

21 A. I'm not sure.

22 MR. RAMER: Let's turn to Connelly
23 Exhibit 18, which has a 16 in the file name.

24 (Deposition Exhibit No. 18 was marked.)

25 Q. (BY MR. RAMER) Have you seen this

1 document before?

2 A. This does not look familiar.

3 Q. Obviously some of this is in Swedish.

4 I'm only going to ask you about the English.

5 Toward the top, there is kind of a header
6 in the upper right. And then there's a backslash
7 and then there's English. And it says "Hormone
8 treatment of children and adolescents with gender
9 dysphoria."

10 Do you see that?

11 A. Yes.

12 Q. And then as you move down to the light
13 blue text below, after the slash, in English it
14 says "Appendix 2 studies excluded due to high risk
15 of bias."

16 Do you see that?

17 A. Yes.

18 Q. And then below that after the backslash
19 in English, it says "Studies with high risk of
20 bias."

21 Do you see that?

22 A. Yes.

23 Q. And the very first study listed, is that
24 a study you cite in footnote 7 of your
25 declaration?

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Real quick, John, where
2 does this document come from?

3 MR. RAMER: What do you mean?

4 MS. NOWLIN-SOHL: So it's appendix 2.
5 What is it appendix 2 to?

6 MR. RAMER: My understanding it's
7 appendix 2 to the system -- Swedish systematic
8 review.

9 MS. NOWLIN-SOHL: Okay.

10 Q. (BY MR. RAMER) And, Doctor, my question
11 is the first study listed here, is that a study
12 you cite in footnote 7 of your declaration?

13 A. It may be, but I would have to go back
14 and double-check the title.

15 Q. Okay. And do you recall whether the
16 second study listed here is a study you cite in
17 your declaration?

18 A. I'd have to go back and look at the
19 declaration to be certain.

20 Q. If -- do you have any reason to disagree
21 with the conclusion in this document that the
22 studies listed here have high risk of bias?

23 MS. NOWLIN-SOHL: Objection to form;
24 foundation.

25 THE WITNESS: I would have to review how

1 that conclusion was determined.

2 MR. RAMER: Okay. Let's move on to
3 Exhibit -- Connelly Exhibit 19 that has a 17 in
4 the file name.

5 (Deposition Exhibit No. 19 was marked.)

6 Q. (BY MR. RAMER) And, Doctor, have you
7 seen this document before?

8 A. I have seen this document before.

9 Q. And have you read it before?

10 A. I have read some of it.

11 Q. When you read the parts that you've read,
12 was it your opinion that this document raised any
13 concerns?

14 MS. NOWLIN-SOHL: Object to form.

15 THE WITNESS: I think I would need more
16 specifics about parts, the parts.

17 Q. (BY MR. RAMER) Okay. What do you recall
18 reading in this document?

19 A. I was -- I recall reading how this report
20 was developed and the general summary, but I would
21 need more specifics about what parts you're
22 referring to.

23 Q. Okay. Let's go to page 38.

24 MS. NOWLIN-SOHL: Okay.

25 Q. (BY MR. RAMER) Okay. And right column,

Dr. Kara Connelly August 28, 2023

1 do you see a paragraph that's numbered 3.32?

2 A. Yes.

3 Q. Okay. I'm going to read the first
4 sentence and ask if I read it correctly.

5 It says "A closely linked concern is the
6 unknown impacts on development, maturation, and
7 cognition if a child or young person is not
8 exposed to the physical, psychological,
9 physiological, neurochemical, and sexual changes
10 that accompany adolescent hormone surges."

11 Did I read that correctly? Sorry, I
12 didn't hear you.

13 A. Yes. Yes, you did.

14 Q. And do you agree that the impact of
15 puberty blockers on a child's developmental
16 cognition is currently unknown?

17 MS. NOWLIN-SOHL: Objection; form,
18 foundation, mischaracterizing -- well, yeah.
19 We'll leave it at that.

20 THE WITNESS: Can you repeat the
21 question?

22 Q. (BY MR. RAMER) Do you agree that the
23 impact of puberty blockers on a child's -- let me
24 rephrase.

25 Do you agree that the impact of puberty

Dr. Kara Connelly August 28, 2023

1 blockers on an individual's developmental
2 cognition is currently unknown?

3 MS. NOWLIN-SOHL: Same objections.

4 THE WITNESS: Again, I think that
5 there's -- I would need more specific description
6 of what exactly you mean by "cognition."

7 Q. (BY MR. RAMER) What do you understand --
8 as a clinician, what do you understand cognition
9 to be?

10 A. I think of it as encompassing -- I mean,
11 I'm not a brain expert, but it can include
12 intellectual development.

13 Q. Okay. Same page, same paragraph, but the
14 last sentence. I'll just read it and ask if I
15 read it correctly.

16 It says "If pubertal sex hormones are
17 essential to these brain maturation processes,
18 this raises a secondary question of whether there
19 is a critical time window for the processes to
20 take place or whether catch-up is possible when
21 estrogen or testosterone is introduced later."

22 Did I read that correctly?

23 A. Yes.

24 Q. Are you aware of any study that addresses
25 whether a negative impact on brain maturation due

1 to puberty blockade can be made up later through
2 either endogenous or cross-sex hormones?

3 A. Can you repeat that, please?

4 Q. Yeah. My question is about the last part
5 of this where it's talking about catch-up,
6 c-a-t-c-h u-p.

7 And my question is whether you're aware
8 of any studies that have researched whether the
9 impact from puberty blockade on brain maturation
10 can be made up if an individual is later exposed
11 to either endogenous or cross-sex hormones.

12 A. I'm not aware of studies that have
13 defined -- I can't remember the word that you
14 used. I can't remember if you used the word
15 "detriments" in brain development that look
16 specifically at that -- has defined that and then
17 looked specifically at whether that changes the
18 hormones.

19 MR. RAMER: And then let's move to
20 another exhibit. Should be Connelly Exhibit 20,
21 which has an 18 in the file name, if that came
22 through.

23 (Deposition Exhibit No. 20 was marked.)

24 Q. (BY MR. RAMER) And, Doctor, do you
25 recognize this document?

Dr. Kara Connelly August 28, 2023

1 A. I don't believe that I have read this.

2 MS. NOWLIN-SOHL: Can we give her a
3 minute just to take a look at it?

4 MR. RAMER: Yeah, and I can describe it.

5 Q. (BY MR. RAMER) If it is a systematic
6 review conducted by the U.K.'s National Institute
7 For Health and Care Excellence, is that something
8 you think you've read before?

9 A. Tell me again what -- how you described
10 it.

11 Q. A systematic review conducted by the
12 U.K.'s National Institute For Health and Care
13 Excellence which I read as -- I believe is
14 typically abbreviated as NICE, N-I-C-E.

15 Is that something you've read before?

16 A. I am not sure if I have read it. I need
17 to look at it.

18 Q. Okay. But as you sit here today, you
19 can't recall whether you've ever read this?

20 A. This document?

21 Q. Have you ever read any systematic review
22 conducted by NICE?

23 A. I don't believe that I have.

24 Q. I'd like to go to page 99 of this. And
25 just let me know when you're there.

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Appendix G?

2 MR. RAMER: Correct.

3 MS. NOWLIN-SOHL: Okay. We're there.

4 Q. (BY MR. RAMER) And the study that's
5 being assessed on this page, is this the de Vries
6 study that you cite?

7 A. Is there a place where I can see what the
8 title is?

9 Q. Yeah. Let's go to page 82 and then we'll
10 come back to this.

11 MS. NOWLIN-SOHL: Okay. We're there.

12 Q. (BY MR. RAMER) And is that the study
13 that you cite?

14 A. That's one of them.

15 Q. Okay. So let's go back to 99. And do
16 you see kind of in the middle of the page there's
17 a small footnote 2 in small print?

18 A. Yes.

19 Q. And that footnote says that "The
20 researchers here assess that the de Vries study
21 had a high risk of bias due to poor quality
22 overall, lack of blinding, and no control group,"
23 correct?

24 A. That is what this statement says.

25 Q. And do you disagree with that assessment?

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Objection to form;
2 foundation.

3 THE WITNESS: I would need to go and look
4 at how these assessments and determinations were
5 made in this specific review.

6 Q. (BY MR. RAMER) I guess do you think the
7 de Vries study you cite has a high risk of bias or
8 no?

9 MS. NOWLIN-SOHL: Same objections.

10 THE WITNESS: Again, there's -- bias can
11 mean a lot of different things, and so I would
12 have to see how "bias" is defined here and how the
13 risk of bias was ascertained.

14 Q. (BY MR. RAMER) Under any definition of
15 "bias" that's used in research, do you think that
16 the de Vries study that you cite is bias?

17 MS. NOWLIN-SOHL: Objection to form.

18 THE WITNESS: I can say that this
19 de Vries study is -- as far as I can recall, did
20 not include -- it's correct that it did not
21 include a control group.

22 But I can't say whether it has a high
23 risk of bias.

24 Q. (BY MR. RAMER) Can you say whether it
25 has poor quality overall?

Dr. Kara Connelly August 28, 2023

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: I would not -- I would have
3 to look to see how that is defined in this review.

4 Q. (BY MR. RAMER) Under a normal reading of
5 the phrase "poor quality overall," is there any
6 situation where you would agree that the de Vries
7 study you cite has poor quality overall?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: I would not use those words
10 to describe this study.

11 MS. NOWLIN-SOHL: John, are you at a good
12 stopping spot for a break?

13 MR. RAMER: Yeah. Yeah, let's do that.
14 25. How long would you like?

15 MS. NOWLIN-SOHL: Let's do ten minutes.
16 We might just need to get a little fresh air for a
17 minute.

18 MR. RAMER: That's fine with me.

19 MS. NOWLIN-SOHL: Okay. Thank you.

20 THE VIDEOGRAPHER: Okay. So the time is
21 5:25 p.m. Mountain time, and we are off the
22 record.

23 (Break taken from 5:25 p.m. to 5:38 p.m.)

24 THE VIDEOGRAPHER: All right. We are
25 recording. The time is 5:38 Mountain time, and we

1 are back on the record.

2 (Deposition Exhibit No. 21 was marked.)

3 Q. (BY MR. RAMER) Dr. Connelly, I'd like to
4 turn to Connelly Exhibit 21, which has a 19 in the
5 file name.

6 And have you seen this systematic review
7 from NICE before?

8 A. I'm aware that it exists, and I may have
9 seen it.

10 Q. But you don't specifically recall reading
11 it; is that right?

12 A. I don't recall that I've read this whole
13 review.

14 Q. How much of it would you estimate you
15 have read?

16 A. I've probably read -- well, I've read the
17 conclusions and the -- yeah, mostly focused on the
18 conclusions.

19 Q. And do you recall what the conclusions
20 were?

21 A. I would have to look back and
22 specifically to this review to say.

23 Q. Okay. Let's go to page 13 of this
24 document. And just let me know when you're there.

25 A. Okay.

1 Q. And under "Discussion," kind of the
2 middle of the page, I want to start with the third
3 paragraph below "Discussion." And I'll just read
4 it and ask if I read it correctly.

5 "The included studies have relatively
6 short follow-up with an average duration of
7 treatment with gender-affirming hormones between
8 around 1 year and 5.8 years. Further studies with
9 a longer follow-up are needed to determine the
10 long-term effect of gender-affirming hormones for
11 children and adolescents with gender dysphoria."

12 Did I read that correctly?

13 A. Yes.

14 Q. Do you agree that it will take longer
15 than 5.8 years for some of the effects associated
16 with some of these hormonal interventions to
17 become apparent?

18 A. I think that longer follow-up would
19 definitely add evidence to the existing evidence
20 of the shorter duration studies.

21 Q. And so in other words, we don't know what
22 happens in the longer term; is that right?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: Their -- well, in these
25 particular studies that have only gone for as long

Dr. Kara Connelly August 28, 2023

1 as 5.8 years, we can't make conclusions about what
2 happens longer term in those studies, but there
3 have been some studies that apparently aren't
4 included in this statement that have looked at
5 longer-term outcomes.

6 Q. (BY MR. RAMER) Were those longer-term
7 outcome studies that you're referring to regarding
8 adolescents or children?

9 A. Well, they were regarding treatments that
10 were started during adolescence.

11 Q. And what studies specifically are you
12 referring to?

13 A. So the -- several of the studies from the
14 Netherlands looked at longer-term outcomes than
15 5.8 years. And some of the bone health studies
16 from the Netherlands and Belgium have looked at
17 longer-term outcomes than 5.8 years.

18 Q. And do you recall whether the researchers
19 in this systematic review considered those
20 studies?

21 A. I can't remember. I'd have to look at
22 the references.

23 Q. And I'll just read the next paragraph on
24 the page and ask if I read it correctly.

25 It says "Most studies included in its

1 review did not report comorbidities (physical or
2 mental health), and no study reported concomitant
3 treatments and detail. Because of this, it is not
4 clear whether any changes seen were due to
5 gender-affirming hormones or other treatments the
6 participants may have received."

7 Did I read that correctly?

8 A. Yes.

9 Q. What do you understand this paragraph to
10 be saying?

11 A. My interpretation is that in most of the
12 studies, there may have been comorbidities or
13 concomitant treatments that may have also had an
14 impact or played a role in outcomes.

15 Q. So is this paragraph describing a
16 confounding variable like we discussed earlier?

17 MS. NOWLIN-SOHL: Object to the form.

18 THE WITNESS: It's possible, but again,
19 they're kind of making a summary statement about
20 multiple studies, not any specific ones.

21 Q. (BY MR. RAMER) Right. And the paragraph
22 appears to say that because no study recorded
23 concomitant treatments in detail, it's not clear
24 whether any changes seen were due to
25 gender-affirming hormones or other treatments the

1 participants may have received, right?

2 A. That is what they are saying.

3 Q. And that's similar to the hypothetical I
4 asked earlier today about a study where you have
5 patients receiving medical interventions alongside
6 mental health therapy, right?

7 A. Medical interventions -- and the mental
8 health therapy being a concomitant treatment?

9 Q. Right.

10 A. Yes.

11 Q. Okay. Let's -- we can move on from this
12 document. I'd like to just go back to your
13 declaration now and go to page 11.

14 And the header for part IV says
15 "Gender-Affirming medical care for adolescents is
16 safe"; is that right?

17 A. Yes.

18 Q. And what do you mean by the word "safe"?

19 A. In general, I -- in this case I mean that
20 the benefits likely outweigh the risks.

21 Q. So same page, paragraph 37, and the very
22 last sentence that carries over onto the other
23 page, but my question is only about the part
24 that's on this page.

25 And you say that GnRHa medications are

1 also used to treat endometriosis, correct?

2 A. Yes.

3 Q. And can you explain -- just stepping
4 back, GnRHa medications can also be called puberty
5 blockers, right?

6 A. Yeah. That's a term when they're used
7 for the purposes of suppressing puberty.

8 Q. That's fair. So I'll stick with GnRHa
9 medications.

10 So can you explain how GnRHa medications
11 are used to treat endometriosis?

12 A. I can explain my understanding; however,
13 I have not prescribed them for those indications.

14 And so my understanding is that they're
15 used to suppress endogenous estrogen production to
16 prevent the changes to the uterine lining that can
17 lead to symptoms related to endometriosis.

18 Q. And when an individual is receiving GnRHa
19 medications to treat endometriosis, do you know
20 how long they're on the medication for that
21 treatment?

22 MS. NOWLIN-SOHL: Object to form.

23 THE WITNESS: Since I don't prescribe it
24 for that indication, I can't say with certainty.

25 Q. (BY MR. RAMER) So let's go next page in

1 your declaration, and paragraph 41, and second
2 sentence.

3 You're referring to gynecomastia; is that
4 right?

5 A. Yes.

6 Q. And how is gynecomastia diagnosed?

7 A. It's diagnosed clinically by physical
8 exam.

9 Q. So the diagnosis for gynecomastia does
10 not turn on the presence of psychological
11 distress, correct?

12 A. The diagnosis -- I'm sorry. Can you
13 repeat that?

14 Q. The diagnosis for gynecomastia does not
15 turn on the presence or lack thereof of
16 psychological distress, correct?

17 A. Correct.

18 Q. And same paragraph, next sentence, you
19 refer to either PCOS or PCOS. I don't know how
20 you pronounce it. Which is it?

21 A. I say PCOS.

22 Q. Okay. I will defer to you.

23 And how is PCOS diagnosed?

24 A. PCOS is diagnosed based on clinical and
25 laboratory evaluation.

1 Q. And so the diagnosis for PCOS does not
2 turn on the presence or lack thereof of
3 psychological distress, correct?

4 A. The diagnosis -- the diagnosis is not
5 dependent -- or to establish a diagnosis is not
6 dependent of psychological distress, but some of
7 the treatments for both PCOS and gynecomastia are
8 considered to alleviate psychological distress if
9 they are present in an individual.

10 So the treatment can be influenced by the
11 presence or absence of psychological distress.

12 Q. But gynecomastia is not psychological
13 distress, right?

14 A. The physical condition of gynecomastia is
15 not, but it can in some individuals cause
16 psychological distress.

17 Q. Right. And in your declaration, page 14,
18 paragraph 50, in the first sentence there, you
19 say, "Gender-affirming hormone therapy may have an
20 impact on future fertility potential, although
21 treatment can be tailored to minimize that risk if
22 maintaining fertility is important to the family
23 and there are options for fertility preservation";
24 is that right?

25 A. Yes.

1 Q. And down in footnote 10, your first
2 sentence there, you say, "Many individuals
3 assigned female at birth who take testosterone are
4 able to achieve pregnancy or use assisted
5 reproductive technology to conceive after
6 discontinuing testosterone."

7 Did I read that right?

8 A. Yes.

9 Q. And do you tell that to your patients?

10 A. I tell them that the way that I counsel
11 patients -- and this would be specific to patients
12 assigned female at birth; it's not pertinent to
13 patients assigned male at birth, the specific
14 statement -- but what I explain is that what is
15 known about the impacts of testosterone on future
16 fertility is based on small studies of individuals
17 who start -- who started testosterone as adults in
18 their 20s or older.

19 And that what those small studies have
20 shown is that the majority of the individuals in
21 those studies resumed menstrual cycles after
22 discontinuation of testosterone, and then some of
23 them went on to achieve pregnancy or carry a
24 pregnancy, or had their eggs be for someone else
25 to carry a pregnancy.

1 But where we don't have all of the
2 answers is whether those outcomes are different
3 for individuals who start testosterone at a
4 younger age.

5 Q. In this first sentence in footnote 10,
6 you cite the Light study; is that right?

7 A. Yes.

8 Q. And did the patients in the Light study
9 go through natural puberty before taking
10 testosterone?

11 A. My understanding is that they did.

12 Q. And do you think that the difference
13 between taking testosterone before going through
14 natural puberty on the one hand and taking
15 testosterone after going through natural puberty
16 on the other hand could make a difference in
17 fertility outcomes?

18 A. So are you referring to for patients who
19 have not gone through natural puberty, are you
20 referring to patients who are on puberty blockers?

21 Q. I guess either -- sure, yes, puberty
22 blockers.

23 A. I think it's possible that
24 testosterone -- I'm sorry, can you repeat the
25 specific question?

1 Q. Yeah. It's just do you think that the
2 difference between taking testosterone before
3 going through natural puberty on the one hand and
4 taking testosterone after going through natural
5 puberty on the other hand could make a difference
6 in fertility outcomes?

7 A. I think it's possible.

8 Q. And do you know what the treatment
9 regimen was for the patients in the Light study?

10 A. Can you be more specific about "treatment
11 regimen"?

12 Q. Do you know what -- how they were
13 receiving testosterone? Let me rephrase.

14 Do you know what their treatment regimen
15 for receiving testosterone was in the Light study?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: Do you mean dosage or how
18 it was administered?

19 Q. (BY MR. RAMER) Both.

20 A. I can't remember specific dosages or if
21 they reported on that, but testosterone is
22 generally administered by injection.

23 Q. And in this citation for Light, before it
24 you say "See, e.g."

25 Do you see that?

1 A. Yes.

2 Q. And what does "See, e.g." mean?

3 A. It's an example of a study that is --
4 that I'm referring to or that I'm referencing in
5 making the prior statement.

6 Q. And so are you suggesting there are other
7 studies that support the proposition that many
8 individuals assigned female at birth who take
9 testosterone are able to achieve pregnancy or use
10 assistive reproductive technology to conceive
11 after discontinuing testosterone?

12 A. Yes. There's another reference in the
13 same paragraph.

14 Q. I'm sorry. Can you clarify that answer?
15 What do you mean?

16 A. So were you saying that I'm saying that
17 there are other studies that can --

18 Q. I guess -- sorry.

19 A. -- support the statement?

20 Q. Right. The way I was reading this is you
21 say -- you make this statement at the beginning of
22 footnote 10, and then you say "See, for example,
23 the Light study."

24 And when I read that, it suggests the
25 Light study is just one example that shows the

1 proposition in this first sentence.

2 And my question is can you name another
3 study that demonstrates that proposition?

4 A. Yeah. The second -- the second study
5 following that one or following the next statement
6 can also support the prior statement. It's a
7 study, a completely different way of looking at
8 the question, but it was a study that demonstrated
9 that transgender men can achieve pregnancy,
10 transgender men who have taken testosterone can
11 achieve pregnancy.

12 Q. And just to make sure we're on the same
13 page, are you referencing the Thornton study
14 there?

15 A. Yes.

16 Q. Okay. Are you aware of any study that
17 suggests many individuals who are assigned female
18 at birth who transition during adolescence are
19 able to achieve pregnancy?

20 A. No, not of adolescence. I don't believe
21 that there are any studies that have reported on
22 that specific question in a large population.

23 Q. And in the same footnote, its second to
24 last sentence starts with "Some transgender
25 women."

Dr. Kara Connelly August 28, 2023

1 Do you see that?

2 A. Yes.

3 Q. Do you counsel your patients about this
4 option?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: Can you be more specific
7 about counseling patients about this option for
8 this specific reason?

9 Q. (BY MR. RAMER) Right. Do you ever tell
10 your patients that to preserve fertility
11 potential, you could elect to use only
12 antiandrogen medications without estrogen?

13 A. Yes.

14 Q. And do patients choose that option?

15 A. Yes.

16 Q. And is that protocol in accordance with
17 the WPATH guidelines?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: Can you be more specific
20 about -- what do you mean by "protocol"?

21 Q. (BY MR. RAMER) Prescribing antiandrogen
22 medications without estrogen to a patient.

23 Is that consistent with the WPATH
24 guidelines?

25 MS. NOWLIN-SOHL: Same objection.

Dr. Kara Connelly August 28, 2023

1 THE WITNESS: I don't recall that it's
2 not included as an option in the guidelines. I
3 believe that spironolactone is included in the
4 guidelines as an option.

5 I don't know if the standards of care --
6 did you mean the Endocrine Society guidelines or
7 WPATH standards of care?

8 Q. (BY MR. RAMER) Well, my first question
9 was WPATH. After you answer this, my next
10 question is going to be Endocrine Society. But --
11 so go ahead.

12 A. So antiandrogen medications are in a
13 completely different category as estrogen and have
14 different clinical effects.

15 So when I'm counseling patients about
16 different options, we talk about spironolactone as
17 a category of medications that can lower the
18 effects of androgens, but don't pause the physical
19 body changes like breast development that estrogen
20 causes. And spironolactone does not have the same
21 impact on sperm -- future fertility potential or
22 sperm production as estrogen does.

23 So some individuals may want the androgen
24 lower effects but may not want breast development.

25 Q. And my question is as you sit here today,

Page 255

1 do you know whether the WPATH guidelines say that
2 for adolescents you could use only antiandrogen
3 medications without estrogen to preserve sperm
4 production?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: I don't know if that exact
7 statement is made.

8 Q. (BY MR. RAMER) Do you know if that
9 statement is made in substance in the WPATH
10 guidelines?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: I don't know if it's made
13 in reference to preserving fertility.

14 Q. (BY MR. RAMER) And what about with
15 respect -- same question with respect to the
16 Endocrine Society guidelines.

17 MS. NOWLIN-SOHL: Same objections.

18 THE WITNESS: Same. I don't think that
19 it's made in reference to preserving fertility --
20 as an option for preserving fertility. Because
21 the option for preserving fertility really lies in
22 not using estrogen.

23 Q. (BY MR. RAMER) Can you explain that,
24 what you mean by that?

25 A. Yeah. So the estrogen is what has --

1 what, based on research available, can have an
2 impact on future sperm production. So if future
3 fertility is desired, then there is an option to
4 not take estrogen.

5 Q. And is -- no, I think we'll move on.

6 In that footnote in the last citation
7 there, you cite Yang.

8 Do you see that?

9 A. Yes.

10 Q. And as you sit here today, can you recall
11 whether the subjects in that study were adults?

12 A. Yes.

13 Q. Yes, they were?

14 A. Yes, they were.

15 Q. Of all your patients, have you ever had a
16 case of an individual who was assigned male at
17 birth who underwent cross-sex hormone treatment
18 for a period of years and subsequently conceived a
19 child?

20 A. I am not -- and do you mean by -- so
21 conceived -- I'm assuming you mean conceived a
22 child as having had their sperm used to result in
23 pregnancy?

24 Q. We can include that, yes.

25 A. Okay. I'm not aware of any of my

1 patients that have reached that point and have had
2 their sperm used to conceive a pregnancy or to
3 conceive a child.

4 Q. And are you aware of any report of such a
5 case in the literature?

6 A. Of? Can you remind me? The case of
7 someone who started treatment as adolescent?

8 Q. Right. Male -- assigned male at birth
9 who underwent cross-sex hormone treatment for a
10 period of years.

11 A. I can't say specifically, but there are a
12 number of individuals who elected to undergo sperm
13 cryopreservation, which would -- that held that
14 the sperm would not have been impacted by the
15 gender-affirming hormone treatment.

16 Q. And are you aware of any patients that
17 have pursued that option successfully?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: I have -- can you define
20 what you mean by "successful"?

21 Q. (BY MR. RAMER) Have you ever had a
22 patient, natal male or assigned male at birth, who
23 pursued cryopreservation of sperm and then
24 subsequently conceived a child?

25 A. None of my patients that I have

Dr. Kara Connelly August 28, 2023

1 prescribed treatments to have, as far as I know,
2 conceived a child. I do have a number of patients
3 that have undergone sperm cryopreservation, and
4 they may use the cryopreserved sperm in the
5 future, but the majority -- I can't think of any
6 of my patients that I have treated who have
7 reached -- who are out of their 20s at this time.
8 So it may not be a goal of theirs right now.

9 Q. Are you aware of any published case study
10 that documents a natal female or assigned female
11 at birth who underwent cross-sex hormone treatment
12 for a period of years and subsequently gave birth
13 to a healthy child?

14 A. I'm sorry if I missed this, but are you
15 referring to people who started hormone treatment
16 at any age?

17 Q. Let's start with adolescence.

18 A. I'm not aware of a study that has looked
19 specifically at this question for someone to --
20 for people who started hormones in adolescence.
21 But in adults, yes.

22 Q. Do you agree that a child who begins
23 taking -- let me rephrase.

24 Do you agree that an individual who
25 begins taking puberty blockers at Tanner Stage II

1 and proceeds without interruption to cross-sex
2 hormones will be infertile?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: I think that we are --
5 we're still learning the effects of hormones on
6 future fertility for individuals who start puberty
7 blockers prior to completion of their endogenous
8 puberty, but there are some situations such as
9 individuals assigned female at birth and start
10 puberty blockers and then testosterone, cross-sex
11 hormones, without going through or completing
12 their endogenous puberty who in the future may be
13 able to come off treatments and be able to carry a
14 pregnancy in the uterus that they were born with.
15 But I'm not aware of any studies that specifically
16 looked at that.

17 Q. (BY MR. RAMER) For a natal male or an
18 individual who's assigned male at birth who is at
19 Tanner Stage II and seeking to begin puberty
20 blockers, what are the options for preserving that
21 individual's fertility?

22 A. So at Tanner Stage II of testicular
23 development, the only options are either to not
24 start puberty suppression, pubertal suppression,
25 and there are some research protocols that -- in

Dr. Kara Connelly August 28, 2023

1 some centers that are investigating the
2 possibility of cryopreservation of testicular
3 tissue. But that is only done in -- under
4 clinical research protocols.

5 Q. Let's go back to your declaration,
6 page 9, paragraph 29. And in the last sentence of
7 that paragraph, you say that "Some patients will
8 come to experience their gender differently"; is
9 that right?

10 A. Can you tell me what paragraph again?

11 Q. Sorry, page 9, paragraph 29. It's at the
12 top in that it's the last sentence of that
13 paragraph and the last part of that sentence.

14 MS. NOWLIN-SOHL: Can you repeat what the
15 question is?

16 Q. (BY MR. RAMER) The question is just you
17 say that some patients will come to experience
18 their gender differently, right?

19 MS. NOWLIN-SOHL: Objection;
20 mischaracterizes testimony.

21 THE WITNESS: I'm sorry. I missed what
22 the actual question is.

23 Q. (BY MR. RAMER) Let's do it this way,
24 which I've been doing and maybe I shouldn't have
25 switched. I'll read the sentence and then I'll

1 ask if I read it correctly.

2 "The WPATH guidelines also recommend that
3 doctors inform families of the limitations in the
4 research and the possibility that some patients
5 will come to experience their gender differently."

6 Did I read that correctly?

7 A. Yes.

8 Q. And what is that referring to when it
9 says that some patients will come to experience
10 their gender differently?

11 A. It's referring to the possibility that
12 their gender expression or gender role may shift
13 and change over time.

14 MR. RAMER: I'd like to look at Connelly
15 Exhibit 22. It should be the last one I sent most
16 recently. It has a 23 in the title.

17 (Deposition Exhibit No. 22 was marked.)

18 Q. (BY MR. RAMER) Doctor, do you recognize
19 this article?

20 A. Yes.

21 Q. And did you help author this article?

22 A. Yes.

23 Q. Is the data in this article from your
24 clinic?

25 A. It is not from my clinic.

1 Q. What clinic is it from?

2 A. I believe it is from the clinics -- I
3 just need to go back to look at the methods. It's
4 individuals who had gender-affirming surgery at
5 OHSU in the departments of plastic surgery,
6 urology, and gynecology.

7 Q. Okay. And that's the university where
8 you work, correct?

9 A. Correct.

10 Q. And your point is that these weren't
11 people in your clinic, I assume, because your
12 clinic doesn't do surgeries?

13 A. Correct.

14 Q. Okay. And is this article listed in your
15 CV?

16 A. I can't recall because it just was
17 recently published. It is listed in my CV now,
18 but I don't know if in the version that you have
19 if it had been added.

20 Q. In the orange -- so page 1 in the orange
21 box after "Results," it refers to 1,989
22 individuals who underwent gender-affirming
23 surgery, correct?

24 A. In the abstract?

25 Q. How are you -- sorry. Just that orange

Dr. Kara Connelly August 28, 2023

1 box at the top.

2 MS. NOWLIN-SOHL: There's a couple orange
3 boxes. So do you mean the one at the top that's
4 shaded orange?

5 MR. RAMER: Yes. Thank you.

6 THE WITNESS: Okay. Yes, I see that.

7 Q. (BY MR. RAMER) And of those 1,989
8 individuals, do you know if any were under the age
9 of 18?

10 A. Who underwent -- no.

11 Q. No, you don't know?

12 A. No, I don't know, but I don't believe any
13 of them were. But I can't say with certainty.

14 Q. That's fair. And in that same sentence,
15 I'll read it and ask you if I read it correctly.

16 It says "Among 1,989 individuals who
17 underwent GAS, 6 or .3 percent, either requested
18 reversal surgery or transitioned back to their sex
19 assigned at birth."

20 Did I read that correctly?

21 A. Yes.

22 Q. And as a general matter, the purpose of
23 this article is to look into the concept of regret
24 after gender-affirming surgery, correct?

25 A. Yes.

1 Q. And the way that you measure regret in
2 this article is by counting the number who
3 requested reversal surgery or transitioned back to
4 their sex assigned at birth, correct?

5 A. I'm just going to review how that
6 population was identified and defined.

7 The patients that were identified, the
8 six patients, were individuals who requested
9 reversal surgery or said that they transitioned
10 back to their gender assigned at birth.

11 Q. And were these individuals who requested
12 reversal surgery or transitioned back at your
13 university?

14 A. They had received some aspect of their
15 care at OHSU, but it's possible that prior aspects
16 of their gender-affirming care occurred elsewhere.
17 I can't say with certainty if all of their care
18 happened at OHSU.

19 Q. I guess my question was more about the
20 reversal care or the transition back. That would
21 have happened at your university that you're
22 recording here, right?

23 A. Yes. These are patients that approached
24 the surgical teams to make these requests or
25 statements of transitioning back to their gender

1 assigned at birth.

2 Q. And so the .3 percent statistic would not
3 include anyone who detransitioned with a different
4 medical provider outside of the university, right?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: This -- I don't believe
7 that any of these six individuals presented and
8 made that request outside of the university.

9 Q. (BY MR. RAMER) Yeah, sorry. I guess
10 what I'm asking is we have these six individuals
11 which represents .3 percent of the sample.

12 And my question is this sample would not
13 include individuals who initially transitioned at
14 the university but then went elsewhere to request
15 reverse surgery or transition back, right?

16 A. Right. It wouldn't include those
17 hypothetical individuals. However, in -- I can
18 say that I know -- I know the surgeon's approach
19 and the behavioral health team's approach of the
20 surgical patients is that they encouraged their
21 patients to return to care with them if there are
22 any desire for reversal surgeries or concerns
23 about wanting to transition back to the gender
24 assigned at birth.

25 Q. Has a patient in your clinic ever

Dr. Kara Connelly August 28, 2023

1 expressed regret at having taken puberty blockers?

2 A. No.

3 Q. Has a patient in your clinic ever
4 expressed regret at taking cross-sex hormones?

5 A. No.

6 Q. I'd like to go to page 207 in this
7 document. I think it's the second page. And
8 right column, second full paragraph under the bold
9 "OHSU THP Care Model." And I'd like to read the
10 third -- let's see. I'd like to read the fourth
11 sentence, and I'll ask if I read it correctly.

12 It says "Ongoing exploration and
13 evolution of identity is expected and normalized
14 as part of the consenting process, leaving open
15 the conversation around shifts in identity or
16 transition goals without shame or judgment."

17 Did I read that correctly?

18 A. Yes.

19 Q. What do you mean when you say that "the
20 evolution of identity is expected"?

21 A. Well, we know that adolescents are
22 undergoing -- it's a developmental process in
23 terms of development of identity. And while
24 gender identity is fixed and identity is fixed and
25 stable in the overwhelming majority of individuals

Page 267

1 as they go through adolescence, the way that they
2 express that identity or experience that identity
3 can shift and change as they go through
4 adolescence and young adulthood.

5 Q. And that shift or change is expected,
6 right?

7 A. It's part of the -- it's part of the
8 developmental process in adolescents is that the
9 way that somebody expresses their gender and
10 experiences their gender can and usually does
11 shift and change, not always. And that's
12 referring again not to gender identity, but to
13 expression and their experience of their gender.

14 Q. Well, this says evolution of identity is
15 expected, right?

16 A. Evolution of their identity in general in
17 adolescence, identity. Not solely specific to
18 gender identity. And it also includes the way
19 that they experience and express their identity.

20 Q. Okay. In that same sentence, what are
21 the shifts in identity you're referring to?

22 A. So again, shifts -- that was referring to
23 shifts in how someone experiences or expresses
24 their identity. And that's also linked to the
25 following statement, transition-related goals. So

1 goals around gender transition or goals around
2 gender expression can shift and change over time.

3 Q. Okay. Same page, left column, the large
4 carryover paragraph, and the second to last
5 sentence in that paragraph, you refer to
6 "weaponization of information on regret."

7 A. I'm looking at it. I see that.

8 Q. And what do you mean by that?

9 A. That statement is generally saying that
10 in some cases, the idea of regret can -- that can
11 be some patients' experiences. There have been
12 some -- some who have made the claim that because
13 of that potential for some people, that the
14 provision of gender-affirming care for a
15 population should be prohibited.

16 Q. Do you have any particular individuals in
17 mind?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: I don't have any particular
20 individuals.

21 Q. (BY MR. RAMER) Do you think the Idaho
22 legislature has weaponized information on regret?

23 MS. NOWLIN-SOHL: Object to form;
24 foundation.

25 THE WITNESS: I have not seen anything

1 that I would characterize as weaponization of
2 information on regret.

3 Q. (BY MR. RAMER) I'd like to turn to
4 page 211 in this article, and right column, first
5 full paragraph.

6 And in the first sentence you say, "It
7 may be unrealistic to predict or eliminate
8 gender-related regret."

9 Do you see that?

10 A. Yes.

11 Q. What do you mean by that?

12 A. Well, that -- it's important to interpret
13 that in the context of the rest of the article,
14 which talks about different factors that can
15 influence someone's experience of regret.

16 And that's in addition to other studies
17 that have shown that it's -- that generally
18 individuals, if there are individuals who
19 experience regret around gender-affirming
20 treatments, that most of the time it's not related
21 to a change in identity, rather, factors in their
22 environments such as -- that can cause things like
23 minority stress or lack of support or
24 discrimination or safety concerns that contribute
25 to that experience of regret.

Dr. Kara Connelly August 28, 2023

1 So with that in mind and the fact that
2 there are many factors that can play into
3 someone's experiences of regret, we may not ever
4 be able to fully predict or eliminate all of the
5 factors that may play into someone's experience of
6 regret.

7 Q. Is regret ever the result of a change in
8 gender identity?

9 A. It can.

10 Q. And do you think it is unrealistic to
11 predict or eliminate gender-related regret that
12 results from a change in gender identity?

13 A. I'm sorry.

14 MS. NOWLIN-SOHL: Can you repeat that?

15 Q. (BY MR. RAMER) Do you think it is
16 unrealistic to predict or eliminate gender-related
17 regret that results from a change in gender
18 identity?

19 MS. NOWLIN-SOHL: Object to form.

20 THE WITNESS: Yeah, I think I would agree
21 with that statement that it may be unrealistic to
22 predict or eliminate that.

23 Q. (BY MR. RAMER) On the same page, the
24 left column, the second full paragraph kind of a
25 little over halfway down, there's a sentence that

Dr. Kara Connelly August 28, 2023

1 begins with the phrase "At our center."

2 Do you see that?

3 A. Yes.

4 Q. And I'll just read it and ask if I read
5 it correctly.

6 It says "At our center it is not unusual
7 to encounter patients who detransitioned earlier
8 in life but because of changing societal context,
9 present for retransition. (See next section.)"

10 Did I read that correctly?

11 A. Yes.

12 Q. Is that true that it is not unusual to
13 encounter patients who are retransitioning?

14 A. There is -- it's hard to generalize
15 because some people use that term in their -- to
16 describe their experience, and some don't.

17 But -- it's not common, but we do have
18 patients who have used the word -- the word
19 "detransition" and then subsequently
20 "retransition."

21 Q. Well, this says it's not unusual. And do
22 you -- can something be not unusual yet also be
23 not common?

24 MS. NOWLIN-SOHL: Object to form.

25 THE WITNESS: Well, again, this is in the

1 surgical setting, so I don't have that experience
2 with my patients. That isn't experience that our
3 patients have expressed or have experienced. So I
4 can't comment on exactly what the lead author
5 meant by "not unusual."

6 I think it would be -- I would have to
7 clarify with the surgeons about how they defined
8 that qualifying term.

9 Q. (BY MR. RAMER) Okay. And one more
10 question on this.

11 Page 212 under "Limitations," the first
12 sentence says "The understanding of gender
13 incongruence is evolving, and much of the
14 presented information is based on the limited data
15 available, our workgroup discussions, TGD
16 community input, and clinical experience."

17 Did I read that correctly?

18 A. Yes.

19 Q. And do you agree the understanding of
20 gender incongruence is evolving?

21 A. I agree that the field in general and
22 research pertaining to the field of gender
23 incongruence is -- you know, with more research
24 that is performed, the understanding is growing.

25 And with that, then I would say that

Dr. Kara Connelly August 28, 2023

1 there will be evolutions in our understanding of
2 the field in general.

3 MR. RAMER: And, Li, if we could pull up
4 Exhibit 23, which has a 26 in the file name.

5 MS. NOWLIN-SOHL: Is this a good time for
6 a break?

7 MR. RAMER: Yeah, sure. I mean, this is
8 the last -- I think I only have like 20 minutes
9 left on the clock. Happy to take a break if you
10 want, but this is the last document I was going to
11 talk about. Either way, up to you.

12 MS. NOWLIN-SOHL: Let's see. Yeah, I
13 guess let's take a five-minute break.

14 And can we also just do a time check, how
15 much time is remaining?

16 THE VIDEOGRAPHER: Sure. Let me just go
17 off the record here real quick and I can add it
18 up.

19 So the time is 6:35 p.m. Mountain, and we
20 are off the record.

21 (Break taken from 6:35 p.m. to 6:42 p.m.)

22 THE VIDEOGRAPHER: All right. So we are
23 recording. The time is 6:42 p.m. Mountain time,
24 and we are back on the record.

25 MR. RAMER: Okay. I'd like to take a

1 look at Connelly Exhibit 23, which has a 26 in the
2 file name.

3 (Deposition Exhibit No. 23 was marked.)

4 Q. (BY MR. RAMER) Do you have that pulled
5 up?

6 A. Yes.

7 Q. And, Doctor, this is a printout from the
8 CMS website.

9 And have you seen the information
10 contained in this printout before?

11 A. Yes.

12 Q. And moving down the page, there's a kind
13 of bold header that says "General Payment."

14 Do you see that?

15 A. Yes.

16 Q. And it says "From Endo Pharmaceuticals,
17 Inc.," correct?

18 A. Yes.

19 Q. And on the next line, is that your name?

20 A. Yes.

21 Q. And on the line after that, it says
22 "Nature of payment, consulting fee"; is that
23 right?

24 A. Yes.

25 Q. And the payment amount was \$2,110; is

Dr. Kara Connelly August 28, 2023

1 that correct?

2 A. Yes.

3 Q. And the date of the payment was June 27,
4 2018; is that right?

5 A. That sounds like -- I can't remember the
6 exact date, but 2018, spring of 2018, yes, that
7 sounds --

8 Q. And sorry. I should have directed you
9 down a line. I was just reading the date of
10 payment, June 27, 2018.

11 A. Okay.

12 Q. And then on the next page in the middle,
13 it says "Associated products."

14 Do you see that?

15 A. Yes.

16 Q. And below that in the right column, in
17 the second row it says "Drug"; is that right?

18 A. Yes.

19 Q. And then two rows below that, it says
20 "National Drug Code, NDC."

21 Do you see that?

22 A. Yes.

23 Q. And then in the right column in that row
24 it lists a code.

25 And do you know what drug corresponds to

Page 276

1 the National Drug Code listed there?

2 A. I can't say without looking it up.

3 Q. If we go down a line below that, do you
4 see it says "Supprelin LA"?

5 A. Yes.

6 Q. What is that?

7 A. That is a brand of the histrelin implant
8 that is in the category of GnRH -- the
9 gonadotropin releasing hormone agonist.

10 Q. Does that refresh your recollection of
11 whether the -- what the National Drug Code above
12 that is related to?

13 A. I just can't say. I don't have the
14 National Drug Code memorized for that medication,
15 but I do know the medication name.

16 Q. Okay. And so did you receive a
17 consulting fee from Endo Pharmaceuticals in 2018?

18 A. Yes.

19 Q. And was that consulting fee related to
20 Supprelin LA?

21 A. The consulting fee was -- it was a
22 one-time meeting of a medical advisory board
23 convened to discuss this medication and
24 potentially developing research trials pertaining
25 to the medication.

Dr. Kara Connelly August 28, 2023

1 Q. And when you say "medication," you're
2 referring to Supprelin LA?

3 A. Yes. Yes.

4 Q. And is that a drug that your clinic has
5 ever prescribed as a puberty blocker?

6 A. Yes.

7 Q. Did you ever prescribe that drug as a
8 puberty blocker in 2018?

9 A. I would have to go back to look
10 specifically, but it's possible.

11 Q. And since 2018, have you ever prescribed
12 that drug as a puberty blocker?

13 A. Yes.

14 Q. Since 2018, have you received any other
15 payments from Endo Pharmaceuticals?

16 A. No.

17 Q. Did you list this consulting work in your
18 CV?

19 A. I don't believe that I listed it in my
20 CV.

21 Q. Did you ever disclose this consulting fee
22 in any of your published research?

23 A. I disclosed -- I disclosed it -- I don't
24 believe it was disclosed in published research,
25 but I've disclosed it in accordance with my

1 university's standards.

2 Q. Did you ever disclose this consulting fee
3 to patients to whom you prescribed Supprelin LA?

4 A. I don't believe that I have.

5 Q. And can you just describe the full scope
6 of the nature of your consulting work for Endo
7 Pharmaceuticals?

8 A. Yes. So it was -- as I said, it was a
9 one-time meeting in 2018 of medical professionals
10 who were brought to serve on an advisory board to
11 discuss factors that would need to be considered
12 or that could be considered in the development of
13 research studies using this medication.

14 Q. Is that type of meeting something that
15 you regularly participate in?

16 A. No.

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: That -- that's the only
19 time that I have participated in that type of
20 meeting.

21 Q. (BY MR. RAMER) And you said to discuss
22 factors that could be considered in development of
23 research studies using the drug; is that right?

24 A. Um-hmm.

25 Q. What does that mean?

1 A. I'm pausing because I had to sign an NDA,
2 and -- at the time.

3 But it was essentially helping to inform
4 the pharmaceutical company of what -- for example,
5 what outcomes would need to be considered and
6 measured as part of research studies that they
7 were considering pursuing.

8 Q. And just to clarify, are you unable to
9 fully answer my questions because of an NDA that
10 you signed with Endo Pharmaceuticals?

11 A. I -- I've been able to answer them, your
12 questions, in the way that I consider fully to
13 explain what my participation was with the -- in
14 this meeting.

15 Q. But why did you mention the NDA a moment
16 ago?

17 A. I don't know if I can provide specifics
18 about -- I'd have to go back and review that --
19 specifics about the -- their plans for -- their
20 plans that they were considering in terms of
21 pursuing research studies.

22 Q. Okay. So if I asked you that question,
23 you would be unable to answer because of the NDA;
24 is that right?

25 MS. NOWLIN-SOHL: Objection;

1 mischaracterizes testimony.

2 THE WITNESS: If you were to ask me which
3 question?

4 Q. (BY MR. RAMER) Well, I thought I just
5 asked why did you mention the NDA, and I thought
6 you had said that it's because there are certain
7 things you cannot disclose; is that right?

8 MS. NOWLIN-SOHL: Objection;
9 mischaracterizes her testimony.

10 THE WITNESS: No, that's not what I meant
11 by that. I believe that I can answer all of the
12 questions that you will ask me about the meeting.

13 Q. (BY MR. RAMER) Okay. What were the
14 research studies that Endo was considering
15 pursuing that you were advising on?

16 MS. NOWLIN-SOHL: Objection to form and
17 to relevance.

18 Q. (BY MR. RAMER) You can answer.

19 A. The research studies were pertaining to
20 use of the medication in youth with gender
21 dysphoria.

22 Q. And so the meeting with Endo
23 Pharmaceuticals that you attended was to discuss
24 potential research studies regarding the use of
25 Supprelin LA to treat youth with gender dysphoria;

1 is that correct?

2 A. The meeting was to advise on
3 considerations around different variables that
4 would need to be considered in measuring their
5 desired outcomes if they were to develop a
6 research study looking at the use of this
7 medication in use of gender dysphoria.

8 And I should clarify, no such study was
9 developed as a result of the meeting.

10 Q. Can you do a research study like that if
11 the drug is not approved by the FDA for that use?

12 MS. NOWLIN-SOHL: Objection to form and
13 to relevance and to foundation.

14 THE WITNESS: Can you be a little more
15 specific?

16 Q. (BY MR. RAMER) Well, I guess the use of
17 Supprelin LA to treat gender dysphoria in youth is
18 not approved by the FDA, correct?

19 MS. NOWLIN-SOHL: Object to form.

20 THE WITNESS: The use of Supprelin LA --
21 or gender dysphoria is not an FDA-approved
22 indication. Or it's an off-label indication for
23 the use of this medication -- of Supprelin LA.

24 Q. (BY MR. RAMER) And my question was just
25 at this meeting you were discussing research

1 studies regarding the use of Supprelin LA to treat
2 gender dysphoria in youth.

3 And my question is can you do that if
4 it's not approved by the FDA?

5 MS. NOWLIN-SOHL: Objection. Same
6 objections; relevance, foundation.

7 Q. (BY MR. RAMER) Yeah, that's -- you can
8 ignore that question. I don't actually think it
9 makes any sense.

10 Okay. So what were the factors that you
11 were discussing about desired outcomes at this
12 meeting?

13 MS. NOWLIN-SOHL: I'm going to -- we
14 might go off the record here and talk a little bit
15 about the NDA because I think you're now
16 encroaching onto that area, but I'm not sure that
17 this is relevant. But we can have a conversation
18 about it if you'd like to keep asking questions.

19 MR. RAMER: You want to go off the record
20 to discuss the NDA?

21 MS. NOWLIN-SOHL: With Dr. Connelly and
22 the scope of it, because I feel like you're now
23 going into that.

24 MR. RAMER: Okay. How much time do you
25 think -- so just to be clear, are you instructing

Dr. Kara Connelly August 28, 2023

1 her not to answer that last question?

2 MS. NOWLIN-SOHL: No, I'm not at this
3 time, but I'd like to talk to her about the scope
4 of the NDA before we proceed.

5 MR. RAMER: Can I have her answer the
6 question that's on the table and then we'll take a
7 break and you can discuss the NDA?

8 MS. NOWLIN-SOHL: Can you repeat the
9 question?

10 Q. (BY MR. RAMER) It was just what are the
11 factors that you discussed at this meeting
12 regarding desired outcomes?

13 MS. NOWLIN-SOHL: Would you like to have
14 a conversation about the NDA before answering,
15 or --

16 And I'm also going to object to form, to
17 relevance, and --

18 THE WITNESS: I can say that the factors
19 that were discussed were around things like how we
20 would -- how would be the best way to assess
21 growth measurements and potential side effects and
22 just general things around factors that may have
23 been important to include in the design of the
24 study.

25 Q. (BY MR. RAMER) Do you know why the study

Dr. Kara Connelly August 28, 2023

1 was never pursued?

2 MS. NOWLIN-SOHL: Object to the form;
3 speculation, foundation.

4 THE WITNESS: I don't.

5 Q. (BY MR. RAMER) Do you recall anyone else
6 who was at this meeting?

7 A. Do I recall who was at the meeting?

8 Q. Correct.

9 A. Yes, I recall some of the people, but I
10 don't remember everyone's name.

11 Q. Can you give me any names that you do
12 remember?

13 MS. NOWLIN-SOHL: Object to relevance.

14 THE WITNESS: Steve Rosenthal and Jeremy
15 Carswell are the only two that I can remember.

16 Q. (BY MR. RAMER) And where was the
17 meeting?

18 MS. NOWLIN-SOHL: Object to relevance.

19 THE WITNESS: I can't remember for
20 certain. I think it was maybe in Chicago.

21 Q. (BY MR. RAMER) And why were you paid to
22 attend the meeting?

23 A. I was paid a consulting fee as a
24 consultant to contribute my expertise to the
25 meeting.

Dr. Kara Connelly August 28, 2023

1 Q. To contribute your expertise to the
2 design of the potential study; is that right?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: It was not to contribute to
5 the design of the study. I did not -- we did not
6 discuss the design of the study.

7 MR. RAMER: Okay. I think with that, I
8 don't have any more questions, Dr. Connelly. I
9 appreciate the time that you've taken today.

10 And I will pass the witness to your
11 counsel if counsel has any questions for you.
12 Otherwise, thank you.

13 MS. NOWLIN-SOHL: John, do you mind if we
14 take -- I know it's late on the East Coast, so I'm
15 sorry to ask this, but do you mind if we take 15
16 minutes for me to look over my notes and stuff?

17 MR. RAMER: Yeah, absolutely.

18 MS. NOWLIN-SOHL: Okay. So we'll come
19 back at a quarter after.

20 MR. RAMER: Sounds good.

21 THE VIDEOGRAPHER: Okay. So the time is
22 7:00 p.m. Mountain time, and we are off the
23 record.

24 (Break taken from 7:00 p.m. to 7:17 p.m.)

25 THE VIDEOGRAPHER: All right. So we are

1 recording. The time is 7:17 p.m. Mountain time,
2 and we are back on the record.

3

4

EXAMINATION

5

BY MS. NOWLIN-SOHL:

6

Q. Okay. So, Dr. Connelly, you spoke
7 earlier about puberty blockers being used as
8 treatment for precocious puberty.

9

Do you recall that?

10

A. Yes, specifically central precocious
11 puberty.

12

Q. Okay. And how long have puberty blockers
13 been used for that purpose?

14

A. I believe at least 30 years.

15

Q. Okay. And how long have you been using
16 puberty blockers to treat gender dysphoria?

17

A. How long have I personally?

18

Q. Um-hmm.

19

A. Since I started providing care. I'd say
20 probably within the last ten years.

21

Q. Okay. And during the time that you've
22 been practicing, are you aware of any issues
23 affecting cognition as a result of the use of
24 puberty blockers that have been identified by
25 clinicians or researchers?

Dr. Kara Connelly August 28, 2023

1 A. I am not aware of any.

2 Q. And do endocrinologists today continue to
3 provide puberty blockers when indicated to treat
4 central precocious puberty?

5 A. Yes.

6 Q. So earlier you were also asked a few
7 questions about the basis -- bases of your
8 opinions about the effectiveness of blockers and
9 hormone therapy for the treatment of adolescents
10 with gender dysphoria, and you were referencing
11 scientific research.

12 Do you recall that?

13 A. Yes.

14 Q. Does your clinical experience also
15 contribute to those opinions that you expressed?

16 A. Yes.

17 Q. So earlier you were talking about initial
18 medical visits with patients at your clinic.

19 Do you recall that conversation?

20 A. Yes.

21 Q. And how many of the patients leave those
22 initial medical visits with a prescription for
23 either puberty blockers or hormone therapy or
24 another type of gender-affirming medication?

25 A. That is very rare. And I would estimate

1 less than 5 percent of the time.

2 Q. Okay. And after that initial visit, what
3 happens? What do the patients do prior to their
4 follow-up visit?

5 A. Yeah, so that -- again, the care is
6 individualized, and it depends on the patient.
7 But it usually includes the patients reviewing
8 information that they receive at the visit,
9 information that we give them at the conclusion of
10 the visit that they may go home and read over.

11 They have the opportunity to ask
12 additional questions of the medical provider
13 either by phone or through -- or written or
14 through the electronic health record.

15 Many of them will continue to have
16 conversations with their parents. Their parents
17 may have additional questions for the different
18 members of the treatment team.

19 Some patients will have ongoing
20 conversations with their therapists.

21 Some patients will have another visit
22 with our psychologist.

23 Some parents will have a visit with the
24 psychologist.

25 And so it can be any of those -- can be

1 any of those, that variety of different items.

2 Q. Okay. And as a result of those items,
3 does it ever happen that a patient might have a
4 prescription for puberty blockers or hormone
5 therapy at the time of their follow-up medical
6 appointment?

7 A. Yes.

8 Q. Okay. And do you have a rough idea of
9 how often that happens?

10 A. Yeah. I would estimate maybe about
11 20 percent of patients who have completed the
12 initial visit will initiate a medication prior to
13 their first follow-up appointment.

14 Q. And has that number changed over time?

15 A. It has. And, yeah, generally -- so we've
16 actually seen -- we've seen less patients over
17 time that have -- that initiate a medication prior
18 to the first follow-up appointment.

19 And that's partially due to the fact that
20 we're seeing -- we're seeing patients that are in
21 childhood, haven't yet reached puberty, so aren't
22 eligible for any medical interventions. We're
23 seeing an increase in that population.

24 And then we're also seeing an increase in
25 the population of individuals who determine that

1 they don't want to start any of the treatments
2 that we've discussed or don't want to start
3 cross-sex hormones or puberty blockers or want
4 more time to consider the treatment.

5 Q. Okay. And so earlier I think you were
6 asked whether only 2 percent of patients will
7 initiate puberty blockers or cross-sex hormones
8 before the second visit, and you said that that
9 was correct.

10 Was that testimony correct or --

11 A. What I was referring to with that
12 2 percent was individuals who are prescribed a
13 medication at the completion or at their initial
14 visit.

15 Q. And that is different from the number of
16 patients who will be -- have a prescription for
17 medication at the time of the follow-up visit?

18 A. Yes.

19 MS. NOWLIN-SOHL: Okay. No further
20 questions.

21 MR. RAMER: I don't have any either.
22 So thank you very much, Doctor.
23 And thank you, Li.

24 MS. NOWLIN-SOHL: Yes. And thank you to
25 everyone for staying later into the evening,

Dr. Kara Connelly August 28, 2023

1 particularly on the East Coast.

2 MR. RAMER: Okay.

3 THE WITNESS: Thank you, all.

4 MR. RAMER: Have a good day.

5 THE VIDEOGRAPHER: All right. So then
6 this concludes our video deposition with Dr. Kara
7 Connelly. It is August 28, 2023. The time is
8 7:24 p.m. Mountain time, and we are off the
9 record.

10

11 (Whereupon the deposition was concluded at 7:24 p.m.)

12 *****

13 (Signature requested.)

14

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25

Dr. Kara Connelly August 28, 2023

VERIFICATION

STATE OF _____)

)

COUNTY OF _____)

I, KARA CONNELLY, M.D., being first duly sworn on my oath, depose and say:

That I am the witness named in the foregoing deposition taken the 28th day of August, 2023, consisting of pages numbered 1 to 292, inclusive; that I have read the said deposition and know the contents thereof; that the questions contained therein were propounded to me; the answers to said questions were given by me, and that the answers as contained therein (or as corrected by me therein) are true and correct.

Corrections Made: Yes_____ No_____

KARA CONNELLY, M.D.

Subscribed and sworn to before me this ____ day of _____, 2023, at _____, Idaho.

Notary Public for Idaho

Residing at _____, Idaho

My commission expires: _____.

Page 293

Dr. Kara Connelly August 28, 2023

REPORTER'S CERTIFICATE

STATE OF IDAHO)
)
COUNTY OF ADA)

I, Amy E. Simmons, Certified Shorthand Reporter and
Notary Public in and for the State of Idaho, do hereby
certify:

That prior to being examined, the witness named in
the foregoing deposition was by me duly sworn to testify
to the truth, the whole truth, and nothing but the truth;

That said deposition was taken down by me in
shorthand at the time and place therein named and
thereafter reduced to typewriting under my direction, and
that the foregoing transcript contains a full, true, and
verbatim record of said deposition.

I further certify that I have no interest in the
event of the action.

WITNESS my hand and seal this 28th day of August,
2023.



AMY E. SIMMONS

ID CSR No. 685

CA CSR No. 14453

WA CSR No. 22012915

OR CSR No. 22-009

RDR, CRR, CRC,

and Notary Public

My commission expires: 6/13/28.

[& - 20006]

&	11:03 48:6,8	1523 3:13	19 7:4 41:24
& 2:6,21 3:3,12 8:17 9:1 13:14	11:17 48:8,10	155 6:5,8	205:8 233:3,5
0	12 6:12,22 85:8 150:10 164:20	156 6:11 7:11	241:4
00269 1:4 8:10	164:21 171:7	16 6:4,20 195:6	197 181:19
1	195:6,8 204:16	195:9 203:22	185:22 187:16
1 5:11 14:10,16 170:8 180:11 180:12 182:24 184:8 191:15 242:8 263:20 293:9	120 5:17	208:14,16	1979 145:18
1,989 263:21 264:7,16	125 2:17	230:23	198 180:10
10 6:8 20:12 21:12 27:14 66:13 82:20,20 154:18 155:14 155:25 171:11 197:18 204:10 204:22 249:1 250:5 252:22	1285 3:4	164 6:12	182:24 188:17
100 20:3,5,5	12:11 85:12,14	168 6:17	195:22
10004 2:18	12:18 85:14,16	17 5:12 6:23 85:8 224:19,20	199 194:5,18
10019 3:4	13 6:14 48:1 142:14 179:23	233:3	1:03 47:25
1050 2:22	180:1 194:4	17th 2:22	1:12 120:18,20
10:08 2:11 8:5	208:14 241:23	18 7:3 20:4,6 22:8,11,18 25:15,17,19 63:23 64:2,7 64:12,16,24 65:3,9,13,14,20 65:23 68:10 93:6,9,10 94:25 95:9,18 95:23 96:1,4,5 96:11,14 97:3 97:6,24 98:12 101:23 103:4 103:11,23 105:4,6 158:1 158:3,10 160:19 195:11 230:23,24 236:21 264:9	1:23 1:4 8:10
11 6:11 73:2 82:23,23 156:2 156:7,12 179:24 194:4 245:13	130 5:18		2
112 7:6	131 7:8		2 5:12 6:13,17 7:3,3 15:2 16:23 17:7 20:11 61:9,12 61:21,22 62:2 76:15 111:17 132:5 149:17 187:11,13 188:18,18 231:14 232:4,5 232:7 238:17 291:6,12
	134 5:20		2,110 275:25
	139 5:23		2-3 126:13
	14 5:11 6:17 83:22 85:20 167:20,22 168:1 248:17		20 7:7 25:4 66:3 223:6 236:20,23 274:8 290:11
	14453 294:22		200 4:4
	145 42:1 56:7		20006 2:22
	14553 2:7		
	149 6:3		
	15 5:11 6:7,10 6:18 27:16 124:22 137:23 145:12,14 149:3 204:16 204:19 224:19 286:15		
		180 6:14	
		18th 65:7	

[20036 - 47.5]

20036 3:13	208.854.8073	252 219:18	30 168:6 187:7
2010 68:23,23	3:19	253 215:5	287:14
2011 16:9	20s 20:8 66:4	254 209:4	302 6:11
2013 68:24	249:18 259:7	255 221:2	31 44:4 176:8
2015 6:11 16:9	21 7:9 76:16	26 97:12	179:6 191:25
2017 21:5	178:3 241:2,4	101:18 121:23	3191 4:4
42:10 139:21	211 270:4	162:12,21	32 154:18
2018 276:4,6,6	212 273:11	274:4 275:1	197:18 198:4
276:10 277:17	212.373.3000	262 7:9	198:12,20
278:8,11,14	3:5	27 122:2,4	34 155:5
279:9	212.549.2584	196:10 197:1	196:10 197:1
2019 56:14	2:18	276:3,10	35 5:25
202.220.9621	22 7:12 51:21	275 7:12	37 245:21
3:14	66:9 178:2,14	276 205:15	38 233:23
202.539.6620	178:16,17,19	28 1:20 8:5	3873 140:1
2:23	196:11 262:15	28:4 292:7	142:8
2020 15:7	262:17	287 5:6	3895 175:18
168:6	22-009 2:8	28th 2:10 293:8	3:00 154:12,14
2022 7:5 20:14	294:23	294:18	3:12 120:8
20:22 145:19	22012915 2:8	29 261:6,11	4
230:10	294:22	292 293:9	4 5:17,20 15:15
2023 1:20 2:10	224 6:23	29423 294:20	120:24 121:3
8:5 205:8	23 7:14 157:21	2:03 120:20,22	134:24 195:5
292:7 293:8,22	262:16 274:4	2:50 154:10,12	195:14 196:13
294:19	275:1,3	3	196:13
204 6:18	230 7:3	3 5:14,18 6:19	402 131:5
207 267:6	236 7:4	7:15 40:25	404 132:4
208 6:20	24 5:13 177:25	41:1 56:6,6	409 135:9
208.287.7700	178:13 205:24	57:21 60:9	41 5:14 247:1
4:5	241 7:7	133:17 137:22	410 135:25
208.334.2400	248 211:12	145:12 225:10	44 124:23
3:18	249 209:19	264:17 266:2	45 43:10
208.742.6789	25 25:5 27:11	266:11	47.5 184:4,18
3:8	156:20 203:23	3.32 234:1	185:12
	240:14		

[4:16 - accurate]

4:16 204:3,5	190:20,25	176:7,18,22	100:15 101:9
4:27 204:5,7	191:3,21 193:6	177:3,7 178:9	101:13,14
5	197:18 198:12	179:2 188:2,23	105:24 106:10
5 5:18 6:16	198:16 203:17	188:24 189:6,7	106:18 109:14
25:22 28:2	204:11 231:24	189:15,25	118:11 121:5
76:16 97:9	232:12	190:8,22	129:9 151:1
130:22,25	7.1. 135:11	191:25 193:6	167:17 211:9
191:13,21	70 180:20	261:6,11	220:11 222:1
223:6 289:1	181:6,8 187:5	90 21:18 24:7	249:4 252:9
5.8 242:8,15	700 68:6	66:15	253:19 260:13
243:1,15,17	72 180:22	96.2 183:13	260:13 271:4
50 85:20	7:00 286:22,24	184:12 185:9	280:11
248:18	7:17 286:24	99 237:24	above 2:12
500 21:6,8	287:1	238:15	152:22 153:1
545 5:17	7:24 292:8,11	993 20:13	162:24 277:11
5:25 240:21,23	8	21:11	absence 248:11
5:38 240:23,25	8 6:3 28:4	a	absolutely
6	97:12 101:18	a.m. 2:11 8:5	286:17
6 5:16,19,20	145:19 149:10	48:6,8,8	abstract 263:24
6:24 51:20,21	149:12 155:5	aaron 3:17	access 6:8
134:15,16	175:15	9:15	28:15 66:23
264:17	80 25:9	abbreviated	106:16
6/13/28 294:25	801 2:22	237:14	accessed 92:19
685 2:7 294:21	81 196:11	abbreviation	95:8
6:35 274:19,21	812 3:7	152:2	accessing 28:11
6:42 274:21,23	82 238:9	abbreviations	28:19 105:21
7	83702 3:8 4:5	151:25 152:3	160:15
7 5:23 77:10	83720 3:17,18	abdomen 94:21	accompany
139:9,10	85 25:10	ability 52:15,25	234:10
151:13,14	9	53:14 74:23	accordance
154:19,20	9 5:5,22 6:5	107:21,22	254:16 278:25
175:14 176:18	7:13 16:4 44:4	136:23	account 105:17
178:23 188:3	77:13 111:18	able 10:18	108:18
188:24,25	155:14,25	19:25 33:21	accurate 27:9
		38:10 55:24	129:21 196:18

[accurate - affirming]

206:7 accurately 98:21 222:2 acetate 62:18 62:22 achieve 249:4 249:23 252:9 253:9,11,19 achieved 79:17 achieving 90:4 achille 152:17 152:22,25 153:7 acknowledge 51:12 acknowledged 52:12 53:13 acknowledge... 175:21 acknowledging 98:25 161:25 aclu 17:15 aclu.org 2:19 2:19 acquires 182:6 acquisition 143:1 acting 215:15 218:8 action 294:17 activates 77:5 active 16:16 actual 163:7 197:1 261:22	actually 18:18 34:2 56:8 96:5 96:10 109:2 121:22 144:3 151:14 200:17 283:8 290:16 ada 1:13 2:9 4:3 9:7 294:3 adacounty.id.... 4:6 add 242:19 274:17 added 122:8 124:6 263:19 addition 138:19 215:9 215:11 222:14 270:16 additional 289:12,17 address 51:3,7 53:3,5 209:25 addressed 52:3 52:9 addresses 235:24 adequately 158:14,21 160:17 161:3 adhd 26:20 27:1,4 adherence 52:3 administered 251:18,22	administration 60:25 61:5 adolescence 6:8 19:24 22:2,11 22:22,23,25 208:9 243:10 253:18,20 259:17,20 268:1,4,17 adolescent 6:19 52:20 53:4,6 57:24 58:7,11 74:22 75:9 151:6 234:10 258:7 adolescent's 52:4 adolescents 6:24 7:8,10 19:24 44:7 58:10 68:14 91:5,7 153:1 222:5,10 223:14 225:15 227:18,25 231:8 242:11 243:8 245:15 256:2 267:21 268:8 288:9 adrift 79:15 adult 20:1,9 30:20 65:24 66:5,22 67:3 67:25 68:1	adulthood 19:2 19:25 268:4 adults 6:9 64:4 65:14 152:13 153:2 158:14 158:20 159:6 159:10,20,24 160:5,13,25 162:3 227:15 229:2,11 249:17 257:11 259:21 advance 120:4 adverse 207:13 207:23,25 208:6 209:10 advise 282:2 advising 281:15 advisory 277:22 279:10 affecting 287:23 affiliated 91:13 affirmation 34:12 affirmed 35:5 180:13,23 affirming 5:15 6:8 7:9,12 19:10 28:7 35:6 64:17,21 64:25 69:17,23 70:1,4,7 85:22 91:16 92:13,23

[affirming - answers]

93:7 95:3	96:14 101:23	agreement	animal 211:16
96:17 97:5,17	102:22 104:16	106:8	212:19 216:2
97:19,25 98:6	104:24 105:4,6	ahead 10:22	animals 212:1
98:13,24	105:14 153:6	84:21 86:22	212:7,8,14,23
100:10,14	157:16 158:3	167:21 194:15	213:1,6 214:7
101:8,15	160:19 195:11	255:11	214:8,10,15
104:17 105:5,8	250:4 259:16	aim 187:23	216:17,23
105:21 106:6	264:8	188:9	animated 80:6
107:4,16,19	aged 158:1	aims 141:2	annelou 113:7
108:12 109:5	agency 230:11	187:21	113:10,25
118:17 149:25	ages 19:21	air 240:16	answer 10:22
151:19 176:15	22:16 77:15	al 8:9,10	10:23 11:8
179:8 192:2,19	92:25 152:14	alert 112:6,10	38:1 39:2 65:5
192:24 196:5	158:10	alignment	98:21 99:4
225:9,18 226:1	ago 21:5	72:16	101:10 104:21
226:12,17	280:16	alleviate 70:18	106:19 110:7
242:7,10 244:5	agonist 277:9	248:8	110:24 143:19
244:25 245:15	agree 34:18	alleviating 70:6	193:11 194:8
248:19 258:15	36:8,23 73:10	alongside 245:5	201:8,24 210:7
263:4,22	106:1 107:7	alternative	210:11,14,20
264:24 265:16	122:16 129:19	131:13 136:4	212:4 217:2,10
269:14 270:19	136:12 155:13	american 2:16	220:11 222:1
288:24	159:19 160:22	americas 3:4	252:14 255:9
ag.idaho.gov	160:23 209:14	amount 91:3	280:9,11,23
3:19,20	212:5,13	275:25	281:11,18
age 19:19 20:4	215:21 220:8	amy 1:25 2:6	284:1,5
25:15 65:20	226:21 228:3,6	8:16 294:5,21	answered
66:2 68:10	228:19 229:5,8	analogues 7:7	38:15 39:1
69:3 77:6,7,8	229:10 234:14	225:17 226:17	71:9 105:15
77:10,13,22,25	234:22,25	analyzing 71:5	116:24 178:5
78:1,2,4 79:19	240:6 242:14	anatomy 94:19	203:11
79:19 82:15,17	259:22,24	androgen	answering
83:21 93:7	271:20 273:19	255:23	10:10 284:14
94:25 95:8,18	273:21	androgens	answers 10:18
95:23 96:1,4		255:18	250:2 293:12

[answers - assess]

293:13 antiandrogen 254:12,21 255:12 256:2 antonio 13:22 anxiety 6:14 44:9,12,20 45:21,22 46:4 46:9,12,24 47:15 50:21 51:1 176:16 179:1,3 187:25 188:10,19 192:6 205:24 anytime 112:17 apart 71:16 211:22 apologize 162:5 171:13 apoptosis 211:19 apparent 242:17 apparently 243:3 appear 14:19 17:9 32:3 79:3 220:2 appearance 29:16 30:12,14 appearances 2:15 3:1 4:1 8:19 appears 244:22	appendices 230:19 appendix 7:3 230:17 231:14 232:4,5,7 238:1 application 131:11 applied 132:17 146:22 apply 130:5 appointment 56:19 57:2,5,6 57:8 58:13 60:6 182:13 184:22 187:2 188:2 290:6,13 290:18 appointments 57:25 63:17 182:4 appreciate 286:9 approach 7:13 46:11 133:18 136:4 266:18 266:19 approached 107:10 265:23 appropriate 106:7 163:9,21 164:1 212:18 212:19 223:14 approval 15:24	approved 282:11,18,21 283:4 approximately 23:2 25:4,9 66:1,3,14 68:21 82:20 approximation 82:15 april 14:23,25 area 19:13 75:3 113:4 283:16 areas 160:13 article 41:18,20 42:2 90:18,20 131:2 149:11 149:15 150:5,7 151:13 154:20 155:6,9 180:3 180:5,7 186:13 192:12,13 195:21 197:4 197:19,22 204:21,22 205:1,12 206:4 206:5,6,24 207:5 208:18 216:15,21 262:19,21,23 263:14 264:23 265:2 270:4,13 articles 11:21 12:1 114:16 117:2 156:9 157:14 158:11	199:4 227:2 230:4 ascertain 52:14 ascertained 239:13 asked 10:10 17:17,18 34:24 37:22 38:15 39:1 50:17 67:14 110:21 162:1,2 203:10 245:4 280:22 281:5 288:6 291:6 asking 17:15 48:13 55:13 72:24 75:11 76:3 110:16 144:2,3 146:9 160:4 182:19 186:6 201:23 266:10 283:18 asks 160:3 aspect 113:14 160:4 265:14 aspects 70:5 105:21 211:2 265:15 assess 74:1,11 74:16 75:12,23 78:10 109:10 143:13,17 144:6,10,14,19 144:25 159:6 159:14 161:14

[assess - aware]

161:16 194:17 238:20 284:20 assessed 53:13 108:8 109:8 132:15 144:4 238:5 assessing 74:9 74:14 78:5 110:18 111:2 assessment 30:24 58:3 74:6 75:16,18 75:20 97:1 106:20 107:25 108:25 109:17 110:5 182:6 230:12,12 238:25 assessments 30:24 74:19 239:4 assigned 23:9 23:12,22 24:23 26:9 29:21 30:6,11 33:1 33:11,18 72:11 72:16 77:9,12 79:16 82:19,22 95:22 96:14 97:4,18 98:7 100:9,13 127:15,18,24 128:23 180:16 180:20,25 181:2,5,17	228:8 249:3,12 249:13 252:8 253:17 257:16 258:8,22 259:10 260:9 260:18 264:19 265:4,10 266:1 266:24 assignment 132:14 assisted 249:4 assistive 252:10 associate 13:13 associated 2:6 8:16 69:18,21 70:12,19 71:4 158:5 198:7,17 208:9 242:15 276:13 association 16:18 assume 10:9 11:1 36:4 89:3 120:5 121:5 127:6,9 129:15 180:25 186:6 194:14 229:21 263:11 assuming 257:21 athlete 15:17 athletic 16:1 attached 167:8 attempt 14:8 67:2 96:3,7	attempted 130:5 attempting 118:2 attend 285:22 attended 111:21 281:23 attending 68:20 attitude 166:19 attorney 1:11 1:12 2:5 3:15 8:21 9:4,5,15 9:24 11:20 17:14 august 1:20 2:10 8:5 292:7 293:8 294:18 author 41:17 154:21 175:4 180:5 205:3 206:17 208:21 262:21 273:4 author's 121:11 authoritative 148:11 authorities 223:10,18,25 224:4 authors 112:21 154:23 155:8 165:1 175:7 211:25	autism 26:18 26:19,25 27:3 27:17,19,23 28:2 54:11,18 55:1,11,13,22 56:4 221:11,22 automatically 108:22 availability 105:8 available 62:21 122:12,18,21 123:3,17,20,22 141:3 142:12 224:14 227:1 257:1 273:15 ave 3:13 avenue 3:4 average 57:20 66:3 82:20 189:15,25 190:8,24 191:3 191:9,13,14,17 191:21,22 242:6 aware 94:22 95:7 98:16 150:25 151:4 163:14,23,25 164:10,14 206:3 216:15 216:21,25 217:8 222:3,8 222:21,25 235:24 236:7

[aware - beyond]

236:12 241:8 253:16 257:25 258:4,16 259:9 259:18 260:15 287:22 288:1	266:23 274:24 278:9 280:18 286:19 287:2 background 13:18 166:14 168:12 backing 203:3 backslash 231:6,18 bad 24:4 baker 149:11 149:11 balance 215:17 218:10 balshem 5:19 barriers 5:14 based 102:16 104:22 117:5 118:21 119:3 129:17 131:23 138:4,14 148:21 151:7 151:11 176:17 177:19 193:6 201:24 227:8 227:11 247:24 249:16 257:1 273:14 bases 288:7 basic 40:15 60:15 98:25 basically 10:6 16:1,14 24:6 42:23 58:22 78:10 132:13	basis 226:23,25 230:3 288:7 baughman 2:21 9:1 began 19:4,12 beginning 41:23 163:2 252:21 begins 84:9 175:14,22 187:17 207:7 212:6 215:8 259:22,25 272:1 begun 15:22 behalf 8:20,23 9:1 behavioral 19:15 39:25 106:21 109:12 110:6,13 111:13 178:12 215:12 222:1 266:19 belgium 243:16 believe 14:9 34:16 37:4 42:2 43:1 60:8 90:24 91:2 94:12,22 102:18 103:8 114:4,5,7 123:18 149:10 154:25 155:11 164:19 175:13	176:24 194:10 208:25 237:1 237:13,23 253:20 255:3 263:2 264:12 266:6 278:19 278:24 279:4 281:11 287:14 beneficial 31:14,17,22 32:9 209:10 benefit 78:16 78:19 79:4,21 105:5 108:1,2 108:19 203:7,8 benefits 5:14 48:24 49:2,6,9 50:4 99:2 108:3,5 207:10 225:19 226:2,6 226:19 245:20 bennetts 1:11 4:2 best 10:15,16 58:23,25 93:24 115:8 122:12 122:18,21 123:2 148:8 174:8 284:20 better 32:19 39:6 177:19 214:19 beyond 75:3,13 76:11 101:10 109:18 110:1,8
b			
b 5:9 6:1 7:1 baby 89:17 back 24:11 28:3 44:3 47:24 48:1,11 50:16 56:7 57:21 67:1 76:14 85:17,19 101:16 105:20 107:19 120:23 138:24 145:11 148:18 152:7 154:15 170:3 171:5,17 175:12,18 176:6 179:5 182:24 183:15 185:22 188:17 194:3 196:21 203:16 204:8 206:6 223:5 232:13,18 238:10,15 241:1,21 245:12 246:4 261:5 263:3 264:18 265:3 265:10,12,20 265:25 266:15			

[beyond - brain]

110:20 220:14 220:20 bias 5:21 114:25 115:1,2 115:9 116:7,11 135:24 231:15 231:20 232:22 238:21 239:7 239:10,12,13 239:15,16,23 big 156:23 binder 29:11 29:12 30:13 binders 30:7 35:4 bioethicist 13:4 biological 166:22 167:13 169:16,22 170:9,15,23 171:22 172:4 birth 23:9,12 23:22 24:23 26:9 29:21 30:6,11 33:2 33:11,19 72:11 72:17 77:10,13 79:17 82:19,23 89:20 90:5 95:23 96:14 97:4,19 98:8 100:9,13 180:16,21 181:1,3,5,18 227:19,25	228:9 249:3,12 249:13 252:8 253:18 257:17 258:8,22 259:11,12 260:9,18 264:19 265:4 265:10 266:1 266:24 birthday 65:7 bit 11:1 64:7 87:13 91:4 111:16 119:12 167:21 283:14 blinding 238:22 block 215:7 blockade 236:1 236:9 blocker 278:5,8 278:12 blockers 24:19 24:21 25:3 33:7 36:6,21 37:20 55:12,24 56:3 60:25 61:13 62:3,17 69:1,4,9,11 70:14,17,23 71:2,12,17 73:19,23 74:3 76:18 77:19,24 78:7 79:20,23 81:8 82:2,7,10 83:1,13,15,25	84:1,6,8 143:18 144:7 182:12 183:4 183:13 184:3 184:10,13,23 185:10,12 186:1,11 187:1 187:8 198:6,21 217:2,10 219:6 222:4,9 226:1 226:11 229:17 234:15,23 235:1 246:5 250:20,22 259:25 260:7 260:10,20 267:1 287:7,12 287:16,24 288:3,8,23 290:4 291:3,7 blood 141:19 blue 156:24 162:24 173:18 231:13 board 14:3 15:12,13,14 225:7 226:4 277:22 279:10 body 32:15 33:20,20,23 34:6 100:3 132:15 133:25 255:19 boise 3:8,18 4:5	bold 42:4 140:3 149:18 150:11 175:21 181:20 209:5 225:11 267:8 275:13 bone 142:13,18 142:22 143:1,2 143:5,6,6,8,10 207:13 214:18 214:20,23,24 243:15 born 86:8 88:3 88:15 90:8 260:14 bottom 129:6 129:10,12 133:16 151:24 152:16 183:1 189:4 205:6 211:14 box 3:17 131:7 263:21 264:1 boxes 264:3 boys 29:23 152:20 brain 77:5 207:14,18,23 208:1,6 215:23 216:4,7,17,23 217:3,11,18 218:21 220:3 220:13,19,24 235:11,17,25 236:9,15

[brains - carry]

brains 219:11 219:11,12	broken 189:9 190:21	cantu 6:16	147:3,12,22
branching 211:19	brought 57:14 279:10	capacities 1:14	148:1,4,11
brand 62:11,20 277:7	bullet 131:9	capacity 1:10 1:12	149:25 150:2
brandings 62:23	bunch 168:20 168:22	captured 160:17 161:3	151:7 160:15
brands 62:21	button 119:19	captures 158:15,21	165:17,19,24
break 11:1,7,9 47:17,19 48:8 50:16 85:14 119:21 120:20 153:17 154:1 154:12 195:18 203:19 204:5 240:12,23 274:6,9,13,21 284:7 286:24	c c 8:1 51:22 236:6,6 237:14 ca 294:22 california 2:7 call 16:23 30:5 30:6 39:23 40:6,7,8,21,24 42:12,25 43:8 43:16,20,22 45:1 59:22 60:24 61:4 85:7,8 106:12 called 22:10 29:10 30:9 59:25 60:2,7 88:8 94:13 102:9 145:22 246:4 calls 81:13 132:13 146:4 146:13 147:6 147:24 174:3 174:15 canal 93:17 94:7,10 102:13	cardiovascular 141:5,9,14 142:3,5 care 5:15 6:19 6:23 11:24 19:1,10 20:1,6 20:9 28:9,22 30:15,22 31:4 31:7,10 35:12 35:16 36:14,18 37:3,6,7,16 38:18 41:23 42:11,13 44:8 46:14,23 54:24 55:5,17,17,20 64:7,13,16,17 64:20,21 65:1 65:4,7,22,24 66:23 67:3,13 67:20,25 68:5 69:18,23 70:1 70:4,5 71:23 87:20 102:21 104:13 105:22 118:17 145:17 145:23 146:2,7 146:11,18,24	168:14 173:22 174:8,12,17,20 174:21 175:2 175:10 176:3 176:15 179:9 179:21 192:3 192:20,24 206:12 223:11 223:12,13 224:15,17 225:9 226:7 227:17,24 228:4 237:7,12 245:15 255:5,7 265:15,16,17 265:20 266:21 267:9 269:14 287:19 289:5 carefully 118:7 118:8 caregiver 59:1 59:15,20 caregivers 58:2 58:19 caring 19:8 carries 26:19 48:19 49:10,22 245:22 carry 27:1 49:21 249:23

[carry - chest]

249:25 260:13 carryover 162:13 269:4 carswell 285:15 case 1:4 8:10 9:24 17:10,13 32:25 34:23 66:25 130:23 136:6,8,13,19 136:25 146:22 203:1 245:19 257:16 258:5,6 259:9 cases 19:25 30:11,25 31:11 31:15 32:14 80:4 91:11 94:11 117:4 123:16 129:20 180:24 225:21 226:8 269:10 casey 3:7,9 9:9 cass 7:5 catch 235:20 236:5 categories 88:14 126:15 categorization 124:17 category 26:21 36:19,20 49:16 49:17,19 95:2 102:1 177:24 180:13,15 182:25 183:3	189:9,23 190:6 191:16 255:13 255:17 277:8 cause 34:5 50:13 115:11 166:25 172:8 172:24 217:1,9 270:22 caused 202:10 causes 53:22 54:4 255:20 caution 102:23 103:3 223:11 223:25 225:25 cease 16:12 center 13:21 225:12 272:1,6 centered 56:20 60:12 centers 261:1 central 71:15 71:16 76:24 77:2,16,23 78:8 79:25 80:16,24 81:4 81:6 287:10 288:4 certain 21:7 29:2 32:15 54:6 74:19 101:3 111:14 134:11 149:1 151:10 155:10 166:11 176:25 211:22 232:19	281:6 285:20 certainly 10:6 186:7 certainty 27:16 28:1 63:2 66:12 221:25 228:17 246:24 264:13 265:17 certificate 294:1 certification 15:3,6,13,14 certified 14:3 15:12 294:5 certify 294:7,16 cessation 166:10 challenges 45:8 45:13 change 34:6 54:9,15 141:16 153:11 167:1 172:9,13,20,24 173:1,3,5,10,10 188:19 217:16 262:13 268:3,5 268:11 269:2 270:21 271:7 271:12,17 changed 290:14 changes 6:14 32:16 33:12,20 33:21,23,24 76:23 81:3,17	165:20 173:10 187:25 188:10 194:23 214:6 219:9,12 234:9 236:17 244:4 244:24 246:16 255:19 changing 111:15 272:8 chapter 151:6 characteristics 29:4,8 163:8 221:10,22 222:5,10 characterize 49:14 200:15 200:21 229:14 270:1 characterized 100:21 characterizing 177:18 check 188:8 232:14 274:14 chen 6:22 114:10,12 204:13 205:11 206:4,5,6 207:5 208:22 208:23 chest 26:2 29:10,12,16,22 29:24 30:7,14 35:4 95:3 97:5 97:18 98:7

[chest - clinician]

99:18,21 100:1 100:22,24 chicago 285:20 child 74:22 75:8 77:20,22 82:1 100:15 101:9 234:7 257:19,22 258:3,24 259:2 259:13,22 child's 234:15 234:23 childhood 19:2 21:21,24,25 22:22 23:1 290:21 children 6:23 7:4,8,10 19:20 68:14 89:14 153:1 231:8 242:11 243:8 children's 13:15,23 210:3 210:16 choices 166:23 cholesterol 141:18 choose 135:15 186:13,14 254:14 choosing 127:17 chosen 186:18 chris 4:7 8:15	chronologic 104:24 chronological 77:25 105:14 circumstances 64:6 104:12 cisgender 16:3 29:23 citation 197:19 251:23 257:6 cite 18:2 154:20 155:5 195:5 197:19,22 198:4 204:12 205:12 208:23 227:2 230:4 231:24 232:12 232:16 238:6 238:13 239:7 239:16 240:7 250:6 257:7 cited 157:14 158:10 163:15 164:2 195:13 206:4 citing 163:24 198:16,16 civil 2:16 claim 226:5 269:12 clarify 20:19 24:2 25:25 26:11 37:18 46:7 47:5 80:13 82:4	96:19 104:25 128:11 158:24 163:17 169:24 194:8 252:14 273:7 280:8 282:8 clarity 18:7 classify 130:3 cleaner 10:19 clear 244:4,23 283:25 clearly 79:15 clinic 6:15 18:7 18:11,16,18,23 18:24 19:3,18 19:20 20:13 21:19 22:20,23 23:20 24:15 30:1,2,16 31:4 31:7 39:11,13 39:16 42:14,17 44:7,18 46:6 46:11 53:20,22 54:20 55:10,25 56:15,24 60:2 62:6,8,16 63:5 63:14,22 64:2 64:14,18,19 65:1,4,7,9 66:11,15 68:12 88:18 91:5,11 91:13,19,24 92:2,10,17,19 92:24 93:1,5 95:12 96:13	179:17 180:8 181:25 182:12 186:15 193:25 194:12 197:16 221:23 262:24 262:25 263:1 263:11,12 266:25 267:3 278:4 288:18 clinical 5:24 11:25 14:2 32:2 42:5 71:22 119:5 122:11,22 123:1,7,18,19 123:25 129:6,9 129:18 130:19 138:2 139:1 146:1,10,17 147:2,11,15,16 147:18 148:12 173:20 174:6 177:2 221:20 223:12 247:24 255:14 261:4 273:16 288:14 clinically 73:9 73:17 96:18,20 177:14,21,24 178:20 179:1 247:7 clinician 26:13 47:7 51:9 135:18 146:9 146:25 148:3

[clinician - completion]

217:1,9 219:4 235:8 clinicians 26:20 104:9 125:22 126:3,10 138:5 287:25 clinics 19:7 228:7,10 263:2 clock 153:18 274:9 closely 234:5 closer 187:4 clothing 29:3,7 29:14 30:12,13 30:13 35:22 cms 275:8 coast 11:3,4 17:4,4 48:1 286:14 292:1 code 1:14 3:11 73:2 276:20,24 277:1,11,14 coexisting 51:25 52:11,23 53:10 cognition 234:7 234:16 235:2,6 235:8 287:23 cognitive 13:6 13:8 52:16 53:15 105:24 106:11,23 107:24 210:3 210:16,23 211:3,6 215:12	215:15 218:9 cohort 136:7 collated 193:8 colleague 18:10 colleague's 18:12 colleagues 18:6 112:14 collective 9:10 colon 94:12 124:6 column 42:3 56:7 132:22 133:21,24 135:10 140:2 142:9 149:18 152:9 153:8 156:23 157:22 160:9 162:12 162:21 171:18 173:17 175:20 181:20 183:24 184:16 187:16 189:16,19 194:6,18 195:22,23 196:8,9 205:17 207:7 209:4,20 211:13 215:6 219:19 221:2 233:25 267:8 269:3 270:4 271:24 276:16 276:23	columns 134:3 134:9,12 152:8 189:14 come 17:12 36:2 75:25 153:19 167:22 180:8 223:4,23 224:9,12 232:2 238:10 260:13 261:8,17 262:5 262:9 286:18 comes 159:20 166:12 coming 41:9 46:20 72:22 85:2 117:3 commencing 2:11 comment 126:10 150:22 161:1 273:4 commission 1:14 3:11 293:25 294:25 commissioned 140:4,9 144:24 145:3 149:6 common 22:21 22:23 272:17 272:23 communicate 55:6 66:19 67:1,4,19 68:2 communication 55:7 64:11	66:16,18 67:15 community 273:16 comorbidities 244:1,12 company 2:6 8:17 62:13,25 63:2 280:4 compare 128:25 compared 16:3 117:8 178:21 221:24 comparing 118:1 comparison 135:15,22,23 136:9,14,16,19 136:22 137:1,6 complete 95:24 96:11 137:19 137:19 176:18 completed 13:22,24 14:1 290:11 completely 253:7 255:13 completes 177:7 182:6 completing 182:4 260:11 completion 158:2 260:7 291:13

[complex - consensus]

complex 52:16 53:15 105:24 106:11,23 107:23 complexity 157:9 compliance 103:12,17 104:3 component 37:7 108:25 215:12 components 108:16 214:20 comprehensive 18:25 19:14 30:23 compression 29:15 30:13 compromise 52:2 computer 41:10 conceal 29:3,7 conceive 249:5 252:10 258:2,3 conceived 257:18,21,21 258:24 259:2 concept 50:1 92:22 132:9 201:24 264:23 concepts 121:16 131:5	concern 217:19 219:5 234:5 concerned 59:8 concerning 227:13 229:16 230:1 concerns 59:2 80:6 219:9 233:13 266:22 270:24 conclude 202:9 203:8 216:5 concluded 292:11 concludes 292:6 conclusion 81:14 146:4,13 147:6,24 174:4 174:15 193:5 195:24 202:14 203:13 232:21 233:1 289:9 conclusions 117:5 129:17 150:14 151:2,5 178:10,14 190:17 202:20 208:6 214:24 224:10,13 241:17,18,19 243:1 concomitant 244:2,13,23 245:8	condition 26:25 30:9 46:1 48:16 49:8 248:14 conditions 26:16 45:23 53:3,6 221:17 conduct 117:21 213:25 conducted 26:7 26:9 118:3 150:1 156:18 179:19 213:20 213:22 237:6 237:11,22 conducting 74:18 212:10 213:19,21 214:9 conducts 40:21 43:19 confidence 132:23 133:4 133:11 confidential 59:18 confidentially 58:14 59:10 confirm 21:23 37:25 52:18 63:20 165:10 171:8 179:15 confounding 115:20 199:17 199:21 200:6	200:16,19,22 201:3,8,12,17 201:25 244:16 confused 173:14 218:25 congruent 29:4 connecting 28:23 29:2 40:16 connelly 1:19 2:1,4 5:4,11,13 8:8 9:22 12:6 14:10,18 16:23 17:8 18:14 40:25 56:6 76:15 85:18 120:25 121:3 130:22 134:15 139:9,14 149:10,14 154:16 155:22 156:2,12 164:20 168:22 170:14 171:6 175:13 179:23 204:9,16 208:14 224:18 230:22 233:3 236:20 241:3,4 262:14 275:1 283:21 286:8 287:6 292:7 293:5,19 consensus 6:20 209:24

[consent - correct]

consent 182:6	consisting	20:7 40:18	cooperative 3:6
consenting	293:8	65:3,6 165:16	cooperkirk.c...
267:14	constitutes	176:12 226:7	3:14
consequence	77:16	288:2 289:15	copy 14:19
161:10,15	consultant	continued 3:1	correct 15:8,9
consequences	285:24	4:1 6:1 7:1	18:19 20:15
209:9,15	consultation	41:23 196:12	22:18,19 24:6
consider 12:6	96:9	227:9,12	24:12,13,24
12:10,11 13:9	consulting	229:16	25:21 26:7
47:10 79:22	275:22 277:17	continues	38:4,24 40:5
101:12 113:10	277:19,21	28:10	40:22 59:7
199:21 220:22	278:17,21	continuing	60:5 62:5
280:12 291:4	279:2,6 285:23	66:23	63:21 64:5,10
considerable	contacted	continuous	69:19,23 70:14
166:20 171:21	17:14	16:21	71:6 72:20
205:23	contacting	contribute 55:4	73:20 75:22
considerations	67:23	270:24 285:24	76:7,8,12,13,18
173:18 282:3	contained	286:1,4 288:15	76:19 82:18
considered	275:10 293:11	contributing	84:4 95:4,10
55:18,20 77:11	293:13	76:2	103:13 129:14
148:8 166:17	contains	contributions	132:1,16 134:4
166:20 170:10	294:14	122:22,25	134:7,25
174:8 200:11	contemporan...	control 238:22	136:21 139:19
216:12 228:23	135:15	239:21	148:22 150:8
243:19 248:8	content 18:8	convened	152:4,13
279:11,12,22	contents 18:5	277:23	155:22,23
280:5 282:4	121:18 293:10	conversation	156:10 159:21
considering	context 51:9	43:24 267:15	162:22 165:12
280:7,20	52:10 89:20	283:17 284:14	178:18 179:18
281:14	99:12 126:11	288:19	183:14 184:14
consistent	148:19 213:11	conversations	184:15,24
221:20 254:23	213:16 270:13	101:5 289:16	185:7 187:3
consistently	272:8	289:20	188:15,20
200:13	continue 15:12	cooper 2:17	189:12,15
	16:15 19:23	3:12 8:24,24	190:1,9,22

[correct - cross]

191:2,12,19	133:7,14	235:22 242:4	courses 119:2
194:1 197:20	135:13,19	242:12 243:24	court 1:1 4:8
198:2,8,15,22	136:3,10	244:7 262:1,6	8:11 9:17
204:13 205:9	137:24 138:7	264:15,20	10:17
205:12 208:2	140:8,11 141:1	267:11,17	cover 10:4
210:13 213:23	141:6 142:10	272:5,10	coverage 62:23
238:2,23	142:15 145:15	273:17	covered 10:2
239:20 246:1	145:20 149:23	correlates	covers 97:13
247:11,16,17	150:3,12,16	207:5	covid 41:24
248:3 263:8,9	153:10,12	corresponds	crc 1:25 294:23
263:13,23	157:4,11,24	276:25	create 94:7,9
264:24 265:4	158:7 160:10	cortex 215:18	104:8
275:17 276:1	160:20 162:15	218:11	created 93:18
282:1,18 285:8	163:12 165:15	cortical 143:5	158:4
291:9,10	165:21 166:16	costs 50:5	creating 37:22
293:14	167:2 168:9,16	counsel 8:18	creation 93:16
corrected	173:24 175:25	10:2,20,21	102:12,13
293:13	176:4,10,20	11:12 12:4	224:6
corrections	180:19 181:24	18:5 99:2	criteria 31:25
293:16	182:9 185:14	249:10 254:3	55:14,16 96:24
correctly 28:6	187:24 188:4	286:11,11	103:14 105:20
28:12 42:9,15	194:20 195:1	counseling	105:22 117:3
44:6,10 45:6	195:25 196:6	182:5 254:7	130:6 149:19
45:10 51:24	196:15 205:19	255:15	225:11
52:6 56:13,21	206:1,9,14	counting 265:2	critical 235:19
57:23 58:5	207:9,15 209:7	countries	cross 25:8 36:7
76:21,25 81:20	209:12,22	223:20	36:22 37:20
81:23 85:21	210:5 211:15	county 1:12 2:9	61:5,14 62:4,9
86:3 97:15,20	211:23 215:10	4:3 9:7 293:3	69:1,12 70:14
101:20,24	215:19 219:25	294:3	70:23 71:3
102:20 103:1	220:6 221:8,18	couple 120:4	72:1 73:19,23
111:20,25	223:8,15	121:15 264:2	74:3 84:7 90:9
122:7,14 125:5	225:14,22	course 119:4	106:16 107:2
125:24 131:10	227:7,20 234:4	199:10	107:15 108:10
131:15 132:22	234:11 235:15		109:3 144:10

[cross - defer]

144:14 182:13 183:10,14 184:3,23 185:10,13,25 186:10,25 187:8 189:10 189:12 198:6 229:18 236:2 236:11 257:17 258:9 259:11 260:1,10 267:4 291:3,7 crr 1:25 294:23 cryopreservat... 86:9,10,12,13 86:15 87:5,9 87:10 89:4,13 258:13,23 259:3 261:2 cryopreserved 259:4 csr 1:25 2:7,7,8 2:8 294:21,22 294:22,23 current 13:12 132:21 149:7 160:11,24 161:8,17 194:23 currently 15:22 15:23 225:18 226:18 234:16 235:2 curriculum 5:11 119:5	cut 43:13 73:15 cutoff 178:10 cv 1:4 8:10 14:19 15:2 16:4 263:15,17 278:18,20 cwd 1:4 8:10 cycle 79:18 166:10 cycles 249:21 d d 3:16 5:1 8:1 d.c. 2:22 3:13 dana 3:3 9:13 data 154:24 155:9,23 159:5 159:19,22 161:15 179:15 180:7 185:6 186:14 190:18 191:8 208:5 211:9 224:14 262:23 273:14 database 193:9 date 8:4 14:21 14:22 112:20 194:21 195:4 205:8 276:3,6 276:9 dated 7:5 day 2:10 292:4 293:8,21 294:18 dayton 4:4 9:7	de 6:19 113:8 113:10,25 114:1,5,7 195:14 197:19 197:22 199:4 199:13 205:4 206:17 207:17 238:5,20 239:7 239:16,19 240:6 deal 34:7 dealing 54:10 deaths 150:15 decide 31:15 107:3,14,16 108:10,11 109:3,4,17 deciding 109:25 decision 74:24 102:25 103:16 106:23 122:11 122:17,23 123:1,8,19,25 135:17 145:8 decisions 52:16 52:21,25 53:7 53:15 93:25 105:24 106:11 107:24 109:15 111:3 224:4 declaration 5:12 17:9,21 18:2,5 20:11 28:3 44:3 45:5	51:20 68:4 76:14 80:10,17 81:6 85:19 97:12 101:17 111:16 137:22 139:19 140:14 145:11 148:18 154:17 155:4 176:7 179:5 191:24 197:18 203:17 204:10 208:24 223:6 227:3 230:5 231:25 232:12 232:17,19 245:13 247:1 248:17 261:5 decreased 190:8 191:18 dedicated 39:16 42:12 57:25 58:8,17 deem 23:11 113:1 155:16 deemed 128:13 223:13 deems 225:16 deepening 33:5 33:13 defendant 4:2 defendants 1:15 2:5 3:10 8:9 9:16 defer 247:22

[define - detailing]

define 61:7 70:1 109:9 258:19 defined 51:13 73:9 109:8 153:5 167:17 174:22 236:13 236:16 239:12 240:3 265:6 273:7 defining 89:16 definitely 65:2 105:16 122:22 242:19 definition 26:22,23 47:12 72:22,23 73:5 73:12,16 77:20 99:14 132:21 133:10 138:20 148:1 239:14 degrees 44:8 delay 76:23 81:3,17 delaying 81:9 delineation 102:22 delivered 38:18 68:5 delphi 209:23 demonstrate 106:7,15 211:16 demonstrated 253:8	demonstrates 253:3 demonstrating 80:21 166:21 171:22 dendritic 211:19 denied 56:3 density 211:20 departments 263:5 depend 58:21 93:21,22 117:23 174:21 200:9 219:8 dependent 62:22 248:5,6 depending 57:17 87:24 142:5 143:10 200:18 depends 35:2 46:15,17 49:23 51:13 58:20,22 59:23 69:6 72:21 78:21 79:11,11 83:17 83:18 86:7 93:19 100:16 100:22 106:25 109:7 113:4,21 128:6,6 142:1 147:15,19 193:21 212:16 212:16 213:2,2	289:6 depose 293:6 deposed 9:25 deposition 1:19 2:1,4 8:8,13,15 11:19 12:4 14:16 17:7 41:1 120:24 130:25 134:16 139:10 149:12 155:25 156:7 164:21 168:1 180:1 204:19 208:16 219:16 224:20 230:24 233:5 236:23 241:2 262:17 275:3 292:6,11 293:8,10 294:9 294:11,15 depot 62:23 depression 6:14 44:9,12 44:19 46:5,10 46:12,25 47:14 50:21 51:1 176:15 177:1,2 177:11,15,22 177:25 178:8 178:18,21 188:1,10,19 192:6 205:24 depth 209:18 describe 13:11 14:10 23:9	35:9,19,22 39:10,13 57:4 96:13 112:2 127:11 187:25 237:4 240:10 272:16 279:5 described 32:2 35:3 36:15,18 42:23 67:15 76:4 92:4 100:9,12 121:2 183:9 237:9 describing 74:2 87:2 126:16 198:2 244:15 description 235:5 design 115:7 133:22 136:6 202:16,23 203:12 209:25 284:23 286:2,5 286:6 designed 161:6 161:7,14,24 162:2 200:9 desire 29:24 88:13 266:22 desired 257:3 282:5 283:11 284:12 detail 18:21 91:3 244:3,23 detailing 60:16 60:22

[detected - different]

detected 44:13	detransitioned	279:12,22	55:1,15 71:15
determinants	266:3 272:7	developmental	78:13 80:20
206:11	detransitioning	74:2,15,23	247:9,12,14
determination	229:14	75:10,12,21,24	248:1,4,4,5
75:1,10 76:6	detriments	76:1,4 209:9	diagnostic
76:10 78:6	236:15	219:9 234:15	53:17
109:24 110:5	develop 19:12	235:1 267:22	diane 114:9,12
111:11 114:18	31:19 56:19	268:8	208:22
129:4 157:7	74:12 165:4,6	development...	died 205:25
determinations	212:18 282:5	111:11	differ 135:16
54:8 170:11	developed	developments	160:13,25,25
239:4	168:13 233:20	14:24 15:1	difference
determine	282:9	deviation	127:23 191:4
57:15 75:25	developing	189:18	194:11 220:3
78:16,24 79:20	277:24	devices 29:25	250:12,16
82:1 101:13	development	dgc 42:10,17	251:2,5
106:22 109:14	13:7,9 68:17	56:14	differences
111:6 112:9,15	74:22 75:9	diagnose 81:25	196:2
114:15 178:7	78:2,4,23	diagnosed	different 26:16
242:9 290:25	86:20 88:20	21:13,16,20	29:13 32:17
determined	142:22 149:7	22:7,17,25	35:6 37:9,9
59:18 76:5	168:23 169:3	23:24 24:7	45:23 49:15,20
77:7 233:1	169:11,13	26:24 31:6	49:21 50:19
determines	207:14,18,23	34:9 45:24	51:11 54:25
93:23 177:13	208:1,7 210:4	71:13,18,24	57:16 58:15
determining	210:17,23	72:3 73:24	60:15 70:5
32:8 39:18	211:3,7 214:18	77:23 95:13	71:14 72:12
74:22 107:20	214:20,23,24	96:15 162:7	73:11,13 74:7
108:18 110:19	215:23 216:4,7	247:6,7,23,24	74:20 76:1
117:1 145:6	216:17,23	diagnoses 43:6	78:20 83:5
179:1	217:3,11,18	44:17 45:19	87:24 94:3,5,6
detransition	218:22 234:6	diagnosis 22:21	104:12 105:21
227:15 229:1	235:12 236:15	26:19 27:1	105:25 106:15
229:11 272:19	255:19,24	28:1 31:24	107:11,12,22
	260:23 267:23	37:7 44:19	107:25 108:6

[different - doctor]

109:15 111:3	difficulty 20:8	44:17 57:9,16	56:4
112:7 113:18	66:22	58:13,14	disproportion...
117:18 124:11	direct 121:17	121:21 277:23	221:23
124:17 128:2,4	directed 276:8	279:11,21	distance 188:23
128:21,23	direction	281:23 283:20	188:24
130:3 132:25	294:13	284:7 286:6	distinct 105:14
133:6,13	directly 80:16	discussed 34:17	distinction 89:7
137:15,16	director 18:15	38:9,17 39:8	89:8 93:2
141:17 142:24	disagree	48:24 90:22,22	146:1,10,16
143:2,6,7,9	123:13 150:18	90:25 91:15	147:1,10
147:18 159:4,4	226:10,15,24	148:19 244:16	distress 53:20
166:8 171:10	229:21 232:20	284:11,19	53:23 54:4
174:18 177:23	238:25	291:2	69:18,21 70:6
181:7 186:19	disagreement	discusses 184:9	70:12,18 71:3
199:25 214:6	230:4	discussing	72:14 73:4,10
219:11 221:14	disciplines 74:8	32:12 40:17	73:13,18
239:11 250:2	76:2	50:20 67:12	247:11,16
253:7 255:13	disclaimer	81:6 89:11	248:3,6,8,11,13
255:14,16	175:22	101:19 126:16	248:16
266:3 270:14	disclose 59:1	170:13 282:25	distributed
282:3 289:17	278:21 279:2	283:11	157:6
290:1 291:15	281:7	discussion	district 1:1,2
differentiation	disclosed	10:11 23:10	8:11,12
211:19	278:23,23,24	37:16 50:23	diverse 19:1,5
differently	278:25	81:7 102:14	26:10 42:20
137:17 200:14	disclosing 59:9	121:16 145:11	70:24 221:14
261:8,18 262:5	59:18	150:11 209:5	221:15
262:10	discontinuation	242:1,3	dkennedy 3:5
differing	249:22	discussions	doctor 41:12
142:21	discontinuing	273:15	48:12 131:1
difficult 27:25	249:6 252:11	disorder 26:19	156:14 164:23
48:21,25 49:17	discrimination	26:25 27:3,18	168:3 180:2
49:19 94:20	270:24	27:20,24 28:2	204:20 208:17
128:25 129:16	discuss 18:21	54:11,18 55:2	232:10 233:6
	34:11 37:11,14	55:11,14,23	236:24 262:18

[doctor - effect]

275:7 291:22 doctors 262:3 document 41:13 121:6,9 121:19 126:5 131:6 132:3 134:18 135:5 135:10 164:24 164:25 173:17 224:23 230:8 231:1 232:2,21 233:7,8,12,18 236:25 237:20 241:24 245:12 267:7 274:10 documents 11:15,21,22 43:23 153:19 160:16 168:24 169:10 259:10 doe 1:5,7,7,7 doernbecher 13:15,23 18:16 42:17 doing 109:12 261:24 dosage 251:17 dosages 251:20 double 188:8 232:14 dr 8:8 9:22 12:6 14:18 17:8 18:14 85:18 120:25 139:14 149:14	154:16 155:22 170:14 204:9 205:4,4 241:3 283:21 286:8 287:6 292:6 draft 17:20 139:22 drafting 17:23 144:23 dramatic 176:13 179:7 192:1,16,18,22 193:5,23 draw 117:5 129:17 150:13 151:1 190:17 203:13 208:5 drawing 93:3 202:20 drawn 151:5 dreed 4:6 drill 137:23 droz 3:16 9:5,5 drug 276:17,20 276:25 277:1 277:11,14 278:4,7,12 279:23 282:11 drugs 62:14 63:1 dsm 71:13,19 72:3 due 157:8 158:3 166:23 231:14 235:25	238:21 244:4 244:24 290:19 duly 293:5 294:9 durable 166:21 167:5,11,12 169:16,22 170:9,15,23 171:22 172:4 duration 242:6 242:20 dutch 197:5,8 197:12 dysphoria 6:24 7:8,10 21:13 21:17,20 22:18 23:25 24:8 29:18 31:6,25 34:10 35:1 37:8 45:8,13 45:20,25 46:1 46:5,10,25 50:22 51:2 55:15 68:6,15 69:19,22 70:6 70:10,13,19 71:4,13,19,25 72:3,13,14,20 73:11,14,25 82:1 83:14 95:13 96:15 115:12 138:3 143:18 144:7 144:11,15,20 162:7 173:21	231:9 242:11 281:21,25 282:7,17,21 283:2 287:16 288:10 dysphoric 5:23 e e 1:25 2:6 5:1,2 5:9 6:1 7:1 8:1 8:1,16 237:14 294:5,21 e.g. 52:2 251:24 252:2 earlier 36:15 77:6 126:17 135:24 187:12 244:16 245:4 272:7 287:7 288:6,17 291:5 early 20:8 153:15 207:10 east 11:3 17:4 48:1 286:14 292:1 eastern 120:11 ebm 125:8,21 editorial 205:11 207:6 education 160:14 effect 32:23 34:2 71:1,2 132:23,24 133:1,4,5,6,11 133:12,13

[effect - endocrinology]

136:8 141:3	efficacy 227:13	eligard 62:24	endnote 195:5
142:12 151:2	229:17 230:1	eligible 55:11	195:14
207:18 211:5	egg 87:15	290:22	endnotes 195:6
213:6,6 214:10	eggs 86:15,20	eliminate 270:7	195:8
214:14 216:16	88:16,20,22	271:4,11,16,22	endo 275:16
216:22 219:4	90:14 249:24	email 41:14	277:17 278:15
220:13,19	eight 193:21	43:21 134:21	279:6 280:10
222:4,9 223:1	eighth 150:1	153:19	281:14,22
242:10	151:6	emailing 14:8	endocrine 5:23
effective 48:17	either 31:23	embryo 86:20	5:24 6:12,17
49:5 81:9	47:18 87:15	embryos 86:21	16:9,17,20
166:10	89:12 120:7	87:1,12,14,14	51:15 52:19
effectiveness	143:12,16	emerged	83:6,9 90:25
80:21,25	144:5,9,13,18	166:21 171:21	101:21 103:18
143:13,17	144:21 182:12	emerging	103:20,21,25
144:6,10,14,19	184:23 187:8	111:24	104:4 105:2
288:8	212:17 236:2	emphasis 34:12	106:9 137:25
effects 6:21	236:11 247:19	emphasized	138:1,10,12
136:13,17,25	250:21 260:23	37:13	139:4,11,15
137:4 143:2	264:17 274:11	employed	148:20 165:7
150:14 151:19	288:23 289:13	209:23	165:10 168:4
207:13,23,25	291:21	employers	173:20 174:6
208:6 211:18	ejaculation	53:21	174:11,24
212:6 215:16	88:7	employment	175:1,6,9
215:23 216:4,7	elaborate 70:2	160:15	255:6,10
217:3,11,17	elect 254:11	encompasses	256:16
218:10,21	elected 258:12	30:23	endocrinolog...
219:20 220:1	electronic	encompassing	13:15 42:14
220:23 222:17	193:3 289:14	235:10	58:1,8,18
242:15 255:14	element 166:22	encounter	endocrinolog...
255:18,24	167:13 171:22	272:7,13	288:2
260:5 284:21	172:5	encouraged	endocrinology
efficacious	elements 115:9	266:20	6:15 12:12
209:25	209:25	encroaching	13:25 14:6
		283:16	19:8 56:17

[endocrinology - exact]

68:19 88:18 endogenous 33:4,5,12 80:22 81:22 84:5,8 209:11 209:15 236:2 236:11 246:15 260:7,12 endometriosis 246:1,11,17,19 endorse 196:12 endorsed 196:11,14 endorsement 196:2 engaged 64:13 english 231:4,7 231:13,19 ennis 4:7 8:15 ensure 53:6,13 102:23 ensuring 103:15 entail 30:16 46:19 70:4 entailed 200:17 200:19,24 entails 42:23 entering 127:1 entire 121:18 entitled 2:12 132:5 133:17 134:4,6 188:19 environment 40:13	environments 176:12 270:22 equal 34:19 36:9,24 38:2 38:11,22 48:18 49:9,9 55:22 equally 37:13 48:17 49:5 equate 22:4 equation 92:22 especially 19:6 86:24 219:10 221:11 esq 2:16,17,21 3:3,7,12,16,16 3:17 4:4 essential 235:17 essentially 31:2 35:5 86:14 177:10 280:3 establish 20:6 65:20 68:11 116:23 155:15 174:7 175:9 176:2 248:5 established 71:23 139:2 147:17,19 165:19 establishing 197:12 estimate 20:24 21:5,8,16 22:21,24 23:2	23:4,17,21 24:11,18,25 25:2,4,7,9,12 25:22 27:7,23 66:10,13 95:14 96:16 97:8 132:24,25 133:4,6,11,13 187:4 241:14 288:25 290:10 estimation 27:9 181:9 187:7 estradiol 62:10 estrogen 33:14 142:25 235:21 246:15 254:12 254:22 255:13 255:19,22 256:3,22,25 257:4 et 8:9,10 ethical 50:10 212:13,22,25 213:5,8,14,18 european 223:9 223:17,24 evaluate 6:21 51:12 evaluated 52:13 evaluation 54:2 54:7 57:12 107:20 108:17 109:13 247:25	evaluations 30:24 60:18 evening 291:25 event 294:17 everyone's 285:10 evidence 5:19 5:21 6:18 7:7,9 118:21 119:1,3 122:9,13,18,21 123:3,25 124:2 124:8,10,15,18 126:17 127:21 129:2,11,13 130:4 131:25 132:6,15 133:18,25 141:3 142:12 166:21 171:21 194:21 195:3 204:24 221:9 227:13 229:16 229:25 242:19 242:19 evolution 267:13,20 268:14,16 evolutions 274:1 evolve 84:11 evolving 273:13,20 exact 164:5,6,9 177:13 218:19 256:6 276:6

[exactly - expert]

exactly 21:7 54:19 171:3 183:16 210:21 228:17 235:6 273:4	excluded 231:14	204:16,19 208:14,16 224:19,20 230:23,24 233:3,3,5 236:20,20,23 241:2,4 262:15 262:17 274:4 275:1,3	261:8,17 262:5 262:9 268:2,13 268:19 270:15 270:19,25 271:5 272:16 273:1,2,16 288:14
exam 247:8	excuse 35:11 184:1 194:7 227:10	exhibits 153:16 153:21,25 155:14 156:9	experienced 30:19 72:15 84:25 173:9 182:7 273:3
examination 9:20 287:4	executive 215:13	existing 115:10 117:1,25 118:16 242:19	experiences 45:9,14 159:25 160:6,12,14,16 160:24 161:2,8 161:9,14,17 173:3 268:10 268:23 269:11 271:3
examinations 63:6,9	exerting 215:16 218:9	exists 117:6 241:8	experiencing 33:4 178:20
examine 188:10	exhibit 5:11,12 5:14,17,18,20 5:23 6:3,5,8,11 6:12,14,17,18 6:20,23 7:3,4,7 7:9,12,14 14:8 14:10,16 16:23 17:7 40:24,25 41:1 56:6,6 57:21 60:9 76:15 119:8 120:24 121:3 130:22,25 134:15,16 139:9,10 149:10,12 155:25 156:2,7 156:12 164:19 164:20,21 167:20,22 168:1 169:6 170:4,13 171:6 171:7,10 175:14 179:23 180:1 194:3,4	expect 32:19 84:14	experiments 212:14,22 213:1
examined 294:8		expectation 32:22	expert 5:12 12:7,10,11 13:6,10 17:9 17:18 94:19 106:21 109:12 113:11,25 114:6 138:5 209:3,24 214:18 220:23 235:11
example 32:15 32:21 33:10,25 59:16 67:16 79:14 94:2 106:16 130:19 166:8,11 169:21 207:13 252:3,22,25 280:4		expectations 31:19 32:4,13 33:19	
examples 32:24 33:9 45:16 94:8 95:1 166:6		expected 84:11 84:14 267:13 267:20 268:5 268:15	
excellence 237:7,13		experience 7:13 13:8 129:7,10 129:18 158:14 158:15,20,21 158:25 159:2 159:11 202:17 229:13,14	
except 63:23 152:13 166:15			
exceptional 225:20 226:8			
excitatory 215:17 218:10			

[expertise - fee]

expertise 19:13 74:8,21,21 75:3,8,14,15 76:2,12 101:11 101:13 109:19 110:2,9,21,24 111:4,13 114:8 114:13 178:12 220:14,20 285:24 286:1	228:12 exploration 267:12 explore 31:12 31:12 53:22 54:3 exposed 136:5 234:8 236:10 express 268:2 268:19 expressed 267:1,4 273:3 288:15 expresses 268:9 268:23 expression 31:13 262:12 268:13 269:2 extensive 182:5 extensively 10:3 32:8 extent 52:13 81:13 146:3,12 147:5,23 174:3 174:14 206:12 extenuating 104:11 external 102:12 166:18,25 172:8 extraction 88:9	facsimile 3:19 fact 81:8 128:19 164:10 168:13 169:13 169:15 271:1 290:19 factor 105:17 128:17 227:22 229:1,15 factors 105:18 114:17,20 129:3 158:4 166:23 193:22 227:9,12 228:15,23 270:14,21 271:2,5 279:11 279:22 283:10 284:11,18,22 facts 206:3 fair 20:3 21:8 35:19,22 38:20 46:9 49:24 64:4 71:8 80:7 109:16,23 111:5 123:3 141:22 152:25 187:20 189:6 199:2 225:24 246:8 264:14 fall 138:20 177:23 falls 26:18 77:20 184:3,17	familiar 53:16 72:5 111:24 113:7 114:9 115:19 116:6 116:16 117:16 118:20 124:9 126:8,19 127:4 129:6,22 131:17,20 132:9 134:12 134:17 135:4 137:7 159:1 197:4,14 215:24 224:7 231:2 families 28:24 262:3 family 40:10 56:20 57:10,13 57:15 58:3 60:12,19 78:22 86:1 112:17 142:6 182:5 248:22 far 78:12 79:2 79:9,12,13 125:16 135:16 239:19 259:1 fda 282:11,18 282:21 283:4 feasible 157:7 212:18 february 7:5 fee 275:22 277:17,19,21
experts 113:1 145:6 expired 15:7 expires 293:25 294:25 explain 18:23 39:6 77:3 80:11 87:13 93:2,14 94:2,4 94:20 105:11 115:22,24 116:9,19,22 118:23 124:14 127:19 129:9 129:25 137:10 173:6 176:22 177:20 178:23 224:12 246:3 246:10,12 249:14 256:23 280:13 explained 118:25 explanation 10:8 161:23	f fabric 29:15 faced 216:2		

[fee - follow]

278:21 279:2 285:23 feel 283:22 fellowship 13:25 19:6 68:19 female 23:9,11 23:12,22 26:9 29:21 33:18 77:9 79:17 82:19 95:22 96:14 97:4,18 98:7 100:8,9 100:12,13 101:7 180:16 180:21 181:5 181:17 228:9 249:3,12 252:8 253:17 259:10 259:10 260:9 females 23:4,7 23:18 24:12 26:7 29:18 95:12 96:13 227:19,25 fertility 85:23 85:25 86:1,5 86:17 87:22 88:18 90:21,22 207:14 248:20 248:22,23 249:16 250:17 251:6 254:10 255:21 256:13 256:19,20,21	257:3 260:6,21 fertilized 87:16 fewer 48:19 49:11 50:8 fi 41:7 119:9 field 12:9 13:10 112:22 113:1,4 113:11,14 118:13 138:6 141:10 142:18 146:9 273:21 273:22 274:2 fields 12:9 112:8 fifth 176:10 figure 17:3 126:13,13 129:5,12 file 119:13 175:14 179:24 194:4 204:16 208:15 224:19 230:23 233:4 236:21 241:5 274:4 275:2 files 171:9 fill 43:21 187:18 final 79:4 81:19 153:8 165:13 finally 207:8,10 find 122:1 124:23 197:2 findings 118:1 118:2 153:9	163:10,21 164:1 fine 47:21 155:19 196:23 196:24 197:3,3 207:1 240:18 finer 74:8 finland 223:22 firm 8:25 first 6:14 14:8 28:5 42:7 44:5 51:23 56:12,18 57:1,4,6 60:5 60:24 61:4,14 61:18,23 63:4 67:5,22 68:13 79:18 85:20 100:5 121:21 122:5 125:3,4 133:21 134:3 135:25 136:1 137:23 140:7 141:2 142:9 145:16 148:18 149:22 150:11 152:3 157:2,23 160:23 165:9 165:13 166:15 182:3,14,21,22 186:2,11 187:2 187:6,16,23 188:2,11,20,23 189:16 194:6 194:18 197:19 209:20,20	225:13 229:15 230:9 231:23 232:11 234:3 248:18 249:1 250:5 253:1 255:8 270:4,6 273:11 290:13 290:18 293:5 five 21:1,5 85:4 274:13 fixed 267:24,24 flatter 29:16 30:14 flexibility 215:12,16 218:9 flip 195:8 223:5 flow 154:3 focused 168:14 241:17 follow 6:14 20:7 32:3 50:11 63:6,8 63:12,16 71:22 104:10 105:2 137:8 183:25 184:17,21 185:3,11,16,17 186:2,11 187:2 187:7 188:2,11 188:20 189:20 190:1,2,9,11 191:1,5,11,13 191:18,21 192:15 196:3

[follow - front]

196:13,14 242:6,9,18 289:4 290:5,13 290:18 291:17 following 13:24 183:21 210:1 227:5 230:9 253:5,5 268:25 follows 227:16 font 151:23 footnote 154:19 154:20 155:5 197:23 198:12 198:16 203:17 204:11,12 205:13 231:24 232:12 238:17 238:19 249:1 250:5 252:22 253:23 257:6 force 140:9 forces 166:25 172:8,23 foregoing 293:7 294:9,14 forgot 74:12 form 20:18 23:5 24:1 34:14,21 35:14 36:11 37:2 38:14,25 43:21 44:15 47:4 48:20 49:12 50:9 51:5,16 53:8 54:12,21	56:1 63:7 67:7 67:17 69:5,24 70:15 71:7 73:21 80:18 81:1 82:3,8 83:2,16 84:12 88:25 89:12,15 89:22 90:6 91:9 92:3,5 95:16 98:1,19 99:16 103:6,19 104:5,18 105:10 106:2 106:17 107:5 107:17 108:13 111:9 112:23 113:12 114:2 115:13 117:8 117:10,13 123:15 130:7 137:2 145:1 148:14 150:20 151:9 157:18 158:16 159:8 159:16 161:11 161:18 163:16 164:11 166:1 170:17,25 172:1,15 173:13 174:2 179:12,16 182:6 184:5,25 186:16,23 192:21 193:7 197:6,13	199:18 200:7 201:4,20 202:12,25 203:10 206:18 210:9 213:12 216:9 217:5,22 218:18,23 219:7 220:15 224:1 228:5,13 229:6,23 230:6 232:23 233:14 234:17 239:1 239:17 240:1,8 242:23 244:17 246:22 251:16 254:5,18 256:5 256:11 258:18 260:3 266:5 269:18,23 271:19 272:24 279:17 281:16 282:12,19 284:16 285:2 286:3 formal 28:1 43:6 64:11 66:15,17 67:14 formally 23:24 67:1,18 71:12 71:18 72:2 format 157:6,8 193:4 224:25 225:1 formed 87:15	forms 95:5 formulate 210:20 forward 32:20 40:18 found 19:3 218:15 foundation 101:2 117:11 122:19 126:4 127:22 145:2 150:21 153:3 199:19 206:23 210:10 220:9 224:2 232:24 234:18 239:2 269:24 282:13 283:6 285:3 founded 18:18 four 132:6 188:22 fourth 171:20 176:8,9 188:25 191:25 267:10 framework 165:18 franklin 3:7 freezing 86:14 86:15,21 87:1 87:17 88:5,16 88:22 fresh 240:16 friends 1:4,6 front 4:4 11:16 121:3

[frozen - general]

frozen 88:12	g	64:17,18,19,21	173:11,21,21
full 56:11 122:5	g 8:1 238:1	64:25 68:6,14	176:15 179:8
125:4 136:1	gad 176:18	69:17,19,22,23	180:13,17,23
142:9 187:17	178:23 188:3	70:1,4,6,8,10	181:3 188:7
194:6,19	188:24,25	70:13,19,24	192:2,19,24
195:22 196:8	190:20,25	71:4,13,18,25	196:5 221:12
205:17 207:7	191:3,21 193:6	72:3,5,10,12,14	221:14,15
209:9,14,20	gah 206:13	72:15,19,20,22	225:9,15,18
211:13 219:16	gain 46:19	73:1,6,8,11,14	226:1,12,17
221:2 267:8	gaining 40:9	73:16,20,24	228:9 231:8
270:5 271:24	gaps 165:16,23	81:25 83:13	242:7,10,11
279:5 294:14	187:18	84:10,15,19	244:5,25
fully 56:15	garrison 3:3	85:1,22 91:16	245:15 248:19
108:2 271:4	gas 264:17	92:13,23 93:7	258:15 261:8
280:9,12	gather 57:14	95:3,13 96:15	261:18 262:5
functioning	gathered	96:17 97:5,17	262:10,12,12
52:4 205:21	159:10	97:19,25 98:6	263:4,22
215:13	gears 91:4	98:13,24	264:24 265:10
fundamental	111:15	100:10,14	265:16,25
122:8 124:7	gender 5:15,23	101:8,15	266:23 267:24
funding 15:16	5:23 6:8,24 7:4	104:17 105:5,8	268:9,10,12,13
further 51:12	7:8,9,10,12	105:21 106:6	268:18 269:1,2
60:16 168:12	18:16,23 19:1	107:4,16,19	269:14 270:8
168:18 242:8	19:5,10 21:13	108:12 109:5	270:19 271:8
291:19 294:16	21:16,20 22:18	115:11 118:17	271:11,12,16
furthermore	23:25 24:8	138:3 143:18	271:17 273:12
160:11	28:7 29:5,18	144:7,11,15,20	273:20,22
future 85:23	30:2 31:6,12	149:25 151:19	281:20,25
90:15 248:20	31:25 34:9,11	162:7 166:17	282:7,17,21
249:15 255:21	35:1,7 37:8	166:22 167:1,5	283:2 287:16
257:2,2 259:5	42:17,20 45:8	167:10 169:16	288:10,24
260:6,12	45:13,20,25	169:23 170:9	general 1:11
	46:1,5,10,25	170:24 171:23	3:15 15:7
	50:22 51:2	172:9,13,20,24	41:21 63:22
	53:21 55:15	172:25 173:3,9	64:8 78:18

[general - going]

80:6 103:22	132:17 137:17	go 10:22 11:9	274:16 277:3
105:3 131:23	166:25 172:23	39:22 42:1	278:9 280:18
132:11 142:22	181:10,11,14	44:3 50:16	283:14,19
147:2,10 148:3	181:16 185:20	51:19,20 56:6	289:10
177:16 178:15	185:21,23,24	65:14 76:14,16	goal 259:8
208:3 211:10	223:19 251:22	83:19,20 85:19	goals 267:16
221:24 233:20	269:9 270:17	86:22 108:16	268:25 269:1,1
245:19 264:22	290:15	111:17 112:19	goes 52:20
268:16 273:21	genital 94:11	119:10 120:10	107:19
274:2 275:13	101:22 102:1,3	124:20,21	going 10:11
284:22	102:5 103:4	132:3 139:24	15:25 16:1,15
general's 8:21	genuine 173:5	140:1 149:9,10	24:10 27:15
9:4,6,16,24	173:7,10	149:17 151:12	28:4,4,6 31:14
generality	genuinely	153:8 157:21	33:3 47:16,18
13:19 18:22	172:8,13,20	162:12 175:12	56:8,10,11
39:12	getting 40:12	175:17 179:22	76:20 78:25
generalizable	40:14 44:21	180:10 183:15	79:4,21 84:4
212:20 219:13	66:24 110:16	185:22 188:17	86:23 95:20
generalize	222:19	190:19 194:5	105:20 108:22
163:10,21	girls 152:20	194:15 199:11	119:7 121:15
164:1 272:14	give 27:8 29:15	203:16 204:10	121:17 122:6
generally 21:25	30:12,14 32:24	205:13,15	125:3 131:4
22:13 29:10,14	79:13 94:8	206:6 208:14	135:11 136:1
29:20 35:15	97:8 237:2	209:3,19	140:7 145:10
41:22 45:1	285:11 289:9	211:12 213:18	145:13 151:18
46:16 56:23	given 46:18	215:5,7 219:18	152:7,17
58:11 62:23	78:13 128:1	220:25 225:10	153:24 154:3
63:18 64:5	215:13 218:6	232:13,18	155:17 157:2
65:12,21 70:7	221:15 293:12	233:23 237:24	162:13,14
73:1 77:10,13	gnrh 225:17	238:9,15 239:3	166:14 168:8
79:1 86:8	226:17 277:8	241:23 245:12	175:24 176:9
88:16,20	gnrha 220:3	245:13 246:25	181:19 187:23
104:23,25	245:25 246:4,8	250:9 255:11	188:8 189:3
115:2,8 117:24	246:10,18	261:5 263:3	194:3 195:18
127:7 130:18		267:6 268:1,3	195:20,24

[going - guides]

196:21 197:17 211:14 219:24 221:7 231:4 234:3 250:13 250:15 251:3,4 255:10 260:11 265:5 274:10 283:13,23 284:16 gonadotrophin 7:7 gonadotropin 277:9 gonads 86:7 87:24 good 9:22 47:20 48:3 53:7 85:3,6 119:24 120:16 154:7 203:25 240:11 274:5 286:20 292:4 gordon 121:12 gotcha 125:17 grade 5:18,20 129:22 130:6 130:13,18 131:11,24,24 132:10,13 134:23 grade's 133:18 gradually 194:24 grafts 94:16	grammar 18:8 granularity 115:11,18 gray 211:20 great 14:17 34:7 47:12 156:6 greater 50:6 187:11 green 3:17 9:12 9:15,15 groombridge 2:21 9:1 groombridge... 2:23 ground 10:4 50:2 group 19:19 127:17 135:22 135:23 136:7,9 136:14,16,20 136:22 137:1,6 168:10 189:5 190:3,11,13,19 190:22 238:22 239:21 groupings 188:22 groups 29:1 127:16,25 128:21,23 135:15,17 137:15 189:4 growing 6:18 204:24 273:24	grown 20:25 growth 21:2,4 78:15,21 79:19 284:21 guarantee 176:1 guerrero 18:13 18:14 guess 34:24 35:3 49:16 60:9 62:7 64:18,19 65:11 72:18,23 76:15 80:15 82:6,24 85:4 92:8 101:6 102:5 104:21 105:13 110:15 113:6 113:15 117:14 130:14 144:2 147:9 164:8 165:3 173:8 180:11 183:23 185:22 200:18 201:7 202:2 208:13 213:8 219:1 239:6 250:21 252:18 265:19 266:9 274:13 282:16 guidance 112:20 214:11 guide 224:15 224:16	guided 119:1 guideline 5:24 101:22 103:18 103:21,21 104:4 140:10 147:15,17,20 173:21 174:7 174:11 guidelines 5:18 5:20 11:25 32:2 51:15,18 52:20,22 53:2 55:17 71:23 82:25 83:4,6,7 83:9 90:23 91:1 103:12 104:1,7,8,14 105:2 106:9 130:20 134:24 138:3,10,11,12 138:14,25 139:2,4,12,16 144:24 145:5 145:10,17,22 146:2,10,17,21 147:2,11,18 148:12,20,21 148:24 149:7 175:9,13 176:1 223:10 254:17 254:24 255:2,4 255:6 256:1,10 256:16 262:2 guides 5:17

[guyatt - hitting]

guyatt 5:17,21 121:12	happy 153:24 274:9	143:14 155:1,3 155:11 160:15	helping 11:4 31:11,14,18
gynecologist 13:2	hard 37:12 49:13,21 126:7	168:11 176:13 176:25 178:12	34:8 280:3
gynecology 263:6	200:15 201:11 216:10 272:14	182:8 198:7,18 206:12 222:1	helps 174:7
gynecomastia 30:9 247:3,6,9 247:14 248:7 248:12,14	harm 50:12,13 59:13,13,14,19 176:16 192:7	223:10,17,24 225:7 226:4 230:11 237:7 237:12 243:15 244:2 245:6,8 266:19 289:14	hembree 5:25
h	harmful 141:23	head 10:14	hierarchy 122:9 124:2,7 124:10,15 125:6,19,23 126:16 127:20 129:10,12
h 5:9 6:1 7:1 236:6	header 140:3 156:24 157:3 173:18 181:20 209:5 231:5 245:14 275:13	healthy 89:19 89:20 90:5,15 259:13	high 13:18 18:22 39:12 44:8 231:14,19 232:22 238:21 239:7,22
half 82:21,23 84:3,5 184:22	health 5:15 6:3 6:9 13:14,21 16:18 19:1,16 28:22 30:15,21 30:22 31:7,10 32:6 35:10,12 35:16 36:13,18 37:6,16 39:25 40:15 43:4 44:18 45:7,12 45:18,23,25 46:22 47:2,9 47:11 51:3 52:13 54:1 55:2 65:1 106:21 109:12 110:6,14 111:13 113:20 142:13,18	hear 72:25 234:12	higher 127:20 134:6 177:10 177:12,16 178:20 181:12 181:13,15 185:24 186:3,3 186:7,9,21,24 190:3,4 191:14
halfway 15:3 215:8 219:19 271:25		heard 117:15 159:3	highest 178:2
hampshire 3:13		hedrick 5:15	hips 33:25
hand 162:21 250:14,16 251:3,5 294:18		height 78:25 79:5,22 80:2	history 44:21 57:14 60:19,19 142:6
hang 134:19		held 8:13 258:13	histrelin 62:18 277:7
hannema 205:4		hello 120:25 121:1	hit 47:25 85:8
happen 177:3 290:3		help 17:23 32:8 32:17 46:7 60:21 67:16 139:22 165:4 180:5 262:21	hitting 17:2 119:18
happened 59:21 78:15 265:18,21		helped 165:6	
happens 40:7 88:17 242:22 243:2 289:3 290:9		helpful 11:5 79:14 160:1	

[hmm - ii]

hmm 279:24 287:18 hold 125:9 holds 218:13 218:14,16 holistic 18:25 home 289:10 hopes 33:20 hormonal 225:12,18 226:17 242:16 hormone 6:3 7:7 85:22 143:7,10 150:14 151:2 151:19 182:1 183:4,7,9 184:2,10,10,13 184:13 186:1 188:14 189:24 190:7 191:2,10 191:17 198:21 231:7 234:10 248:19 257:17 258:9,15 259:11,15 277:9 288:9,23 290:4 hormones 6:8 7:10 25:8 32:15,16,23 36:7,22 37:20 61:5,14 62:4,9 69:1,12 70:14 70:18,23 71:3	72:2 73:19,23 74:3 78:15 83:19,21 84:7 90:9 106:16 107:2,15 108:6 108:11 109:3 142:21 143:9 144:10,14 182:13 183:10 183:14 184:3 184:24 185:10 185:13 186:10 187:1,8 189:11 189:12 196:5 198:6 211:17 215:14,22 216:3,6 217:15 218:8 229:18 235:16 236:2 236:11,18 242:7,10 244:5 244:25 259:20 260:2,5,11 267:4 291:3,7 hospital 13:16 13:24 hour 2:11 10:25 47:17 48:2 57:20 85:3,8 154:5 195:17 ht 183:4,7 188:12,14,24 188:25 189:6	human 125:7 125:20 217:4 219:14 humans 212:15 212:20,23 213:7 214:1,25 216:8 217:12 217:18 218:13 218:15,17 219:6,12 hung 50:17 119:9 hypothetical 37:23 48:13,15 48:22 49:1,3 49:25,25 50:3 202:3,5 203:4 245:3 266:17	ideations 176:16 identified 117:24 142:14 265:6,7 287:24 identify 16:2,3 18:1 69:12 84:21 identifying 117:1 identity 7:4 29:5 35:7 70:8 72:10,15 84:10 84:15,19 85:1 160:16 166:17 166:22 167:1,5 167:11 169:17 169:23 170:10 170:24 171:23 172:9,14,20,24 173:1,3,10,11 180:17 267:13 267:15,20,23 267:24,24 268:2,2,12,14 268:16,17,18 268:19,21,24 270:21 271:8 271:12,18 ignorance 79:6 ignore 283:8 ii 22:4,7,11 69:10 82:7,11 82:13,17 84:2 157:22 259:25
		i	
		icd 73:2 idaho 1:2,11,13 1:14 2:7,10 3:11 8:12,21 9:3,5,23 269:21 293:22 293:24,24 294:2,6 idea 65:13 79:25 269:10 290:8 ideally 135:14 135:21 ideation 6:6 44:9,13 192:7 196:3	

[ii - individualized]

260:19,22 imagine 48:22 49:1 imaging 60:18 immediately 61:19,23 220:5 223:4 impact 59:3,5,8 85:23 115:3 131:12 141:14 141:15,17,18 141:20,23,23 143:1,3,9 176:12 210:2 210:22 211:2 217:16,25 234:14,23,25 235:25 236:9 244:14 248:20 255:21 257:2 impacted 258:14 impacting 114:24 impacts 142:22 210:15 221:13 234:6 249:15 implant 277:7 implants 62:19 implied 19:17 important 85:25 122:22 122:24 131:14 131:18 163:5 187:14 248:22	270:12 284:23 impossible 150:13 improve 168:14 improved 79:22 205:21 improvement 78:25 193:15 193:23 194:22 195:5 198:7,18 200:5 202:8,11 improvements 176:14 179:7 179:21 192:1 192:16,18,23 193:6 203:14 improves 136:22 include 26:20 27:3 28:22 35:18 36:6,17 37:19 45:21,22 45:22 57:25 73:12,17 88:4 102:2 123:8 135:21 177:22 222:23 235:11 239:20,21 257:24 266:3 266:13,16 284:23 included 14:25 26:16 37:24 49:3 73:4	104:13 116:15 123:24 138:19 138:23 152:14 155:16 157:25 177:6 202:20 242:5 243:4,25 255:2,3 includes 39:24 268:18 289:7 including 25:16 26:24 36:13,21 42:11 70:17 103:15 160:14 207:11 211:18 inclusion 117:3 inclusive 293:9 incongruence 53:21 72:6 73:6,17,20 173:22 225:16 273:13,20,23 incongruent 5:23 72:19,22 73:1,8 incorrect 65:17 increase 136:16 227:17,18,23 228:4,8 290:23 290:24 increased 189:25 190:25 191:11 increasingly 165:19	independent 7:4 indicated 28:8 40:17 60:22 91:16,18 96:18 96:20 288:3 indication 201:2 246:24 282:22,22 indications 178:17 246:13 individual 1:13 3:10 31:24 32:3 53:19,20 54:23 71:24 74:9 76:11 77:15 83:1 87:6 100:14 101:8 105:23 107:10,14 110:8 125:22 126:2,9 142:6 236:10 246:18 248:9 257:16 259:24 260:18 individual's 52:15 53:14 84:10 211:6 235:1 260:21 individualized 37:5 38:18 46:14 54:24 56:19 60:11 289:6

[individually - interpretation]

individually 111:6	infertile 260:2	191:22,23	44:23 45:1,2
individuals 26:9,24 28:8	influence 115:9	192:14 196:3	57:11 188:1,11
31:5 33:1,10	116:1,2,3	288:17,22	196:11
37:9 77:9,12	127:1 128:17	289:2 290:12	integrated
82:19,22 88:3	201:14 211:17	291:13	19:15
88:15 90:8	228:15,23	initially 266:13	intellectual
141:4 142:13	270:15	initiate 62:3	235:12
157:25 158:3	influenced	182:3,21	intend 37:23
158:10 165:18	248:10	188:12 196:4	intention
165:25 166:23	influences	290:12,17	162:16 163:3
166:25 172:9	166:18	291:7	interchangea...
172:13,19	influencing	initiated 61:23	146:6,23
173:23 174:9	201:18 228:24	189:10,11,24	interdisciplin...
174:13 185:2	inform 150:1	190:7 191:2,10	18:24 39:23
195:10 201:15	262:3 280:3	191:17	56:16 57:8
222:23 223:2	information	initiating 42:13	75:25
228:8 229:12	55:4,7 57:10	71:25	interest 19:12
248:15 249:2	58:17 59:9,19	initiation 32:1	58:23,25
249:16,20	60:20 159:9	injection	294:16
250:3 252:8	166:3 171:2	251:22	interfere 52:1
253:17 255:23	269:6,22 270:2	input 273:16	52:24 53:11
258:12 260:6,9	273:14 275:9	instance 67:6	interfering
263:4,22 264:8	289:8,9	67:22 213:4	53:14
264:16 265:8	inhibiting	institute 237:6	interim 7:5
265:11 266:7	52:15	237:12	intermittently
266:10,13,17	inhibitory	institution 14:1	16:19
267:25 269:16	215:17 218:10	instructing	intern 4:8
269:20 270:18	initial 133:25	283:25	interpret 52:10
270:18 290:25	182:2,16	instructs 10:21	96:24 161:23
291:12	183:14,16,19	insurance	270:12
inferences	183:21 184:11	62:22	interpretation
136:7,17,20,23	185:9,17	intake 6:14	161:5,20,22
136:24 137:4,5	188:20 189:16	39:16 40:6,21	206:19 226:3
	190:1,5,9,12,25	42:12,24 43:8	244:11
	191:5,11,14,18	43:16,20 44:20	

[interpreted - know]

interpreted 115:4 128:2,18	245:5,7 290:22	iv 156:24 245:14	keep 11:4 47:17 153:24 154:3
interrupt 10:15 10:17	intraabdominal 94:21	j	156:10 195:18 195:20 283:18
interruption 260:1	introduced 116:12 235:21	j 3:16	kennedy 3:3 9:12,13,13
intervention 35:13 74:16 106:24 108:19 108:23 110:1 111:14 132:1 135:16,18 136:5,8,13,17 136:25 137:4 207:11	introducing 156:8	jan 1:11 4:2	key 131:7 160:13
interventions 19:21 25:13 28:7,11,16,20 29:6 31:13,16 31:16,18,20,22 32:1,5,9,13,18 32:20 35:18 36:4,6,9,10,13 36:14,18,19,21 36:25 37:1,11 38:3,3,8,8,12 38:13,17,23,23 47:3 51:4 107:22,25 113:19 136:12 183:1 199:25 200:3 201:16 202:7,10,21 203:5,9,15 208:8 242:16	intuition 125:8 125:21	jane 1:5	kind 10:25 11:22 28:20,25 33:23 49:14 50:17 60:20,22 85:3 92:21 93:8 97:13 112:5 141:15 153:16 179:2 188:22 193:15 205:7 231:5 238:16 242:1 244:19 271:24 275:12
	investigated 127:15	january 205:8	kinds 29:13
	investigating 261:1	jean 5:11	kirk 3:12
	investigator 214:13,17	jedrzejewski 7:13	know 10:6,12 11:7 14:11 16:24 29:23 30:3,5 39:3 41:2,9 65:11 65:14 75:19 80:15 83:8 87:8,8 88:10 89:20 90:17,19 98:20 106:18 108:14 113:22 121:24 123:11
	involve 35:7 86:19 212:8	jeremy 285:14	
	involved 17:12 46:23 142:7 152:13 195:10	jess 18:13	
	involves 74:7 88:16,20	joan 1:6,7	
	involving 158:5	jocelyn 4:8	
	irb 15:24	john 1:6,7 3:12 8:20 9:23 162:19 170:2 171:9 216:19 232:1 240:11 286:13	
	issue 47:9 104:22	joint 110:24	
	issued 174:24 223:10	joke 121:6,7	
	issues 47:2 51:3 287:22	jramer 3:14	
	italics 209:21 210:12	judgment 58:25 227:8,11 267:16	
	items 30:14 35:18,21 290:1 290:2	judgments 122:10	
		june 276:3,10	
		k	
		kara 1:19 2:1,4 5:4,11,12 8:8 168:21 292:6 293:5,19	

[know - li]

130:23 134:9	286:14 293:10	238:22 247:15	194:18 196:8
139:25 143:15	knowing	248:2 270:23	205:16 209:4
143:21 144:21	127:17 172:4	lacks 115:11	211:12 219:18
149:5 152:18	200:16,22,23	large 128:24	221:2 269:3
153:18 156:21	201:13 210:21	153:25 227:18	271:24 274:9
157:13,16	knowledge	227:24 253:22	legal 81:13
158:9 161:1	60:1 74:21	269:3	146:4,13 147:6
162:8,9 167:16	165:17,24	larger 116:14	147:24 174:3
169:25 170:14	201:1 227:14	119:13 156:3	174:15
170:22 177:3	229:1	larsson 4:8	legislature
183:18 195:9	knowledgeable	lasting 215:16	269:22
196:24 197:12	111:23	215:22 216:4,7	lends 194:22
200:12,21	known 57:9	217:3,11 218:9	length 157:8
201:9,14,18	97:19 145:17	218:21 219:3	193:16
202:13,16	145:23 163:9	late 19:24	leslie 2:17 8:24
206:25 207:2,2	249:15	286:14	letter 182:7
207:22,25	l	law 8:25	leuprolide
210:7,13,25	l 3:3	lcooper 2:19	62:18,22
211:5,8 212:3	la 277:4,20	lead 121:11	level 13:18
212:25 214:10	278:2 279:3	154:21 205:3	18:22 39:12
214:14 217:1,9	281:25 282:17	208:20 218:12	105:23 106:7
217:17 218:13	282:20,23	246:17 273:4	106:10,15,19
218:14,16	283:1	learn 112:11	107:23 108:15
228:16 237:25	label 282:22	166:3 218:5,7	109:14,17,18
241:24 242:21	labeled 131:7	learning	110:19 111:2,7
246:19 247:19	133:22 152:9	214:16 260:5	111:12 132:20
251:8,12,14	153:8 189:6	leave 234:19	levels 107:11
255:5 256:1,6	labeling 171:10	288:21	132:6,10,14
256:8,12 259:1	laboratory	leaving 267:14	li 2:16 8:22
263:18 264:8	60:17 247:25	led 19:3 228:17	11:3 47:20
264:11,12	labrador 1:10	left 50:16 131:7	139:9 149:9
266:18,18	3:10 8:10	140:1 157:22	155:14 167:20
267:21 273:23	lack 190:14,16	162:12,21	171:12 179:22
276:25 277:15	201:1 227:9,12	171:17 181:19	204:15 274:3
280:17 284:25	229:16,25	187:16 194:5	291:23

[liberties - looking]

liberties 2:16	lincoln.wilson	118:1,13,16	242:9,14,18,22
libraries 112:6	3:19	216:16,22	243:2,5,6,14,17
library 112:5	line 152:1,3,5	258:5	look 16:1 18:7
lies 256:21	185:6 275:19	little 11:1 41:8	20:11 42:3
life 6:3 89:14	275:21 276:9	51:22 87:13,23	54:25 58:15
90:5 151:20	277:3	91:4 115:5	60:14 78:1,1,3
152:2 272:8	lining 246:16	119:12 133:11	78:14,22 79:18
light 231:12	linked 45:8,13	139:25 153:15	97:11 114:18
250:6,8 251:9	45:19 46:1,5	159:17 177:20	126:5 138:24
251:15,23	46:10,25 50:22	195:17 197:7	151:23 152:16
252:23,25	51:1 234:5	198:12 209:18	153:4 167:6,15
likelihood	268:24	215:8 222:20	169:18 178:4,6
88:24 177:14	lipids 141:4,9	240:16 271:25	183:15 193:9
178:20	141:14,17,18	282:14 283:14	196:21 198:23
likely 10:12	list 15:15 170:7	lived 159:2	205:16 206:24
133:12 139:24	181:3 227:22	lives 166:24	209:17 214:5
180:24 181:5	278:17	llp 3:3	218:3 222:14
194:23 220:4	listed 35:19,21	lnowlin 2:19	224:18,24
226:1 228:15	77:16 127:8	logic 157:9	231:2 232:18
228:22 245:20	167:7 229:15	long 15:13 17:3	236:15 237:3
limit 106:13	231:23 232:11	43:8 57:19	237:17 239:3
limitation	232:16,22	82:24,25 83:14	240:3 241:21
106:1,4 163:14	263:14,17	120:9 215:16	243:21 262:14
163:18 201:19	277:1 278:19	216:4,7 217:3	263:3 264:23
limitations	listen 71:9	217:11 218:9	275:1 278:9
5:21 125:7,20	listing 187:21	218:21 219:3	286:16
158:4 262:3	lists 151:24	220:4 240:14	looked 155:20
273:11	168:20,22	242:10,25	169:19 179:14
limited 132:24	276:24	246:20 287:12	179:20 199:1
133:5 135:7	literature 5:17	287:15,17	222:11 236:17
273:14	111:23 112:3,5	longer 11:1	243:4,14,16
limits 104:16	112:6,19	43:12,14 64:7	259:18 260:16
105:8,12	113:16,17,19	64:25 166:19	looking 40:11
lincoln 3:16 9:3	115:10 117:1,5	192:17 193:15	41:22 79:1
	117:8,9,15	193:19 196:13	126:24 129:5

[looking - materials]

132:19 139:6,7 144:16 150:23 167:9 169:6 171:15,18 178:6 184:9 195:12 198:11 204:14 207:4 211:10 215:25 215:25 222:17 222:22 227:5 253:7 269:7 277:2 282:6 looks 37:8 40:14 124:23 183:24 185:7,8 223:1 lost 137:8 lot 11:21 12:1 26:15,19 31:11 92:16 114:8,12 114:17,21 129:3,20 146:21 160:3 193:22 213:18 239:11 low 132:20 133:9 lower 134:4 142:4 177:17 181:12 190:12 191:22 255:17 255:24 lowest 125:22 lunch 11:2 119:24 120:9	120:20 121:6 lunchtime 11:4 lupron 62:24 m m 1:11 4:2 5:2 m.d. 1:19 2:1,4 5:4 293:5,19 made 29:15 43:7 66:21 145:8 164:13 224:4,8 236:1 236:10 239:5 256:7,9,12,19 266:8 269:12 293:16 main 70:16,20 127:23 141:20 maintain 15:13 16:15 maintaining 85:25 248:22 major 209:8 majority 25:23 65:3,6,8,17,21 84:24 96:6 181:4 249:20 259:5 267:25 make 10:4 11:10 14:7 23:14 52:15,20 52:25 53:6,15 54:8 62:1 74:5 75:16,20 76:7 95:20 102:24 103:16 105:24	106:11,23 107:23 109:15 111:10 112:19 119:24 129:16 136:7,12,20,23 136:24 137:4 148:12,16 155:18 166:23 171:15 178:14 193:5 202:14 209:2 211:9 214:24 216:11 216:13 243:1 250:16 251:5 252:21 253:12 265:24 makes 75:1,9 75:18 76:11 93:25 154:3 283:9 making 43:25 74:24 76:9 78:5 80:12 96:25 110:4 111:3 114:18 122:11,17,23 123:1,8,19,25 139:20 226:5 244:19 252:5 male 30:11 33:1,11 77:12 82:22 180:15 180:17,23 181:2,3 249:13 257:16 258:8,8	258:22,22 260:17,18 males 23:13 30:5,6 malleable 166:18 management 131:13 182:2 manner 38:18 marked 14:16 17:7 41:1 120:24 130:25 134:16 139:10 149:12 155:25 156:7,9 164:21 168:1 180:1 204:19 208:16 224:20 230:24 233:5 236:23 241:2 262:17 275:3 mastectomies 97:25 98:13,24 mastectomy 26:2 95:15,24 97:19 98:17 99:5,15,17,21 99:23,25 100:1 100:6,10,14 101:8 master's 14:2 119:5 match 72:10 materials 42:4 56:9

[matter - medical]

matter 2:12 8:9 41:21 63:22 78:18 80:6 131:23 132:11 147:2,11 148:3 173:8 177:16 178:15 190:15 211:20 264:22	22:12 23:7 25:16,16,25 26:11 28:14 32:11 34:23 40:3 43:13,17 44:23 46:8 47:6,14 49:18 51:7,9,10,11,12 51:12 52:11 54:16 59:4,5,7 61:17,18 64:17 66:17 68:16 73:15 83:9 84:17 87:23 90:16 92:25 93:4,6 94:3,5 96:7,19,22 99:10,12 105:12,14 106:3 108:22 113:15 115:1,6 116:2 117:13 119:23 122:25 124:2,11,11 130:17 137:12 138:17,22 141:23 143:4 147:25 148:2,5 153:11 158:25 159:4 163:18 166:6 167:18 169:5 173:6 180:16 182:14 189:17,20 190:2,11,12	197:8 199:7,8 213:8,10 222:13,15,21 223:19 232:3 235:6,10 239:11 245:18 245:19 251:17 252:2,15 254:20 255:6 256:24 257:20 257:21 258:20 264:3 267:19 269:8 270:11 274:7 279:25 meaning 67:20 102:3 129:15 173:11 174:20 175:7 227:2 means 47:8 51:14 52:9 70:7 73:10 126:3 138:18 167:10,12 170:14 177:4 183:18 201:13 211:1 213:13 213:16,17 meant 180:24 194:16 273:5 281:10 measure 193:24 265:1 measured 192:25 193:2,4 215:13 280:6	measurements 284:21 measures 74:20 137:20 measuring 189:7 282:4 medical 5:17 18:15,25 19:21 28:7,11,15,20 29:6 31:13,15 31:16,17,21 32:1,4,9,13,18 32:20 34:12,17 34:20 35:9,13 35:16 36:4,5 36:10,20,25 37:10,16,19,19 38:3,7,12,22 39:8,24 43:24 47:2 50:11 51:4,25 52:11 52:24 53:10 56:18 57:1,5,6 57:7,14 58:11 58:12 59:10 60:6,17,18,19 60:24 61:4,14 63:4 105:22 110:13 113:18 176:15 179:9 182:15,21 192:2,19,24 193:3 199:25 200:3 201:15 202:6,10,21
matters 71:5 maturation 78:14 106:22 108:15 234:6 235:17,25 236:9 mature 107:1,3 107:14,15 108:10,11,21 109:2,4 maturity 102:24 103:16 105:7,12,16,23 106:7,10,12,15 106:19 107:10 107:12,23 108:25 109:8 109:10,14,17 109:24 110:17 110:18,19 111:2,6,12 mcr 5:11 md 5:11,13 13:19,20 168:22 mean 20:20 21:2,24 22:1			

[medical - mischaracterizes]

203:5,9,15	meeting 58:18	43:4 44:18	methods 42:4
207:11 208:7	96:24 277:22	45:7,12,18,23	56:10 130:19
212:5,11	279:9,14,20	45:25 46:22	181:20,21
213:22 245:5,7	280:14 281:12	47:1,9,11 51:3	263:3
245:15 266:4	281:22 282:2,9	52:13 54:1	middle 16:4
277:22 279:9	282:25 283:12	55:2 113:20	238:16 242:2
288:18,22	284:11 285:6,7	143:14 176:13	276:12
289:12 290:5	285:17,22,25	182:7 198:7,18	mind 71:8
290:22	meets 56:17	206:12 244:2	123:18 166:12
medication	57:8	245:6,7	223:4,23
62:6,16 70:17	member 16:8	mention 86:6	269:17 271:1
142:7 182:1	16:12,20	280:15 281:5	286:13,15
246:20 277:14	165:11	mentioned	minimize 85:24
277:15,23,25	members 1:13	27:17 30:15	248:21
278:1 279:13	3:10 174:25	40:6 43:2	minority 45:9
281:20 282:7	175:6 178:12	63:19 77:2	45:14 46:6,11
282:23 288:24	289:18	87:3,11 98:10	47:1 50:22
290:12,17	membership	187:12	51:2 65:2
291:13,17	16:13	mentioning	270:23
medications	memorized	212:1	minors 158:6
35:8,8 62:8	277:14	mentions	168:13,15
76:22 80:20	men 152:23	207:17	minute 119:22
81:2 166:9	253:9,10	mentor 214:12	237:3 240:17
182:3,21	menarche	214:17	274:13
245:25 246:4,9	79:17	mentors 19:9	minutes 43:10
246:10,19	menstrual	met 11:20	47:22 85:5
254:12,22	79:18 166:9	103:14	153:20 203:23
255:12,17	249:21	method 131:24	240:15 274:8
256:3	mental 6:3,9	methodologies	286:16
medicine	19:1 28:22	6:21	mischaracteri...
118:21 119:1,3	30:15,21,22	methodology	217:23
213:11	31:7,9 32:6	114:22 129:23	mischaracteri...
meet 31:25	35:10,12,16	130:6,13,18	38:6 39:1
39:21 55:14,15	36:13,18 37:6	132:13	61:16 75:6
58:1,2,8 117:2	37:16 40:15		81:12 99:8

[mischaracterizes - negatively]

104:6 123:6 147:5 170:18 261:20 281:1,9 mischaracteri... 234:18 mispronuncia... 211:23 missed 259:14 261:21 missing 65:11 mistake 173:12 misunderstan... 202:2 model 42:5 56:16 212:19 267:9 moment 46:18 70:8 118:19 280:15 monday 1:20 2:10 months 63:18 192:15 193:20 193:21 194:25 205:24 morning 9:22 187:12 mountain 2:11 8:5 48:6,10 85:12,16 120:18,22 154:10,14 204:3,7 240:21 240:25 274:19 274:23 286:22	287:1 292:8 move 32:20 39:9 134:14 145:9 157:9 173:16 176:6 183:23 184:16 187:14 189:14 196:24 231:12 233:2 236:19 245:11 257:5 moving 29:6 40:17 197:3 275:12 multicenter 15:21 multidiscipli... 7:12 42:11 56:15 74:4 multifaceted 7:13 multiple 127:4 244:20 mx 9:9 n n 5:1,2,2 8:1 237:14 name 9:23 18:12,13 35:5 113:7 114:9 118:12 121:11 175:14 179:24 194:5 204:17 205:2 208:15 208:20 224:19 230:23 233:4	236:21 241:5 253:2 274:4 275:2,19 277:15 285:10 named 293:7 294:8,12 names 168:20 168:22 205:5 285:11 narrative 117:15 natal 23:4,7,11 23:13,17 24:12 26:7 29:17 30:5 95:12 96:13 100:8,12 101:7 258:22 259:10 260:17 national 112:5 223:9,17,24 225:7 226:4 237:6,12 276:20 277:1 277:11,14 natural 250:9 250:14,15,19 251:3,4 nature 275:22 279:6 nbhw 225:16 nda 280:1,9,15 280:23 281:5 283:15,20 284:4,7,14	ndc 276:20 necessarily 141:24,25 224:9 necessary 40:16 necessity 122:10 need 9:11 10:12 40:11 53:2,5 60:17,20 102:23 103:7 106:14 126:6 140:19 166:3 167:15 206:24 207:12 209:17 210:24 213:5 216:12 218:3 220:10 233:15 233:21 235:5 237:16 239:3 240:16 263:3 279:11 280:5 282:4 needed 19:14 31:3 165:20 242:9 needs 58:4 105:17 159:23 160:12,17,24 161:3 negative 235:25 negatively 176:12

[neither - nowlin]

neither 183:4 184:10,13 185:10,12 netherlands 197:11,16 198:1 243:14 243:16 neural 210:3,16 210:23 211:3,7 neuro 26:10 neurochemical 234:9 neurodevelop... 6:21 208:10,12 222:4,9 neurodevelop... 221:12,16,17 neurodivergent 222:18,24 neurodiverse 26:12,14 27:3 27:4,7 221:13 221:21 222:5 222:10 223:2 neurodiversity 26:17 221:10 neurogenesis 211:18 neurological 219:4 neurologist 12:19 neuronal 211:17	neurotypical 221:15 never 59:25 71:8 285:1 new 2:18 3:4,13 5:14 20:5 39:14,15 56:16 65:19 112:6,12 164:18 168:13 169:13 227:14 nice 7:8,11 237:14,22 241:7 nike 15:16 nine 203:23 non 212:20 nonbinary 69:13 nonconforming 188:7 nonmedical 34:11,16,19,23 34:25 35:18 36:9,12,14,17 36:19,25 37:10 37:17 38:2,8 38:12,23 39:8 113:19 normal 77:7,8 77:11 240:4 normalized 267:13 nos 155:25 notary 2:9 293:24 294:6	294:24 note 145:23 163:6 197:18 notes 286:16 noting 125:7,20 november 168:6 nowlin 2:16 5:6 8:22,22 14:14 17:1,6 20:18 23:5,19 24:1 34:14,21 35:14 35:24 36:11 37:2 38:5,14 38:25 41:5,7 41:14 44:15 47:4,21,23 48:3,20 49:12 50:9 51:5,16 53:8 54:12,21 56:1 61:15 63:7 67:7 69:5 69:24 70:15 71:7 73:21 75:5 80:18 81:1,11 82:3,8 83:2,16 84:12 85:6,9 88:25 89:15,22 90:6 91:9 92:5 95:16 98:1,15 98:19 99:7,16 101:2 103:6,19 104:5,18 105:10 106:2	106:17 107:5 107:17 108:13 109:6,20 110:3 110:10 111:9 112:23 113:2 113:12 114:2 115:13 117:10 119:11,14,18 119:23 120:2,6 120:10,15 121:24 122:3 122:19 123:5 123:15 124:25 125:9,15 126:4 127:22 130:7 130:11,24 134:19,23 135:1 137:2 139:11 145:1 146:3,12,19 147:4,13,23 148:6,14 149:13 150:20 151:9 153:3,23 154:4,7 155:19 155:24 156:5,8 156:13 157:18 158:16,23 159:8,16 161:11,18 162:19,25 163:16 164:11 166:1 167:23 168:2 170:2,17 170:25 171:8

[nowlin - object]

171:14 172:1 172:15,21 173:13 174:2 174:14 175:3 175:16,19 179:12,16,25 184:5,25 185:16 186:16 186:23 192:21 193:7 197:6,13 199:18 200:7 201:4,20 202:12,25 203:10,21,25 204:18 206:18 206:23 210:9 210:18 212:2 213:12 216:9 216:18 217:5 217:13,22 218:18,23 219:7 220:9,15 220:21 224:1 226:20 228:5 228:13 229:6 229:23 230:6 232:1,4,9,23 233:14,24 234:17 235:3 237:2 238:1,3 238:11 239:1,9 239:17 240:1,8 240:11,15,19 242:23 244:17 246:22 251:16	254:5,18,25 256:5,11,17 258:18 260:3 261:14,19 264:2 266:5 269:18,23 271:14,19 272:24 274:5 274:12 279:17 280:25 281:8 281:16 282:12 282:19 283:5 283:13,21 284:2,8,13 285:2,13,18 286:3,13,18 287:5 291:19 291:24 ntds 158:2 number 19:9 21:4 61:21 97:7 160:13 177:5,19,25 178:2 182:20 183:25 185:25 186:3,7 194:4 205:23 227:17 227:23 228:4,8 258:12 259:2 265:2 290:14 291:15 numbered 170:7 171:11 234:1 293:9	numbering 156:11 171:9 numbers 177:23 193:10 197:1 numeral 121:23 156:24 numerically 190:3 nw 3:13 ny 2:18 3:4 o o 5:2 8:1 oath 293:6 object 10:20 24:1 47:4 48:20 49:12 50:9 51:5,16 53:8 54:12,21 56:1 63:7 67:7 69:5,24 70:15 71:7 73:21 80:18 81:1 82:3,8 83:2,16 84:12 88:25 89:15,22 90:6 91:9 92:5 95:16 98:1,19 99:16 106:2,17 107:5,17 108:13 111:9 112:23 113:12 114:2 115:13 117:10 130:7 137:2 148:14	150:20 151:9 157:18 158:16 159:8,16 161:11,18 163:16 164:11 166:1 170:17 170:25 172:1 172:15 173:13 174:2,2,14 179:12,16 184:5,25 186:16,23 192:21 193:7 197:6,13 199:18 200:7 201:4,20 202:12,25 203:10 206:18 210:9 213:12 216:9 217:5 218:18,23 219:7 220:15 224:1 228:5,13 229:6,23 230:6 233:14 240:1,8 242:23 244:17 246:22 251:16 254:5,18 256:5 256:11 258:18 260:3 266:5 269:18,23 271:19 272:24 279:17 282:19 284:16 285:2 285:13,18

[object - okay]

286:3 objection 20:18 23:5,19 34:14 34:21 35:14,24 36:11 37:2 38:5,14,25 44:15 61:15 75:5 81:11,13 98:15 99:7 101:2 103:6,19 104:5,6,18 105:10 109:6 109:20 110:3 110:10 113:2 122:19 123:5 123:15 126:4 127:22 130:11 145:1 146:3,12 146:19 147:4 147:13,23 148:6 153:3 158:23 172:21 175:3 206:23 212:2 217:13 217:22 220:9 220:21 226:20 232:23 234:17 239:1,17 254:25 261:19 280:25 281:8 281:16 282:12 283:5 objections 210:18 235:3 239:9 256:17	283:6 observational 126:20,23,24 127:21 128:24 129:2 135:14 observations 125:22 126:2,9 221:21 observed 194:11 219:10 220:4 221:17 observing 127:2 obtain 116:23 209:24 obtained 40:12 57:11 87:15,16 154:24 155:9 225:2 obtaining 15:24 88:6 obviously 231:3 occur 82:16,17 83:21 107:12 194:24,24 223:12 occurred 100:1 265:16 occurrence 221:10 occurs 56:23 227:15 229:1 229:11	october 56:14 odd 139:25 offer 157:8 offered 97:17 97:24 98:6,12 158:3 225:20 office 3:15,17 4:3 8:21 9:4,6 9:8,16,24 official 1:10,12 1:14 oh 39:5 121:8 162:4 169:8 194:4 ohsu 13:23 263:5 265:15 265:18 267:9 okay 10:2 12:6 14:7,9,24 17:1 17:8 20:21 21:15 23:15 24:10 27:2 36:2 40:23 41:11,15 45:3 47:24 48:4,5 48:12 53:19 60:5,9 61:25 70:9 74:25 79:24 81:5,18 85:10,11 88:3 92:15,21 93:10 96:12 97:2 99:4,14 100:8 101:16 102:8 109:16 111:15	119:12 120:8 120:13,21 121:15,20 122:3,5 123:13 124:25 125:15 126:12 130:21 131:1,4,23 133:16 134:14 135:1,7 139:8 139:18 146:8 146:25 149:13 149:17 153:14 154:4,8,9 155:24 156:1 156:14,22 162:25 164:22 168:2 169:9,15 173:16 175:17 175:19 176:6 179:25 180:10 187:16 188:17 194:18 195:13 195:21 197:25 203:16,22 204:2,9,15,18 205:2,6,13 209:19 211:12 213:20 215:5 218:24 219:18 219:24 220:25 222:25 224:18 224:22 225:3 232:9,15 233:2 233:17,23,24 233:25 234:3

[okay - own]

235:13 237:18 238:3,11,15 240:19,20 241:23,25 245:11 247:22 253:16 257:25 263:7,14 264:6 268:20 269:3 273:9 274:25 276:11 277:16 280:22 281:13 283:10,24 286:7,18,21 287:6,12,15,21 289:2 290:2,8 291:5,19 292:2 old 22:11 25:19 64:3 66:9 older 65:23 66:1 83:23 96:5 158:1,10 249:18 omitting 226:13 ones 16:15 83:11 141:20 223:22 244:20 ongoing 31:1 199:9,9 267:12 289:19 online 11:21,22 12:2 157:6,13 onset 22:1,3 81:9	open 11:15 267:14 opened 24:15 openpayment... 7:14 opinion 34:10 34:15 104:16 167:9 172:12 172:19,22 209:3 233:12 opinions 138:5 288:8,15 opportunity 289:11 opposed 22:25 50:1 optimal 122:11 122:16 123:1,7 123:18 131:11 165:17,24 option 87:2,19 89:2 254:4,7 254:14 255:2,4 256:20,21 257:3 258:17 options 34:11 34:13,16,17,20 34:20,23,25 35:9 37:17,19 37:19 39:7 40:17 52:17 57:17 86:1,5 86:17,19 87:22 88:4,24 90:21 90:22 102:4	105:25 248:23 255:16 260:20 260:23 orange 263:20 263:20,25 264:2,4 order 134:20 136:20 oregon 2:8 13:14 16:18 organization 165:11 organizations 16:14 112:13 origin 73:2 original 99:13 originally 27:15 161:7 outbox 119:9 outcome 71:4 79:1,5,22 114:25 116:1,5 126:25 127:2 131:18 132:1 144:3 176:2 243:7 outcomes 6:9 80:1 113:18,20 113:21 114:23 131:14 141:5,9 141:14 142:3,5 143:24,25 159:7,14 197:15 202:20 203:14 206:11	214:7 243:5,14 243:17 244:14 250:2,17 251:6 280:5 282:5 283:11 284:12 outlined 55:16 outside 44:18 46:22 92:20 266:4,8 outweigh 225:19 226:2,6 226:18 245:20 ova 87:10 ovarian 86:15 215:14,22 218:7 ovaries 87:25 88:16 90:3,8 overall 28:9 58:3 76:1 179:20 205:20 238:22 239:25 240:5,7 overshadowing 53:17 overwhelming 25:23 84:24 267:25 ovocyte 86:9,14 own 79:6 100:4 130:8 159:11 192:12 221:20

[p - part]

p	168:18 169:21	paid 285:21,23	194:6,19
p 4:4 8:1 236:6	176:7 180:10	pam 1:4	195:22 196:9
p.m. 85:12,14	180:11 181:19	pandemic	197:18 198:4
85:14,16	182:24 185:22	41:24	198:12,20
120:18,20,20	187:16 191:25	paper 130:13	205:17 207:7
154:10,12,12	194:5,18	130:15 131:21	209:20 211:13
154:14 204:3,5	195:22 196:8	157:8 196:19	219:19 221:3
204:5,7 240:21	197:18 204:10	197:2 220:11	223:6 230:9
240:23,23	205:15,16	papers 112:10	234:1 235:13
274:19,21,21	209:4,19	112:16 114:15	242:3 243:23
274:23 286:22	211:12 215:5	paragraph	244:9,15,21
286:24,24	219:18 221:1,2	20:12 21:12	245:21 247:1
287:1 292:8,11	223:6 225:10	28:4,5 44:4	247:18 248:18
page 5:4,10 6:2	225:12 230:9	45:4 51:21	252:13 261:6,7
7:2 10:5 15:2,3	233:23 235:13	76:16,17 80:9	261:10,11,13
15:15 16:4,5	237:24 238:5,9	81:16,18 85:20	267:8 269:4,5
20:11 21:24	238:16 241:23	97:12 101:17	270:5 271:24
28:4 42:1,2	242:2 243:24	101:18 102:19	paragraphs
44:4 51:20,21	245:13,21,23	111:18 122:6	205:7
56:7 76:16	245:24 246:25	124:4 125:4,12	parameter 6:20
85:20 97:12	248:17 253:13	136:1 137:22	parentheses
101:18 111:17	261:6,11	145:12,14	189:18
121:24 122:4	263:20 267:6,7	148:17 149:3	parents 1:4,6
124:21,22	269:3 270:4	150:11 154:18	289:16,16,23
125:13,13	271:23 273:11	155:5 157:23	parsons 3:7 9:9
126:13 131:5,6	275:12 276:12	160:7 162:13	9:9
131:7 132:4	pages 5:11,13	162:15,23	part 30:18
133:16 135:9	5:16,17,19,22	165:9,13	44:20,23 52:19
135:10,13,25	5:25 6:4,7,10	166:13 168:7	52:22 53:1
137:22 145:12	6:11,13,16,17	168:19 171:18	54:1,6,7 58:12
149:17 150:10	6:19,22,24 7:3	171:20 172:7	79:8 119:4
151:13,14	7:6,8,11,13,15	173:19 175:22	139:1 143:2
154:18 155:4	132:4 293:9	176:8 179:6	145:4 161:5
156:20 157:21	pagination	181:23 187:17	202:16,23
162:12,21	139:25	187:20 191:25	214:19 236:4

[part - patients]

245:14,23	partnership	87:20 91:19,21	34:1,4 39:20
261:13 267:14	138:1	93:4,24 94:24	44:16 45:18
268:7,7 280:6	parts 143:7,10	100:23 102:24	55:11 56:2
partially	233:11,16,16	103:4,11,15	57:24 58:7
228:24 290:19	233:21	106:6,14,22	60:23 61:3
participant	partway	107:1,3,9	62:3 63:5,12
16:16	204:23	108:9,18,21	63:23,24 64:12
participants	pass 286:10	109:2,13 111:7	64:15,24 65:3
15:23 116:15	passage 51:22	111:11 112:17	65:8,12,19,21
137:18 181:21	patient 7:13	127:3,5 128:7	66:4,6,9 67:4,9
205:21,23	20:25 24:17,20	128:14 131:14	67:19,24 68:1
244:6 245:1	25:1,6,11 27:6	131:18 135:17	68:3,6,9 69:12
participate	27:22 28:9,15	148:9 176:25	73:24 84:24
17:16 74:24	32:22 34:9	177:7,14 181:9	86:24 87:21
169:3 279:15	37:12,15 38:9	181:17 185:20	88:23 89:11
participated	38:19 39:14,15	194:12 200:25	91:10,16,23
168:23 169:11	40:9 45:24	254:22 258:22	92:1,3,11,15,18
169:13 224:5	46:4,9,13,15,18	266:25 267:3	92:23 93:1,6
279:19	46:24 50:14,21	289:6 290:3	95:8,22 96:3
participation	50:25 54:10,18	patient's 43:24	96:12,17 97:3
280:13	54:20,22,23,25	58:23,25 74:1	98:24 101:5,23
particular	54:25 55:1,3,5	74:15 107:21	103:23 105:5
19:15,18 62:11	55:13,18,22	109:24 176:13	127:15,24
62:20 74:15	56:16,19 57:5	177:11 193:3	128:20 136:5
90:17,20	57:9,13,15	patients 20:4,6	143:14 176:14
109:18 111:8	58:1,16,16	20:14,16,22	176:18 179:8
112:18,21,25	59:11,15,19	21:6,7,11,12,15	179:21 182:2
113:22 115:17	60:11 61:13	21:19 22:6,16	182:11,20
119:2 127:2	64:2 66:8	22:20,24 23:3	184:22 185:25
132:1 154:18	71:12,14,18	23:16,21,24,25	186:25 189:23
178:10 242:25	72:2,9 74:9	24:7 25:15	190:6 191:16
269:16,19	79:2,12,16	26:10 27:4,19	192:2,19,23
particularly	81:25 82:13	28:19,23 30:1	193:18,19
206:12 227:18	83:17,18,24	30:8,20 32:12	202:17,24
227:24 292:1	84:1,4,6 87:18	32:14 33:2	203:4,5 208:7

[patients - pharmaceutical]

245:5 249:9,11 249:11,13 250:8,18,20 251:9 254:3,7 254:10,14 255:15 257:15 258:1,16,25 259:2,6 261:7 261:17 262:4,9 265:7,8,23 266:20,21 269:11 272:7 272:13,18 273:2,3 279:3 288:18,21 289:3,7,19,21 290:11,16,20 291:6,16 patterns 78:22 78:23 paul 3:2 9:14 paulweiss.com 3:5 pause 32:15 33:22 248:15 255:18 pausing 280:1 payment 275:13,22,25 276:3,10 payments 278:15 pcos 247:19,19 247:21,23,24 248:1,7	pdf 41:15 121:25 122:2 124:23,24 171:9 pediatric 5:14 6:12,15 12:11 13:14,23,25 14:6 16:16,19 19:7 30:17,18 30:20 39:21 68:19 74:17,25 75:7,17 76:5 76:10 138:1 165:7,10 168:14 174:24 175:1,6 pediatrics 15:7 15:12 pending 15:16 penny 1:5,5 people 6:4 7:5 26:17 35:25 84:15,17,18,21 146:5 151:20 159:4 160:19 163:5,8,11,22 164:2 174:17 181:2 221:21 222:18 259:15 259:20 263:11 269:13 272:15 285:9 percent 20:3,5 20:5 21:18 24:7 25:5,10	25:22 27:11,14 27:16 28:2 61:9,12,21,22 62:2 66:13,15 97:9 180:20,22 181:6,8 183:13 184:4,12,18 185:9,12 187:5 187:7,11,13 196:10,11,13 197:1 264:17 266:2,11 289:1 290:11 291:6 291:12 percentage 21:2,15 22:24 23:4,17 24:18 24:21,24 25:2 25:7,12,20 27:6,22 64:15 64:25 66:9 95:14,23 96:16 181:6,8 184:2 184:17 185:2 185:19 186:4,8 186:9,22,25 perform 91:5 103:11 104:2 performance 16:2 performed 100:17 103:24 106:21 123:19 145:7 273:24	performs 88:12 period 22:10 186:18 192:14 192:17 193:18 193:20 257:18 258:10 259:12 peritoneum 94:14,17 person 39:18 42:14 55:8,9 58:16,16 60:15 60:15 75:9 86:8 93:12 106:25 178:16 178:19 234:7 person's 29:5 35:6 46:23 129:18 personally 17:20 18:1 68:5,25 287:17 persons 5:24 pertaining 52:23 60:18 113:17,20 160:5 213:14 273:22 277:24 281:19 pertains 118:16 pertinent 249:12 peter 1:5,5 pharmaceutical 280:4

[pharmaceuticals - potential]

pharmaceutic... 275:16 277:17 278:15 279:7 280:10 281:23	physicians 68:20 physiological 234:9 piece 29:14 pieces 29:2 pitch 33:7,14 33:17 place 26:5 34:19 36:9,24 38:2,11,22 112:4 192:16 235:20 238:7 294:12 places 125:8,21 plaintiffs 1:8 2:16 3:2 8:23 8:24 9:2,10,13 plan 10:25 60:7 60:13,23 61:3 planning 219:17 plans 56:20 60:12 280:19 280:20 plastic 263:5 plates 78:15 79:19 play 128:9 129:3 271:2,5 played 244:14 playing 114:24 please 8:18 9:18 10:8 23:6 79:15 89:8,8	124:16 198:14 236:3 pllc 3:12 plural 62:7 poe 1:4,5,5,5 8:9 point 61:19 85:3 108:21 117:19 121:21 178:13 191:6 201:17 222:25 258:1 263:10 points 80:12 107:12 131:8 191:21 police 59:22,25 60:2 policy 11:25 165:20 170:10 political 176:11 poor 238:21 239:25 240:5,7 population 20:25 24:17,20 25:1,6,11 27:7 27:23 28:10,15 66:8 80:19 90:10 97:10 116:13,14 128:7,14 148:9 152:10,20,23 163:7 181:9,17 185:20 186:19 194:12 200:25 219:14 221:24	253:22 265:6 269:15 290:23 290:25 populations 29:23 129:17 153:5 166:11 portion 160:4 160:23 161:2,4 pose 59:10 position 6:13 13:12 15:11 168:11 169:3 possibility 216:6 261:2 262:4,11 possible 46:3 53:22 54:4 72:18 84:19 135:16 137:3 162:17 163:4 206:10 207:12 207:18 225:19 226:18 235:20 244:18 250:23 251:7 265:15 278:10 post 3:17 potential 6:5 48:23 85:23 99:2 108:3,3,5 108:6 114:25 248:20 254:11 255:21 269:13 281:24 284:21 286:2

[potentially - proceeds]

potentially 110:20 128:13 141:9,13 201:2 277:24	249:4,23,24,25 252:9 253:9,11 253:19 257:23 258:2 260:14	presented 219:2 266:7 273:14	printout 6:17 7:14 168:4 170:3,6 275:7 275:10
practice 5:24 11:25 32:2 50:2 64:8 68:13 71:22 130:8 138:2 139:2 148:8 173:21 174:6	preparation 15:22	preservation 86:2,6,9,18 87:22 248:23	prior 19:21 20:17,22 22:1 22:1 57:7 71:25 87:17 105:15 252:5 253:6 260:7 265:15 289:3 290:12,17 294:8
practices 174:8	prepare 11:18	preserve 254:10 256:3	
practicing 287:22	prescribe 68:25 69:3,9,11 73:18 74:3 77:19,24 78:6 79:10 82:7,9 82:12 246:23 278:7	preserving 88:4 90:14 256:13,19,20 256:21 260:20	
practitioners 104:10	prescribed 71:11,17 72:1 73:22 79:5 183:21 246:13 259:1 278:5,11 279:3 291:12	pressure 141:19	probably 23:8 25:22 61:9 66:13 96:23 97:9 187:4 241:16 287:20
precocious 71:15,16 76:24 77:3,17,23 78:8 79:25 80:17,24 81:4 81:6 287:8,10 288:4	prescribing 35:7 70:22 219:5 254:21	prevent 246:16	problem 120:3 171:14
predict 131:25 270:7 271:4,11 271:16,22	prescription 288:22 290:4 291:16	previous 169:6 170:3,13 171:6	
preface 121:22	prescriptions 66:24 182:1	previously 56:9 63:19 80:10 171:18 198:1	problems 52:1 52:12,24 53:11
prefer 48:18 49:10 50:5,7	presence 30:10 247:10,15 248:2,11	primarily 109:11 223:23 226:9	procedure 26:4 26:6,8 88:10 88:11,21 102:16 104:3 181:22 209:23
preference 122:10 153:24	present 4:7 28:8 44:7,8 70:7 248:9 272:9	primary 69:17	procedures 88:19
prefrontal 215:17 218:11		principal 214:13,17	proceed 107:2 107:3 284:4
pregnancy 89:18,19 90:15		principle 122:9 124:7 129:19	proceeding 47:2 51:4
		principles 50:11 212:13 212:22,25 213:5,9,14,19	proceeds 260:1
		print 205:7 238:17	

[process - psychotherapy]

process 15:24 17:24 39:10,13 65:22 76:9 112:2 117:4 209:9 267:14 267:22 268:8	programming 218:8 progress 40:3 progressed 67:12 prohibited 269:15 projects 214:2 pronounce 152:17,18 247:20 pronounced 100:5 pronouns 35:5 35:21 proper 52:21 75:12 proposition 198:5,17 252:7 253:1,3 propounded 293:11 prosecuting 1:12 prosecutor's 4:3 9:8 prospect 89:12 90:4 protocol 54:10 67:23 197:12 254:16,20 protocols 260:25 261:4 provide 10:23 30:22 31:20	32:21 37:4 41:23 45:16 102:22 168:11 280:17 288:3 provided 19:21 37:4,7 42:10 46:14 104:13 206:13 223:13 224:17 226:7 provider 20:2,9 36:8,24 38:1 38:11,22 39:24 39:25 47:11 48:18 49:10 50:7 52:14 55:3 59:10 63:25 64:4 65:25 66:5,22 66:23 67:3,25 88:19 110:6,13 110:14 111:13 182:8 266:4 289:12 providers 32:7 34:11,19 44:18 46:22 50:11 53:24,25 54:1 58:11,12 67:13 68:1,2 provides 18:25 173:22 174:12 providing 5:14 19:10 30:21 31:2 70:13 165:19 189:15	189:20 223:11 223:12 287:19 provision 30:25 31:1 225:9 269:14 psychiatrist 12:13 30:17 psychological 30:23 51:25 52:11,23 53:10 54:2 57:12 107:20 108:17 113:21 205:20 234:8 247:10 247:16 248:3,6 248:8,11,12,16 psychologist 12:15 39:21 54:5 55:4 74:18,25 75:7 75:18 76:5,10 289:22,24 psychology 56:17 58:3 psychosocial 30:24 31:2 42:12,22 44:14 44:23,25 45:1 psychotherapy 199:5,7,16 200:4,6,17,19 200:24 201:2,9 201:25 202:8 202:15,19,23 202:24 203:6

[pubertal - question]

pubertal 6:22 32:25 33:12 69:6,8 76:23 78:1,3,11,15,22 81:3,17 210:2 210:15 211:5 211:17 216:3,6 216:16,22 217:17 219:3 219:13,21 220:1,13,19,23 221:13 222:17 235:16 260:24 puberty 19:22 22:1,3 24:18 24:21 25:2 33:4,6 36:6,21 37:20 55:12,24 56:3 60:25 61:13 62:3,17 68:25 69:3,9 69:11 70:14,17 70:23 71:2,12 71:15,16,17 73:19,23 74:3 76:18,24 77:3 77:6,11,15,17 77:19,23,24 78:6,8,12,17,19 79:3,13,20,23 80:1,17,24 81:4,7,8,9,22 82:2,7,10 83:1 83:13,15,24 84:1,5,6,7,8	143:17 144:7 182:12 183:13 184:23 185:10 185:12 186:1 186:10 187:1,8 198:6,21 207:11,23 209:8,11,15 215:15 217:2 217:10,16 218:8,20 219:6 219:6 222:4,9 225:17,25 226:11,16 229:17 234:15 234:23,25 236:1,9 246:4 246:7 250:9,14 250:15,19,20 250:21 251:3,5 259:25 260:6,8 260:10,12,19 260:24 267:1 278:5,8,12 287:7,8,11,12 287:16,24 288:3,4,23 290:4,21 291:3 291:7 public 2:9 293:24 294:6 294:24 publications 112:12 113:23	published 112:7 119:1 138:2 145:18 211:9 212:10 230:10 259:9 263:17 278:22 278:24 publishes 114:1 pull 167:24 274:3 pulled 275:4 purpose 31:9 69:17,22 70:13 70:16,21 117:24 264:22 287:13 purposes 23:10 25:18 36:5,16 49:24 70:22 246:7 pursue 30:12 50:13 87:19 95:24 96:4,8 109:18 111:14 pursued 92:16 258:17,23 285:1 pursuing 111:7 280:7,21 281:15 put 49:17,19 59:19 80:15 putting 145:4	q qol 152:1 153:11 qualifier 130:15 qualifying 273:8 quality 5:19,21 6:3 132:10,14 132:20 133:18 133:25 151:20 152:2 238:21 239:25 240:5,7 quarter 286:19 quarters 151:25 152:4 question 10:8 10:10,20,22 11:8 23:16 24:3,5 25:19 28:5 36:5,17 36:23 37:22 39:3 42:8 48:14 49:7 50:17,19,25 51:23 56:12 63:11 64:23 67:18 70:10 71:10 75:19 82:5 95:21 97:23 98:3,11 98:21 99:5 101:7,10,10 105:15 108:24 109:22 110:22

[question - ramers]

111:18 112:18	110:16 121:16	40:23 41:2,12	125:13,17,19
115:15 116:23	135:7 155:17	41:17 44:22	126:12 128:4
135:3 144:5,12	160:3,5 161:25	47:7,16,20,22	130:10,14,21
146:15 147:7,9	177:6 178:5	47:24 48:4,12	131:1 134:14
158:18 162:5	189:3 193:12	48:25 49:18	134:17,22,25
164:8 165:3	222:15 280:9	50:15 51:8,19	135:4 137:7
170:12,20,22	280:12 281:12	53:16 54:14	139:8,13,15
172:17 173:15	283:18 286:8	55:10 56:5	145:9 146:8,16
184:7 185:1,5	286:11 288:7	61:20 63:10	146:25 147:9
186:8 191:8	289:12,17	67:10 69:8	147:21 148:2
194:7,10,13,13	291:20 293:11	70:2,20 71:8	148:10,17
194:15 201:6	293:12	71:11 74:1	149:9,14
202:9 203:2	quick 134:19	75:11 80:23	150:25 151:12
210:1,8,11,14	162:19 232:1	81:5,18 82:6	153:7,15 154:2
210:20 217:2,7	274:17	82:12 83:5,20	154:5,8,16
217:25 218:25	quite 153:25	84:16 85:2,7	155:14,22
220:12,17	quiz 90:16	85:10,18 89:3	156:1,6,10,14
221:1 222:6,12	r	89:19,25 90:11	157:21 158:19
222:14 232:10	r 8:1	91:14 92:8	159:1,13,19
234:21 235:18	rafael 3:16 9:5	95:19 98:4,17	161:13,21
236:4,7 245:23	rafael.droz	98:23 99:11,19	162:22 163:1
250:25 253:2,8	3:20	101:6 103:10	163:19 164:14
253:22 255:8	raise 33:7,14	103:25 104:15	164:18,23
255:10,25	142:2	104:21 105:13	166:5 167:20
256:15 259:19	raised 233:12	106:5 107:1,8	167:24 168:3
261:15,16,22	raises 235:18	108:9,20 109:9	170:5,8,21
265:19 266:12	ramers 3:12 5:5	109:23 110:7	171:5,12,17
273:10 280:22	8:20,20 9:21	110:15 111:15	172:6,18,25
281:3 282:24	9:23 14:7,17	112:25 113:6	173:16 174:10
283:3,8 284:1	14:18 16:22	113:15 114:5	174:23 175:8
284:6,9	17:3,8 20:21	115:16 117:14	175:12,17,20
questionnaire	23:8,23 24:4	119:7,12,17,20	179:14,18,22
157:10 176:25	34:18,24 35:17	120:1,3,8,12,25	180:2 184:8
questions 6:19	36:2,16 37:21	122:1,5,24	185:5,18,19
10:7,18 57:16	38:10,20 39:2	123:9,21 125:1	186:21 187:3

[ramer - read]

192:25 193:14	262:14,18	rating 5:18,20	121:5 122:6,7
197:10,17	264:5,7 266:9	131:25 133:18	122:14 125:3,5
199:23 200:10	269:21 270:3	ratio 23:23	125:24 131:10
201:7,23	271:15,23	24:10,14	131:10,15
202:22 203:3	273:9 274:3,7	raúl 1:10	132:21,22
203:16,22	274:25 275:4	rdr 1:25 294:23	133:2,7,10,14
204:1,9,15,20	279:21 281:4	reach 66:21	135:11,13,19
206:21,25	281:13,18	67:5,16	136:1,2,10
208:17 210:13	282:16,24	reached 67:21	137:24,24
210:24 212:5	283:7,19,24	82:10 105:23	138:7 140:7,8
213:15 216:14	284:5,10,25	258:1 259:7	140:11,16,25
216:20 217:8	285:5,16,21	290:21	140:25,25
217:19 218:1	286:7,17,20	reaches 82:13	141:6 142:10
218:20 219:1	291:21 292:2,4	reaching	142:10,15
219:15 220:12	randomized	107:11	145:13,14,20
220:18,25	127:5,10,11,13	read 11:23 28:5	149:22,23
224:11,18,22	127:19 128:12	28:6,12 42:7,8	150:3,12,12,16
226:23 228:11	128:17,20	42:15 44:5,6	151:15,18
228:19 229:10	129:1	44:10 45:5,6	153:10,10,12
230:3,8,22,25	randomly	45:10 51:23,24	157:2,3,11,23
232:3,6,10	127:15,24	52:6 56:9,12	157:24 158:7
233:2,6,17,25	128:23 163:7	56:13,21 57:22	160:8,9,20
234:22 235:7	164:15	57:22 58:5	162:13,14,15
236:19,24	range 77:7,8	60:10 76:20,21	163:1,12
237:4,5 238:2	213:13	76:25 80:10	165:14,14,21
238:4,12 239:6	rank 127:20	81:19,20,23	166:14,16
239:14,24	rare 25:14	85:21,21 86:3	167:2 168:8,9
240:4,13,18	59:21 61:1,1,6	97:14,15,20	168:16 173:24
241:3 243:6	61:7 173:4	101:20,20,24	175:24,25
244:21 246:25	288:25	102:20,20	176:4,9,10,20
251:19 254:9	rather 10:13	103:1,7 111:19	181:22,23
254:21 255:8	127:25 128:21	111:20,25	182:9 187:23
256:8,14,23	128:22,22	112:10,16	187:24 188:4
258:21 260:17	214:1 220:4	113:23 118:9	194:20,20
261:16,23	270:21	118:13,14	195:1,24,25

[read - recognize]

196:6,15	75:21,24 76:1	150:18 214:22	106:5 108:23
198:14 205:18	76:4	232:20 254:8	119:16 156:3
205:18 206:1,5	reading 11:21	reasons 224:9	182:1 277:16
206:9,9,14	126:10 143:20	recall 50:23	289:8
207:8,9,15	144:21 149:4	62:13,25 91:2	received 13:19
209:1,6,7,12,21	150:5 164:4,6	119:6 140:18	13:20 14:12,13
209:22 210:5	164:9 180:19	140:21 149:16	24:21 31:24
211:14,15,23	185:14 218:12	150:5 154:23	44:17,19 92:3
215:9,10,19	226:12 233:18	155:8 156:17	92:24 93:7,8
217:14 218:2,6	233:19 240:4	156:19 157:19	119:14,21
219:15,24,25	241:10 252:20	162:11 164:4,6	127:3 244:6
220:6,10 221:7	276:9	164:9 169:18	245:1 265:14
221:8,18 223:7	real 134:19	175:8,11	278:14
223:7,15	162:19 210:2	178:11 196:25	receives 37:15
225:13,14,22	210:14,22	199:3,14 205:1	54:24 100:9,13
227:6,6,20	211:1 232:1	208:19 216:24	101:7 182:5
228:25 230:15	274:17	232:15 233:17	receiving 31:4
233:9,10,11,11	realistic 31:19	233:19 237:19	65:22 66:10
234:3,4,11	32:4,12 34:7	239:19 241:10	199:4,13,15
235:14,15,22	realistically	241:12,19	200:3,4 201:16
237:1,8,13,15	32:18	243:18 255:1	202:6,7,18,24
237:16,19,21	reality 5:14	257:10 263:16	203:4,6 245:5
241:12,15,16	realize 167:21	285:5,7,9	246:18 251:13
241:16 242:3,4	realized 19:13	287:9 288:12	251:15
242:12 243:23	really 13:9	288:19	recent 145:18
243:24 244:7	53:18 55:8	recalling 225:5	recently 262:16
249:7 252:24	60:21 79:20	receive 16:24	263:17
261:25 262:1,6	113:21 166:15	24:18 25:2,7	receptors 143:7
264:15,15,20	167:17 193:17	25:12,20 28:19	recognition
267:9,10,11,17	193:21 200:8	31:6 39:14	165:20 219:10
272:4,4,10	200:23 218:3	41:3,6 55:6,12	recognize
273:17 289:10	256:21	55:24 64:16,25	41:13 121:9,11
293:9	reason 50:1	65:4,6,15	180:3 205:2,5
readiness 74:2	64:1 113:24	67:20 83:13	208:20 236:25
74:15 75:10,13	114:4 128:12	95:14 97:5	262:18

[recollection - reintroduced]

recollection 277:10	recording 8:4 48:10 85:16	referencing 28:21 140:14	188:14 227:23 263:21
recommend 104:1 262:2	120:22 154:14 204:7 240:25	156:15 169:10 252:4 253:13	refills 66:24,25 reflective 181:9
recommenda... 44:1	265:22 274:23 287:1	288:10	185:20 196:17
recommenda... 104:9 158:5 224:15,16 225:6,8,11	records 193:3 recruit 162:16 163:3	referral 39:14 39:15 92:17,22	refresh 17:2 119:19 277:10
recommended 101:22 103:22 105:3	recruiting 15:23	referred 91:11 91:12,19,21,23 92:1,11 147:16 147:20 197:11 221:12	regard 207:13 regarding 136:8,13,25 142:12 158:13 158:20 209:24 216:16,22 243:7,9 281:24 283:1 284:12
recommending 223:11,25 225:25	reduced 80:2 176:17 192:8 294:13	referring 29:9 59:14 90:10 95:17 113:5 127:6,9 131:21 136:15 139:5 139:19 148:25 149:3 150:24 163:19 169:25 170:23 171:2,4 183:16,17 201:21 207:3 210:21,23 211:3 223:18 233:22 243:7 243:12 247:3 250:18,20 252:4 259:15 262:8,11 268:12,21,22 278:2 291:11	regardless 24:23 87:23 218:15 regards 153:6 regimen 251:9 251:11,14 regional 211:20 registered 227:19,25 regret 7:12 264:23 265:1 267:1,4 269:6 269:10,22 270:2,8,15,19 270:25 271:3,6 271:7,11,17
reconcile 192:11	reducing 69:21 70:10,12 71:3	refers 60:10 72:9 131:20 177:5 182:16	regularly 279:15 reintroduced 100:3
reconvene 153:22	reed 4:4 9:7,7 refer 57:1 91:7 136:6,9,14,19 137:16 172:4 247:19 269:5		
record 8:4,7,19 10:18 43:24 48:7,11 85:13 85:17 120:19 120:23 154:11 154:15 204:4,8 240:22 241:1 274:17,20,24 283:14,19 286:23 287:2 289:14 292:9 294:15	reference 21:12 73:9 169:15,22 216:15 252:12 256:13,19 references 138:25 139:7 149:4 167:7,10 167:16 171:3 216:21 230:10 243:22		
recorded 8:15 191:9 244:22			

[relate - requires]

relate 189:3	reliably 159:6	201:5 216:18	reports 53:19
related 33:12	reliance 114:21	217:6 220:16	53:20 159:25
33:16 46:21	remain 83:1,14	222:6 234:20	represent
113:18 116:12	111:23	236:3 247:13	168:4
160:14 220:3	remaining 6:18	250:24 261:14	representative
221:11 246:17	274:15	271:14 284:8	116:14 162:17
268:25 270:8	remember 73:3	rephrase 24:25	163:4 186:14
270:20 271:11	118:15 121:14	35:20 53:4	represented
271:16 277:12	155:10 177:13	66:7 73:7	132:10 221:23
277:19	178:1 236:13	82:24 91:25	representing
relates 111:18	236:14 243:21	100:11 106:13	9:23
relating 118:12	251:20 276:5	117:20 226:13	represents
relatively 242:5	285:10,12,15	230:18 234:24	266:11
released 112:7	285:19	251:13 259:23	reproductive
145:19 165:1	remembered	replace 99:17	88:17 249:5
225:2	2:3	99:21	252:10
releasing 7:7	remembering	replaced 100:2	request 11:7
277:9	164:6	report 6:11 7:5	66:25 266:8,14
relevance	remind 87:7	43:21 233:19	requested
80:11 81:7	187:13 258:6	244:1 258:4	264:17 265:3,8
142:18 281:17	remote 1:19 2:1	reported 1:25	265:11 292:13
282:13 283:6	2:3	8:16 152:15	requests
284:17 285:13	remotely 2:15	192:12 206:11	265:24
285:18	3:1 4:1 8:14	244:2 251:21	require 63:5
relevant 51:22	removal 26:2	253:21	71:24 92:17
83:11 89:8	99:23	reporter 9:11	123:9 212:14
141:10 283:17	removed 99:18	9:18 10:17	212:22 213:1
reliability	99:22 100:2,22	14:13 41:6	required 157:9
124:19 128:3,5	100:25	119:16 294:5	182:4
128:10,19	renew 15:10	reporter's	requirement
136:16	repeat 98:2	294:1	15:11
reliable 114:16	109:21 144:12	reporting 2:6	requires
128:13 137:5	146:15 147:7	4:8 8:16	122:11,17
227:9,12	158:17 170:19	197:15 216:3	123:2,12
229:25	172:16 184:6		131:12

[research - reviews]

research 6:20 14:2 90:13 111:24 112:12 116:12 119:5 137:12,14,15 137:16,18 138:4,15,19 148:22 158:5 187:18 209:25 210:1 212:6,7 212:8,11 213:16,19,20 213:22,25 214:12,16,19 223:13 224:15 226:8,25 239:15 257:1 260:25 261:4 262:4 273:22 273:23 277:24 278:22,24 279:13,23 280:6,21 281:14,19,24 282:6,10,25 288:11 researched 236:8 researcher 113:22 126:25 researcher's 117:24 researchers 113:1 115:8 116:22 117:21	238:20 243:18 287:25 researching 222:3,8 reserve 58:12 residency 13:23 residing 293:24 resolve 47:1,6,8 47:13 50:18 resolved 47:15 resources 19:14 28:24,25 29:2 40:16 respect 43:3,4 54:14,16 70:24 80:24 109:25 111:7 139:3 148:24 169:10 219:5 256:15 256:15 respond 10:13 35:1 respondents 157:17 162:6,9 163:6 164:15 response 110:17 rest 207:4 270:13 restate 49:6 202:3 result 78:25 79:4,21 94:3 108:1,1 257:22	271:7 282:9 287:23 290:2 resulting 53:21 79:21 89:17 90:15 results 60:6 115:3,9 136:9 136:14,15,19 159:13 177:8 192:12 263:21 271:12,17 resumed 249:21 resumes 81:22 retransition 272:9,20 retransitioning 272:13 retrieval 88:21 retrieved 86:21 retrieving 87:3 87:4,5 return 56:5 63:5 99:13 125:19 137:21 154:17 266:21 returning 125:6 142:8 160:7 191:24 reversal 264:18 265:3,9,12,20 266:22 reverse 266:15 reversible 98:18 99:5,10	99:12,15 review 6:4 7:4 7:5,7,9 111:23 112:3,19 113:17 116:17 116:21,22,24 117:7,9,15,19 118:4,6,9,14 131:12 140:4 142:11 143:25 149:6,24 151:8 151:11 230:10 230:15,17,19 230:20 232:8 232:25 237:6 237:11,21 239:5 240:3 241:6,13,22 243:19 244:1 265:5 280:18 reviewed 12:2 224:12 reviewing 11:24 113:16 144:1 205:11 289:7 reviews 117:22 118:12 138:4 138:14,18,21 139:1,5 140:10 140:13,17,22 143:13,17,24 144:6,9,13,17 144:18,25 145:7 148:22

[reviews - sampled]

148:25 149:2 149:25 151:1,4 revision 150:1 rifkind 3:2 right 8:3 9:22 14:15 16:10 17:6 18:16 20:14,24 21:9 24:8 29:19 40:21 42:3 44:14 46:2 48:9 52:21 53:7 56:7,8 57:2 59:15 63:25 64:9 65:18 68:7 75:1,11 77:17 80:3,5,5 81:10 85:15 86:12 89:4 91:8 92:14 94:23 95:3 97:11 99:6 108:12 110:15,23,25 114:6 119:20 120:13,15 123:14 134:1 134:22 135:10 138:15 142:8 145:24 147:3 149:18 151:21 154:13,21 155:6 156:23 159:20 165:11 167:24 168:5	170:1,16 171:12 173:12 173:17 175:20 177:8,11,17 179:3,9 183:10 184:4 187:9 188:12 189:21 190:19 192:20 195:6,22,23 200:20 201:3 201:10 204:1,6 207:6,6 209:20 212:11,24 213:4 215:2,6 223:3 229:22 231:6 233:25 240:24 241:11 242:22 244:21 245:1,6,9,16 246:5 247:4 248:13,17,24 249:7 250:6 252:20 254:9 258:8 259:8 261:9,18 265:22 266:4 266:15,16 267:8 268:6,15 270:4 274:22 275:23 276:4 276:16,17,23 279:23 280:24 281:7 286:2,25 292:5	risk 5:21 6:6 30:25 48:23 49:16,16 59:11 59:12,19 85:25 135:23 142:3,4 158:4 207:22 231:14,19 232:22 238:21 239:7,13,23 248:21 risks 48:19,23 49:11,14,15,20 49:20,22,23 50:5,8 99:3 108:4,6 225:16 225:25 226:5 226:11,16 245:20 rodent 215:21 219:12 rodents 212:7 212:11 213:23 214:1,18,21,23 215:3,3,14 216:1 217:15 218:15 219:4 219:11 role 75:23 114:24 128:9 244:14 262:12 roles 32:17 roman 121:22 156:24 162:24 room 4:4 11:13 41:8 57:14	rosenthal 285:14 rough 290:8 round 209:23 routinely 111:22 112:3 113:16 row 183:3,24 184:9 276:17 276:23 rows 276:19 rules 10:4 run 114:19 runover 162:23 runs 135:12 160:8 s s 2:21 5:9 6:1 7:1 8:1 safe 245:16,18 safety 59:3,6,8 227:13 229:17 230:1 270:24 sake 215:3 sample 114:22 128:8,14 162:17 163:4 180:20 181:13 184:12,22 185:9 186:8,17 186:18 189:7 266:11,12 sampled 163:7 164:16

[samples - see]

samples 128:19	183:1,4,12	220:14,20	152:9 157:22
san 13:21	184:12 187:25	279:5 283:22	161:2,5 166:13
saw 21:6	188:9 194:21	284:3	168:7,7 173:19
184:11	196:1,10	score 177:8,10	182:4 183:23
saying 34:1,3	205:20 206:8	177:12,12,17	188:23 189:19
49:4 53:2,5,9	206:10 207:10	177:17,23	194:6,19
61:12,12,25	209:8 211:16	178:6,7,9	205:16,17,17
62:2 64:21	215:11 219:2	190:2,11,12	207:7 209:6
65:16 75:4	220:1 221:9	191:3,10,13,14	211:13,14
87:4 105:1	223:9 225:15	191:17,21,22	221:2 223:6
134:10 141:22	227:8,24 231:7	193:10,11	228:25 232:16
206:17,22	231:14,19	scores 153:11	247:1 253:4,4
244:10 245:2	234:5 235:16	178:16,16,17	253:23 267:7,8
252:16,16	238:19,24	178:19,22	269:4 271:24
269:9	243:25 245:14	189:7,16,17,20	276:17 291:8
says 42:5 45:7	262:9 264:16	189:25 190:8	secondary 29:3
76:22 81:21	267:12 268:14	190:25 193:6	29:8 235:18
97:16 101:21	272:6,21	screen 43:1,5	section 16:5
102:21 122:8	273:12 275:13	screening	56:10 103:8
124:6 125:6	275:16,21	42:13,22 43:6	135:11 272:9
131:11 132:23	276:13,17,19	44:14,24,25	see 15:4,18
133:10 135:14	277:4	176:17 177:1	16:6 19:20,23
136:4 140:3,9	school 40:13	178:25	28:10 37:15
141:2 142:11	science 13:14	scrolled 125:16	65:19 87:18
149:24 150:13	13:21	seal 294:18	96:12 119:8
151:18 152:1	scientific 115:7	search 149:18	120:16 124:22
153:10 157:5	166:20 171:21	second 28:18	125:9 126:12
157:25 160:11	227:10,12	42:2 56:11	127:7 132:7
163:20,20,25	229:16,25	60:10 61:24	133:19,22
165:16 166:17	288:11	62:4 76:20	140:5,19
168:6,10,19,21	scientist 216:2	97:13 111:19	149:20 151:25
170:15,23	216:5	119:13 122:6	152:9,14,19
171:19,21	scope 101:11	131:6 132:22	153:9 156:25
172:7 173:20	101:12 110:1	133:24 134:6	164:19 165:1
181:21,25	110:20 209:3	142:11 145:13	168:5,25 170:7

[see - services]

172:10 175:21	96:9 228:4	sent 14:9 16:25	223:7 225:13
176:13 179:7	260:19	155:15 164:19	226:13 227:5
180:12 181:14	seem 47:13	204:15 262:15	228:25 230:9
182:25 183:5	166:24 172:7	sentence 20:12	234:4 235:14
183:15 184:19	seen 33:2 91:11	28:18 42:8	245:22 247:2
187:18 189:1	92:18 93:1,5	44:5 45:5 56:9	247:18 248:18
192:1,4,9,16,18	121:13 131:2	56:11 57:22	249:2 250:5
192:22 193:5	134:12 149:15	60:10,11 76:20	253:1,24 261:6
194:4 195:15	164:23,25	80:9,14 81:19	261:12,13,25
203:6 205:6	183:19 193:23	85:20 97:13	264:14 267:11
207:17 215:9	204:20,25	98:5,9 101:18	268:20 269:5
219:22 221:5	208:18 224:22	102:19 111:19	270:6 271:25
225:10 228:1	224:24,25	122:6 124:3,6	273:12
229:3,19	225:3,6 228:9	125:4 135:12	sentences 136:2
230:13 231:10	230:25 233:7,8	137:23 138:13	157:23 162:14
231:16,21	241:6,9 244:4	140:8,24 142:9	162:23 166:15
234:1 238:7,16	244:24 269:25	145:14 146:22	176:10 179:6
239:12 240:3	275:9 290:16	148:18 149:22	206:8 219:25
251:24,25	290:16	150:11 157:3	separate 45:25
252:2,22 254:1	select 16:14	160:8 161:6	116:4 199:25
257:8 264:6	selected 162:10	163:2,20,23	201:15
267:10 269:7	selection 116:7	164:5,7,9	separately
270:9 272:2,9	149:19	165:14 166:16	108:8
274:12 275:14	self 176:16	167:8 168:8	series 12:17
276:14,21	192:7	171:19,20	116:25 136:6,8
277:4	send 16:22	172:6 175:25	136:13,19,25
seeing 68:1	43:21 119:7	176:9 181:23	149:24
205:1 207:4	120:4 153:21	191:25 194:6	serve 17:18
208:19 216:14	sending 40:24	194:19 195:23	19:18 117:25
216:20 290:20	sense 11:10	196:9 205:18	279:10
290:20,23,24	23:14 40:13	206:20,22	server 153:20
seekers 227:17	119:24 142:23	207:8,19 209:6	serves 178:10
227:24	148:13,16	209:20 211:15	service 16:5
seeking 39:19	154:3 155:18	215:7 218:12	services 7:4
55:5 57:18	283:9	219:20 221:3,7	97:16,24 98:5

[services - skin]

98:12 230:12 sessions 111:22 set 104:8 186:14 setting 137:12 137:14 273:1 settings 223:13 226:8 several 32:24 33:9 51:10 177:22 194:25 220:2 243:13 sex 24:23 25:8 29:4,8 36:7,22 37:20 61:5,14 62:4,9 69:1,12 70:14,23 71:3 72:1,10,16 73:19,23 74:3 80:22 84:7 90:9 106:16 107:2,15 108:10 109:3 141:3 142:12 142:21 144:10 144:14 181:1 182:13 183:10 183:14 184:3 184:23 185:10 185:13,25 186:10,25 187:8 189:10 189:12 198:6 229:18 235:16 236:2,11	257:17 258:9 259:11 260:1 260:10 264:18 265:4 267:4 291:3,7 sexual 234:9 shaded 264:4 shaking 10:13 shame 267:16 shape 33:20,20 33:23,24 34:6 67:17 share 60:21 shared 58:19 59:9 110:12,12 110:12 111:4 sheet 168:13 169:14,15 shift 84:15,19 84:25 262:12 268:3,5,11 269:2 shifts 267:15 268:21,22,23 short 192:13 242:6 shorter 193:18 242:20 shorthand 294:5,12 show 215:14 showed 18:6 41:9 200:5 showing 120:8	shown 90:13 215:22 249:20 270:17 shows 189:24 190:7,24 191:9 202:8 252:25 side 284:21 sign 280:1 signature 292:13 294:20 signed 280:10 significance 132:5 190:15 190:17 191:7 significant 15:1 73:10,18 177:15,22,25 178:3,7,21 179:1 190:10 191:4,20 193:24 194:11 208:10 significantly 176:17 190:4 192:7 signs 182:5 similar 29:25 33:10 170:12 225:4 245:3 similarly 196:1 simmons 1:25 2:7 8:16 294:5 294:21 simplify 113:7 170:21	simply 26:18 56:3 127:2 177:19 185:5 191:8 simultaneously 56:18 single 37:11 49:14 129:1 136:7 193:10 sit 38:21 90:17 118:11 143:21 149:5 153:18 195:9 207:1 237:18 255:25 257:10 situation 31:21 31:23 32:21 46:15 52:4 59:22 60:3 107:13 174:19 240:6 situations 32:6 50:20 59:17 105:4 212:21 260:8 six 152:8 193:20 265:8 266:7,10 size 128:8,15 sizes 114:22 128:8 skeletal 78:2,4 79:19 skin 94:11,16

[skip - sohl]

skip 150:10 156:1 157:9 skipping 167:21 slash 231:13 slow 41:8 small 97:7 151:23 238:17 238:17 249:16 249:19 smaller 205:7 social 12:23 18:11 30:18 35:20,23 39:16 39:17 40:8,20 42:13,24 43:19 43:20,23,25 45:8,12 52:1 52:12,24 53:11 56:17 58:2 176:11 230:12 societal 272:8 society 5:24 6:12,17 16:9 16:17,19,20 51:15 52:19 83:6,10 91:1 101:21 103:18 103:20,21 104:4 105:2 106:9 137:25 138:1,10,12 139:4,11,16 148:20 165:7 165:10 168:5	174:11,24 175:1,6,9 255:6,10 256:16 society's 104:1 168:10 173:20 174:6 sohl 2:16,19 5:6 8:22,22 14:14 17:1,6 20:18 23:5,19 24:1 34:14,21 35:14 35:24 36:11 37:2 38:5,14 38:25 41:5,7 41:14 44:15 47:4,21,23 48:3,20 49:12 50:9 51:5,16 53:8 54:12,21 56:1 61:15 63:7 67:7 69:5 69:24 70:15 71:7 73:21 75:5 80:18 81:1,11 82:3,8 83:2,16 84:12 85:6,9 88:25 89:15,22 90:6 91:9 92:5 95:16 98:1,15 98:19 99:7,16 101:2 103:6,19 104:5,18 105:10 106:2	106:17 107:5 107:17 108:13 109:6,20 110:3 110:10 111:9 112:23 113:2 113:12 114:2 115:13 117:10 119:11,14,18 119:23 120:2,6 120:10,15 121:24 122:3 122:19 123:5 123:15 124:25 125:9,15 126:4 127:22 130:7 130:11,24 134:19,23 135:1 137:2 139:11 145:1 146:3,12,19 147:4,13,23 148:6,14 149:13 150:20 151:9 153:3,23 154:4,7 155:19 155:24 156:5,8 156:13 157:18 158:16,23 159:8,16 161:11,18 162:19,25 163:16 164:11 166:1 167:23 168:2 170:2,17 170:25 171:8	171:14 172:1 172:15,21 173:13 174:2 174:14 175:3 175:16,19 179:12,16,25 184:5,25 185:16 186:16 186:23 192:21 193:7 197:6,13 199:18 200:7 201:4,20 202:12,25 203:10,21,25 204:18 206:18 206:23 210:9 210:18 212:2 213:12 216:9 216:18 217:5 217:13,22 218:18,23 219:7 220:9,15 220:21 224:1 226:20 228:5 228:13 229:6 229:23 230:6 232:1,4,9,23 233:14,24 234:17 235:3 237:2 238:1,3 238:11 239:1,9 239:17 240:1,8 240:11,15,19 242:23 244:17 246:22 251:16

[sohl - specifying]

254:5,18,25	30:3 35:20	154:7 203:25	specifically
256:5,11,17	39:3 41:14	276:5,7 286:20	44:4 46:8
258:18 260:3	43:13,14 47:25	speak 12:3 18:4	64:21 74:10
261:14,19	54:17 63:10	special 168:19	78:5 85:19
264:2 266:5	65:5 67:10	169:12	108:24 111:17
269:18,23	71:1 73:15	specialized	131:5 137:22
271:14,19	74:12,14 79:6	111:21	139:3 140:1
272:24 274:5	80:13 83:25	specialty 15:14	145:10 149:18
274:12 279:17	86:11,22,23	specific 33:19	154:17 160:18
280:25 281:8	91:25 98:2,4	34:4 53:24	176:7 194:17
281:16 282:12	99:19 100:4,11	54:13 73:3	198:24 209:4
282:19 283:5	115:14 120:2	83:9 92:6	210:22 211:2
283:13,21	124:5 128:11	103:8 104:19	214:5 215:25
284:2,8,13	133:2 134:20	106:19,24	223:2 236:16
285:2,13,18	135:2 146:14	108:19 112:24	236:17 241:10
286:3,13,18	158:17 162:4	113:4 115:5	241:22 243:11
287:5 291:19	169:7 170:5,19	117:2 118:12	258:11 259:19
291:24	171:19 184:6	143:24 144:3	260:15 278:10
solely 80:24	187:14 191:15	150:23 158:4	287:10
81:8 155:15	198:9 204:14	159:18 161:12	specifics 88:10
268:17	204:23 213:21	166:6 176:1	156:19 157:20
somebody	216:18 218:24	178:4 179:13	233:16,21
26:18 34:24	222:19 226:13	196:19 197:8	280:17,19
148:3,10	234:11 247:12	199:6 201:22	specified 130:6
178:15,16	250:24 252:14	208:11 211:11	specify 23:6
268:9	252:18 259:14	214:2,2,6,7	34:22 43:17
somebody's	261:11,21	219:9 222:12	51:6,17 53:24
173:9	263:25 266:9	235:5 239:5	63:8 66:17
someone's 70:8	271:13 276:8	244:20 249:11	67:8 83:3 89:1
72:15 111:2	286:15	249:13 250:25	99:9 103:23
172:24,25	sought 86:24	251:10,20	113:13 117:12
173:2 178:8	86:25	253:22 254:6,8	118:8 181:1
270:15 271:3,5	sound 47:20	254:19 268:17	specifying
sorry 22:15	sounds 48:3	282:15	92:12
24:10 26:5	85:6 120:15		

[spectrum - steve]

spectrum 26:18 26:25 27:3,17 27:20,23 28:2 54:11,18 55:2 55:11,14,22 56:4	staging 78:11 stand 42:19 183:7 188:6 standard 146:2 146:11,17 147:2,11,22 148:1,4,11 173:22 174:12 174:17,20,21 175:2,10 176:2 189:18	243:10 249:17 258:7 259:15 259:20 287:19 starting 29:6 77:11 79:20 176:8 189:5 starts 77:15 135:12 204:23 219:20 221:3 253:24 state 1:11 2:9 8:18 20:13 27:10,13 99:13 111:21 137:25 145:16 148:20 293:2 294:2,6 statement 6:13 81:15 106:8 107:7 123:14 131:22 148:12 150:19 160:22 164:12 165:4,6 167:5,8,19 168:11 169:4 169:12 171:4 171:25 174:23 175:5,7 179:15 207:3 211:10 216:11,13 217:14 218:4,6 218:19 226:3 226:10,15,22 229:5,8,22 238:24 243:4 244:19 249:14	252:5,19,21 253:5,6 256:7 256:9 268:25 269:9 271:21 statements 12:1 192:11 196:17,18 206:7 220:8 224:6,8,11 265:25 states 1:1 8:11 15:6 16:8 103:22 153:9 170:8 statistic 266:2 statistical 190:14,16 191:6 statistically 190:4,10 191:4 191:20 193:24 194:11 stay 64:11 65:8 65:17 66:15 67:14 staying 291:25 steady 24:14,16 stepping 246:3 steps 60:16,22 182:5 steroid 80:22 141:4 142:21 steroids 142:13 steve 285:14
speculation 145:2 175:3 212:2 285:3	standards 11:24 55:17 71:23 102:21 103:3 145:17 145:23 146:7 146:23 150:2 151:7 255:5,7 279:1		
spend 34:7			
sperm 86:8,13 86:14,20 87:9 87:15 88:5,5,6 88:12 255:21 255:22 256:3 257:2,22 258:2 258:12,14,23 259:3,4	stands 176:24 start 22:15 39:11 43:3 48:13 52:5 57:7 70:10 83:19,20 88:1 90:11 92:8 96:9 125:17 138:11 227:10 242:2 249:17 250:3 259:17 260:6,9,24 291:1,2		
spine 211:20			
spironolactone 255:3,16,20			
spoke 287:6			
spot 119:24 162:20 240:12			
spring 276:6			
stable 52:4 267:25	started 33:3 68:23 83:24 90:9 185:2		
stage 22:4,7,11 68:16 69:7,9 74:23 78:1,4 78:11 82:7,11 82:13,16,17 84:2 259:25 260:19,22			

[stick - successfully]

stick 111:16 246:8	137:16 138:19 142:14 143:25	126:23,24 127:21 128:25	253:16 257:11 259:9,18 282:6
stipulations 8:19	150:23 152:12 155:21 163:15	129:2 133:22 136:5 137:18	282:8,10 284:24,25
stone 2:21 9:1	163:24 164:3	137:19,20	286:2,5,6
stop 119:24	179:20 195:10	152:16,19,22	studying 212:6
stopped 81:21 84:3,8	197:5,9,10,14 197:25 198:5	153:1,5 154:24 157:25 158:2	215:3,3
stopping 85:3 240:12	198:15,23 199:13,17,22	161:7,7,13,16 163:6,10,22	stuff 286:16
strategies 131:13	201:22 202:1 211:16 212:1,8	164:15 180:22 186:5,10	styles 29:14
strategy 149:19	212:10 215:14	187:21 191:9	subject 140:21 166:18
street 2:17,22 3:7 4:4	215:21,24 216:3 217:15	194:17,23 195:13 200:2,5	subjects 199:3 199:12 200:2 202:6 257:11
strength 131:25	222:11,14,22 231:14,19	200:9 201:19 202:5,8,16,23	submitted 17:10
stress 45:9,14 46:6,11 47:1 50:22 51:2 270:23	232:22 236:8 236:12 242:5,8 242:20,25 243:2,3,7,11,13	203:12 204:13 205:21 212:1 213:5,6 214:9 214:13,17	subscribed 293:21
stressors 45:19	243:15,20,25	215:2 218:2,3	subsequently 13:22 39:20 257:18 258:24 259:12 272:19
strong 194:22 195:4	244:12,20 249:16,19,21	219:2,16 222:3 222:8,16 223:1	substance 256:9
stronger 129:2	252:7,17	231:23,24	substantial 205:22
strongly 102:23	253:21 260:15	232:11,11,16	substantially 132:25 133:5 133:12
structure 143:3 220:3,14,19,24	270:16 279:13 279:23 280:6	232:16 235:24 238:4,6,12,20	successful 88:24 89:13,17 90:4,14 166:9 258:20
studied 116:4 116:13 118:6,8 128:7 179:11 194:2 212:17 213:3	280:21 281:14 281:19,24 283:1	239:7,16,19 240:7,10 244:2 244:22 245:4 250:6,8 251:9 251:15 252:3	successfully 20:1 66:5
studies 18:2 128:2,9 135:14	study 5:21 12:9 15:17,21,25 114:23 115:7 116:12 126:20	252:23,25 253:3,4,7,8,13	

[successfully - survey]

67:24 76:23	244:19	220:2,13,19,23	93:8,12 97:18
81:3,17 258:17	supervision	221:13 222:17	98:7 100:20,21
suffering 72:19	68:20 214:12	260:24,24	102:3,5 104:17
suggest 37:23	support 28:10	sure 10:2,4	104:20 105:9
213:5	28:19,20,23	21:3 27:8 62:1	108:7 144:19
suggested	29:1 31:2	83:8 89:19	263:12 266:22
110:20	40:14 140:10	90:11 95:20,25	surgery 7:12
suggesting	168:12 182:7	112:19 120:1	25:20,24 26:1
252:6	194:22 195:4	120:12 130:17	91:16,18,24
suggests 194:23	252:7,19 253:6	131:20 139:20	92:2,3,4 93:8
221:9 252:24	270:23	144:8,16 149:8	95:1,3,6 96:4,5
253:17	supporting	149:8 162:20	96:11,17,25
suicidal 6:6	173:23 174:12	167:12 171:15	97:5 100:16
30:25 44:9,13	supports 40:11	185:18 194:9	101:15,22
176:16 192:7	40:12	203:20 206:7	102:1 103:4,22
196:2	supposed 63:11	209:2 211:1	104:22 105:3,6
suicidality	supprelin	230:21 237:16	106:6 107:4,16
188:1 196:11	277:4,20 278:2	250:21 253:12	107:19 108:12
196:12,14	279:3 281:25	274:7,16	109:5 263:4,5
suicide 150:15	282:17,20,23	283:16	263:23 264:18
151:3 205:25	283:1	surgeon 12:21	264:24 265:3,9
suite 2:22	suppress 219:6	91:19,21 93:22	265:12 266:15
summaries	246:15	93:23 94:19	surges 234:10
122:12,17,21	suppressing	96:10 98:22	surgical 25:13
123:2,8,12,17	78:16,19 80:22	99:1,1 100:19	93:19 97:16,23
123:20,22,24	209:10,15	101:4 102:16	98:5,12 265:24
summarize	225:17 226:16	103:10,17	266:20 273:1
117:4 118:2	246:7	surgeon's	survey 6:11
141:2	suppression	266:18	155:3,12
summarized	6:5,22 33:1	surgeons 91:12	156:15,17
142:11	207:12,24	92:20 94:6,12	157:5,14,17
summarizing	210:2,15 211:6	94:13,16 273:7	158:1,9,13,19
118:2	216:17,23	surgeries 25:15	159:5,14,20
summary 6:23	217:18 218:20	91:5,8 92:7,10	160:2,3,17
133:17 233:20	219:3,13,21	92:13,16,19,23	161:4,6,24

[survey - tell]

162:2,6,10 163:20,25 164:13 swear 9:18 sweden 6:23 7:3 223:22 225:7,24 swedish 230:11 231:3 232:7 switch 164:18 171:5 switched 261:25 switching 91:4 162:4 sworn 293:5,21 294:9 symptom 194:22 195:4 symptoms 47:14 246:17 system 40:14 112:4 130:2 232:7 systematic 6:4 116:17,21,24 117:7,19,21 118:3,6,9,12,14 122:12,17,20 123:2,8,12,16 123:20,21,23 131:12 138:4 138:14,18,21 138:25 139:4 140:4,10,13,16	140:22 143:12 143:16,23,25 144:6,9,13,18 144:25 145:6 148:21,25 149:1,6,25 151:1,4,8,11 230:10,15,20 232:7 237:5,11 237:21 241:6 243:19	153:17,20 154:1 178:13 192:16 193:19 193:20,21 195:18 203:18 203:18 235:20 237:3 242:14 249:3 252:8 257:4 274:9,13 274:25 284:6 286:14,15 taken 2:4 8:8 48:8 85:14 105:17 108:17 119:2 120:20 154:12 204:5 240:23 253:10 267:1 274:21 286:9,24 293:8 294:11 takes 17:3 talk 98:23 138:9 255:16 274:11 283:14 284:3 talking 67:9,11 76:17 80:16,23 89:4,23 97:14 135:24 146:6 148:4 179:6 193:16 198:20 236:5 288:17 talks 133:21 270:14	tanner 22:4,7 22:11 69:10 78:11 82:7,11 82:13,17 84:2 259:25 260:19 260:22 task 140:9 tasked 144:23 team 11:20 28:10 39:23 57:8 74:4,5,10 74:16 75:25 110:25 116:22 145:4,5 178:12 182:23 222:1 289:18 team's 266:19 teams 265:24 technical 92:21 technique 93:19,23,25 102:16 techniques 94:3,5 116:25 technology 230:11 249:5 252:10 telehealth 5:15 41:24 42:6 telephone 2:18 2:23 3:5,8,14 3:18 4:5 tell 87:21 88:23 89:8,11 198:9 224:25 225:1
	t		
	t 5:2,9 6:1 7:1 100:5 236:6 table 11:9 132:5,11,20 133:17 151:17 151:24 152:7 152:12,17 180:11,12,19 182:24 183:1 183:12 184:8 188:18,18,18 189:24 190:7 284:6 tables 190:18 196:22 tailored 85:24 160:18 248:21 take 10:24 11:1 11:7,9 26:4 35:17 43:9 47:17,19 85:4 90:1 107:15 119:13 122:25		

[tell - think]

237:9 249:9,10 254:9 261:10 ten 47:22 153:20 240:15 287:20 term 26:14 27:2 36:1 51:9 51:14 53:17 72:5,8,9,25 115:19,23 116:6,10,11,16 116:20 117:16 118:20,24 124:9 126:8,19 127:7 129:6,22 130:1,2 131:17 131:19 137:8 137:11 177:13 193:15 197:4 199:8 213:10 213:16 220:4 242:10,22 243:2,5,6,14,17 246:6 272:15 273:8 terms 34:6 49:15 68:22 78:11 98:25 124:18 128:2,5 128:10,18 146:6 202:18 210:21 267:23 280:20 testicles 87:25 88:4 89:21,24	testicular 88:9 260:22 261:2 testify 294:9 testimony 38:6 39:1 61:16 75:6 81:12 99:8 104:2,6 123:6,10 147:5 169:24 170:18 217:23 261:20 281:1,9 291:10 testosterone 33:6,13,21 34:5 62:10 142:25 235:21 249:3,6,15,17 249:22 250:3 250:10,13,15 250:24 251:2,4 251:13,15,21 252:9,11 253:10 260:10 tests 60:16,17 texas 13:21,22 text 215:7 231:13 tgdl 42:11,19 273:15 tgn 188:3,6,11 thank 240:19 264:5 286:12 291:22,23,24 292:3 thanks 168:19 169:12	theirs 259:8 theoretical 173:8 theory 108:9 109:2 therapists 46:22 289:20 therapy 6:3 31:1 35:10 85:22 125:7,20 150:14 151:2 151:19 183:7,9 184:10,13 185:3 186:1 188:14 189:24 190:7 191:2,10 191:17 198:21 199:9 245:6,8 248:19 288:9 288:23 290:5 thereof 247:15 248:2 293:10 thing 11:3,6 49:22 171:16 196:25 things 35:4 51:11 124:12 159:4 213:14 213:18 239:11 270:22 281:7 284:19,22 think 9:11 17:5 18:14 19:17 23:8 25:18 26:15,17 32:14	33:8 34:2 35:10,12,15,25 37:18 38:16 40:1 41:7 48:22 49:13,15 51:10,14,20 52:8,18,19 53:1 55:19,21 60:6 63:19 67:15 68:4 70:25 71:9 72:21 73:1 79:24 84:14,18 87:10 93:12 104:23 105:7 105:16 106:14 106:24 107:6 107:13,18 108:7 109:7 110:17 113:3 113:24 115:10 115:25 117:23 118:19 119:8 123:1,4 124:20 126:7 129:20 130:18,21 132:17 135:9 136:15,18,24 137:3,15,17 139:8 141:21 146:5,20 147:1 147:14,14 148:7,15 153:25 154:2 155:16 158:13

[think - top]

158:19 159:3,5	thinking 33:14	84:11,20,22	times 58:24
159:9,13,22,24	39:4,5 90:18	85:5,11,12,16	92:16
161:4 165:23	110:23	85:16 87:16	tissue 26:3
166:2 171:24	third 20:12	90:2 96:10	29:22,24 30:10
172:3 173:2,4	28:9 45:5	107:12 120:17	86:16 94:7,9
173:5 174:5,16	87:11 131:9	120:18,22,22	94:12 99:18,22
174:25 177:5	135:9 175:24	136:2 138:11	99:24 100:2,22
180:23 181:12	180:11 181:23	153:16 154:9	100:24 102:15
181:15 186:22	188:9,24 221:3	154:10,14,14	261:3
199:16,20,24	227:22 242:2	158:1 183:25	title 118:15
200:5,8 202:19	267:10	184:21 185:3	151:18 232:14
203:13 208:5	thirds 23:2,21	185:11 186:1	238:8 262:16
209:17 210:19	24:11 28:14	186:11,19	titled 119:6
211:25 213:15	181:16	187:1,6 192:14	titles 140:20
213:17 216:10	thornton	192:17,24	195:12
217:25 219:15	253:13	193:18,20	today 23:10
220:12,18	thought 33:3,6	194:23 195:5	118:11 143:22
221:1 222:11	37:24 65:12	200:4 202:7	149:5 166:19
222:13,16	201:7 281:4,5	204:2,3,7,7	195:9 216:15
224:21 228:14	thoughts 34:5	222:7 235:19	237:18 245:4
228:22 229:7	thp 267:9	240:20,21,25	255:25 257:10
229:12 233:15	three 63:18	240:25 259:7	286:9 288:2
235:4,10 237:8	151:25 152:4	262:13 269:2	today's 8:4
239:6,15	166:14 192:15	270:20 274:5	together 74:4
242:18 250:12	227:9,11	274:14,15,19	75:25 117:3,25
250:23 251:1,7	time 2:11 8:5,6	274:23,23	145:5
256:18 257:5	17:3 29:21	277:22 279:9	tool 177:1
259:5 260:4	31:3 34:8	279:19 280:2	178:25
267:7 269:21	39:17 46:18	283:24 284:3	tools 74:20
271:10,15,20	48:5,6,10,10	286:9,21,22	176:17
273:6 274:8	57:25 58:8,13	287:1,1,21	top 15:15 25:24
283:8,15,25	61:10,13,18	289:1 290:5,14	26:1 92:3
285:20 286:7	66:7,8 68:11	290:17 291:4	93:11 96:17
291:5	70:8 77:20	291:17 292:7,8	100:21 101:15
	78:12,17,19	294:12	105:6 132:4

[top - trial]

142:9 151:18	transferred	266:13	168:12 183:20
154:5 231:5	63:24 64:3	transitioning	183:21 194:25
261:12 264:1,3	65:24 67:24	20:9 35:23	198:5,17,24
topic 112:18	transgender	265:25	199:10 202:18
topics 58:13	6:4,6,9,11,15	treat 22:17	206:13 214:15
111:22 112:8	6:19,22 15:16	46:12 51:11	225:12,17,18
113:25 144:25	16:2,18 19:4,8	65:12 73:19	225:20 226:1
total 23:25	42:19 141:4	80:1 83:13	226:12,16,18
24:20,24 25:1	142:13 151:20	246:1,11,19	231:8 242:7
25:6,11 27:6	152:10,19,23	281:25 282:17	245:8 246:21
27:22 178:1,7	158:14,15,20	283:1 287:16	248:10,21
193:11	158:21 159:6,7	288:3	251:8,10,14
toward 175:18	159:10,11,15	treated 54:23	257:17 258:7,9
182:25 205:6	159:23,24,25	208:7 259:6	258:15 259:11
211:13 231:5	160:4,6,12,18	treating 34:25	259:15 287:8
towards 29:6	160:24 161:8,9	68:14	288:9 289:18
trabecular	161:14,17	treatment 5:23	291:4
143:6	162:1 163:5,8	35:16 48:18	treatments
track 11:4	163:11,22	49:10 50:7	48:16,17,23
trained 19:10	164:2 165:18	52:2,2,5,16	49:5,8 50:4,13
30:19	165:24 168:11	53:12 54:19	61:22 71:6,25
training 19:5	168:13,15	55:16 56:20	111:3 128:7
111:22	173:23 174:9	57:17 60:7,12	141:13,16,19
trajectories	174:13 188:7	60:13,23 61:3	142:2,4 198:25
221:16	210:3,16 253:9	64:19 65:15	203:7 214:6
trans 154:25	253:10,24	66:10 70:5	226:6 227:14
155:3,11	transition 20:1	71:1 78:24	230:2 243:9
162:18	35:20 42:6	79:4 81:21	244:3,5,13,23
transcribed	253:18 265:20	83:12 84:3	244:25 248:7
10:12	266:15,23	85:24 105:25	259:1 260:13
transcript	267:16 268:25	109:18 111:8	270:20 291:1
10:19 294:14	269:1	126:25 127:3	treats 63:22
transfer 66:5	transitioned	127:14,16,25	trial 127:5,10
66:22 67:2	56:14 264:18	128:1,21,23	127:12,13,20
	265:3,9,12	138:3 143:13	129:1

[trials - understand]

trials 128:12,17 277:24	turn 63:23 64:12,16,24	288:24	93:6,9,10
trick 63:11	65:3,9,23 66:9	types 92:7,10	94:24 95:8,18
tried 16:22 49:4	156:20 230:22	92:23 94:7,8	95:23 96:1,4
tripping 222:20	241:4 247:10	95:6 104:20	96:14 97:3,5
true 132:24	247:15 248:2	124:17 130:3	97:24 98:12
133:5,12	270:3	141:17 143:5	101:21,23
171:25 172:3	turned 22:8	typewriting	103:4,11,23
172:12,19	151:14	294:13	105:3,6 138:20
174:1,19	turning 20:10	typical 77:22	149:18 150:10
182:11 212:21	28:3 140:24	137:23	158:3 160:19
214:22 218:13	two 23:2,21	typically 43:9	165:9,13
218:14,16	24:11 28:14	57:19 82:16	175:21 181:21
272:12 293:14	48:16 49:8	83:14,21	195:11 214:11
294:14	50:4 84:2,5	135:17 237:14	239:14 240:4
trust 112:21	86:18 95:6	u	242:1 261:3
truth 294:10,10	127:13,24	u 236:6	264:8 267:8
294:10	132:4 134:3,9	u.k. 223:22	273:11 294:13
try 40:23 50:12	134:12 136:1	u.k.'s 237:6,12	undergo
83:25 117:18	140:9,22	u.s. 6:11 154:25	107:16 108:12
119:7 122:1	141:20 143:5	155:2,11 163:5	109:3,4,25
133:2	143:12,16	163:8	258:12
trying 46:19	155:20 156:9	ultimately	undergoing
62:1 83:12	157:23 158:11	58:18 89:13	200:1 267:22
89:25 91:14,17	162:14 167:6	um 279:24	undergone
97:2 109:1	167:15 181:16	287:18	33:11 259:3
167:18 185:6	189:4 197:24	unable 38:1	underlying
turban 6:6,9	199:4 205:24	99:4 280:8,23	166:22 171:23
154:21 155:5	206:8 209:23	uncertainty	underpinning
155:21 156:9	219:24 276:19	227:16	169:16,22
157:14 158:11	285:15	unclear 170:6	170:9,15,24
163:15,24	type 30:13	under 15:2	understand
164:2	100:16 104:22	20:6 25:15,19	10:7 21:24,25
	114:22 147:20	36:19 68:9,20	22:12 30:4
	279:14,19	71:13,19 72:3	31:18 32:17,19
		72:23 82:25	34:8 37:25

[understand - vaginal]

45:3,3 50:1,2 51:8 61:11 62:1 70:9 75:17 77:14 79:24 83:12 87:12 91:15,17 95:21 96:21 97:3 99:11 107:21,22 108:3,20 109:1 115:15,17 124:1 126:8,22 146:8 169:2,9 171:24 175:1 185:6 191:6 199:8,12 206:21 209:1,2 213:10 214:20 214:23 218:4 235:7,8 244:9 understanding 26:14 40:9,15 46:19,20 47:8 63:21 72:8 100:20 115:22 116:9,11,19 118:23 124:14 126:1 129:25 130:2 131:24 137:10 141:8 142:17 159:23 167:4 206:16 232:6 246:12 246:14 250:11 273:12,19,24	274:1 understood 10:9 35:23 37:21 199:2 209:11,16 underwent 257:17 258:9 259:11 263:22 264:10,17 unexplained 227:16,23 228:3,20,21 unfortunately 175:14 179:24 215:6 union 2:16 united 1:1 8:11 universe 67:11 67:19 university 13:14,21 263:7 265:13,21 266:4,8,14 university's 279:1 unknown 234:6 234:16 235:2 unrealistic 32:22 270:7 271:10,16,21 unsystematic 125:21 126:2,9 unusual 272:6 272:12,21,22 273:5	unwilling 174:10 updated 168:10 updating 160:15 upper 131:6 168:5 231:6 urologist 12:25 88:9,11 urology 263:6 use 23:11 26:23 29:18,25 35:4 36:1,6 62:6,8 62:11,16,18,20 79:5 84:13 88:13 94:6 108:10 112:3 130:14 135:18 136:7 141:4 146:5 174:17 240:9 249:4 252:9 254:11 256:2 259:4 272:15 281:20 281:24 282:6,7 282:11,16,20 282:23 283:1 287:23 used 29:3,22 51:15 60:8 73:4 76:22 80:21 81:3,16 93:20 94:1,9 94:12,13,16,20 102:15 123:25	130:3,12,18 132:18 137:6 146:23 148:7 154:24 155:9 159:6,14 161:16 180:7 224:14 236:14 236:14 239:15 246:1,6,11,15 257:22 258:2 272:18 287:7 287:13 useful 159:22 users 5:17 uses 74:20,21 102:17 using 40:1 41:24 61:8 74:8 79:23 117:4 130:17 188:2 229:17 256:22 279:13 279:23 287:15 usually 72:25 96:25 112:19 192:15 268:10 289:7 uterine 246:16 uterus 260:14 utilized 200:25 v v 1:9 71:13,19 72:3 162:24 vaginal 93:16 94:7,9 102:13

[vaginoplasties - want]

vaginoplasties 98:14	various 29:13	view 27:2	volumes 211:21
vaginoplasty 93:13,14 94:4 94:23,24 98:10 102:2,4,6,15,22 103:5,9,11	vary 55:8 102:16 104:22	viewed 128:10	vries 6:19 113:8,10,25 114:1,5,7 195:14 197:19 197:22 199:4 199:13 205:4 206:17 207:17 238:5,20 239:7 239:16,19 240:6
valid 166:20	verbally 10:13	virtual 5:14 41:24	vs 8:9
validity 124:18 128:3,5,10,18	verbatim 294:15	visit 39:24,25 57:19 60:24 61:4,14,19,23 61:24 62:4 63:4 67:2 176:19 182:2 182:15,16,22 182:22 183:14 183:16,19,22 183:25 184:11 185:4,9,11 186:2,12 188:1 188:20 189:16 189:20 190:1,1 190:2,5,9,9,12 191:1,1,5,5,11 191:12,13,15 191:18,19,22 191:23 192:14 193:10,12,12 193:13 196:3 196:13 289:2,4 289:8,10,21,23 290:12 291:8 291:14,17	vulva 93:16 102:13
valuable 159:12 160:1	verification 293:1		vulvoplasty 102:10
value 34:19 36:9,24 38:2 38:11,22 117:7 122:10	veritext 2:6 8:17		w
variable 115:20 116:1,4 127:1 199:17,21 200:6,12,16,20 200:22 201:3,9 201:12,18,25 244:16	version 14:22 139:21 145:16 145:18,19 151:7 263:18		wa 294:22
variables 114:23 216:12 282:3	versus 83:6 108:7 178:13 196:4 198:25		waiting 14:14 119:11,17 153:19
variation 205:22	video 2:6 8:17 292:6		walk 13:17
variations 221:16	videoconferenc... 2:5 8:14		want 10:25 11:6 30:3 40:18 42:3,7 47:17 50:15,18 58:14 63:20 78:10 85:4 89:14 97:11 116:24 121:21 128:11 132:19 132:20 150:10 153:17,18,20 154:1 171:24 190:19 194:19
varies 193:17	videographer 4:7 8:3 9:17 48:5,9 85:11 85:15 120:17 120:21 154:9 154:13 204:2,6 240:20,24 274:16,22 286:21,25 292:5	visits 41:25 63:12 96:9 288:18,22	
variety 45:23 60:14 228:15 228:22 290:1	videotaped 1:19 2:1,3 8:7 8:13,14	vitae 5:11 voice 33:5,7,13 33:15,17	

[want - witness]

195:18 203:18	261:23 265:1	white 211:20	110:11 111:10
203:23 209:2	268:1,9,18	who've 33:11	112:24 113:3
214:14,22	274:11 280:12	wi 41:7 119:9	113:13 114:3
217:1,9,17	284:20	wide 213:13	115:14 117:12
218:5,7,13,14	ways 35:6 88:6	willing 17:15	122:20 123:7
242:2 255:23	112:15 127:25	wilson 3:16 9:3	123:16 125:11
255:24 274:10	146:21 147:18	9:3	126:7 127:23
283:19 291:1,2	168:14 174:18	window 235:19	130:8,12 135:2
291:3	we've 47:16	witness 9:18	137:3 145:3
wanted 48:13	71:9 92:15,18	17:19 20:19	146:5,14,20
83:8 171:15	97:14 195:17	23:6,20 24:2	147:7,14,25
214:10	290:15,16	34:15,22 35:15	148:7,15
wanting 266:23	291:2	35:25 36:12	150:22 151:10
warn 12:17	weaponization	37:3 38:7,16	153:4 157:19
washington 2:8	269:6 270:1	41:16 44:16	158:17,24
2:22 3:13	weaponized	47:5,19 48:21	159:9,17
wave 153:16,21	269:22	49:13 50:10	161:12,19
way 19:2 36:3	wear 30:6	51:6,17 53:9	163:17 164:12
47:18 50:19	web 170:3,6	54:13,22 56:2	164:22 166:2
51:13 54:7,17	webpage 6:17	61:17 63:8	170:19 171:1
55:6 67:17	website 168:5	67:8 69:6,25	172:2,16,22
75:12 88:8	275:8	70:16 73:22	173:14 174:5
115:3,24	weighed 48:24	75:7 80:19	174:16 175:4
116:15,21	207:12	81:2,15 82:4,9	179:13,17
117:18 118:25	weight 49:21	83:3,17 84:13	184:6 185:1
127:8 128:1,9	weiss 3:2 9:14	89:1,16,23	186:17,24
128:18 147:16	welfare 225:7	90:7 91:10	192:22 193:8
152:1,5 153:5	226:4	92:6 95:17	197:7,14
161:24 177:18	went 249:23	98:2,16,20	199:20 200:8
178:5 181:7	266:14	99:9,17 101:3	201:5,21
190:21 198:14	west 3:7 4:4	103:7,20 104:7	202:13 203:1
200:10,14	11:4 17:4	104:19 105:11	203:12 206:19
208:13 219:2	wharton 3:3	106:3,18 107:6	210:11,19
229:9 249:10	whichever 50:5	107:18 108:14	212:3 213:13
252:20 253:7		109:7,21 110:4	216:10 217:6

[witness - yeah]

217:14,24	84:13 100:5	worse 177:17	yeah 21:8 22:5
218:19,24	146:21 174:17	177:19	24:4 39:5 41:5
219:8 220:10	174:20 221:4	worst 177:11	43:19 46:13
220:16,22	236:13,14	wpath 6:4 83:6	47:21,23 49:16
224:3,21	245:18 272:18	83:10 90:23	51:19 63:10
226:21 228:6	272:18	102:21 103:3	64:19,23 65:6
228:14 229:7	words 60:8	103:12 138:2	67:10 69:16
229:24 230:7	64:1 73:3	138:10 145:10	74:14 79:16
232:25 233:15	136:18 225:3	145:16 146:7	80:15 82:6
234:20 235:4	240:9 242:21	148:21,24	85:9 87:14
239:3,10,18	work 18:7	149:6 150:1	90:11,12 91:14
240:2,9 242:24	42:13 56:18	254:17,23	94:18 95:4
244:18 246:23	113:23 120:13	255:7,9 256:1	114:21 115:7
251:17 254:6	145:5 198:1	256:9 262:2	115:24 119:18
254:19 255:1	263:8 278:17	wpath's 148:1	120:13 124:5
256:6,12,18	279:6	wrest 3:6 9:10	126:7 128:22
258:19 260:4	worked 84:25	wrest.coop 3:9	137:20 151:16
261:21 264:6	worker 12:23	write 43:21	151:22 155:19
266:6 269:19	18:11 30:18	writing 130:13	164:5 170:5
269:25 271:20	39:17,17 40:8	130:15,19	172:18 177:21
272:25 279:18	40:20 42:24	written 18:8	182:10 184:8
281:2,10	43:19,20,23,25	198:10 289:13	196:23 198:11
282:14,20	58:2	wrong 63:21	199:11 200:1
284:18 285:4	workgroup	125:11 133:2	201:12 203:15
285:14,19	273:15	134:20 185:8	203:21 207:2
286:4,10 292:3	working 19:4	198:15	208:13 223:21
293:7 294:8,18	30:20 32:7	wu 2:21 9:1	226:21 229:24
women 152:23	46:17,21 55:3	x	234:18 236:4
253:25	109:13	x 5:1,2,9 6:1	237:4 238:9
wonder 119:20	works 17:5	7:1	240:13,13
wondering	120:12	xxvi 121:23	241:17 246:6
89:10	world 16:17	y	251:1 253:4
word 19:17	210:2,14,22	yang 257:7	256:25 266:9
40:1 49:6 50:5	211:1		271:20 274:7
50:18 52:8			274:12 283:7

[yeah - zoom]

286:17 289:5	98:7,12 118:17
290:10,15	158:15,22
year 14:23	159:7,11,15,23
68:16,22 225:1	159:25 160:6
242:8	160:12,24
years 14:1 19:9	161:9,15,17
20:17,22 21:1	162:1 181:25
21:5 22:11	188:3,11 196:4
25:19 64:3	196:10 221:12
66:9 82:21	221:14,15
84:3,5 93:7	225:9 228:4
169:19 195:11	281:20,25
220:2 242:8,15	282:17 283:2
243:1,15,17	z
257:18 258:10	zero 178:16,22
259:12 287:14	zoom 2:4 8:14
287:20	
york 2:18 3:4	
young 7:5 19:2	
19:25 29:5	
30:20 35:6	
39:18 46:23	
221:21 227:15	
229:2,11 234:7	
268:4	
younger 65:20	
77:6 86:24	
250:4	
youngest 77:10	
youth 6:6,15,22	
16:2,3 19:1,5,9	
19:11,18 32:7	
33:18 42:11	
70:24 76:23	
81:4 97:18,24	

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

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Christine Brady, Ph.D. August 31, 2023

UNITED STATES DISTRICT COURT
DISTRICT OF IDAHO

1 PAM POE, by and through her) Case No.
2 parents and next friends,) 1:23-cv-00269-CWD
3 Penny and Peter Poe; PENNY)
4 POE; PETER POE; JANE DOE, by)
5 and through her parents and)
6 next friends, Joan and John)
7 Doe; JOAN DOE; JOHN DOE,)
8)
9 Plaintiffs,)
10)
11 v.)
12)
13 RAÚL LABRADOR, in his)
14 official capacity as the)
15 Attorney General of the State)
16 of Idaho; JAN M. BENNETTS, in)
17 her official capacity as)
18 County Prosecuting Attorney)
19 for Ada, Idaho; and the)
20 INDIVIDUAL MEMBERS OF THE)
21 IDAHO CODE COMMISSION, in)
22 their official capacities,)
23)
24 Defendants.)
25 _____)

REMOTE VIDEOTAPED DEPOSITION OF CHRISTINE BRADY, Ph.D.
THURSDAY, AUGUST 31, 2023

EXHIBIT
B

Reported By: Amy E. Simmons, CSR, RDR, CRR, CRC

Page 1

1 REMOTE VIDEOTAPED DEPOSITION OF CHRISTINE BRADY, M.D.

2
3 BE IT REMEMBERED that the remote videotaped
4 deposition of CHRISTINE BRADY, M.D., was taken via Zoom
5 videoconference by the attorney for the Defendants before
6 Associated Reporting & Video, a Veritext company, Amy E.
7 Simmons, Idaho CSR No. 685, California CSR No. 14553,
8 Washington CSR No. 22012915, Oregon CSR No. 22-009, and
9 Notary Public in and for the County of Ada, State of
10 Idaho, on Thursday, the 31st day of August, 2023,
11 commencing at the hour of 10:06 a.m. Mountain time in the
12 above-entitled matter.

13
14
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24 Jocelyn Larsson,
25 Court Reporting Intern

I N D E X
E X A M I N A T I O N

CHRISTINE BRADY, M.D. PAGE

By: Mr. Ramer.....6

E X H I B I T S

NO. PAGE

Exhibit 1. Curriculum Vitae of Christine Erin Lam Brady, Ph.D. (10 pages) 12

Exhibit 2. Expert Declaration of Christine Brady, Ph.D. (18 pages) 16

Exhibit 3. "Gender Identity 5 Years After Social Transition," Olson (7 pages) 98

Exhibit 4. Borderline Personality Disorder Diagnostic Criteria (1 page) 123

Exhibit 5. "Guidelines for Psychological Practice with Transgender and Gender Nonconforming People," American Psychological Association (33 pages) 134

Exhibit 6. "APA Resolution on the Imposition of Death as a Penalty for Persons Aged 18 Through 20, Also Known as the Late Adolescent Class," American Psychological Association (5 pages) 168

Exhibit 7. "Understanding and Supporting Patients with Dynamic Desires for Gender-Affirming Medical Interventions" (3 pages) 183

P R O C E E D I N G S

THE VIDEOGRAPHER: All right. So we are recording, and we are on the record. Today's date is August 31, 2023. The time is 10:06 a.m. Mountain time.

For the record, this is the remote videotaped deposition of Dr. Christine Brady. It is taken by the Defendants in the matter of Poe, et al., vs. Labrador, et al., Case No. 1:23-cv-00269-CWD. It's in the United States District Court for the District of Idaho.

The videotaped deposition is being held remotely via Zoom videoconference. The videotaped deposition is being recorded by Chris Ennis and reported by Amy Simmons of Associated Reporting & Video.

And if counsel will please state their appearances and any stipulations for the record.

MR. RAMER: John Ramer on behalf of Defendants.

MS. NOWLIN-SOHL: Li Nowlin-Sohl with the ACLU on behalf of Plaintiffs.

MS. COOPER: Leslie Cooper, ACLU, Plaintiffs.

1 MR. MAY: Philip May from the law firm of
2 Groombridge Wu Baughman & Stone on behalf of
3 Plaintiffs.

4 MR. DeROIN: David DeRoin with Wrest
5 Collective on behalf of Plaintiffs.

6 MR. CUNNINGHAM: Ridan Cunningham, Paul
7 Weiss Rifkind, Wharton & Garrison, Plaintiffs, not
8 yet admitted.

9 MR. GREEN: Aaron Green, Idaho Attorney
10 General's Office. I haven't appeared. I'm just
11 observing.

12 THE VIDEOGRAPHER: And if the court
13 reporter will please swear the witness.

14
15 CHRISTINE BRADY, M.D.,
16 a witness having been first duly sworn to tell the truth,
17 the whole truth, and nothing but the truth, testified as
18 follows:

19
20 EXAMINATION

21 BY MR. RAMER:

22 Q. Hi, Dr. Brady. My name is John Ramer.
23 I'm from the law firm of Cooper & Kirk
24 representing the Defendants in this case.

25 And my first question to you is have you

1 ever been deposed before?

2 A. Not as an expert witness.

3 Q. Okay. I take that answer as -- that you
4 have been deposed in a different context; is that
5 right?

6 A. Yes.

7 Q. So I assume you have a general
8 understanding of how it goes. I'll just go over
9 quickly some brief ground rules to make sure we're
10 all on the same page.

11 As you know, I'll ask you questions. If
12 you don't understand my question, please just ask
13 for an explanation, and I'll attempt to clarify
14 it. Otherwise I'll assume that you understood the
15 question and are answering the question that I
16 asked.

17 As you also know, the proceeding is being
18 transcribed by the court reporter, so I'll ask
19 that you respond verbally rather than shaking your
20 head yes or no.

21 And I will do my best not to interrupt
22 you and just ask that you do your best not to
23 interrupt me so we can help the court reporter
24 keep a clean transcript.

25 Your counsel may object to a question

1 that I ask, but unless counsel instructs you not
2 to answer the question, you should provide an
3 answer.

4 And we can take breaks whenever you want.
5 Just let me know. The only request is that you
6 would answer any pending questions before we break
7 and then we'll go on the break.

8 Does that all make sense?

9 A. Yes.

10 Q. Okay. And, Dr. Brady, is anyone other
11 than counsel in the room with you?

12 A. No.

13 Q. And do you have any documents open in
14 front of you?

15 A. No.

16 Q. And what did you do to prepare for this
17 deposition?

18 A. I read the case filings as well as
19 pertinent research as it is relevant to my report
20 and declaration.

21 I also reviewed the expert declarations
22 of the case in Tennessee.

23 Q. When you say "the case in Tennessee,"
24 what do you mean by that?

25 A. The similar litigation that was proposed

1 in Tennessee.

2 Q. And do you know the status of that
3 litigation?

4 A. I do not. The current status, no.

5 Q. Did you speak with anyone about your
6 deposition today?

7 A. Just my legal counsel.

8 Q. And you mentioned you reviewed pertinent
9 research to prepare for today; is that right?

10 A. Yes.

11 Q. Can you just give me a general
12 description of what you mean by "pertinent
13 research"?

14 A. So I'm sorry. Do you mean prior to today
15 or just in preparing my report?

16 Q. My earlier question is what you had done
17 to prepare for the deposition. And I thought you
18 had said you reviewed pertinent research. And I
19 was just asking what you mean by that.

20 A. Yeah. So I just reviewed the -- my
21 report and then the citations that I had used in
22 my report.

23 Q. Did you review any articles or
24 publications that are not cited in your report?

25 A. Not in preparation for today, no.

1 Q. Dr. Brady, do you consider yourself to be
2 an expert?

3 MS. NOWLIN-SOHL: Objection to form.

4 THE WITNESS: I consider myself to have
5 expertise in clinical psychology. And I have a
6 specialization in treating youth with gender
7 dysphoria.

8 Q. (BY MR. RAMER) Dr. Brady, are you an
9 endocrinologist?

10 A. No.

11 Q. Are you a neurologist?

12 A. No.

13 Q. Are you a surgeon?

14 A. No.

15 Q. Are you a social worker?

16 A. No.

17 Q. Are you a urologist?

18 A. No.

19 Q. Are you a gynecologist?

20 A. No.

21 Q. Are you a bioethicist?

22 A. No.

23 Q. Are you an expert in cognitive
24 development?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: In my general graduate
2 school training, I did receive training in child
3 development, and part of that included cognitive
4 development. I also took neuropsychology.

5 Q. (BY MR. RAMER) Are those courses that
6 you took?

7 A. Yes.

8 Q. And so do you consider yourself an expert
9 in neuropsychology?

10 A. Not an expert, no.

11 Q. Do you consider yourself an expert in
12 child cognitive development?

13 A. I wouldn't -- I received training. I
14 wouldn't consider myself an expert.

15 Q. And could you briefly describe your
16 current position?

17 A. So I'm the psychologist at the Pediatric
18 and Adolescent Gender Clinic at Stanford
19 University. That is my full-time position.

20 Q. And at just a high level of generality,
21 could you walk me through your professional
22 background since you received your bachelor's
23 degree?

24 A. Sure. So after receiving my bachelor's
25 degree, I got -- I went to James Madison

1 University and received a master's in
2 psychological sciences with a focus on child
3 psychology.

4 After my terminal master's, I then
5 attended a Ph.D. program at Ohio University in
6 clinical psychology.

7 Q. And then after that -- is that your
8 educational background? Is that right?

9 A. Yes. And then for our degrees, we are
10 required to do internship and fellowship. And so
11 my internship was one year at Seattle Children's
12 Hospital with the University of Washington. And
13 then my fellowship was at the University of
14 Louisville, which was then Kosair Children's
15 Hospital, now Norton Children's Hospital.

16 MR. RAMER: And, Li, I just tried to send
17 what I'll call Brady Exhibit 1.

18 MS. NOWLIN-SOHL: I have not yet received
19 it. It's through on my phone, so I know it's
20 coming to my email shortly. All right.

21 THE WITNESS: I can see it.

22 (Deposition Exhibit No. 1 was marked.)

23 Q. (BY MR. RAMER) And, Dr. Brady, does this
24 appear to be a copy of your CV?

25 A. Yes.

1 Q. And is it up-to-date?

2 A. No.

3 Q. What should be included on here that is
4 not?

5 A. There might just be a few other talks
6 that I've given since this was submitted.

7 Q. Any publications?

8 A. No.

9 Q. I'd like to go to page 2. And under
10 Roman Numeral IV, do you see there's "Honors and
11 Awards"?

12 A. Yes.

13 Q. And in 2020, it says you received a
14 "First Place Poster Award."

15 Do you see that?

16 A. Yes.

17 Q. And can you just explain what that award
18 was for?

19 A. So this poster was -- I was last author
20 on a poster that was submitted to the conference,
21 the Pediatric Psychology -- sorry, Society of
22 Pediatric Psychology annual conference in 2020.

23 And that poster was done by a student at
24 Indiana University on -- it was four cases of
25 gender-diverse youth who also had GI problems.

1 Q. Could you explain what "GI" mean?

2 A. Gastrointestinal.

3 Q. And a question I should have asked
4 earlier, but are you board certified?

5 A. No.

6 Q. And, Doctor, you've publish peer-reviewed
7 original research, correct?

8 A. Yes.

9 Q. Has any of your peer-reviewed original
10 research related to transgender medicine?

11 A. No.

12 Q. And you're a member of the American
13 Psychological Association; is that right?

14 A. Yes.

15 Q. Are you a member of the American Medical
16 Association?

17 A. No.

18 Q. And are you a member of WPATH?

19 A. Yes.

20 Q. And are you also a member of USPATH?

21 A. Yes.

22 Q. Can you just explain the relationship
23 between WPATH and USPATH?

24 A. Sure. So WPATH is the larger
25 organization, umbrella organization that's an

1 international group.

2 And then some countries have developed
3 their own sub sort of groups, so USPATH being the
4 United States sort of subgroup within WPATH.
5 Europe has one as well.

6 Q. Is it just one for all of Europe?

7 A. I'm not sure.

8 Q. On your CV, I'd like to just go to the
9 final page and down toward the bottom. And you
10 have a Roman Numeral IX for "Trainees."

11 Do you see that?

12 A. Yes.

13 Q. And then it lists "Psychiatry Fellows";
14 is that right?

15 A. Yes.

16 Q. And this is my own ignorance, but you're
17 a psychologist, correct?

18 A. Yes.

19 Q. Can you just help me understand why you
20 would have psychiatry fellows?

21 A. Sure. So during their training,
22 psychiatry fellows do get training in therapy, and
23 sometimes that is supervised by a psychologist who
24 has more experience in that area. And so when the
25 psychiatry fellows rotate with me, I'm supervising

1 them on their therapy.

2 Q. And of your fellows is Jack Turban,
3 Dr. Jack Turban; is that right?

4 A. Yes.

5 Q. Is that the same Dr. Turban that you have
6 published before?

7 A. We published one commentary together,
8 yes.

9 MR. RAMER: And, Li, I tried sending a
10 little while ago to see if we could move it along,
11 but I think Connelly Exhibit 2 hopefully you've
12 received.

13 MS. NOWLIN-SOHL: Yes.

14 MR. RAMER: I'm sorry, Brady Exhibit 2.

15 MS. NOWLIN-SOHL: Yes, we have it.

16 (Deposition Exhibit No. 2 was marked.)

17 Q. (BY MR. RAMER) Okay. And, Dr. Brady,
18 does this appear to be the expert declaration that
19 you submitted in this case?

20 A. Yes.

21 Q. And how did you come to be involved in
22 this case?

23 A. So Li, the ACLU, sent me an email,
24 reached out to me, and we discussed the potential
25 of working together.

1 Q. Have you ever served as an expert witness
2 before?

3 A. No.

4 Q. And what were you -- as a general matter
5 what were you asked to do?

6 MS. NOWLIN-SOHL: I'm just going to
7 object to the extent it calls for a legal
8 communication.

9 But you can still answer.

10 MR. RAMER: And I'll clarify the answer.

11 Q. (BY MR. RAMER) Not looking for the
12 substance of any communications with counsel.
13 Just as a general matter, what were you asked to
14 do as an expert in the case?

15 A. That I would be submitting this
16 declaration that we see before us and provide
17 deposition, which we are doing today, and then
18 possibly appear in court at a later date.

19 Q. And did you personally draft this
20 declaration?

21 A. Yes.

22 Q. And did anyone help you at all with the
23 drafting process?

24 A. No.

25 Q. Did you personally identify all the

1 studies that you cite in this declaration?

2 A. Yes.

3 Q. And did you speak with anyone other than
4 counsel about the contents of this declaration?

5 A. No.

6 Q. And is it -- let me just ask.

7 You co-founded a gender clinic at
8 Hennepin Healthcare; is that right?

9 A. Yes.

10 Q. And what led you to co-found that clinic?

11 A. My original position at that institution
12 was to be the psychologist embedded into their
13 pediatrics clinic. And there were several
14 programs running out of that pediatrics clinic.

15 And there was a pediatrician who
16 expressed interest in starting a gender program
17 within that clinic, and he asked if I would be
18 interested in providing mental health support to
19 that clinic.

20 Q. And you're currently at the Stanford
21 Pediatric and Adolescent Gender Clinic, right?

22 A. Yes.

23 Q. And do you treat patients at that clinic?

24 A. Yes.

25 Q. We'll discuss it in more detail a little

1 bit later, but just at a high level of generality,
2 could you explain what the gender clinic does?

3 A. So we provide a variety of services to
4 gender-diverse youth; some medical, some
5 nonmedical. My role is providing therapeutic
6 services and also mental health consultation to
7 our larger, integrated team.

8 Q. When you say "therapeutic services," what
9 do you mean?

10 A. Psychotherapy.

11 Q. Does the clinic serve a particular age
12 group?

13 A. Yes. So we don't have a lower limit, but
14 typically our youngest patient has been about
15 three years old. And then we do have an upper
16 limit of 25, but typically most young adults are
17 transitioning out of our clinic around 22, 23.

18 Q. And do you know how many patients the
19 clinic serves?

20 A. The clinic's been open for almost six
21 years, and my -- the most recent number I was
22 given was that we have now served over 1,000
23 patients.

24 Q. When you say "have now served," do you
25 mean in the totality of the clinic's existence?

1 A. Yes, in the six years that we've been --
2 yeah.

3 Q. Do you know approximately how many
4 patients are currently receiving treatment at the
5 clinic?

6 A. I do not.

7 Q. And you've been there for three years; is
8 that right?

9 A. Almost three.

10 Q. And in those almost three years that you
11 have been there, has the patient population at the
12 clinic grown?

13 A. Could you be more specific? What do you
14 mean by "grown"?

15 Q. Have the number of patients receiving
16 treatment -- excuse me.

17 Has the number of patients receiving
18 treatment increased?

19 A. So if you mean, like, the number of new
20 patients increasing per year, that's actually
21 remained quite stable. But it's grown because we
22 carry the patients that we saw the year before and
23 we're continuing to see them the next year and the
24 next year. So the number has increased over six
25 years.

1 Q. When you say the new patients have been
2 stable, you're referring to patients coming into
3 the clinic over those three years, the number has
4 remained stable; is that right?

5 A. Yeah, meaning, like, the number of new
6 referrals we get per week has been pretty stable
7 over that six years.

8 Q. And you say that in the last eight years,
9 you've treated over a thousand youth and families,
10 correct?

11 A. Yes.

12 Q. How many current patients do you have?

13 A. What would you consider to be current?

14 Q. What would you consider to be current?

15 A. So because I have some who, you know, see
16 me infrequently, and I have others who see me
17 pretty regularly, so it's sort of hard for me to
18 say. And then some, you know, pop in when I
19 haven't seen them in a long time.

20 So I guess what I would say is my active
21 caseload that I'm seeing fairly regularly and at a
22 decent frequency, maybe 70.

23 Q. 70 patients?

24 A. Um-hmm.

25 Q. Sorry. Say again.

1 A. I was just saying "yes" instead of
2 "um-hmm."

3 Q. I need to work on that too, so I
4 appreciate it.

5 And you say 100 percent of your patients
6 are transgender youth; is that right?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: Currently all of my
9 patients are experiencing some sort of gender
10 questioning.

11 Q. (BY MR. RAMER) Well, I guess let's go to
12 your paragraph 7 in your declaration, which is
13 page 2. I think fourth sentence, kind of middle
14 of the paragraph.

15 Do you see where it says "Currently
16 100 percent of my clinical practice are
17 transgender youth"?

18 A. Yes.

19 Q. And so is that statement accurate?

20 A. In this case, I'm using "transgender" as
21 the umbrella term for gender diversity, so yes,
22 it's accurate.

23 Q. And when you say "youth," do you mean
24 individuals under the age of 18?

25 A. Some are young adults, but a majority are

1 under the age of 18.

2 Q. When you say "young adults," you're
3 referring to people who are over 18?

4 A. Yes.

5 Q. What percentage of your current patients
6 are over the age of 18?

7 A. I would say maybe 10 percent.

8 Q. And could you describe -- I think you had
9 started to describe, but could you explain a
10 little bit more what happens with patients once
11 they turn 18 years of age with respect to care at
12 your clinic?

13 A. So because we can follow kids up until --
14 or young adults until 25, we've sort of -- it's up
15 to them and their life circumstances whether or
16 not they want to transfer services.

17 So some of our youth go off to college in
18 other states, making it difficult for us to
19 continue providing their care. So we might find
20 them care that's, you know, closer to their
21 college or wherever they end up living.

22 Some youth stay local and continue with
23 us until a time in which they feel ready to
24 transfer to adult services.

25 Sometimes they reach the upper limit and

1 they're not necessarily ready, but we sort of
2 transfer them anyway.

3 Q. And was the upper limit 25 years old?

4 A. Yes.

5 Q. When patients transfer to a new provider,
6 does your clinic stay in formal communication with
7 them?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: I'm not sure, because
10 typically that would be the medical provider that
11 is probably facilitating that communication. So
12 I'm not sure.

13 Q. (BY MR. RAMER) Of your current patients,
14 have all of them been diagnosed with gender
15 dysphoria?

16 A. No.

17 Q. What percentage of your current patients
18 have been diagnosed with gender dysphoria?

19 A. Because a lot of our patients are coming
20 to gender clinics sort of late in their journeys,
21 so oftentimes they've been exploring things with
22 an outside therapist or have been discussing this
23 with their family for a long time, they're sort of
24 coming to gender clinic at a point where they've
25 already explored a lot. And so I would say a

1 majority have gender dysphoria, maybe 75 percent.

2 Q. And what was the significance of the
3 point that they've been on their journey for a
4 while before they come to the clinic?

5 A. That we're sort of seeing a subset of
6 gender-diverse youth. You know, it takes a lot
7 for families to make the decision to come to a
8 gender clinic, and oftentimes they're speaking
9 with other professionals and seeking advice from
10 their pediatrician or seeking advice from their
11 child's current therapist with regards to where to
12 go or what to do.

13 So my point was that just that, you know,
14 we are typically not seeing youth who are at the
15 beginning of their journey. And so they're more
16 likely to meet criteria because they've been
17 persistent, consistent for longer.

18 Q. I see. By "criteria," you mean the
19 criteria for gender dysphoria; is that right?

20 A. Correct.

21 Q. And so the point is that because these
22 are individuals who have progressed in their
23 journey, the percentage of individuals who are
24 formally diagnosed with gender dysphoria may be
25 higher than at other providers? Is that what

1 you're saying?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: I don't know how the
4 percentages compare, but that might be the case.

5 Q. (BY MR. RAMER) But that's why you were
6 talking about that, right?

7 A. Yes.

8 Q. In this field, do you understand a
9 distinction between a child and adolescent?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: Could you specify "this
12 field"?

13 Q. (BY MR. RAMER) Transgender medicine.

14 MS. NOWLIN-SOHL: Same objection.

15 THE WITNESS: So do I understand the
16 difference between child and adolescents?

17 Q. (BY MR. RAMER) I'm just asking is there
18 a difference in the terminology that's -- excuse
19 me.

20 When you use the term "child" or
21 "adolescent," are you referring to individuals at
22 different stages of maturity?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: Typically when we're
25 referring to children, we're talking about

1 prepuberty. And when we're talking about
2 adolescents, we're talking about pubertal or
3 post-pubertal.

4 Q. (BY MR. RAMER) And at what stage do you
5 consider the conclusion of the prepubertal phase?

6 A. So as a mental health professional, I'm
7 not able to make that distinction. I rely on my
8 medical team to make that distinction.

9 But typically it's with Tanner staging
10 and with blood work.

11 Q. And do you know what Tanner stage?

12 A. So typically it's early Tanner Stage II.
13 Between II and III is when puberty begins.

14 Q. Do you have patients who were diagnosed
15 with gender dysphoria before Tanner Stage II?

16 A. Yes.

17 Q. Do you have patients who were diagnosed
18 with gender dysphoria after the beginning of
19 Tanner Stage II?

20 A. Yes.

21 Q. Of your patients, which diagnosis is more
22 common?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: Meaning which is more
25 common, childhood or adolescent gender dysphoria?

1 Q. (BY MR. RAMER) Correct.

2 A. In our clinic, it's about 30 percent of
3 our patients are prepubertal, and about 70 percent
4 are post -- or pubertal or post-pubertal.
5 Pubertal, excuse me.

6 Q. Of your current patients, do you know
7 what percentage are natal females?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: The general -- a general
10 estimate in our clinic, which we looked at
11 relatively recently, was that we actually have a
12 50/50 split of designated females and designated
13 males in both age groups.

14 Q. (BY MR. RAMER) When did you look at
15 that?

16 A. About a year ago.

17 Q. And is that percentage, that 50/50 split,
18 the same for patients who have been formally
19 diagnosed with gender dysphoria?

20 A. Yes.

21 Q. Did the 50/50 split surprise you?

22 A. The reason that we looked at it is
23 because I was interested to know, you know --
24 given that I've been doing this work for eight
25 years, I've been interested, you know, to know how

1 things have sort of evolved since I first started.

2 When I was working in Louisville, we kind
3 of had different rates, so I was interested to
4 see.

5 It wasn't surprising because clinically,
6 you know, that's what I was seeing in my office.
7 If you look at my schedule, it's a pretty 50/50
8 mix of the designated sex.

9 Q. What were the rates in Louisville?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: I don't remember exactly,
12 but it felt as though we were seeing a lot more
13 binary-identifying individuals and more often
14 transmasculine.

15 Q. (BY MR. RAMER) When you say "binary,"
16 you're distinguishing from nonbinary; is that
17 right?

18 A. Nonbinary, agender, genderqueer, gender
19 fluid.

20 Q. And when you say "transmasculine," you're
21 referring to -- can you explain what you mean by
22 "transmasculine"?

23 A. Designated females who identify as
24 masculine.

25 Q. Of your patient population that has been

1 diagnosed with gender dysphoria, what percentage
2 receive puberty blockers?

3 A. That would be hard for me to estimate.
4 Not all of our youth are seeking medical
5 intervention, and not all are eligible for medical
6 interventions, and not all are Tanner Stage --
7 between Tanner Stage II and III.

8 So I mean, I guess if it's prepubertal,
9 which was your question, it would be none because
10 they wouldn't be medically ready for pubertal
11 blockade.

12 Q. When you said not all of them are seeking
13 medical interventions, what did you mean by that?

14 A. So some families are coming to our clinic
15 to just get education, support, resources to
16 support their child or youth, or the youth
17 themselves might just be wanting to explore ways
18 to express gender or socially transition rather
19 than are coming specifically seeking medical
20 intervention.

21 Q. So are some coming specifically seeking
22 medical intervention?

23 A. Yes.

24 Q. As a psychologist, are you the provider
25 who would actually be making the diagnosis of

1 gender dysphoria?

2 A. Oftentimes in our clinic that is the
3 case, but I'm not the only person who can do that.

4 Q. Have you ever personally diagnosed a
5 child with gender dysphoria?

6 A. Yes.

7 Q. Have you ever personally diagnosed an
8 adolescent with gender dysphoria?

9 A. Yes.

10 Q. Do you also determine whether a
11 patient -- or I guess let me just back up. Maybe
12 you can just kind of explain your role in this
13 process.

14 My general understanding is that the
15 clinics are interdisciplinary or
16 multidisciplinary, and so you have different
17 providers doing different things.

18 Could you just explain your role?

19 A. Sure. And it gets complicated too,
20 because we are in a fairly well-resourced area, so
21 sometimes it's not even our team that's providing
22 services. It might be community providers as
23 well.

24 But when a family comes to our clinic, we
25 spend a lot of time getting to know the family,

1 getting to know the youth, understanding their
2 gender identity, and kind of goals for why they're
3 coming to gender clinic.

4 And then we will kind of pick a treatment
5 plan as a team for what will happen next with that
6 family.

7 Sometimes the focus might be more on the
8 mental health piece, in which case it might be
9 meetings with myself to provide support around
10 social transition, resources, education.

11 Might be also to just support youth with
12 gender dysphoria who are struggling with their
13 dysphoria or other comorbid diagnoses that they
14 may be experiencing.

15 Sometimes they have a therapist in the
16 community already who we can coordinate and
17 collaborate with and get collaborative information
18 from so they don't necessarily have to see a
19 member of our behavioral health team. It can be
20 done out in the community if they have a provider
21 with proper training.

22 Q. You mentioned social transition. Can
23 you explain what you mean by that?

24 A. Sure. So social transition is a pretty
25 diverse set of actions that some people choose to

1 take. So oftentimes that includes changing name
2 and pronouns.

3 At school, extracurricular activities,
4 within the family, with peers.

5 It could also mean adopting a clothing
6 style that's more consistent with their affirmed
7 gender, haircuts, you know, makeup, jewelry, the
8 kind of, like, external things that other people
9 can see, and making steps to be more comfortable
10 with those.

11 Q. And I think you said that those are
12 actions that individuals choose to take; is that
13 right?

14 A. Yes.

15 Q. Is there ever a clinical indication that
16 somebody should social transition?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: It's very individualized.
19 We need to understand the context in which a
20 person lives.

21 So, for example, we are -- our capture
22 area for our clinic is quite vast, so we have
23 people coming from several hours away in rural
24 areas where they might be the only gender-diverse
25 person in their community or at their school, and

1 it might not be safe for them to take certain
2 steps towards affirming their gender. And so we
3 certainly don't force anyone, which is why I kind
4 of said it's their choice if they want to do that
5 or not.

6 There are some instances in which it can
7 be very helpful. There's research that shows that
8 social transition can help in terms of reducing
9 negative psychological distress.

10 Q. (BY MR. RAMER) And so you said that you
11 don't force anybody to social -- start again.

12 You said you don't force anybody to
13 socially transition.

14 And I guess my question is do you ever
15 recommend it?

16 A. Yeah.

17 Q. And what would you observe that would
18 lead you to recommend socially transition?

19 A. There are some situations where, for
20 example, with certain family members, it's helpful
21 to, you know, come out and share their identity
22 with certain people.

23 Oftentimes there's distress with being
24 closeted, and so social transition is an
25 opportunity to, you know, come out and present

1 yourself more authentically. And so it can
2 alleviate some of that distress and anxiety. So
3 sometimes it is sort of mentioned as, hey, this
4 would be helpful.

5 Q. Have you ever recommended that a patient
6 socially transition before Tanner Stage II?

7 A. Most of the young kids that are
8 presenting to our clinic have already socially
9 transitioned. So I would say maybe like
10 90 percent have done that already prior to coming
11 to us.

12 Q. What is the youngest patient you've ever
13 seen that has socially transitioned?

14 A. Four.

15 Q. And I think earlier you had mentioned you
16 have patients as young as three years old; is that
17 right?

18 A. Yes.

19 Q. And what kind of care is a patient of
20 that age receiving at the clinic?

21 A. So there are no medical interventions
22 until that pubertal, post-pubertal period. So at
23 that point we're really just providing supportive
24 care, maybe recommending support groups for the
25 caregivers, recommending -- you know, kind of

1 giving guidance on how to discuss their child's
2 gender with the school. And, you know, just
3 helping parents to navigate different
4 conversations or different complex situations that
5 they might face.

6 Q. School at three years old would be
7 preschool?

8 A. Yes.

9 Q. And you said "medical interventions," I
10 believe.

11 What do you mean by that?

12 A. So puberty blockers, hormones, you know,
13 menstrual suppression.

14 Q. Are there interventions that are not
15 labeled "medical"?

16 A. So, yeah. It's -- the terminology is
17 difficult. As a mental health professional, I
18 consider therapy to be an intervention. And so,
19 you know, that's what I'm providing is also
20 support and, you know, therapy. I consider that
21 to be an intervention.

22 Q. So do you consider social transition an
23 intervention?

24 A. Yes.

25 Q. Can you walk me through the diagnosis

1 process from the time a patient walks into your
2 office?

3 A. So by the time I'm seeing a patient, we
4 already have a wealth of information. So
5 typically families who are referred to us, we have
6 a kind of pre-intake meeting with just the
7 caregivers to get background information.
8 Typically that's an hour or hour and a half.

9 And then they meet for the first
10 appointment. That's typically an hour and a half
11 to two hours.

12 And we're getting a lot of information
13 from the youth directly during that meeting.
14 Sometimes I've met them during that meeting as
15 well before I have my individual appointment with
16 them.

17 So typically we have, you know, three
18 hours' worth of information.

19 So when a family is working with me, I'm
20 sort of confirming the information that we've
21 obtained already, and then asking more detail
22 about things relevant to mental health and gender
23 dysphoria specifically so you can use it.

24 But I use the DSM criteria, and we just
25 have a kind of clinical interview regarding a

1 youth's experience with those symptoms or not, how
2 their dysphoria manifests, what distresses it
3 causes in their life, and what their goals are.

4 Q. What did you mean by a "clinical
5 interview"?

6 A. So it's a kind of semi-structured
7 interview in which I'm asking about each of the
8 diagnostic criteria and then asking follow-up
9 questions after the youth has responded.

10 Q. And then when you refer to the goals that
11 the individual has, what do you mean by that?

12 A. So depending on the treatment plan, it
13 might be what are your goals for therapy, right?

14 Like, what are you hoping to get out of
15 our meetings together?

16 What supports do you need?

17 What would you like to improve?

18 Sometimes it is what are your goals for
19 transition, physical transition?

20 Sometimes it's what are your goals for,
21 you know, helping your family understand you
22 better. It just depends on what they're being
23 referred to me for.

24 Q. And I'd like to, in your declaration, go
25 to page 5, paragraph 18.

1 And here you discuss the diagnostic
2 criteria for prepubertal children, right?

3 A. Yes.

4 Q. And so you would use this diagnostic
5 criteria for children who are pre-Tanner Stage II;
6 is that right?

7 A. Tanner Stage II and below, yeah.

8 Q. And in the first sentence after A, it
9 refers to a "marked incongruence."

10 Do you see that?

11 A. Yes.

12 Q. What does the word "marked" mean there?

13 A. Yeah, so this is direct verbiage from the
14 DSM-5. But, you know, typically with all of the
15 diagnoses in the DSM, you have to meet criteria,
16 but then there also has to be impairment
17 experience from those symptoms.

18 So typically "marked" means, you know,
19 it's not just there, but it's there and it's
20 causing some sort of difficulty or impairment in
21 daily functioning.

22 Q. Well, I guess if you look at the bottom
23 of the page with B -- and I understand this is
24 just the DSM criteria in the report, but doesn't B
25 just describe what you just said?

1 A. Yes.

2 Q. And so you're saying that in A, the word
3 "marked" means B?

4 A. I think that's part of it. I mean, I
5 think for me as a clinician, it also means marked
6 as in noted, right?

7 So, you know, and typically -- I should
8 have mentioned earlier that I'm not just
9 conducting a clinical interview with the youth,
10 right? I'm also talking with caregivers and other
11 adults and getting their observations and views of
12 youths over time, and especially in early
13 childhood when maybe the youth don't remember so
14 well. And so, you know, marked incongruence could
15 mean like observed or noted.

16 Q. Okay. You don't think that that word --
17 whether we pronounce it marked or marked, I
18 sincerely don't know --

19 A. Sure.

20 Q. But you don't think that that is
21 suggesting a particular degree of incongruence?

22 A. Well, I think the criteria below is
23 referencing the degree being strong in many of
24 those criteria.

25 Q. Can there be an incongruence that isn't

1 marked?

2 A. I mean, there are sometimes incongruence
3 that is not observed by the youth themselves or by
4 parents. You know, some kids have very low
5 insight and so they might not see it as, you know,
6 an incongruence.

7 Q. Have you ever had a patient where you've
8 concluded that the patient has an incongruence but
9 it's not marked?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: I have had youth who don't
12 meet criteria for gender dysphoria. And that
13 might be a case in which they don't meet criteria.

14 Q. (BY MR. RAMER) Okay. So I take it you
15 don't really think that that word adds much to
16 this diagnosis; is that right?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I don't see it as critical,
19 that word.

20 Q. (BY MR. RAMER) You don't see it as
21 critical?

22 A. In determining my diagnosis.

23 Q. So still in A, the DSM-5 requires at
24 least six-month duration of the incongruence; is
25 that right?

1 A. Six-month duration consisting of at least
2 six of the criteria below. So they have to have
3 the six criteria for at least six months, yes.

4 Q. Yeah, sorry. And I'm not trying -- we're
5 just going to walk through it. When I ask
6 specific questions, I don't want -- I'm not
7 implying that you're over-focused on that when
8 you're doing the diagnoses.

9 But with respect to the six-month
10 duration, why is that a requirement?

11 MS. NOWLIN-SOHL: Object to form;
12 foundation.

13 THE WITNESS: So the duration component
14 is also very common in other diagnoses within the
15 DSM. And typically it's to establish some sort of
16 pattern and stability in the symptoms.

17 Q. (BY MR. RAMER) And so here, this would
18 be establishing stability of the incongruence; is
19 that right?

20 A. Yes.

21 Q. And so if there were only five months'
22 duration of incongruence, that incongruence may be
23 unstable?

24 MS. NOWLIN-SOHL: Object to form;
25 mischaracterizes testimony.

1 THE WITNESS: They would just be
2 subclinical and not meet criteria for gender
3 dysphoria at this moment in time.

4 Q. (BY MR. RAMER) What do you mean by
5 "subclinical"?

6 A. So they might meet some of the criteria
7 but not all the criteria.

8 Q. And I think let's go to page 12 of your
9 declaration, paragraph 35. I think this might be
10 what you were referring to. I just want to
11 confirm.

12 The final sentence of paragraph 35 -- and
13 I'll just read it and ask if I read it correctly.

14 It says "Some patients who are evaluated
15 do not meet the criteria for gender dysphoria
16 either due to symptom length or lack of symptoms,
17 in which case a treatment plan may include
18 nonmedical support and intervention to address
19 symptoms/distress."

20 Did I read that correctly?

21 A. Yes.

22 Q. And here you refer to symptom length.

23 Is that what we were just talking about?

24 A. The six-month duration, yes.

25 Q. Do you think a six-month duration is a

1 good idea?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: I think having a duration
4 criteria is helpful. I know there was a task
5 force put together for DSM-5 for revisiting gender
6 dysphoria diagnosis, and that criterion was based
7 on research.

8 Q. (BY MR. RAMER) The six-month number was
9 based on research?

10 A. Yes.

11 Q. And you refer here to nonmedical support
12 and intervention.

13 Do you see that?

14 A. Yes.

15 Q. And could you just explain what you mean
16 by that?

17 A. So again, you know, it might be my choice
18 in terms, but typically that might include
19 education, psychoeducation.

20 It might include working with parents on
21 how to best support their child.

22 It might include social transition or
23 different changes in gender expression. That can
24 still be supportive for a subclinical
25 gender-diverse patient.

1 Q. Would it include psychotherapy?

2 A. If they're in significant distress or if
3 they have other diagnoses.

4 Q. And how does -- sorry. Go ahead.

5 A. I said yes. I nodded but didn't say yes.

6 Q. And how does nonmedical support and
7 intervention address symptoms/distress?

8 A. So sometimes distress is coming from
9 conflict. So sometimes as a youth is sort of
10 exploring gender or, you know, trying to
11 understand themselves. They might just have
12 distress from trying to figure that out.

13 Or they might have distress in
14 communicating about what's going on with them to
15 caregivers, adults, peers.

16 They might also be struggling with some
17 symptoms, even though they don't meet full
18 criteria for gender dysphoria. They might be, you
19 know, experiencing gender distress with those
20 symptoms.

21 So psychotherapy is really aimed at
22 support and also teaching coping skills and
23 managing some of the distress.

24 Q. So psychotherapy can address
25 symptoms/distress?

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: It can help to manage them.

3 Q. (BY MR. RAMER) So you used the phrase
4 "to address."

5 Am I understanding you think -- or you're
6 using the phrase "to address" to help and manage;
7 is that right?

8 A. Yes.

9 Q. Are you distinguishing between helping
10 and managing symptoms/distress and something else?

11 A. Could you say that again?

12 Q. Is that different from -- do you consider
13 helping and managing symptoms/distress to be
14 different from treating symptoms/distress?

15 A. Yes. So, you know, for -- there is a
16 difference between sort of like managing and
17 alleviating symptoms, and there is a difference
18 between treatment to me.

19 So that distinction being, you know --
20 treatment would seem to suggest that those
21 symptoms might go away.

22 And so I'm more aiming in psychotherapy
23 at alleviating kind of any distress, but not
24 necessarily treating symptoms or making symptoms
25 go away.

1 Q. Do you think medical interventions are
2 treatment?

3 A. Yes.

4 Q. So you think medical interventions are
5 distinct from psychotherapy with respect to
6 addressing symptoms and distress?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: Here we're talking
9 specifically about subclinical -- you know, those
10 who don't meet full criteria for gender dysphoria,
11 in which case we probably wouldn't be considering
12 medical intervention if they didn't have full
13 criteria for gender dysphoria.

14 Q. (BY MR. RAMER) Do you use psychotherapy
15 on people who have met the criteria for gender
16 dysphoria?

17 A. Yes.

18 Q. And is the psychotherapy in that context
19 a treatment as you use the term?

20 A. For those who meet full criteria for
21 gender dysphoria, it cannot be a stand-alone
22 treatment. There is no evidence to suggest that.

23 Q. When you say "it cannot be a stand-alone
24 treatment," what do you mean by that?

25 A. So we -- the only evidence we have for

1 treating, treating in the sense of truly, like,
2 alleviating the distress and symptoms of gender
3 dysphoria are medical interventions.

4 And so psychotherapy alone isn't
5 sufficient to be able to treat full gender
6 dysphoria.

7 Q. And so you said we don't have evidence
8 that psychotherapy can be a treatment for gender
9 dysphoria; is that right?

10 MS. NOWLIN-SOHL: Object to form;
11 mischaracterizes the testimony.

12 THE WITNESS: That psychotherapy isn't
13 effective treatment of gender dysphoria.

14 Q. (BY MR. RAMER) Is there evidence that
15 medical interventions alone are an effective
16 treatment for gender dysphoria?

17 A. Yes.

18 Q. What evidence is that?

19 A. So there are many studies that look at
20 the benefits. So medical interventions for
21 gender-diverse youth and young adults,
22 specifically that they show improvements in their
23 psychological functioning like depression and
24 anxiety, as well as reductions in their symptoms
25 of gender dysphoria.

1 Q. And those studies look at medical
2 interventions alone?

3 A. Sorry, I'm thinking. I would have to --
4 I'm not sure if it's looking -- if it controls for
5 receiving therapy or not.

6 Q. Do you know if there is any study that
7 controls for receiving therapy that shows a
8 benefit?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: I think those studies are
11 hard to conduct, and so I don't -- I don't know if
12 there's one that looks at medical as stand-alone.

13 MR. RAMER: We've been going almost an
14 hour. I don't know, would this be a good time for
15 a short break?

16 MS. NOWLIN-SOHL: Yeah, that sounds good.

17 MR. RAMER: Do you want to just take five
18 since we've got the kind of longer break later?

19 MS. NOWLIN-SOHL: Yeah.

20 MR. RAMER: Okay. So we'll do 10 after
21 the hour.

22 THE WITNESS: Okay. Thanks.

23 THE VIDEOGRAPHER: Okay. So the time is
24 11:05 a.m. Mountain time, and we are off the
25 record.

1 (Break taken from 11:05 a.m. to 11:11 a.m.)

2 THE VIDEOGRAPHER: All right. So we are
3 recording. The time is 11:11 a.m. Mountain time,
4 and we are back on the record.

5 Q. (BY MR. RAMER) Dr. Brady, I'd like to go
6 to page 5 in your declaration, back to paragraph
7 18, and specifically going down to what I'll call
8 subparagraph 6.

9 And my question is what are typically
10 masculine toys?

11 A. Yeah. So the criteria are still not
12 perfect, but, you know, what DSM is trying to
13 achieve here, you know, is things that people
14 stereotypically still think of as masculine or
15 feminine.

16 And so in the case of masculine toys
17 might be more like sports, trucks, things of that
18 nature versus girls being more, like, dolls,
19 crafts, things like that.

20 Q. So you said sports are typically
21 masculine. I guess you'd say activities?

22 A. Yes.

23 Q. And you said crafts are typically -- what
24 are you saying about crafts?

25 A. So again, these are just stereotypes of

1 how parents might view toys. So crafts in that
2 case might be more typically associated with
3 females.

4 Q. And so if I understand your answer, if a
5 girl -- no, I'm sorry.

6 If a boy has a strong rejection in
7 sports, that's an indication that the boy may have
8 gender dysphoria?

9 MS. NOWLIN-SOHL: Object to form;
10 mischaracterizes testimony.

11 Sorry to interrupt. Real quick, did we
12 lose Amy?

13 (Discussion held off the record.)

14 THE WITNESS: So one of the important
15 things about the diagnosis of gender dysphoria in
16 childhood is that you need six of the criteria.
17 And so that stand-alone criteria, no, would not
18 indicate that necessarily somebody is transgender
19 or gender dysphoria.

20 Q. (BY MR. RAMER) Right. My question was
21 not whether that standing alone --

22 My question was whether under the DSM-5,
23 if a boy has a strong rejection of sports, that
24 would indicate the boy potentially has gender
25 dysphoria; is that right?

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: So clinically, I would want
3 to see more than just one sort of rejection and
4 activity and then, of course, have to look at all
5 the other criteria together.

6 However, if the designated male is kind
7 of rejecting all masculine activities, then that
8 is certainly something of interest.

9 Q. (BY MR. RAMER) Then what are some other
10 masculine activities?

11 A. So it might be things like
12 rough-and-tumble play.

13 It might be things like, you know, again,
14 like trucks, construction, stereotypical things
15 like that.

16 It might be even, you know, gravitating
17 towards wanting to play with other girls and not
18 wanting to play with boys.

19 Q. Well, that last one, that's in
20 subparagraph 5, right?

21 A. Yes.

22 Q. And so I'm asking specifically about
23 subparagraph 6 where we're referring to typically
24 masculine activities.

25 And I thought you had said a strong

1 rejection of one, like sports, may not be enough,
2 but a rejection of all typically masculine
3 activities may be something you take into account.

4 And my question was simply this, which is
5 in addition to sports and I believe you said
6 rough-and-tumble play, what are some other
7 typically masculine activities?

8 MS. NOWLIN-SOHL: Object to form; asked
9 and answered.

10 THE WITNESS: It might be even things
11 that are marketed towards boys. So, for example,
12 a toy that's in the store and in the typically
13 kind of boy aisle, you know, youth might say, "I
14 don't want that because that's for boys."

15 Q. (BY MR. RAMER) What is the boy aisle of
16 a store?

17 A. So toys are typically marketed for either
18 boys or girls. So if you go to a Target or any
19 other store, you might notice that some aisles are
20 predominately pink and purple still and other
21 aisles are predominately blue and black and red.
22 And those are, you know, stereotypically where
23 they place boys' and girls' toys.

24 Q. What's the significance of pink and
25 purple?

1 A. So these are colors that are typically
2 associated with girls. Marketing has shown that
3 girls have a preference for those colors.

4 Q. Do you have expertise in marketing?

5 A. No.

6 Q. And so what are typically feminine
7 activities?

8 A. On the flip side of our boys examples, it
9 might be, you know, toys that are marketed towards
10 girls. They might have a rejection of those toys,
11 dolls, you know, games and activities, like I
12 said, like art or crafts, cooking, you know,
13 playing house, these kinds of things.

14 Q. Did you say art is a typically feminine
15 activity?

16 MS. NOWLIN-SOHL: Object to form;
17 mischaracterizes testimony.

18 THE WITNESS: This isn't my -- what I
19 believe to be typical, but this is just what
20 society tends to view as feminine and masculine
21 activities.

22 Q. (BY MR. RAMER) But, Doctor, aren't you
23 the one who diagnoses individuals with the DSM-5
24 criteria?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: I do diagnose gender
2 dysphoria, yes.

3 Q. (BY MR. RAMER) Do you use the DSM-5
4 criteria?

5 A. Yes.

6 Q. And does the DSM-5 criteria for
7 prepubertal children discuss typically feminine
8 activities?

9 A. Yes.

10 Q. And I'm asking you when you're doing the
11 diagnosis and reading the DSM-5, where it says
12 "typically feminine activities," what are those?
13 And I'm just confirming what your answer was.

14 Did you say that art was a typically
15 feminine activity?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: It can be. So a lot of
18 times these -- this criteria in particular and
19 these activities are not judged or determined by
20 me, but are, you know, kind of determined by the
21 family and also the youth themselves. So it's
22 more important if a youth sees something as
23 feminine or masculine.

24 Q. (BY MR. RAMER) I'm sorry. The criteria
25 in the DSM-5 are determined by the youth or the

1 families themselves? Is that what you said?

2 MS. NOWLIN-SOHL: Object to form;
3 mischaracterizes testimony.

4 THE WITNESS: The judgment of whether or
5 not something is considered to be masculine or
6 feminine is more often determined by the youth and
7 family. But whether or not they're rejecting of
8 that is determined by me.

9 Q. (BY MR. RAMER) You said "more often."
10 Does that mean not always?

11 A. I mean, I guess, yeah. I mean not
12 always.

13 Q. And just -- I want to understand that
14 answer, which is you were saying the families and
15 the individuals determine what is a typically
16 masculine activity within the meaning of the
17 DSM-5, and then you determine whether there is a
18 strong rejection of that?

19 MS. NOWLIN-SOHL: Object to form;
20 mischaracterizes testimony.

21 THE WITNESS: So if a youth is saying,
22 "Dr. Brady, I don't like this toy or I don't like
23 this activity because that's a boy activity or
24 because that's what girls do and I'm not a girl or
25 I'm not a boy," whether or not that activity or

1 that toy is typically or stereotypically seen as
2 boy or girl is less important than the youth
3 viewing that as being a boy or a girl activity.

4 Q. (BY MR. RAMER) So I think -- am I wrong
5 in thinking that what you just described is in
6 subparagraph 4 on this page?

7 A. So it's the reverse of item 6, so
8 rejecting of one thing but the liking of other
9 things.

10 Q. And so your testimony is that when the
11 DSM-5 says typically masculine toys, it is not up
12 to the medical provider to be determining what are
13 typically masculine toys? Is that what you're
14 saying?

15 MS. NOWLIN-SOHL: Object to form;
16 mischaracterizes testimony.

17 THE WITNESS: I'm not sure how to answer
18 your question because it's just that what is
19 considered typical is sort of subjective and
20 constantly evolving. So that's why I rely more on
21 whether our youth sees that or categorizes that.
22 Because what one youth feels is girl things might
23 not be true for another youth.

24 Q. (BY MR. RAMER) Do you use these criteria
25 to diagnose patients?

1 A. Yes.

2 Q. And do you ensure that the marketing
3 congruence is manifested by at least six of the
4 criteria?

5 A. Yes.

6 Q. Have you ever had a patient in which
7 you've seen a strong rejection of typically
8 masculine toys?

9 A. Yes.

10 Q. What were the toys?

11 A. So in some cases it could be any toy
12 that's just the color blue because the, you know,
13 youth felt that blue was a stereotypical male
14 color and they were very rejecting of blue. So it
15 could have been any toy that just happened to be
16 the color blue.

17 In other cases it has been, you know,
18 things like, you know, light cars and trucks.
19 Again, the youth felt that that was a boy thing
20 and so they didn't want to necessarily play with
21 those and were rejecting of those kinds of toys.

22 And then for criterion 4, preferred,
23 sometimes the other gender toys like those.

24 Q. Am I wrong in thinking that you seem to
25 be boiling everything down to the criterion in

1 subparagraph 1?

2 MS. NOWLIN-SOHL: Object to form;
3 argumentative.

4 THE WITNESS: Can you state that again?

5 Q. (BY MR. RAMER) I guess it just seems
6 like the way you're interpreting these criteria is
7 that in the end, what really matters is a strong
8 desire to be of the other gender, which is
9 criterion A1.

10 MS. NOWLIN-SOHL: Object to form. Oh,
11 sorry.

12 MR. RAMER: It's all right.

13 Q. (BY MR. RAMER) I guess I'll just leave
14 it there and ask, is that wrong?

15 MS. NOWLIN-SOHL: Object to form;
16 argumentative, mischaracterizes testimony.

17 THE WITNESS: So the way I interpret the
18 criteria -- you know, somebody could very much
19 have criterion 6 in my example of, you know, I
20 don't like blue things because I typically see
21 them as boy things. But they might not feel not
22 boy. Like, they might not have criterion 1.

23 It might just be, I don't like these
24 things because they're boy things, but they still
25 identify as a boy. So I see them as separate.

1 Q. (BY MR. RAMER) Okay. And just to
2 confirm, you -- when you are diagnosing
3 individuals under this part of the DSM-5, you do
4 not determine what a typically masculine toy,
5 game, or activity is; is that correct?

6 MS. NOWLIN-SOHL: Object to form; asked
7 and answered.

8 THE WITNESS: It's never needed to
9 happen. I mean, most of my patients will say, "I
10 don't like this," for this reason. And so my
11 judgment of whether or not that's a typical boy or
12 girl thing doesn't matter.

13 Q. (BY MR. RAMER) And so it's true that you
14 do not determine what a typically masculine toy,
15 game, or activity is when diagnosing individuals
16 under this part of the DSM-5; is that right?

17 MS. NOWLIN-SOHL: Object to form; asked
18 and answered.

19 THE WITNESS: I can, but I don't need to
20 in most cases.

21 Q. (BY MR. RAMER) You can what?

22 A. I can determine if something is, in my
23 opinion, typically masculine or feminine, but I
24 don't need to in most cases because the youth and
25 the family are able to determine that within their

1 own, you know, culture, within the family of
2 what's -- you know, every family has different
3 ideas of what gender things are.

4 Q. Okay. And my questions are now about
5 what you deem typically masculine or feminine,
6 which you said you can do, correct?

7 A. Yes.

8 Q. Okay. What do you deem typically
9 masculine toys apart from trucks or blue things?

10 MS. NOWLIN-SOHL: Object to form; asked
11 and answered.

12 THE WITNESS: I guess in my mind, I might
13 think about, again, cars, construction-type toys,
14 building-type toys, activities like sports, like
15 scouts.

16 Q. (BY MR. RAMER) What about a soccer ball?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: So again, this is difficult
19 because of course, you know, I believe that a ball
20 is a ball and anybody can play with a ball.

21 But if a youth is saying, "I do not want
22 to play with this specifically because I associate
23 it with boy," then it becomes -- it meets that
24 criterion.

25 Q. (BY MR. RAMER) I understand that part of

1 your answer, but we had also just been discussing
2 how you also can make the determination of what is
3 a typically masculine toy.

4 And my question is do you deem a soccer
5 ball a typically masculine toy?

6 MS. NOWLIN-SOHL: Object to form; asked
7 and answered.

8 THE WITNESS: It could be.

9 Q. (BY MR. RAMER) What does it depend on?

10 A. Again, so there might be situations in
11 which a child is rejecting toys, but it might be
12 for non-gendered reasons, and then there's going
13 to be times where it's for gendered reasons.

14 So if they're rejecting the soccer ball
15 because they just don't like physical activity,
16 that's not relevant to me or my diagnosis.

17 But if they're rejecting the ball because
18 they are associating it with a boy, then it is
19 relevant to me.

20 Q. Okay. What is rough-and-tumble play?

21 A. Typically that's categorized as sort of,
22 like, horseplay, like wrestling. Kind of, you
23 know, more physical forms of play.

24 Q. And why is that typically masculine?

25 A. So there's studies looking at types of

1 play in early childhood between the designated
2 sexes, and rough-and-tumble play is more
3 characteristic of designated males.

4 Q. Have you read those studies?

5 A. Yes.

6 Q. Can you name any of them?

7 A. Not off the top of my head.

8 Q. Moving up to 3 here, it refers to
9 cross-gender roles in make-believe play.

10 What does that mean?

11 A. So, for example, if kids are playing
12 house, if a designated male wants to be the mom in
13 that scenario or if the designated female wants to
14 be the dad in that scenario.

15 Q. And then in 2, it refers to typical
16 masculine clothing.

17 What is typical masculine clothing?

18 A. So this might be being -- it's easier to
19 discuss this criterion in terms of formal wear.
20 So it might be, you know, having to attend a
21 wedding and having to wear, you know, pants,
22 button-up shirt, tie, jacket.

23 Q. That's what criterion A2 is referring to
24 when it talks about -- sorry. I'll just ask the
25 question and then I assume Li will object and then

1 you can have an opportunity to answer.

2 But criterion A2, when it refers to
3 "typical masculine clothing," is referring to
4 formal wear?

5 MS. NOWLIN-SOHL: Object to form;
6 mischaracterizes the testimony.

7 THE WITNESS: Not only, but it is a way
8 to assess for that.

9 Q. (BY MR. RAMER) What else is it referring
10 to if it's not only referring to formal wear?

11 A. So typical masculine clothing, again,
12 might just be a button-up shirt. It might be,
13 again, the color of that clothing, regardless of
14 what type of clothing it is.

15 Q. And with blue, black, and red being the
16 masculine colors; is that right?

17 MS. NOWLIN-SOHL: Object to form;
18 mischaracterizes testimony.

19 THE WITNESS: Commonly, those might be
20 some of the colors.

21 Q. (BY MR. RAMER) What are some other ones?

22 A. It could -- so again, I -- it depends on
23 what a youth views to be the colors that are
24 associated with masculine versus the colors that
25 are associated with feminine.

1 Q. Okay. Let's go to the next page. And
2 this is the DSM-5 diagnostic criteria for
3 adolescents and adults; is that right?

4 A. Yes.

5 Q. And down in 6, so criterion A6, it refers
6 to typical feelings and reactions of the other
7 gender.

8 Do you see that?

9 A. Yes.

10 Q. What are the typical feelings of the
11 female gender?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: So this criterion is trying
14 to get at what people might consider to be typical
15 responses emotionally or behaviorally to certain
16 situations.

17 So, for example, a designated male who's
18 feminine in identifying might feel that their
19 emotional responses are more consistent with those
20 of other girls rather than their designated sex.

21 Q. (BY MR. RAMER) How would emotional
22 responses be more typical of other girls?

23 A. So stereotypically women might -- and
24 girls might respond to things with more sadness
25 rather than irritability or anger.

1 Q. Are you saying girls might respond to
2 things with more sadness rather than irritability
3 or anger than boys would?

4 A. Stereotypically that's what people
5 believe, yeah.

6 Q. Is it fair to say a diagnosis under the
7 DSM-5 turns on stereotypes?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: So again, you know, this
10 criterion is really looking at not only do they
11 have these feelings and reactions, but the
12 patients themselves have a strong conviction that
13 those reactions are more typical of the gender
14 that they are identifying as.

15 Q. (BY MR. RAMER) But you were referring to
16 how this is stereotypical feelings and reactions,
17 right?

18 MS. NOWLIN-SOHL: Objection;
19 argumentative.

20 THE WITNESS: Can you ask that again?

21 Q. (BY MR. RAMER) We'll move on.

22 A. Okay.

23 Q. In 6, in the parenthetical, it refers to
24 some alternative gender different from one's
25 assigned gender.

1 Do you see that?

2 A. Yes.

3 Q. And what is that referring to?

4 A. So the parentheses are trying to be
5 inclusive to the range of gender identities. So
6 before the parentheses, it says "other gender,"
7 which means that, you know, you're born one and
8 then there's one other gender that you could
9 identify with.

10 And so the parentheses are to indicate
11 there's more than just the one gender on the other
12 side. It doesn't have to be the open side of your
13 designated sex.

14 Q. So what is on the other side apart from
15 the opposite of your designated sex?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: So it may be nonbinary or
18 agender or gender-fluid.

19 Q. (BY MR. RAMER) I heard "nonbinary" and I
20 heard "gender-fluid."

21 Did you say something in between? I just
22 didn't hear it.

23 A. Agender.

24 Q. What is agender?

25 A. So this is a label that some individuals

1 used -- use to define a gender that -- people use
2 it in different ways, but most commonly it's used
3 to sort of describe feeling as though you have a
4 gender that maybe can't -- there's no label to it.
5 It's sort of like its own, you know, thing -- it's
6 its own, like, gender. It's, like, unique to me,
7 so I'm kind of agender.

8 Others have used it to say that, you
9 know, I don't necessarily want to be defined by my
10 gender so I'm -- it's typically just sort of an
11 androgenous, nonbinary subcategory.

12 Q. And you said there how different people
13 might use the term.

14 How do you use the term?

15 A. So my -- how am I using it today or how
16 do I use it clinically?

17 Q. Do both.

18 A. In the case of just my comment earlier, I
19 was kind of just using it as an example on another
20 gender label that people sometimes use.
21 Clinically I use it sort of interchangeably with
22 nonbinary.

23 Q. What are the typical feelings and
24 reactions of the nonbinary gender?

25 A. So I assume you're referring to

1 criterion 6?

2 Q. Sorry, yes, still on 6.

3 A. Okay. So the typical feelings and
4 reactions -- I mean, in this case, it's kind of
5 saying that I have reactions and feelings that are
6 not consistent with my designated sex.

7 Q. Apart from an individual just saying that
8 to you, is there any other way you determine
9 whether A6 is satisfied?

10 A. With all the criterion, I do want
11 examples of how that has played out, you know, in
12 a person's life. Certainly also getting examples
13 from caregivers about how they've seen that
14 externally and behaviorally.

15 So it's not just a yes, I feel that way.
16 It's a yes, and here are some examples of that.

17 Q. Why do you ask for or require examples?

18 A. So that's true of any diagnosis in the
19 DSM. We always want to confirm with examples to
20 help really, you know, fill out that diagnosis to
21 ensure that that is an accurate report. So we
22 don't just rely on someone's self-report of saying
23 yes or no, I have this. We want to also have an
24 example to be able to determine for ourselves yes
25 or no, you have this.

1 Q. So what's an example, then, of a typical
2 feeling and reaction of somebody who's nonbinary?

3 A. So again, a nonbinary person might
4 report -- let's say they're designated male. So a
5 designated male is in a situation, and it is
6 stressful, and they believe that, you know, most
7 guys or most other teens their age would respond
8 with -- in this way. So let's say, you know, most
9 people who are designated male who are my age
10 would respond by yelling or, you know, getting
11 upset and, like, going off on a person.

12 But I don't react that way. I, you know,
13 want to cry, or I want to withdraw or, you know, I
14 don't want to -- I feel like the way that I
15 respond to those types of situations isn't
16 consistent with how other boys, you know -- how
17 boys my age react.

18 Q. So if adolescent who was, in your words,
19 designated male said, "I don't want to respond by
20 yelling or getting upset or going off on a
21 person," would that individual have satisfied A6?

22 MS. NOWLIN-SOHL: Object to form.

23 THE WITNESS: I expect more than one
24 example, and so, no, that wouldn't be sufficient
25 enough. I would need more examples to be able to

1 understand that better.

2 Q. (BY MR. RAMER) But that is an example?

3 A. It is an example.

4 Q. I'd like to turn to -- in your
5 declaration to paragraph 12, page 3, paragraph 12.

6 And I guess not asking a question about
7 anything in the text, but just asking you, what
8 does it mean to be transgender?

9 A. Transgender is an umbrella term to
10 describe people whose designated sex and gender
11 identity are not congruent.

12 Q. Can an individual be transgender without
13 having gender dysphoria?

14 A. Yes.

15 Q. So I think I understand the phrase
16 "umbrella term," but is being transgender
17 different from being gender-diverse?

18 A. So often the terms are used pretty
19 interchangeably. Gender-diverse is just another
20 umbrella term that some people prefer to use.
21 And, you know, people's taxonomy in terms of
22 vocabulary are a little bit different.

23 So I, you know, tend to prefer
24 gender-diverse to be a little more inclusive of
25 the range of possible identities and whether or

1 not they have gender dysphoria, but some people
2 use "transgender" as the umbrella term.

3 Q. So is gender-diverse your umbrella term?

4 A. Yeah.

5 Q. And so an individual can be
6 gender-diverse but not be transgender?

7 A. Correct.

8 Q. Can a gender-diverse individual who is
9 not transgender be diagnosed with gender
10 dysphoria?

11 A. Yes.

12 Q. And so a gender-diverse individual who is
13 not transgender may receive puberty blockers and
14 cross-sex hormones to treat that gender dysphoria,
15 correct?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: They could.

18 Q. (BY MR. RAMER) Is gender-diverse
19 different from gender-nonconforming?

20 A. So again, sometimes those terms can be
21 used interchangeably.

22 Q. How do you use them?

23 A. I use them interchangeably.

24 Q. So, sorry. Just so I can confirm, so you
25 view the term "gender-diverse" to mean the exact

1 same thing as gender-nonconforming; is that right?

2 A. Yes.

3 Q. Okay. In your declaration, paragraph --
4 page 3, same paragraph we're on, paragraph 13,
5 first sentence, I'm just going to read it, and my
6 first question will be whether I read it
7 correctly.

8 It says "Gender identity is a person's
9 core internal sense of gender such as male or
10 female."

11 Did I read that correctly?

12 A. Yes.

13 Q. And when you say "internal," what do you
14 mean by that?

15 A. Internal meaning within one's self.

16 Q. Is an internal sense located somewhere
17 internally?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: I'm not sure what that
20 means.

21 Q. (BY MR. RAMER) Is this sense you're
22 referring to, is it, like, in an individual's
23 brain?

24 MS. NOWLIN-SOHL: Object to form.

25 THE WITNESS: So not necessarily, like,

1 located in a specific part of the brain or a
2 specific part of the body, but it does involve
3 thoughts and feelings, in which case the brain is
4 involved.

5 Q. (BY MR. RAMER) Do you think a core
6 internal sense could be described as a strongly
7 held belief?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: Some may consider it to be
10 a belief, yes.

11 Q. (BY MR. RAMER) I'm asking you if you
12 think a core internal sense can be described as a
13 strongly held belief.

14 MS. NOWLIN-SOHL: Object to form.

15 THE WITNESS: Sure. Yeah.

16 Q. (BY MR. RAMER) Is the core internal
17 sense of gender biological?

18 A. There are some studies that indicate that
19 there might be a biological component.

20 Q. In your opinion is it biological?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: I think it's a combination
23 of a lot of things, biology being one.

24 Q. (BY MR. RAMER) What else?

25 A. So it's biological, cultural, societal.

1 Q. Sorry. Were you still going?

2 A. No.

3 Q. Oh. The last two, cultural and societal,
4 is it fair to label those as something external to
5 the person?

6 MS. NOWLIN-SOHL: Object to form.

7 THE WITNESS: Not necessarily. I
8 think -- I wouldn't want to categorize it as
9 external or internal because I think it can be
10 both. Once something is present enough, it
11 becomes internalized.

12 Q. (BY MR. RAMER) But what is being
13 internalized? Something -- let me rephrase that.

14 The thing that is being internalized in
15 the situation you just described is something that
16 was previously external to the individual,
17 correct?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: There are some theories in
20 psychology that look at how something can be so
21 ingrained in a culture that it is just, like,
22 innately known. And so it's something that is
23 internalized even before, like, knowing that it
24 is --

25 So, for example, archetypes and myths.

1 So myths have a very common structure across
2 cultures and across time, and so they're -- and
3 then there's just some innate knowledge that we
4 all have that mishap this structure, but it's not
5 something necessarily that we were aware of. But
6 that's something that is external and then becomes
7 somewhat internalized.

8 Q. (BY MR. RAMER) Do you see a distinction
9 between something that is cultural and societal
10 and something that is biological?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: I'm not sure.

13 Q. (BY MR. RAMER) You're not sure that you
14 see a distinction between -- if I describe
15 something as a biological factor or a cultural
16 and -- excuse me. Start again.

17 If I describe something as a biological
18 factor and I describe something else as a cultural
19 or societal factor, you do not see a distinction
20 between those two categories?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: If you presented it to me
23 that way, yes, I would.

24 Q. (BY MR. RAMER) Okay. And what is that
25 distinction?

1 A. So biological components or variables
2 being something that, I guess, is like organic in
3 nature. It's, like, physical, you know, like
4 within the physical body, has a physical
5 manifestation.

6 Q. And are you implying that the others do
7 not have that bodily physical manifestation?

8 A. Yes.

9 Q. So in that same sentence, you say "core
10 internal sense."

11 And my question is, are there internal
12 senses that are not core?

13 A. Yeah. Identity is multi-faceted. And
14 there are some aspects that are not core to one's
15 self.

16 And there are also internal senses that
17 again are not core to one's self. You know, for
18 example, like if I have a feeling, that doesn't
19 necessarily define who I am. It's just a feeling.

20 Q. What distinguishes a core internal sense
21 from a feeling or non-core internal sense?

22 A. So something that's at somebody's core
23 really defines them in every aspect of their life.
24 So it's kind of cross-cutting in that way and is
25 essential to how they define themselves.

1 Q. Can you give me any other examples of a
2 core internal sense other than gender?

3 A. So I strongly identify as a psychologist.
4 And that is an important part of my identity and
5 who I am, so I would consider that to be a core
6 sense of who I am.

7 Q. Your identity as a psychologist is a core
8 internal sense of yours?

9 A. Yes.

10 Q. Do you have any other examples?

11 A. So people might -- of course, sense of
12 self might be, you know, related to other than
13 their profession, might be, you know, their skill
14 sets, so what a person believes to be their
15 strengths and weaknesses.

16 So, you know, it might be like -- with my
17 teenagers it might be academically, like, I know
18 I'm good at math. And that is, like, core to who
19 I am. And I, you know, want to maybe major in
20 math because I know I'm good at that.

21 Q. When did you begin to identify as a
22 psychologist?

23 A. So I knew that I wanted to become a
24 psychologist probably when I was 20.

25 Q. Do you think biological factors

1 contributed to that identity?

2 MS. NOWLIN-SOHL: Object to form;
3 relevance.

4 THE WITNESS: I think it contributed in
5 some ways in terms of, you know, as I was
6 considering what I wanted to do in my career, I
7 had to consider if I was going to be good at it or
8 not.

9 And I think biologically, I was
10 pre-dispositioned with some strengths that made me
11 well-suited for psychology.

12 Q. (BY MR. RAMER) Do you think that
13 cultural factors also contributed to your identity
14 as a psychologist?

15 A. Not so much.

16 Q. Do you think societal factors contributed
17 to your identity as a psychologist?

18 A. No.

19 Q. Did anything other than biology
20 contribute to your identity as a psychologist?

21 MS. NOWLIN-SOHL: Object to the form;
22 relevance.

23 THE WITNESS: Probably my values and
24 what -- how I wanted to contribute.

25 Q. (BY MR. RAMER) What do you mean by

1 "values"?

2 A. So the values that I hold for wanting to
3 help people led me to a profession where I could
4 help people.

5 Q. And where do those values come from?

6 MS. NOWLIN-SOHL: Objection; relevance.

7 THE WITNESS: I don't know. Just a
8 self-determined set of values.

9 Q. (BY MR. RAMER) Can an individual have a
10 sense of gender that is not a core internal sense
11 of gender?

12 A. There are some individuals whose gender
13 might not be as relevant or important to them as
14 other individuals.

15 Q. And in that situation, is their gender
16 identity not a core internal sense of gender?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I think it's still
19 definitely an internal sense that everyone has.
20 And it is sort of known for most people. Whether
21 or not it's core is individualized.

22 Q. (BY MR. RAMER) So it may or may not be
23 core in people; is that right?

24 A. Correct.

25 Q. How do you determine when it is or is not

1 core?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: So I would spend time, you
4 know, understanding just how much of a role that
5 plays in a person's life and how, you know,
6 important it is to them and how strongly
7 identified they are with that.

8 So, for example -- and maybe a better
9 example than me as a psychologist is now you have
10 racial identity. So, you know, I identify as
11 Asian. Not everybody, you know, who is Asian
12 strongly identifies that way, but that's something
13 that is very important to me.

14 Q. (BY MR. RAMER) So gender identity is a
15 core internal sense for people for whom gender
16 identity is very important; is that right?

17 MS. NOWLIN-SOHL: Object to form;
18 mischaracterizes prior testimony.

19 THE WITNESS: Could you say that again?

20 Q. (BY MR. RAMER) Yeah. So to determine
21 whether a person's internal sense of gender is
22 core or not, the question is whether that sense of
23 gender is something they care significantly about;
24 is that right?

25 MS. NOWLIN-SOHL: Object to form;

1 mischaracterizes prior testimony.

2 THE WITNESS: I'm sorry. I'm still not
3 understanding.

4 Q. (BY MR. RAMER) So I thought you said
5 that the reason your Asian identity is core for
6 you is that it's something that is very important
7 to you.

8 Am I misremembering that?

9 A. That's correct.

10 Q. And my question is to decide whether
11 someone's gender identity is core for them, is the
12 question whether their gender identity is very
13 important to them?

14 MS. NOWLIN-SOHL: Same objections.

15 THE WITNESS: Part of the evaluation,
16 yes, is looking at how strongly that part of them
17 falls -- is.

18 Q. (BY MR. RAMER) Is what? Did you finish?

19 A. That was the end of my sentence. It
20 wasn't a well-structured sentence, but that was
21 the end.

22 Q. Let's go to paragraph 14, same page. And
23 third sentence in this paragraph. And I'll just
24 read it and ask if I read it correctly.

25 It says "Moreover, gender identity is not

1 something that can be voluntarily changed."

2 Did I read that correctly?

3 A. Yes.

4 Q. Does an individual's gender identity ever
5 change?

6 A. It can.

7 Q. How so?

8 A. So there are instances where someone's
9 gender identity still might be gender-diverse but
10 fluctuate in terms of the labels they're using or
11 how they choose to categorize themselves.

12 There are other folks who over time do
13 have congruence with their designated sex.

14 Q. What do you mean by that, "over time they
15 have congruence with their designated sex"?

16 A. I have some patients who identify as
17 gender-diverse and then later on identify as their
18 designated sex.

19 Q. And you're saying that that type of
20 change is never voluntary; is that right?

21 A. Correct.

22 Q. What do you mean by that?

23 A. It's not necessarily someone is forcing
24 themselves to identify as a certain identity. It
25 just, you know, over time evolves in alliance for

1 them.

2 Q. What causes that change?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: It's pretty individualized,
5 so, you know, I think sometimes it's through our
6 work together and exploration that they're able to
7 understand themselves differently or understand
8 just their feelings differently.

9 Q. (BY MR. RAMER) By "work together," do
10 you mean psychotherapy?

11 A. Yes.

12 Q. Are you familiar with the term
13 exploratory therapy?

14 A. Yes.

15 Q. What is your understanding of that term?

16 A. My understanding is creating a safe
17 environment and a safe place for young people to,
18 you know, just express their thoughts and feelings
19 regarding gender and to have a therapist sort of
20 facilitate that exploration process by asking
21 questions or probing further and being a sounding
22 board for those ideas.

23 Q. Just going back to this final sentence in
24 paragraph 14, so are you saying that any change in
25 gender identity is involuntary?

1 MS. NOWLIN-SOHL: Object to form;
2 mischaracterizes prior testimony.

3 THE WITNESS: I guess I think of
4 voluntary as conscious and intentional versus just
5 the natural course of the development of someone's
6 identity.

7 Q. (BY MR. RAMER) What alters the course of
8 someone's gender identity?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: Again, individualized, but
11 in some cases it might be -- it might be
12 understanding more about gender diversity and the
13 spectrum of gender diversity.

14 It might be with regards to learning new
15 information about themselves that they didn't have
16 before. I'll stop there.

17 Q. (BY MR. RAMER) Anything else?

18 A. Not that I can think of.

19 Q. Have you ever heard gender described as a
20 spectrum?

21 A. Yes.

22 Q. Do you think gender is a spectrum?

23 A. Yes.

24 Q. And can you just explain what you mean by
25 that?

1 A. So gender -- there are lots of ways for
2 people to kind of describe their gender. And I
3 think of it as a spectrum from -- in the most
4 simplified way, masculinity to femininity with
5 sort of androgyny being in the middle.

6 Q. Can an individual who I would call a
7 natal male, you would say assigned male at birth,
8 have a gender identity that is more masculine than
9 the individual's body?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: I was confused by that.
12 Could you say that again?

13 Q. (BY MR. RAMER) I guess can you -- what's
14 your definition of gender dysphoria?

15 A. So meeting criteria for gender dysphoria
16 per the DSM.

17 Q. And just as a shorthand, if somebody
18 said, "What is gender dysphoria?" -- I mean, I
19 guess we can do it a different way rather than --

20 Let's go back to page -- let's go to
21 page 6 of your declaration.

22 And paragraph 19A refers to the marked
23 incongruence between someone's
24 experience/expressed gender and assigned gender.

25 Do you see that?

1 A. Yes.

2 Q. And in your view, it is not binary? Or
3 let me rephrase.

4 The gender is not binary, right?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: Yes.

7 Q. (BY MR. RAMER) And could an individual
8 who is assigned male have an experienced or
9 expressed gender that is more masculine than that
10 individual's present gender?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: So let me just -- I'm going
13 to rephrase and see if I understood this
14 correctly.

15 So a designated male who has gender
16 incongruence but still identifies as male?

17 Q. (BY MR. RAMER) Let me ask it a different
18 way, which is does gender incongruence for an
19 individual who is assigned male at birth always
20 involve an incongruence with a more feminine
21 gender identity?

22 MS. NOWLIN-SOHL: Object to form.

23 THE WITNESS: I see. So you're wondering
24 like how far on the spectrum they need to go in
25 order to have gender incongruence?

1 Q. (BY MR. RAMER) I think my question is
2 does it always go one way?

3 A. Yeah, so I think the oversimplification
4 there -- I mean, there are lots of different ways
5 I could go. But the oversimplified version is it
6 could be nonbinary, which is not necessarily
7 feminine. It's just less masculine.

8 Q. Okay. We'll take that.

9 Does it always go one way, meaning less
10 masculine?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: Typically.

13 Q. (BY MR. RAMER) Always?

14 A. Yeah, I can't think of a case in which
15 that hasn't been the direction.

16 Q. Do you think it's possible for a male
17 assigned at birth to say, "My gender identity is
18 more masculine than what I've been assigned"?

19 MS. NOWLIN-SOHL: Object to form; calls
20 for speculation.

21 THE WITNESS: I think it would be
22 difficult to meet the criteria in someone
23 presenting that way. So that would be hard for me
24 to imagine.

25 Q. (BY MR. RAMER) Why would it be difficult

1 to meet the criteria for someone presenting that
2 way?

3 A. Because they -- I can't see how they
4 would necessarily have distress over that if
5 their, you know, designated sex and masculinity
6 are part aligned.

7 Q. So it is binary, then, and it's not a
8 spectrum?

9 MS. NOWLIN-SOHL: Object to form;
10 mischaracterizes prior testimony.

11 THE WITNESS: So again, there's the range
12 of masculinity to femininity. So it's a spectrum
13 in the sense of it's not just there's one other
14 option here. There's a wide range of options and
15 a range of identity within the spectrum.

16 Q. (BY MR. RAMER) Right. But the
17 incongruence for an assigned male based on what
18 you're saying seems like it can only go -- it only
19 counts if it goes one direction, which is less
20 masculine than being assigned male.

21 Is that wrong?

22 MS. NOWLIN-SOHL: Object to form.

23 THE WITNESS: I think that's correct.

24 Q. (BY MR. RAMER) I think you've mentioned
25 the phrase "gender-fluid."

1 Am I remembering - -

2 MS. NOWLIN-SOHL: John, real quick.

3 MR. RAMER: Yeah.

4 MS. NOWLIN-SOHL: We've been going for
5 about an hour. Were you planning to go straight
6 up to the long break, or should we take five
7 minutes?

8 MR. RAMER: Yeah, let's take five and
9 then come back and then we'll go up until the long
10 break.

11 MS. NOWLIN-SOHL: Okay. Sounds good.

12 THE WITNESS: Thank you.

13 THE VIDEOGRAPHER: Okay. So the time is
14 12:14 p.m. Mountain time, and we are off the
15 record.

16 (Break taken from 12:14 p.m. to 12:20 p.m.)

17 THE VIDEOGRAPHER: All right. So we are
18 recording. The time is 12:20 p.m. Mountain time,
19 and we are back on the record.

20 Q. (BY MR. RAMER) Dr. Brady, I believe
21 earlier today you may have used the phrase
22 "gender-fluid."

23 Am I remembering that right?

24 A. Yes.

25 Q. And can you explain what that means?

1 A. So some individuals use this term to
2 describe -- again, if we're talking about the
3 simplified spectrum of masculinity to femininity
4 with androgyny or nonbinary being in the middle,
5 some people fluidly move within that spectrum.
6 Typically the identity isn't shifting, but it's
7 just the expression is what is moving on that
8 spectrum.

9 Q. What do you mean when you say the
10 identity is not moving but the expression is
11 moving?

12 A. So typically we separate gender identity
13 and gender expression. Gender identity being the
14 internal, core sense of what your gender is versus
15 the expression is, again, the external things that
16 people can see, like how you choose to express
17 your internal gender, so clothing, hairstyles,
18 accessories, those sorts of things.

19 So gender-fluid folks sometimes have a
20 stable gender identity, but how they choose to
21 express themselves is more fluid. So on some days
22 they might gravitate towards more feminine
23 expression or more masculine expression or more
24 androgenous expression.

25 Q. So does gender-fluid ever -- and correct

1 me if I'm wrong, but I think I hear you saying
2 gender-fluid in the context you just described is
3 fluidity in gender expression; is that fair?

4 A. Yes.

5 Q. And is there fluidity in any individual's
6 gender identity?

7 A. For some individuals who define
8 themselves as gender-fluid, there can be also
9 fluctuations in the identity on that spectrum.

10 Q. So gender fluidity is itself an
11 identification?

12 A. Yes.

13 Q. When a patient identifies as
14 gender-fluid, how does that identity manifest
15 itself?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: So it might present itself
18 in terms of, again, the expressions of wearing
19 different, you know, types of clothing, or
20 sometimes it's using different pronouns on
21 different days, depending on, you know, how
22 they're identifying that particular day.

23 Q. (BY MR. RAMER) And sorry. I just want
24 to make sure I understand gender fluidity, which
25 is -- and maybe it's helpful if I try to use it in

1 a sentence and you tell me if I'm using it wrong,
2 which is a person says, "I am gender-fluid because
3 my gender identity often changes."

4 Based on your understanding of
5 gender-fluidity, is that sentence coherent?

6 MS. NOWLIN-SOHL: Object to form.

7 THE WITNESS: The sentence may or may not
8 characterize every person's experience, but you
9 did use it correctly, yes.

10 Q. (BY MR. RAMER) Okay. Maybe an easier
11 way to ask this is if somebody is gender-fluid, is
12 it that their gender identity is changing, or is
13 that there simply is no identity other than the
14 fluidity?

15 A. So again, it depends. So for some folks
16 it is that the gender identity is fluid and
17 moving. For other folks it might just be the
18 expression piece that is fluid and moving. So it
19 can be used in different ways depending on the
20 individual.

21 Q. And do you have a particular way that you
22 use it?

23 A. For us it doesn't necessarily -- you
24 know, the label that people use for their identity
25 doesn't matter as much as -- for me, whether or

1 not they meet criteria for gender dysphoria.

2 Q. Well, I guess you have to determine
3 whether there is a marked incongruence between
4 their experience/expressed gender and their
5 assigned gender, right?

6 MS. NOWLIN-SOHL: Object to form.

7 THE WITNESS: As part of the criteria,
8 yeah, it's determinate.

9 Q. (BY MR. RAMER) And so don't you --
10 wouldn't the label be critical to understanding
11 what the individual's experienced/expressed gender
12 is?

13 A. So the -- I would care more about the
14 description of what that means to them rather than
15 the actual table that they're using.

16 Q. In your declaration, page 3,
17 paragraph 14, the second sentence -- I'll just
18 read it and ask if I read it correctly.

19 It says "It is an essential part of one's
20 identity and being."

21 Did I read that correctly?

22 A. Yes.

23 Q. And the "it" there is referring to gender
24 identity; is that right?

25 A. Yes.

1 Q. With respect to the second sentence, me
2 saying that gender identity is an essential part
3 of one's identity and being, what is your
4 authority for that proposition?

5 A. I -- so I believe this to be true because
6 everybody has a gender identity, and so it's kind
7 of an essential part of the human condition.

8 Q. I mean, don't you think there are other
9 things that everybody has that are not an
10 essential part of their identity and being?

11 MS. NOWLIN-SOHL: Object to form;
12 argumentative.

13 THE WITNESS: Could you give me an
14 example?

15 Q. (BY MR. RAMER) I guess how are you using
16 the word "essential"? Maybe we'll start there.

17 A. I think essential is to say that -- you
18 know, again, much like race. My earlier example,
19 much like race, it's something, you know, everyone
20 has a racial identity. Everyone has a gender
21 identity. And so it's essential in the sense that
22 everybody has it.

23 Q. You think race is an essential part of
24 one's identity and being?

25 A. Yes.

1 Q. And now turning to -- still in your
2 declaration -- paragraph 21, which I think is
3 page 7, can you kind of just walk me through what
4 you're explaining in this paragraph?

5 A. Sure. So I am discussing sort of the
6 different -- so I'm trying to figure out how to
7 summarize this.

8 So essentially kind of discussing just
9 the persistence of gender identity through
10 development.

11 Q. And is it fair to say that in this
12 paragraph you are criticizing the study you cite
13 in footnote 4?

14 A. There are some methodological concerns
15 with citation No. 4, yes.

16 Q. And what are those methodological
17 concerns?

18 A. So that study is outdated. It's rather
19 old. And so the criteria that were used for
20 inclusion into that study were from DSM-4, gender
21 identity disorder, and the criteria for
22 prepubertal kids was much lower.

23 So DSM-5 has a requirement of six
24 criterion. DSM-4 had fewer than that. So based
25 on DSM-5 criterion of gender dysphoria, many of

1 the kids in that study would not have been
2 included because they don't meet criteria for
3 gender dysphoria.

4 Q. And why is that a limitation of the
5 study?

6 A. Because it overinflates the number of
7 people who no longer identify as gender-diverse.

8 Q. And then is it fair to say you favorably
9 cite the Olson article in -- that you cite in
10 footnote 5?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: It addresses some of the
13 limitations of citation 4 in that it is using
14 DSM-5 inclusion criteria.

15 Q. (BY MR. RAMER) It is using DSM-5?
16 Sorry, let me rephrase.

17 The Olson article is using DSM-5
18 inclusion criteria?

19 A. Yes.

20 MR. RAMER: I've just got about ten
21 minutes. Let me try and send an exhibit.

22 Okay. I just hit send. We shall see
23 when it arrives.

24 Have we gotten the early warning from the
25 phone yet, Li?

1 MS. NOWLIN-SOHL: No, not yet. Amy, you
2 usually beat me to it. Have you received it?

3 THE REPORTER: I did receive it.

4 MS. NOWLIN-SOHL: Okay. Then I should be
5 hopefully not too far behind.

6 I still do not have it on either device.

7 Oh, here we go.

8 THE WITNESS: It was somewhere over
9 Colorado.

10 MS. NOWLIN-SOHL: Yes. Okay.

11 MR. RAMER: Is it pulled up?

12 MS. NOWLIN-SOHL: Yes.

13 (Deposition Exhibit No. 3 was marked.)

14 Q. (BY MR. RAMER) And, Dr. Brady, is this
15 the article you cite in footnote 5?

16 A. Yes.

17 Q. And did you read this article before you
18 cited it?

19 A. Yes.

20 Q. I'd like to go to page 2, and middle
21 column, the first full paragraph. And I'll just
22 read the first sentence and ask if I read it
23 correctly.

24 It says "This study did not assess
25 whether participants met criteria for the

1 Diagnostic and Statistical Manual of Mental
2 Disorders, Fifth Edition, diagnosis of gender
3 dysphoria in children."

4 Did I read that correctly?

5 A. Yes.

6 Q. And so did this study assess whether the
7 participants met the criteria of the DSM-5?

8 A. This study did not diagnose them.

9 Q. Well, you said "diagnose" there.

10 My question is whether it assessed
11 whether they had been diagnosed under the DSM-5.

12 A. So they did not do their -- yeah, sorry,
13 I was just scrolling around. They did not do
14 their own assessment.

15 Q. But you think this study accounted for
16 whether they were diagnosed under the DSM-5? Is
17 that what you're saying?

18 A. I would have to read it more thoroughly,
19 but my understanding is that they did ask, so it
20 was sort of self-reported diagnosis.

21 Q. Okay. So you're saying the participants
22 in this study self-reported whether they were
23 diagnosed under the DSM-5?

24 MS. NOWLIN-SOHL: Object to form;
25 mischaracterizes the testimony.

1 THE WITNESS: I believe so.

2 Q. (BY MR. RAMER) Do you know where they
3 say that in the article?

4 A. So I believe that with their recruitment
5 methodology, they were recruiting individuals who
6 had socially transitioned.

7 Q. Okay. Sorry. Can you point me to where
8 in the article it says that the participants
9 reported that they had been diagnosed with gender
10 dysphoria under the DSM-5?

11 A. Yeah, I cannot point to that in this
12 article right now. I would have to read it more
13 closely.

14 Q. If it's not in there, is it fair to say
15 your criticism of the article in footnote 4
16 applies to your criticism of the article in
17 footnote 5?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: The limitations of
20 citation 4 still stand. However, you know,
21 citation 5 still has stronger and more rigorous
22 scientific inquiry because it is -- has been done
23 more recently, and is with kids in the United
24 States.

25 Q. (BY MR. RAMER) Do you think the article

1 in footnote 5 is more reliable because it's more
2 recent and conducted with kids in the United
3 States? Is that right?

4 MS. NOWLIN-SOHL: Object to form;
5 mischaracterizes prior testimony.

6 THE WITNESS: Compared to citation 4,
7 yes.

8 Q. (BY MR. RAMER) Why is doing a study with
9 individuals in the United States more reliable
10 than doing a study with individuals elsewhere?

11 A. Perhaps not more reliable, but more
12 relevant given that all of my patients live in the
13 United States.

14 Q. Do you think the experience of
15 individuals in the United States is different from
16 the experience of individuals in Europe?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: Potentially.

19 Q. (BY MR. RAMER) How about with -- do you
20 think their experience -- do you think the
21 experience of individuals in the United States
22 with respect to gender identity is different from
23 the individuals -- let me restart.

24 Do you think the experience of
25 individuals in the United States with respect to

1 gender identity is different from the experience
2 of individuals in Europe with respect to gender
3 identity?

4 MS. NOWLIN-SOHL: Object to form.

5 THE WITNESS: They may be.

6 Q. (BY MR. RAMER) What's the basis for the
7 possibility that they may be different?

8 A. So there are, you know, different
9 experiences of potentially discrimination or there
10 are different, like, laws protecting trans youth
11 in different countries. Different abilities in
12 terms of, like, legal rights to consent and things
13 of that nature.

14 Q. And the idea there is that -- what effect
15 do you think more restrictive laws or more
16 discrimination has?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I just think the experience
19 would be different. And, you know, I don't know
20 without scientific inquiry if that leads to any
21 different outcomes. But, you know, I think when
22 we're talking about youth in the United States, we
23 want to know about youth in the United States.

24 Q. (BY MR. RAMER) And so you think a study
25 out of a country like Sweden, for example, would

1 not be relevant to the experience of individuals
2 in the United States?

3 MS. NOWLIN-SOHL: Object to form;
4 argumentative, mischaracterizes prior testimony.

5 THE WITNESS: I don't think that it makes
6 it irrelevant. I just think that it would be
7 stronger if it pertains to youth in the United
8 States if we're talking about youth in the United
9 States.

10 Q. (BY MR. RAMER) With respect to the Olson
11 study that we were just looking at, had the
12 participants in that study socially transitioned?

13 A. Yes.

14 Q. Do you think there is a possibility that
15 socially transitioning could affect the likelihood
16 of desistance?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: Could you phrase that
19 again?

20 Q. (BY MR. RAMER) Do you think there's a
21 possibility that socially transitioning could
22 affect the likelihood of desistance in an
23 individual?

24 MS. NOWLIN-SOHL: Object to form.

25 THE WITNESS: So I am aware of one other

1 study where they looked at social transition and
2 the strength of identity, and there was no
3 association with whether or not youth had socially
4 transitioned on strengthening or weakening their
5 identity over time.

6 Also clinically I've had socially
7 transitioned youth socially transition again when
8 their identity has changed, so it's certainly not
9 something that is creating a barrier to their
10 identity evolving if that's what's going to
11 happen.

12 Q. (BY MR. RAMER) So is the answer to the
13 question, then, no, you do not think there is a
14 possibility that socially transitioning could
15 affect the likelihood of desistance?

16 MS. NOWLIN-SOHL: Object to form;
17 mischaracterizes prior testimony.

18 THE WITNESS: There's -- I'm only aware
19 of the one study that says that there is no
20 relationship in either direction. And then
21 clinically I've seen it go -- I've not seen that
22 to be true.

23 Q. (BY MR. RAMER) Does the existence of
24 that one study in your expert opinion foreclose
25 the possibility that social transitioning could

1 affect the likelihood of desistance?

2 A. I don't think that one study is enough.
3 But again, clinically, I've seen people be able to
4 socially transition again, retransition without
5 difficulties.

6 Q. Why don't you think that one study is
7 enough?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: So as a scientist, it
10 helps, you know, to have replication studies or
11 more, you know, participants to be able to say for
12 sure.

13 Q. (BY MR. RAMER) Replication studies or --
14 what was the last thing? I missed that. I'm
15 sorry.

16 A. Increased number of participants.

17 MR. RAMER: And I think we're coming up
18 on quarter to. So maybe it's a good time we can
19 take our break?

20 MS. NOWLIN-SOHL: Yeah, that sounds good.

21 THE VIDEOGRAPHER: Okay. So then the
22 time is 12:44 p.m. Mountain time, and we are off
23 the record.

24 (Break taken from 12:44 p.m. to 3:14 p.m.)

25 THE VIDEOGRAPHER: All right. So we are

1 recording. The time is 3:14 p.m. Mountain time,
2 and we are back on the record.

3 Q. (BY MR. RAMER) Dr. Brady, do you think a
4 diagnosis under the DSM-5 should be necessary to
5 receive gender-affirming medical care?

6 A. In my practice, yes.

7 Q. Why do you say that?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: Because I can't speak for
10 what other people might feel is appropriate or
11 not, but that is how we run in our clinic.

12 Q. (BY MR. RAMER) So granting that you do
13 follow the DSM-5, my question is a little bit
14 different, which is just do you think that the
15 diagnosis as articulated in the DSM-5 should be
16 necessary to receive gender-affirming medical
17 care?

18 MS. NOWLIN-SOHL: Object to form.

19 THE WITNESS: Yes.

20 Q. (BY MR. RAMER) And that's even though
21 you described the DSM-5 as -- I think it was
22 either "not perfect" or "imperfect" earlier today.

23 Do you think it is sufficient?

24 MS. NOWLIN-SOHL: Object to form.

25 THE WITNESS: I do.

1 Q. (BY MR. RAMER) Do you think that
2 reducing gender dysphoria is the only purpose for
3 gender-affirming medical interventions?

4 A. I think that is the main goal. However,
5 there are secondary goals that, you know, just
6 include, like, making someone happier. Reducing
7 their dysphoria but also making them happier.

8 Q. So I guess in that answer you're saying
9 in reducing the gender dysphoria, there are other
10 benefits that may come along with that reduction?
11 Is that what you mean?

12 A. Yes.

13 MS. NOWLIN-SOHL: Object to form;
14 mischaracterizes prior testimony.

15 THE WITNESS: Yes. The primary goal of
16 medical interventions is to reduce dysphoria. And
17 then there are secondary benefits that come from
18 that.

19 Q. (BY MR. RAMER) And before we went on the
20 break, we were discussing desistance.

21 Do you recall that, roughly?

22 A. Yes.

23 Q. And one of the questions I had asked you
24 was whether you thought social transition could
25 affect the likelihood of desistance.

1 And my next question is do you think
2 there's any possibility that medically
3 transitioning an adolescent could affect the
4 likelihood of desistance?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: To my knowledge, there
7 isn't any research that looks at that question
8 specifically. Clinically I've not had -- seen
9 that to be the case.

10 Q. (BY MR. RAMER) You're unaware of any
11 research that looks at that question at all?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Research that looks or
14 answers the question of does medical intervention
15 impact the rates of persistence or desistance.

16 Q. (BY MR. RAMER) And so with respect to
17 scientific research, we don't know the answer to
18 that question; is that right?

19 MS. NOWLIN-SOHL: Object to form.

20 THE WITNESS: We do not know whether
21 there is a relationship or isn't, but again,
22 clinically I've seen that there does not appear to
23 be a relationship.

24 Q. (BY MR. RAMER) Are you aware of any
25 study -- this is closely related but a slightly

1 different question.

2 Are you aware of any study that analyzes
3 desistance rates for individuals who are diagnosed
4 with gender dysphoria as adolescents?

5 A. Can you ask that one more time?

6 Q. Are you aware of any study that analyzes
7 desistance rates for individuals who are diagnosed
8 with gender dysphoria as adolescents?

9 A. I am not.

10 Q. I'd like to go to your declaration to
11 page 11, paragraph 33. And my question is
12 actually going to be about the part of the
13 paragraph that runs over on to page 12, so maybe
14 we'll flip to page 12. And specifically about --
15 I'll call it subsection -- subparagraph D.

16 And there you refer to any other mental
17 health conditions -- I'm sorry.

18 And there you say "Any other mental
19 health conditions do not interfere with diagnostic
20 clarity."

21 Do you see that?

22 A. Yes.

23 Q. And what does that mean?

24 A. So in some cases an individual might have
25 comorbid mental health diagnoses that could be

1 impacting -- could be overlapping with gender or
2 could just be interfering with our ability to
3 fully diagnose gender dysphoria or for us to
4 elucidate someone's -- that someone's, you know,
5 decision-making ability is unclouded. So, for
6 example, you know, somebody who has
7 obsessive-compulsive disorder, for example.

8 So I've had patients where someone can
9 hyper focus as a symptom of their OCD on, for
10 example, a particular part of the body. And that
11 might, at first blush, look like a symptom of
12 gender dysphoria, but upon further evaluation and
13 investigation might be body dysmorphia, not
14 necessarily gender dysphoria, and because of the
15 OCD. So in that case, the OCD is interfering with
16 the clarity of us being able to assess the gender.

17 Q. Are there any other conditions like OCD
18 that would interfere with diagnostic clarity?

19 A. There might be other sort of mental
20 health conditions. Off the top of my head, like
21 someone who suffering from depression and is in a
22 depressive episode that is impacting their
23 abilities to, you know, really think clearly about
24 decision-making because the emotions are running
25 too high in that particular moment.

1 So it's not necessarily because they have
2 depression, but the depression symptoms are such a
3 level of severity that it's impacting their
4 ability to provide informed consent.

5 Q. And just to clarify, not only provide
6 informed consent, but would also interfere with
7 the diagnosis; is that right?

8 A. Potentially.

9 Q. Right. And you mentioned OCD. Have you
10 had experience with other conditions that
11 potentially interfered with diagnostic clarity?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Sometimes with other
14 diagnoses it just might take longer to do a
15 thorough assessment due to the complexity of the
16 psychosocial evaluation.

17 So, you know, for example, someone who
18 has multiple diagnoses simultaneously, that's
19 going to take us longer to be able to get the full
20 history and understand how and if those things are
21 related to each other.

22 So potentially it could be any diagnosis,
23 but I'm just listing some of the ones that are
24 more common.

25 Q. (BY MR. RAMER) And so is it possible for

1 an individual who is diagnosed with gender
2 dysphoria to have a co-occurring mental health
3 disorder that is not related to the gender
4 dysphoria?

5 A. Yes.

6 Q. And what are some examples that you've
7 had in your practice where an individual has been
8 diagnosed with gender dysphoria but has a
9 co-occurring mental health disorder that is not
10 related to the gender dysphoria?

11 A. So it can still be the same diagnoses
12 that I've given as example. So sometimes just
13 because someone has OCD doesn't necessarily mean
14 that the symptoms are related to gender, and they
15 could have two separate diagnoses.

16 Depression similarly, many of our
17 patients have gender dysphoria and depression.
18 Maybe there's some overlap between the two, but
19 sometimes they are distinct also.

20 Q. And what about individuals diagnosed with
21 gender dysphoria and ADHD?

22 MS. NOWLIN-SOHL: Object to form.

23 THE WITNESS: We do have individuals who
24 have both of those diagnoses.

25 Q. (BY MR. RAMER) And do you have

1 individuals where the ADHD is not related to the
2 gender dysphoria?

3 A. I've never actually had a case where the
4 two were related.

5 Q. That makes sense.

6 And then what about with respect to
7 autism spectrum disorder? Have you ever had
8 patients that have been diagnosed with gender
9 dysphoria and also been diagnosed with autism
10 spectrum disorder?

11 A. Yes.

12 Q. And in those instances, do you have
13 patients where the autism -- and I guess I'll try
14 again based on the last one.

15 Is autism spectrum disorder ever related
16 to gender dysphoria?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: It can be related. I'll
19 just -- yes, it can be related.

20 Q. (BY MR. RAMER) How so?

21 A. So this is more common on our prepubertal
22 kids. But I've had patients who similar to the
23 OCD maybe misattribute a set of rules.

24 So, for example, I had one patient who
25 was designated male and he expressed really loving

1 the color pink. And his cognitive rigidity sort
2 of led him to, well, if I like pink, then I must
3 be a girl.

4 And so he started to question that, and
5 with further psychotherapy and exploration was
6 able to determine that, well, anybody can like
7 pink. That's not necessarily -- doesn't
8 necessarily lead to having a female identity.

9 Q. And so how do you determine if a
10 co-occurring mental health condition is related to
11 gender dysphoria?

12 A. So again to that kind of clinical
13 semi-structure sort of interview process, so
14 asking questions, getting a response, and delving
15 deeper and sort of probing about, you know, are
16 these things related, challenging some of the
17 thoughts that are presented.

18 So in this case with this young person
19 with ASD, sort of challenging, well, you know, can
20 boys like pink? Like, is that a possibility? Is
21 that something that, you know, you could integrate
22 into your rule-based thinking?

23 So it's kind of just that back and forth
24 of providing information, sort of challenging a
25 thought and understanding if there's flexibility

1 there or not.

2 Q. That process that you just described,
3 would that fall within the umbrella of exploratory
4 therapy, or am I misunderstanding?

5 A. It could be considered exploratory
6 therapy or it could be considered just part of our
7 assessment process.

8 Q. So same page of your expert declaration,
9 same page, paragraph 36. And in the third
10 sentence in the parenthetical you mention changing
11 pathopsychology.

12 Do you see that?

13 A. Yes.

14 Q. And could you just explain what that
15 means?

16 A. Give me one moment to read the full
17 sentence.

18 Yeah, so an example being, you know,
19 maybe we could interchangeably use challenging or
20 complex psychopathology, so, you know, multiple
21 diagnoses.

22 It could also be, you know, challenging
23 psychopathology in terms of behaviorally
24 challenging. It can be difficult to conduct
25 therapy or hold evaluations with people who have a

1 lot of energy or behavioral problems, so that
2 could be considered challenging psychopathology as
3 well.

4 Q. And then in that same parenthetical, you
5 refer to co-occurring neurodiversity.

6 Do you see that?

7 A. Yes.

8 Q. And could you just explain what that is?

9 A. Could include ADHD or autism spectrum
10 disorder or other neurocognitive disorders.

11 Q. Do you have any examples of others? I'm
12 familiar with the first two you listed. I'm just
13 curious if there are others.

14 A. Like differences of learning, like
15 learning with dyslexia or...

16 Q. And when you referred in this sentence to
17 further -- at the beginning of the sentence, you
18 refer to further assessment or testing.

19 Is that just what we were talking about
20 with respect to either exploratory therapy or the
21 psychosocial screening? Or is there something
22 else you're referring to when you say "further
23 assessment or testing"?

24 A. It could include those things. It could
25 also include more extensive psychoeducational

1 testing. So, for example, somebody who is
2 undiagnosed but we have a suspicion that there
3 might be neurodiversity or neurocognitive
4 disorder, we would want to know before proceeding
5 so we could refer the family for evaluation.

6 Q. And in that -- I'll just read the
7 sentence and then ask if I read it correctly, and
8 then I'll have kind of a question about it.

9 It says "Further assessment or testing
10 may be needed to fully understand more complex
11 presentations, e.g., challenging psychopathology,
12 co-occurring neurodiversity prior to initiating
13 medical intervention."

14 Did I read that right?

15 A. Yes.

16 Q. And why do you need to fully understand
17 those situations prior to initiating medical
18 intervention?

19 A. So one of the SOC-8's criteria for
20 blockers, hormones, and surgery is that an
21 individual is able to understand the intervention
22 fully and provide informed consent.

23 And so typically we're referring for
24 these things if there is concern that that
25 criteria is not being reached so that we can

1 understand better why.

2 Q. And have you had patients who were
3 diagnosed with gender dysphoria but were not
4 eligible for medical intervention due to a
5 co-occurring mental health issue?

6 A. Yes.

7 Q. And what happens in that situation?

8 A. Typically we're providing referrals or
9 plugging them into other resources that could
10 support, you know, getting more information about
11 what's going on diagnostically or to better manage
12 any co-occurring mental health problems that are
13 interfering with our ability to move forward, and
14 then we would sort of check in maybe six months
15 later after those things had been done to see
16 where we are and reevaluate.

17 Q. And I guess how do you ultimately make
18 the judgment when somebody does have a
19 co-occurring mental health issue that they are
20 eligible for medical intervention?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: So again, through these
23 series of conversations and assessment and also
24 gaining collateral information from other people
25 and the young person's life, we're sort of able to

1 put that together and make a determination about,
2 yes, this person understands. This
3 decision-making is coming from a thoughtful and
4 logical place rather than an emotional, impulsive
5 one.

6 And then we kind of present whether or
7 not they meet eligibility criteria. But then
8 ultimately it's up to families and youth to make
9 the decision about how they want to move forward.

10 Q. (BY MR. RAMER) Are you familiar with the
11 term "borderline personality disorder"?

12 A. Yes.

13 Q. And is that sometimes referred to as
14 "BPD" as a shorthand?

15 A. Yes.

16 Q. Have you ever diagnosed or treated BPD?

17 A. Yes.

18 Q. Have you ever had a patient who was
19 diagnosed with both BPD and gender dysphoria?

20 A. Yes.

21 Q. And did you deem that patient eligible
22 for medical intervention?

23 A. So BPD can only be diagnosed in patients
24 who are 18 and older, so it's only been in a
25 handful of cases because most of my patients are

1 under the age of 18 that that has occurred.

2 And in those cases, I'm rarely the one
3 that has given that diagnosis. Typically they've
4 been with a therapist before who has given them
5 that diagnosis. But, yes, I have had some
6 patients who have had both of those diagnoses.

7 Q. Why is BPD, why is it a cutoff of 18
8 years?

9 A. So all of the personality disorders in
10 DSM-5 are 18 and above. Personality disorders are
11 an ingrained sort of pattern of behaviors, and so
12 the mental health community has reserved labeling
13 people with those diagnoses until they reach
14 adulthood because there's a lot of development
15 that's still occurring.

16 And so if it's with a younger person,
17 typically we'll say they have borderline
18 personality traits, but not borderline personality
19 disorder.

20 Q. Do you see any similarity there between
21 borderline personality disorder and gender
22 dysphoria?

23 MS. NOWLIN-SOHL: Objection to form.

24 THE WITNESS: Similarities in what ways?

25 Q. (BY MR. RAMER) Well, did you say that

1 the mental health community has decided that a BPD
2 diagnosis should wait until the individual is over
3 18 because more development will take place?

4 MS. NOWLIN-SOHL: Objection to form;
5 mischaracterizes prior testimony.

6 THE WITNESS: So more that it's an
7 ingrained set of behaviors and a pattern of
8 behavior. So a lot of it is very externalized.
9 It's not necessarily like an internal sense of
10 self as a BPD person that that person is born with
11 that. It is something that develops over time,
12 that pattern of behavior.

13 Q. (BY MR. RAMER) What's the behavior at
14 issue with BPD?

15 A. What are the diagnostic criteria for BPD?

16 Q. Or just generally. I'm not trying to
17 quiz you, but when you mention the pattern of
18 behavior, broadly speaking, what does that mean?

19 A. It's kind of a description of a category
20 of behaviors that people exhibit in interpersonal
21 interactions that are maladaptive. So, you know,
22 trying to get validation in unhealthy ways is an
23 example.

24 Q. Does BPD also involve some form of
25 identity disturbance?

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: No, not necessarily.

3 Q. MR. RAMER) But is that -- I guess I'll
4 just --

5 MR. RAMER: All right. This will take a
6 few minutes while the pigeon flies the exhibit.
7 In my defense, it is one page, Li, so this one
8 shouldn't be as long as the others.

9 Q. (BY MR. RAMER) I guess while we're
10 waiting I can ask you a question, which is what is
11 the treatment for BPD?

12 A. So the most evidence-based therapy for
13 borderline personality disorder is something
14 called DBT, which is dialectical behavioral
15 therapy.

16 Q. And what does that entail?

17 A. So it's a therapy can be done in a lot of
18 different formats. Sometimes it's individual;
19 sometimes it's groups; sometimes it's both. But
20 it entails learning a particular set of emotion
21 regulation and de-escalation, coping skills. And
22 then has some specific cognitive restructuring
23 tasks that are learned over the course of therapy.

24 MS. NOWLIN-SOHL: We have the exhibit
25 whenever you're ready, John.

1 MR. RAMER: Okay. And this is, I think,
2 Brady Exhibit 4. And I'll just represent this is
3 from the DSM-5, and it's the diagnostic criteria
4 for BPD.

5 (Deposition Exhibit No. 4 was marked.)

6 Q. (BY MR. RAMER) And I guess my question
7 is about the third one down.

8 Now, I understand that the diagnosis
9 looks like you need -- it's five or more. And so
10 you could theoretically have one without this
11 third criterion, but could you just explain what
12 that criterion is?

13 A. Sure. So typically this presents itself
14 as, you know, people who are defining their
15 self-worth based on how others view them. And so
16 there isn't a strong sense of internal kind of
17 confidence. And so they value themselves based on
18 how much other people value them.

19 So sometimes we consider that to be
20 identity diffusion because self-identity is not
21 very strong.

22 Q. Are there other forms of identity
23 disturbance other than identity diffusion?

24 A. I'm not a borderline personality disorder
25 expert. I received some training in my graduate

1 training, but it's not my area of expertise, so
2 I'm not sure.

3 Q. That's fair. Do you know if the
4 treatment for BPD involves any form of medical
5 intervention?

6 A. Sometimes medications are involved,
7 psychotropic medications.

8 Q. And that would be psychiatric medication;
9 is that right?

10 A. Yes.

11 Q. And I know you just said you're not a BPD
12 expert. If you don't know the answers to these,
13 that's fine.

14 Just out of curiosity, do you know if BPD
15 is more common in the population than gender
16 dysphoria?

17 A. I do not.

18 Q. Do you know if BPD is more common in
19 natal females or females assigned at birth?

20 MS. NOWLIN-SOHL: Object to form.

21 THE WITNESS: I believe that the ratio
22 of, like, epidemiologically, I think it is more
23 commonly diagnosed in assigned females.

24 Q. (BY MR. RAMER) Have you ever considered
25 the possibility that an individual's identity

1 disturbance for BPD could manifest itself as a
2 disturbance in gender identity?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: Could you repeat that?

5 Q. (BY MR. RAMER) Have you ever considered
6 the possibility that an individual's identity
7 disturbance for BPD could be experienced as a
8 disturbance in gender identity?

9 MS. NOWLIN-SOHL: Same objection.

10 THE WITNESS: Through our evaluation
11 process, we are exploring all aspects of identity,
12 not just gender. And it is important that
13 someone's gender identity is stable. I wouldn't
14 necessarily be more worried with someone who has
15 also co-occurring BPD. I would do the same
16 evaluation as I do with every patient.

17 Q. (BY MR. RAMER) When you say it's
18 important that gender identity is stable, what do
19 you mean by that?

20 A. You know, that it is persistent, like,
21 has been present and for a good amount of time.
22 DSM says six months or more, but more is always
23 better.

24 And that there haven't been any major
25 fluctuations in that identity, and that it -- you

1 know, how it evolved is also important in
2 understanding how they came to understand that
3 aspect of themselves.

4 And, you know, for example, like, if I
5 heard that a patient identified as male but then
6 six months later, you know, or four months later
7 identified as like goth instead -- I don't know.
8 I'm just picking like a random personality. But,
9 you know, goes from gender to something else
10 that's not within gender, that would be something
11 worth exploring further.

12 Q. How can someone who is gender-fluid have
13 a gender identity that is stable?

14 A. So again, the gender identity could be
15 stable, but it's the expression that is fluid.

16 But for the ones whose identity does
17 fluctuate, they often are fluctuating within a
18 genderqueer, gender-diverse spectrum. So I've not
19 had a gender-fluid person who one day identifies
20 as cis female and then a week later is identifying
21 as trans male.

22 Q. In your declaration, page 12 -- I think
23 we're already there -- paragraph 34, the second
24 sentence. I'll just read it and ask if I read it
25 correctly.

1 It says "Assessment procedures can vary
2 based on the practice setting, discipline of the
3 provider conducting the assessment, presence of
4 neurodiversity or other individual patient
5 considerations/needs."

6 Did I read that correctly?

7 A. Yes.

8 Q. And is there any requirement in the SOC-8
9 or the Endocrine Society guidelines about how an
10 assessment must be conducted?

11 A. In SOC-8 there's recommendations that it
12 be conducted by a qualified health professional.

13 Q. Does it explain what that means, to be a
14 qualified health professional?

15 A. It does define qualified health
16 professionals.

17 Q. And you say in this sentence that
18 assessment procedures can vary based on the
19 discipline of the provider conducting the
20 assessment.

21 Do you see that?

22 A. Yes.

23 Q. And what does that mean?

24 A. So they can -- the format with which this
25 information is obtained can look different based

1 on these factors.

2 So in terms of the discipline of the
3 provider, you know, it might just be the setting
4 in which this information is obtained. It might
5 be, you know -- in our clinic, our health
6 providers, for example, can't -- can only bill for
7 certain things.

8 And so, you know, information, for
9 example, like, can't be obtained through a phone
10 call. It has to be a virtual meeting or an
11 in-person meeting. And so -- I can bill for a
12 phone call, however.

13 So the format with which we obtain this
14 information, gather this information, might be
15 different just based on the discipline.

16 Q. Oh, I'm sorry. The word "discipline"
17 here is referring to like the --

18 A. The letters that come after someone's
19 name.

20 Q. Gotcha. Okay. That clarifies it for me.
21 Thank you.

22 Okay. So in your declaration, let's go
23 to page 10, paragraph 29. And first sentence,
24 I'll just read the whole thing and ask if I read
25 it correctly.

1 "As stated above, these guidelines are
2 widely accepted in the professional community.
3 They have analyzed all available scientific
4 research and are widely referenced and endorsed by
5 all major U.S. medical and mental health
6 associations."

7 Did I read that correctly?

8 A. Yes.

9 Q. And what guidelines are you referring to
10 in this paragraph?

11 A. The American Psychological Association
12 guidelines on gender-affirming care and the WPATH
13 SOC-8 and the Endo Society guidelines.

14 Q. And what year were the Endocrine Society
15 guidelines published?

16 A. 2017.

17 Q. And what year were the APA guidelines
18 published?

19 A. I think it's 2015.

20 Q. Looking at footnote 14 -- I think that's
21 right. Yeah.

22 And so those guidelines did not analyze
23 any research in the last half-decade, correct?

24 A. Yeah, so my understanding is that the
25 Endo Society and APA are working on that currently

1 to update.

2 Q. Okay. But just so -- it's not correct to
3 say that those guidelines have analyzed all
4 available scientific research, correct?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: They analyzed all available
7 research at the time of publication.

8 Q. (BY MR. RAMER) And when you say in the
9 first sentence of this paragraph that these
10 guidelines are widely accepted in the professional
11 community, do you mean the American professional
12 community exclusively?

13 A. That's what I have the most knowledge of.
14 I'm not sure about how other countries -- if other
15 countries are using the same practices we are.

16 Q. Is there a difference between clinical
17 guidelines and standards of care?

18 MS. NOWLIN-SOHL: Object to form. Object
19 to the extent that it calls for a legal
20 conclusion.

21 THE WITNESS: I'm not sure.

22 Q. (BY MR. RAMER) Do you know whether the
23 American Psychological Association has ever made a
24 distinction between standards and guidelines?

25 A. I don't know.

1 Q. In your declaration on page 1,
2 paragraph 4, in the second sentence, you state
3 that the opinions in this declaration are based
4 on, among many other things, your knowledge of
5 peer-reviewed research relevant to the treatment
6 of gender dysphoria; is that right?

7 A. Yes.

8 Q. And what is the extent of that knowledge?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: Because my current position
11 is 100 percent in the gender clinic and devoted to
12 this population, a majority of my continuing
13 education and a majority of the journals that I
14 subscribe to and the list serves that I'm on are
15 all gender related.

16 So to the extent that I can, I try to
17 keep up-to-date on recent publications in this
18 area as it pertains to my work.

19 Q. (BY MR. RAMER) And how do you follow new
20 developments in the research?

21 A. So again, a lot of the -- I have
22 memberships to things, so I'll get email alerts
23 when things are published.

24 I also have a Google Scholar filter that
25 alerts me every week about new publications with

1 key words.

2 Q. And how do you determine what papers are
3 reliable?

4 MS. NOWLIN-SOHL: Object to form.

5 THE WITNESS: So typically I'm, you know,
6 being a critical consumer of the research, and so
7 I'm making my own judgments based on the
8 methodologies described in the papers, but also
9 impact factors, which is kind of the reach that a
10 journal has, like how many people subscribe to it.
11 All of the things that I read are peer reviewed,
12 and so that process also ensures that quality is
13 being published.

14 Q. (BY MR. RAMER) And what are other impact
15 factors in addition to the number of subscribers?

16 A. Yeah, I forget exactly all the variables
17 that go into an impact factor. There's, like, a
18 formula that creates a number. And a number of
19 subscribers is one variable that goes into that
20 number, but I'm not sure what the other variables
21 are.

22 MR. RAMER: And, Li, have you received
23 Brady Exhibit 5?

24 MS. NOWLIN-SOHL: I have not.

25 Q. (BY MR. RAMER) Doctor, have you ever

1 read a research publication that said there was a
2 lack of evidence to justify gender-affirming
3 medical interventions for minors?

4 MS. NOWLIN-SOHL: Object to form.

5 THE WITNESS: I would have to see the
6 article. I don't know.

7 Q. (BY MR. RAMER) No, I'm just asking if
8 you've ever read one, ever.

9 MS. NOWLIN-SOHL: Same objection.

10 THE WITNESS: That says what?

11 Q. (BY MR. RAMER) I'll have to start from
12 the beginning.

13 Have you ever read a research publication
14 that said there was a lack of evidence to justify
15 gender-affirming medical interventions for minors?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: I -- off the top of my
18 head, I don't know.

19 Q. (BY MR. RAMER) Are you familiar with the
20 term "systematic review"?

21 A. Yes.

22 Q. And could you explain your understanding
23 of that term?

24 A. So systematic reviews are combining --
25 looking at a particular line of inquiry and

1 combining all of the studies that look at that
2 line of inquiry together to create more robust
3 conclusions about the evidence for or against it.

4 MS. NOWLIN-SOHL: We have 5.

5 MR. RAMER: Okay. We can pivot back to
6 that right now if you don't mind pulling that up.

7 (Deposition Exhibit No. 5 was marked.)

8 Q. (BY MR. RAMER) And, Doctor, are these
9 the APA guidelines you cite in your article?

10 A. Yes.

11 Q. I'm sorry, in your declaration.

12 A. Yes.

13 Q. And I'd like to go to page 833, which is
14 the second page, and in particular to the right
15 column below the bold distinction between
16 standards and guidelines.

17 And I'll just read -- no, because these
18 citations will mess it up.

19 So can you just read the first two
20 sentences of that paragraph and let me know when
21 you've finished reading that?

22 A. Sure. Okay.

23 Q. Were you aware the APA has made an
24 important distinction between standards and
25 guidelines?

1 MS. NOWLIN-SOHL: Object to form.

2 THE WITNESS: Reading this paragraph, I'm
3 aware now.

4 Q. (BY MR. RAMER) Were you aware before you
5 read that paragraph?

6 A. No.

7 Q. Do you understand the distinction it's
8 drawing in the second sentence?

9 A. My understanding of it and my
10 interpretation of it are that -- and there are
11 many ways to define standards, but that -- and I
12 might be wrong, but I think the only standards,
13 really, that APA has committed to are our ethical
14 principles in our code of conduct.

15 So even within other diagnoses, there
16 aren't necessarily standards of care because
17 there's a lot of individual autonomy when it comes
18 to the delivery of psychotherapy.

19 Q. What does it mean when it says
20 "guidelines are aspirational"?

21 MS. NOWLIN-SOHL: Object to form;
22 foundation.

23 THE WITNESS: I can't -- I can guess. I
24 don't know what the intent was because I wasn't on
25 the committee that wrote this.

1 Q. (BY MR. RAMER) Yeah, and I guess I'm
2 just asking as a psychologist, when you read this,
3 what is your understanding? I'm not asking what
4 the authors meant.

5 But as you read it, what is your
6 understanding of the statement "guidelines are
7 aspirational"?

8 A. I think these are -- these
9 recommendations are kind of in an ideal world what
10 we would -- the kind of care we would be
11 delivering.

12 Q. Is the distinction from standards that
13 you are not required to deliver care in accordance
14 with the guidelines?

15 MS. NOWLIN-SOHL: Object to form.

16 THE WITNESS: So as it goes on to say in
17 the paragraph, you know, it's recommended that we
18 use these guidelines in conjunction with our
19 ethical principles and code of conduct. And there
20 are some things related to gender care that APA
21 has deemed to be unethical.

22 Q. (BY MR. RAMER) But those aren't -- okay.

23 All right. We'll go back to systematic
24 reviews, where we were.

25 And have you ever conducted a systematic

1 review?

2 A. No.

3 Q. Have you ever read a systematic review?

4 A. About any topic? Yes.

5 Q. As you sit here today, are you able to
6 name any specific systematic review relating to
7 the treatment of gender dysphoria that you have
8 read?

9 A. I have read summaries of systematic
10 reviews but not the systematic reviews themselves.

11 Q. What summaries do you recall reading?

12 A. So, for example, you know, the SOC-8 was
13 founded based on a systematic review of the
14 literature, so that's kind of the combination of
15 the results of that systematic review. But I
16 didn't read in detail their methodology and
17 systematic review.

18 Endo Society, similarly.

19 Q. Do you know what questions the systematic
20 review for the SOC-8 was investigating?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: I don't know specifically.

23 Q. (BY MR. RAMER) Do you know what
24 questions the systematic reviews for the Endocrine
25 Society guidelines were investigating?

1 A. No.

2 Q. Are you familiar with the term
3 "evidence-based medicine"?

4 A. Yes.

5 Q. And can you explain your understanding of
6 that term for me?

7 A. So evidence-based medicine, to my
8 understanding, is when something has acquired
9 enough evidence to support doing that
10 intervention.

11 Q. I'm sorry. Can you say that again?

12 A. Sure. So when enough evidence has been
13 amassed to support doing an intervention or in
14 support of an intervention.

15 Q. Have you taken any particular courses on
16 evidence-based medicine?

17 A. So in my field, there are evidence-based
18 therapies. And so not necessarily medicine, but I
19 have training in evidence-based therapies.

20 Q. So is the training in the therapy itself?
21 Or is the training in the theoretical principles
22 of evidence-based medicine?

23 MS. NOWLIN-SOHL: Object to form.

24 THE WITNESS: So in my training, I've
25 received -- I took courses on research methods and

1 statistics and how to conduct scholarly work.

2 So in my field, there's a lot of
3 evidence -- emphasis placed on evidence-based
4 therapies. And so, you know, being a data
5 scientist and, you know, a Ph.D., that was part of
6 my training is how to conduct that.

7 Q. (BY MR. RAMER) Are you familiar with the
8 term "observational study"?

9 A. Yes. In the context of my world, yes.

10 Q. Yeah, right. What do you understand that
11 term to mean?

12 A. So typically in mental health, it's --
13 the most readily available example that comes to
14 mind is, like, in an educational setting.

15 So at a school, for example, they might
16 go in and observe the behavior of students and
17 code that data and then use that as their data.
18 So rather than asking the students specifically
19 things they just observe and then code that data.

20 Q. Were some of your ADHD publications
21 observational studies?

22 A. No.

23 Q. Are you familiar with the term
24 "randomized controlled trial"?

25 A. Yes.

1 Q. And what do you understand that term to
2 mean?

3 A. So it's a type of research wherein
4 participants are randomly assigned to different
5 conditions within the experiment.

6 And so they're randomly assigned, which
7 is the random part.

8 And then it's controlled because they
9 control for as many variables as they can to get
10 clean outcomes and be able to interpret the data.

11 Q. With respect to study design, is evidence
12 from a randomized control trial more reliable than
13 evidence from an observational study?

14 MS. NOWLIN-SOHL: Object to form;
15 foundation.

16 THE WITNESS: It is considered to be the
17 most rigorous type of study.

18 Q. (BY MR. RAMER) Are you familiar with the
19 term "GRADE methodology"?

20 A. No.

21 Q. In your declaration, going to page 14,
22 paragraph 39, and in the third sentence, I'll read
23 it and ask if I read it correctly.

24 You say "Studies have demonstrated
25 improvements in mental health following

1 gender-affirming medical interventions."

2 Did I read that correctly?

3 A. Yes.

4 Q. And what do you mean when you say
5 "studies have demonstrated improvements following
6 gender-affirming medical interventions"?

7 A. So through various statistical methods,
8 they have shown to correlate the gender-affirming
9 medical intervention with improvements in mental
10 health.

11 Q. In your opinion, have you concluded that
12 gender-affirming medical care causes improvements
13 in mental health?

14 A. The research shows that. And clinically
15 that is what I have seen, so yes.

16 Q. The research shows causation?

17 A. Not causation, but the statistical data
18 that is presented plus my clinical experience
19 leads me to say yes.

20 Q. So the research did not show causation,
21 but when you personally combine the research with
22 your clinical experience, you have concluded that
23 gender-affirming medical care causes improvements
24 in mental health; is that right?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: I believe that it leads to
2 improvements in mental health, yes.

3 Q. (BY MR. RAMER) I asked the question with
4 the verb "cause" for a reason. And I think in
5 your answer you switched to "lead."

6 And I'm just trying to -- you know, I
7 think in this context the word "cause" -- just to
8 be clear, have you concluded that gender-affirming
9 medical care causes improvements in mental health?

10 A. And I can share why I'm avoiding the word
11 "cause" in this case.

12 So for me, causation is specifically a
13 statistical term that is very difficult, even in
14 our randomized control trials, to prove because
15 there are so many other variables that account for
16 change.

17 And so to the best of their scientific
18 ability, I believe these studies to be robust but
19 aren't statistically showing causation. And so
20 that's why I'm saying "leads to."

21 Q. So just to clarify, you are declining to
22 say that gender-affirming medical care causes
23 improvements in mental health; is that right?

24 A. From a statistical perspective, yes.

25 Q. As opposed to what's a non-statistical

1 perspective?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: So -- which is why I'm
4 using "clinically" also. Clinically I have seen A
5 to B and B to C, and, you know, I've not conducted
6 this research myself to be able to show that
7 statistically. But clinically I do see that it is
8 directly linked to gender-affirming medical care
9 that I'm seeing these improvements.

10 Q. (BY MR. RAMER) Back on your declaration,
11 on this page, you list a number of articles in
12 footnote 16.

13 Are these articles the basis for your
14 conclusion that studies have demonstrated
15 improvements following gender-affirming medical
16 care?

17 A. They are samples of those studies, yes.

18 Q. There are other articles?

19 A. Yes.

20 Q. Do you cite them in your declaration?

21 A. No.

22 Q. Is there a reason you didn't?

23 A. I just felt like these were the best
24 representation, and they summarized the previous
25 studies within them as well.

1 Q. Okay. So now are these the best articles
2 in footnote 16?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: I'm not sure I'm qualified
5 to say if they're the best or not, but they are
6 good representations of these relationships.

7 Q. (BY MR. RAMER) Okay. So are there other
8 articles that you're not -- I'm sorry. I'm going
9 to start again.

10 Are there other articles that you are
11 relying on for the basis of your expert opinion
12 that you've not cited in your declaration?

13 A. These are the ones I'm most familiar
14 with. And again, they include a review of the
15 other articles that I would have maybe included,
16 but these are the ones that I'm most familiar
17 with.

18 Q. Okay. So the universe of articles
19 includes what you've cited here and then what is
20 cited within these articles; is that fair?

21 A. Yes.

22 Q. Okay. And you cite two articles by
23 de Vries here.

24 Do you see that?

25 A. Yes.

1 Q. Do you consider de Vries an expert?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: I don't know. I don't know
4 de Vries personally.

5 Q. (BY MR. RAMER) Yeah. Fair. Do you know
6 what country the de Vries studies come out of?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: I would have to look at the
9 article. I'm assuming it says in there.

10 Q. (BY MR. RAMER) If the studies involved
11 participants from the Netherlands, given our
12 discussion earlier today about your preference for
13 studies from the United States, does that mean you
14 deem the de Vries studies less reliable?

15 MS. NOWLIN-SOHL: Objection to form;
16 mischaracterizes prior testimony.

17 THE WITNESS: I don't necessarily -- I
18 don't always consider non-U.S. studies to be of
19 lower quality. It's just if we have similarly
20 robust studies that are about kids in the United
21 States, those might be preferable over other
22 studies. But they can be included in the wealth
23 and averaging and aggregation of data.

24 Q. (BY MR. RAMER) Do you have any knowledge
25 of systematic reviews regarding the treatment for

1 gender dysphoria that have been conducted by
2 European health authorities?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: I don't believe so.

5 Q. (BY MR. RAMER) Have you ever heard of
6 the Cass report?

7 A. No.

8 Q. Okay. Let's go back to your declaration,
9 back to footnote 16.

10 The second article you cite there is
11 by -- well, the lead author is Amy Green, correct?

12 A. Yes.

13 Q. Do you recall where the authors of that
14 article obtained the data they used?

15 A. I would have to go back to the article to
16 confirm that.

17 Q. Do you recall whether any of the articles
18 in footnote 16 isolated medical interventions from
19 psychotherapy when recording their results?

20 MS. NOWLIN-SOHL: Object to form.

21 THE WITNESS: Off the top of my head, I
22 cannot recall. They might have controlled for
23 other -- you know, if they were receiving therapy
24 and their analyses, but I would have to check.

25 Q. (BY MR. RAMER) But as you sit here, you

1 don't know the answer to that question?

2 A. Correct.

3 Q. Do you have any knowledge regarding the
4 neurological effects of pubertal suppression in
5 adolescents?

6 A. Can you repeat that again?

7 Q. Do you have any knowledge regarding the
8 neurological effects of pubertal suppression in
9 adolescents?

10 A. My understanding is that -- I'm not aware
11 of data, but I'm aware of kind of like theoretical
12 ideas regarding if there's a relationship between
13 those two things.

14 Q. What kind of theoretical ideas are you
15 aware of?

16 A. So -- and again, I'm not a medical
17 expert, so usually I'm deferring to my medical
18 team on these kinds of things, but that there is
19 kind of two time points in which there's a lot of
20 neuronal development, one being in very early
21 childhood; the second being in adolescence, and
22 that potentially one variable that triggers that
23 second neuronal development in adolescence is the
24 presence of sex hormones with puberty.

25 Q. And what do you know about -- I guess are

1 neurological effects of pubertal suppression
2 beyond the scope of your expertise?

3 A. Yes.

4 Q. Okay. Are you aware of any study
5 researching the effect of puberty blockers on
6 neurodevelopment in adolescents with neurodiverse
7 characteristics?

8 A. I am not aware.

9 Q. Does that concern you?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: Could you repeat the topic
12 again one more time?

13 Q. (BY MR. RAMER) My previous question was
14 are you aware of any study researching the effect
15 of puberty blockers on neurodevelopment in
16 adolescents with neurodiverse characteristics?

17 And then I asked -- and then you said no.

18 And then I asked does that concern you?

19 MS. NOWLIN-SOHL: Same objection.

20 THE WITNESS: Not necessarily. I --
21 that's a very niche subgroup, and -- yeah. That
22 would be a very small group of our patients, so
23 that doesn't necessarily concern me that that
24 inquiry has not been done.

25 Q. (BY MR. RAMER) Adolescents with

1 neurodiverse characteristics are a niche subgroup?

2 A. Those who have done puberty blockade and
3 also have ASD and are now adolescents.

4 Q. I guess what makes it -- I guess how many
5 of your patients do you think are neurodiverse?

6 A. Very ballpark estimate, maybe 20 percent.

7 Q. And then how many of those would receive
8 pubertal suppression?

9 MS. NOWLIN-SOHL: Object to form.

10 THE WITNESS: So the age makeup of our
11 clinic is probably -- again, this is a guess, but
12 would probably be 30 percent are Tanner II-III and
13 below.

14 Q. (BY MR. RAMER) So the vast majority -- I
15 think I understand.

16 So you're saying the vast majority of the
17 patients at your clinic are past the stage where
18 they would have their puberty suppressed; is that
19 right?

20 A. Yes.

21 Q. Okay.

22 MR. RAMER: I guess we've been going for
23 about an hour. Do you want to take five or ten
24 minutes?

25 MS. NOWLIN-SOHL: Yeah. I think this

1 could be a good five-minute break.

2 MR. RAMER: Okay. Let's do that.

3 THE VIDEOGRAPHER: Okay. So the time is
4 4:17 p.m. Mountain time, and we are off the
5 record.

6 (Break taken from 4:17 p.m. to 4:23 p.m.)

7 THE VIDEOGRAPHER: All right. So we are
8 recording. The time is 4:23 p.m. Mountain time,
9 and we are back on the record.

10 Q. (BY MR. RAMER) Dr. Brady, I'd like to go
11 in your declaration to page 11, paragraph 32, and
12 specifically the second to last sentence. And
13 I'll read it and ask if I read it correctly.

14 It says "Pausing puberty with blockers
15 can help prevent the distress associated with
16 physical changes inconsistent with an adolescent's
17 gender identity and also provide the adolescent
18 more time to understand their gender identity
19 before considering less-reversible treatments."

20 Did I read that correctly?

21 A. Yes.

22 Q. What do you mean by "less-reversible"?

23 A. So other medical interventions such as
24 hormone therapies have permanent effects and
25 reversible effects.

1 Q. Do you think puberty blockers are
2 reversible?

3 A. Yes.

4 Q. And what do you mean by that?

5 A. So for patients who choose to come off
6 the blocker, stop the blockers, puberty --
7 endogenous puberty will resume as normal.

8 Q. Do you think there could be -- in setting
9 aside that endogenous puberty resumes, do you
10 think there could be other effects from pubertal
11 suppression?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: There's, to my knowledge,
14 no research that indicates long-term effects from
15 puberty blockade.

16 Q. (BY MR. RAMER) Is there any research
17 that suggests there are not long-term effects from
18 puberty blockade?

19 A. So the majority of research in this area
20 has been done with precocious puberty, not
21 necessarily gender.

22 In precocious puberty, blockade is
23 sometimes started at very younger, much younger
24 than we would do in gender. So sometimes 7 or
25 earlier depending on what's going on pubertally

1 for that child.

2 So these are youth who are on blockade
3 for much longer than we would do or recommend for
4 our patients in gender. And there are studies
5 looking at there -- that there are no long-term
6 consequences of puberty blockade for those youth.

7 Q. But individuals who receive puberty
8 blockers for central precocious puberty eventually
9 go through their endogenous puberty, correct?

10 A. Some do.

11 Q. Who does not?

12 A. If they're gender-diverse, they might
13 not.

14 Q. Fair. And earlier we were discussing
15 potentially neurological effects from pubertal
16 suppression.

17 And are you able to say based on your
18 knowledge of neurological effects from pubertal
19 suppression that puberty blockers are reversible?

20 MS. NOWLIN-SOHL: Object to form;
21 foundation.

22 THE WITNESS: In my clinical experience,
23 I've not had patients who are on blockers develop
24 academic struggles or show cognitive impairment.

25 I know of several studies that are

1 currently being conducted that are looking at that
2 question specifically. I don't know of any that
3 have already been published.

4 Q. (BY MR. RAMER) Don't you lose contact
5 with most of your patients by the time they're age
6 22?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: It is common when patients
9 transfer to other clinics that we will not hear
10 from them.

11 Q. (BY MR. RAMER) And so in other words,
12 you wouldn't know whether they were suffering any
13 sort of long-term effects after that point, right?

14 MS. NOWLIN-SOHL: Object to form;
15 argumentative.

16 THE WITNESS: Clinically, many of my
17 patients are able to succeed. So many go to
18 college and many are accepted into college; many
19 are able to get jobs.

20 And so from that perspective, they are
21 not experiencing cognitive impairments at the
22 point of time of transfer.

23 Q. (BY MR. RAMER) Which is -- for most
24 patients is 22 years old; is that right?

25 A. Yes.

1 Q. And what are the permanent -- I guess
2 backing up.

3 I believe you said when you were
4 referring to less-reversible treatments -- were
5 you including cross-sex hormones?

6 A. Yes.

7 Q. And what are the permanent effects of
8 cross-sex hormones?

9 A. For estrogen in particular -- I'll just
10 start with estrogen. So for estrogen, permanent
11 effects would be the development of breast tissue.
12 So if someone stops their estrogen, that tissue
13 does not revert or recede.

14 Additionally, there might be impacts in
15 terms of fertility and sperm count on those who
16 undertake estrogen that is permanent.

17 For testosterone, any hair that has grown
18 is permanent. Any hair that is lost is also
19 permanent. Bottom growth or clitoral enlargement
20 is also permanent as well as voice changes.

21 Q. In your declaration, same page,
22 paragraph 33, subpart C, you refer to emotional
23 and cognitive capacity.

24 Do you see that?

25 A. Yes.

1 Q. Could you explain what emotional capacity
2 is?

3 A. So if someone sort of similar to the
4 example I provided earlier about someone who has
5 severe depression, if they are too emotional,
6 sometimes that can cloud their judgment and
7 ability to make informed decisions.

8 Q. And can you explain what "cognitive
9 capacity" is?

10 A. That's the ability to comprehend, the
11 ability to understand an informed consent model,
12 the medical intervention that they are wanting to
13 undertake, the risks, benefits, side effects, and
14 long-term consequences.

15 Q. And how do you determine whether an
16 adolescent has the emotional and cognitive
17 capacity to provide informed consent?

18 A. So over the course of many sessions, we
19 provide education regarding the risks, benefits,
20 side effects, consequences, and have thorough
21 discussions regarding all of that. And then we
22 sort of assess if a young person is able to absorb
23 that information, process that information, repeat
24 back that information, and has given this a lot of
25 thought and consideration.

1 Q. Do different treatments require a
2 different level of emotional and cognitive
3 capacity?

4 MS. NOWLIN-SOHL: Object to form.

5 THE WITNESS: Not necessarily. I think
6 we want -- you know, I think it varies in terms of
7 the complexity depending on what medicine or
8 procedure they're undertaking. So some things
9 have more side effects than others or just more
10 complex in understanding the ins and outs of a
11 particular procedure. So it might just be the
12 thing that we're talking about is more complex.

13 Q. (BY MR. RAMER) Would a treatment with
14 more serious side effects require a higher level
15 of capacity?

16 MS. NOWLIN-SOHL: Object to form.

17 THE WITNESS: Yeah.

18 Q. (BY MR. RAMER) Could an individual under
19 18 have the emotional and cognitive capacity to
20 consent to puberty blockers but not cross-sex
21 hormones?

22 A. Yes, possibly.

23 Q. And could an individual under 18 have the
24 emotional and cognitive capacity to consent to
25 cross-sex hormones but not surgery?

1 A. Yes.

2 Q. In your declaration page 15, paragraph
3 43, in the first sentence you're referring to
4 irreversible secondary sex characteristics. And
5 you provide the example of chest development,
6 which I believe you previously mentioned as well.

7 And my question is why do you deem chest
8 development an irreversible secondary sex
9 characteristic?

10 A. So in this particular section, I'm
11 discussing the changes that come with endogenous
12 puberty. And so for someone assigned male, that
13 would be the deep voice example. So once that
14 voice is deepened for that assigned male, that
15 cannot can reversed for them, even if they are
16 female-identifying and go on estrogen.

17 Similarly with a designated female who
18 goes through endogenous puberty, chest development
19 can't be reversed except for by surgery, but
20 that's a very significant intervention. So if
21 they were to take testosterone, it can't be
22 reversed.

23 Q. Okay. And I think I see the point. So
24 the point is if it requires surgery, then you
25 would view that as an irreversible secondary sex

1 characteristic; is that right?

2 A. Some things can't be changed even with
3 surgery, but that can be one of the criteria.

4 Q. Page 14, paragraph 40, I'll read the
5 first sentence and ask if I read it correctly.

6 You say, "Moreover, as I have seen in my
7 experience as a clinician, the use of hormone
8 blockers and cross-sex hormone therapy during
9 adolescence can prevent the need for future
10 medical treatment such as surgeries to remove or
11 alter secondary sex characteristics and allow for
12 more favorable future outcomes."

13 Did I read that correctly?

14 A. Yes.

15 Q. And are you saying here that the use of
16 puberty blockers or hormones can prevent the need
17 for surgeries later?

18 A. So, for example, with a designated female
19 who has gone through puberty and developed chest
20 tissue, if they identify as masculine and have
21 gender dysphoria and want to treat that dysphoria
22 through surgery, that would be the only way to
23 treat that area of the body.

24 But if that same designated female was on
25 blockers, did not go through that endogenous

1 puberty or develop that chest tissue, they would
2 not necessarily need or seek that surgery later on
3 because they have a masculine chest.

4 Q. Are there any examples other than the
5 example of chest development in the natal female
6 or assigned female at birth?

7 A. So in a designated male, it could be as
8 simple as body hair. So body hair is also
9 irreversible except for, you know, permanent laser
10 electrolysis and different methods like that.

11 So puberty blockade can also prevent body
12 hair from growing and prevent their voice from
13 deepening as well, which would prevent the need to
14 manage that with other procedures in the future.

15 Q. And why does preventing the need for
16 future medical treatment such as surgeries allow
17 for more favorable future outcomes?

18 A. Well, I think it minimizes the distress
19 that can be experienced from developing those
20 secondary sex characteristics of the assigned sex
21 from ever developing. So then they would never
22 develop the distress that they would have
23 developing those parts. But also, you know, we
24 want to minimize medical intervention as much as
25 we can.

1 And, you know, that creates -- you know,
2 any procedure, any medicine has risks associated
3 with it. And if we can prevent a child from
4 receiving surgery, that seems like a good outcome.

5 Q. And can you just -- I think I understand
6 the principle, but can you just explain why that
7 is?

8 A. Which part?

9 Q. Sorry, why you would -- if you can avoid
10 medical intervention, why you would want to do
11 that.

12 A. So, for example, if it's surgery, any
13 surgery has risks associated with it. And if we
14 can avoid someone -- a young person getting
15 surgery, then we would want to do that.

16 Q. And so basically if you have two
17 procedures that are equally effective but one is
18 more invasive, you would prefer the less invasive
19 procedure; is that right?

20 MS. NOWLIN-SOHL: Object to form.

21 THE WITNESS: I think we would weigh, you
22 know, the pros and cons and the risks and benefits
23 of all the potential interventions and want to
24 minimize risk and harm as much as we can.

25 Q. (BY MR. RAMER) Yeah, I guess this is

1 more of a theoretical question because I doubt
2 there are situations where you have procedures
3 that are perfectly equally effective.

4 But the question is if you did have in
5 theory two procedures that were equally effective,
6 one was more invasive and one was less invasive,
7 you would prefer the less invasive procedure,
8 right?

9 MS. NOWLIN-SOHL: Object to form; asked
10 and answered.

11 THE WITNESS: Yes.

12 Q. (BY MR. RAMER) In your declaration,
13 going to page 13, paragraph 37 and the third
14 sentence -- I'll just read it and ask if I read it
15 correctly.

16 It says "As with all medicine,
17 information should be presented in a
18 developmentally appropriate manner to both the
19 adolescent and caregivers."

20 Did I read that correctly?

21 A. Yes.

22 Q. And why should care be given in a
23 developmentally appropriate manner?

24 A. To ensure that youth are able to absorb
25 and comprehend to the best of their abilities.

1 Q. And how do you discuss the risk
2 associated with fertility, for example, in a
3 developmentally appropriate manner with an
4 adolescent?

5 A. So we spend a lot of time focusing on
6 that side effect in particular. And we, again,
7 talk both with the adolescent and the caregivers
8 and present the information.

9 You know, first we sort of discuss how --
10 whatever the medical intervention is, how that
11 impacts fertility or what we know regarding the
12 impacts of fertility.

13 We discuss sort of hypothetically the
14 possibilities in the future of, you know, in
15 hypothetical scenario 1, you do not want kids.
16 And hypothetical scenario 2, you do want to have
17 kids. And hypothetical scenario 3, you know, you
18 want to do a donor or adoption. So we talk about
19 the different ways in which, you know, their life
20 might sort of play out. And we talk about each of
21 those situations and how they may deal or cope
22 with choosing an intervention that impacts their
23 options later on.

24 We also counsel about the options that
25 are available in terms of fertility preservation

1 and the pros and cons of that and answer
2 questions.

3 And we also provide referrals to
4 fertility specialists for further counseling if
5 that's something families are interested in.

6 Q. What are the options for fertility
7 preservation?

8 A. So for sperm preservation, the -- there's
9 kind of three main methods. So one is a hospital
10 visit in which we can obtain a sample.

11 Another is just going to a traditional
12 sperm bank and collecting a sample there to be
13 frozen.

14 There are also mail companies that will
15 mail you a kit to your home so that you can obtain
16 a sample and then send it back to the company for
17 analysis and freezing.

18 For egg preservation, we have -- patients
19 meet with our gyn team, and also we have a
20 fertility department at Stanford that also meets
21 with patients to talk about egg retrieval and
22 preservation.

23 Q. I think I understand the retrieval part.
24 On the preservation part, you had mentioned, I
25 think with respect to sperm, freezing.

1 And is that the same with respect to
2 eggs?

3 A. Both freezing, yes.

4 Q. Both freezing. Are there any other
5 options?

6 A. Not at Stanford.

7 Q. Why did you qualify that with "not at
8 Stanford"?

9 A. Because I believe that there are some
10 places that can do ovary preservation and testicle
11 preservation, so removal of the whole organ and
12 freezing it.

13 Q. Do you know anything beyond that, what
14 you just said?

15 A. I don't.

16 Q. Do you agree that an individual who
17 begins taking puberty blockers at Tanner Stage II
18 and proceeds without interruption to cross-sex
19 hormones will be infertile?

20 MS. NOWLIN-SOHL: Object to form.

21 THE WITNESS: So it just -- we haven't
22 had a case of youth who was blocked, went on to
23 cross-sex hormones, so never had endogenous
24 puberty who was then -- you know, stopped their
25 hormones or tried to get pregnant or have a child.

1 So that situation has just not come up, so I don't
2 think we're able to say.

3 Q. (BY MR. RAMER) Would that treatment
4 regimen of going from puberty blockers to
5 cross-sex hormones to going off hormones to go
6 through endogenous puberty be in accordance with
7 the SOC-8?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: I'm not sure I understand
10 "in accordance." I'm not sure what you mean.

11 Q. (BY MR. RAMER) Do the guidelines discuss
12 how to properly do that procedure?

13 MS. NOWLIN-SOHL: Object to form.

14 THE WITNESS: How to do -- how to do
15 fertility preservation in someone who went on
16 blockade and then hormones and then stopped?

17 Q. (BY MR. RAMER) Yeah, I think that's my
18 question.

19 That process that you just described,
20 like, is that in the guidelines?

21 MS. NOWLIN-SOHL: Same objection.

22 THE WITNESS: I think it -- you know,
23 SOC-8, to the best of my knowledge, doesn't really
24 have specific scenarios. So, you know, they have
25 dosing recommendations for someone who's on

1 testosterone but not necessarily like, you know,
2 more globally somebody who did this and then this
3 and then this and what to do with that. So I
4 don't believe so.

5 Q. (BY MR. RAMER) And is a natal male or a
6 male assigned at birth sexually mature by Tanner
7 Stage II?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: I think -- I'm not sure
10 because I'm not a medical expert, but I think it
11 depends. Some might be; some may not be.

12 Q. (BY MR. RAMER) Of all your patients,
13 have you ever had a case of a natal male or
14 assigned male at birth who underwent prolonged
15 cross-sex hormone treatment and subsequently
16 conceived a child?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I have had cases of both
19 designated males and designated females. They
20 were not on blockers, but they did -- they were on
21 both estrogen and testosterone and then did
22 fertility preservation. So stopped their hormone
23 treatments and did fertility preservation after
24 several years of being on hormone therapies and
25 then got back on their hormones after doing

1 preservation, and that was successful.

2 Q. (BY MR. RAMER) I guess which part of
3 that was successful? The retrieval?

4 A. So the eggs and the sperm were analyzed
5 for viability and were deemed to be viable, but in
6 those two cases they have not become children yet.

7 Q. And how long were those individuals on
8 hormones?

9 A. Testosterone, I believe, was about six
10 years. And then the estrogen case was about four.

11 Q. And is this documented in the literature,
12 or is this just knowledge in your clinic?

13 A. This is just my, yeah, personal
14 experience.

15 Q. And have you had any more other than
16 those?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I've not had any other
19 patients express wanting to do fertility
20 preservation after starting the medical
21 interventions, just those two.

22 Q. (BY MR. RAMER) I guess what percentage
23 of your patients do pursue fertility preservation
24 options?

25 MS. NOWLIN-SOHL: Object to form.

1 THE WITNESS: So I would guess maybe
2 30 percent.

3 MR. RAMER: And, Li, do you have -- let's
4 see. I guess it's now Brady Exhibit 6?

5 MS. NOWLIN-SOHL: Yes.

6 MR. RAMER: Okay.

7 (Deposition Exhibit No. 6 was marked.)

8 Q. (BY MR. RAMER) Doctor, have you ever
9 seen this document before?

10 A. No.

11 Q. And you see it's a document by the
12 American Psychological Association?

13 A. Yes.

14 Q. And you're a member of the American
15 Psychological Association, correct?

16 A. Yes.

17 Q. And I'll just represent to you basically
18 by reading the top, which says it's an "APA
19 Resolution on the Imposition of Death as a Penalty
20 For Persons Aged 18 Through 20, Also Known As the
21 Late Adolescent Class."

22 And do you see it says it was published
23 in August of 2022?

24 A. Yes.

25 Q. And my questions for you are not about

1 the substance of this or your views on the
2 imposition of the death penalty, but I have a
3 question about a couple of statements made in this
4 and just to get your reaction to the scientific
5 statements.

6 MS. NOWLIN-SOHL: Could she just have a
7 second to look at it?

8 MR. RAMER: Yeah, absolutely.

9 THE WITNESS: Thanks.

10 Q. (BY MR. RAMER) And I can tell you where
11 the questions will be if you want to read those
12 paragraphs in particular, which is on page 2 on
13 the left column, the second "whereas" paragraph,
14 and then in the right column the first full
15 "whereas" paragraph. But, please, take your time.

16 A. Sorry, you said page 2, right-hand
17 column, "whereas," second paragraph.

18 And what was the second one?

19 Q. So page 2, left column, second "whereas"
20 paragraph.

21 A. Okay.

22 Q. Same page, right column, first "whereas"
23 paragraph.

24 A. Thank you. Okay.

25 Q. Okay. So we'll start with the second --

1 sorry. We'll start with left column, second
2 "whereas" paragraph. And I'm first just going to
3 read it without saying the citations. So just
4 effectively read the English, and then I'll ask if
5 I read that correctly.

6 It says "Whereas developmental
7 neuroscience, including research on both the
8 structure and function of brain development,
9 establishes that significant maturation of the
10 brain continues through at least age 20,
11 especially in the key brain systems implicated in
12 a person's capacity to evaluate behavioral
13 options, make rational decisions about behavior,
14 meaningfully consider the consequences of acting
15 and not acting in a particular way, and to act
16 deliberately in stressful or highly charged
17 emotional environments, as well as continued
18 development of personality traits, e.g., emotional
19 stability and conscientiousness and what is
20 popularly known as 'character.'"

21 Did I read that correctly?

22 A. Yes.

23 Q. And were you aware that significant
24 maturation of the brain continues through at least
25 age 20?

1 A. Yes.

2 Q. Okay. And now I'm just going to read --
3 let me see if I have another question.

4 Were you aware that this maturation
5 occurs in the key brain systems implicated in a
6 person's capacity to evaluate behavioral options,
7 make rational decisions about behavior, and
8 meaningfully consider the consequences of acting
9 and not acting in a particular way?

10 A. Yes.

11 Q. Okay. So same page, right column and the
12 first full "whereas" clause. And again I'll read
13 it without the citations and ask if I read it
14 correctly.

15 It says "Whereas it is clear the brains
16 of 18- to 20-year-olds are continuing to develop
17 and key brain systems relate to higher-order
18 executive functions and self-control, such as
19 planning ahead, weighing consequences of behavior,
20 and emotional regulation. Their brain development
21 cannot be distinguished reliably from that of
22 17-year-olds with regard to these key brain
23 systems."

24 Did I read that correctly?

25 A. Yes.

1 Q. And do you agree that up until an
2 individual is 20, they are continuing to develop
3 the key brain systems related to higher-order,
4 executive functions, and self-control such as
5 planning ahead, weighing consequences of behavior,
6 and emotional regulation?

7 A. I believe that our brains are always
8 developing. I don't necessarily think that it
9 stops at age 20.

10 Q. Do you agree with the statements -- let
11 me restart.

12 Do you agree with the statements in this
13 paragraph?

14 MS. NOWLIN-SOHL: Object to form; asked
15 and answered.

16 THE WITNESS: Yes.

17 Q. (BY MR. RAMER) Do the statements in the
18 paragraphs we just read give you any concern about
19 whether individuals under 18 can provide informed
20 consent to a treatment that bears risk of
21 infertility?

22 MS. NOWLIN-SOHL: Object to form.

23 THE WITNESS: So just because a brain is
24 continuing to develop doesn't mean it's not able
25 to do these tasks. It just means that they are

1 still maturing in order to reach their full
2 capacity to do these tests. So it's not to say
3 they're not able to do them.

4 Q. (BY MR. RAMER) Do you have any concern
5 about whether adolescents as a category possess
6 the maturity to provide consent to treatment that
7 carries risks of infertility?

8 MS. NOWLIN-SOHL: Object to form.

9 THE WITNESS: So everybody develops at
10 their own pace, and some of within -- some are
11 precocious; some are delayed. And so, you know,
12 each individual is approached as such, as an
13 individual.

14 And there are some who are not able to
15 meet the SOC-8 criteria of being able to have the
16 emotional or cognitive capacity to provide
17 informed consent, in which case we would not
18 proceed with any medical intervention for that
19 youth.

20 So it is embedded in our evaluation
21 process to assess for that.

22 Q. (BY MR. RAMER) And so you think that
23 there are adolescents who are able to -- excuse
24 me.

25 There are adolescents who are able to

1 provide informed consent to that treatment; is
2 that right?

3 A. Yes.

4 Q. I'd like to turn in your declaration to
5 page 12, paragraph 35, first sentence. And you
6 refer in the parenthetical to "evolution of
7 identity."

8 Do you see that?

9 A. Yes.

10 Q. What do you mean by that?

11 A. That's a term that I like to use, but
12 essentially it means how the identity developed
13 over time. So when did it first come into their
14 awareness that there might be incongruence or
15 differences?

16 When did they finally find the words or
17 the labels at which they define themselves?

18 And what information did they obtain to
19 be able to use those words and that kind of thing?

20 Q. Turning to page 7, paragraph 22, last
21 sentence on the page -- I'm sorry. Yes, last
22 sentence on the page. You use the word
23 "detransitioned" in quotation marks.

24 Do you see that?

25 A. Yes.

1 Q. What's your understanding of that word?

2 A. My understanding of that word is that
3 there are many ways to define it, depending on the
4 study. So typically it has been used to mean
5 people who stop their medical interventions,
6 gender-diverse people who stop their medical
7 interventions.

8 Q. And is that your understanding of the
9 word?

10 A. That is how it's most commonly used and
11 defined in the research.

12 Q. And previous page from this, page 6,
13 paragraph 20, first sentence, I'll just read it
14 and ask if I read it correctly.

15 It says "For adolescents and adults whose
16 gender identity differs from their sex assigned at
17 birth, it is very unlikely that they will later
18 come to identify with their birth-assigned sex."

19 Did I read that correctly?

20 A. Yes.

21 Q. And this assertion you make here, does it
22 apply to individuals whose gender incongruence
23 arose during adolescence?

24 MS. NOWLIN-SOHL: Object to form.

25 THE WITNESS: Can you ask that again?

1 Q. (BY MR. RAMER) Yes. The proposition in
2 the first sentence here, does that apply to
3 individuals whose gender incongruence arose during
4 adolescence?

5 MS. NOWLIN-SOHL: Same objection.

6 THE WITNESS: It includes -- I mean, I
7 think it -- excuse me. Let me back up.

8 It includes -- it could be they
9 identified in early childhood. It could be they
10 identified in adolescence, but they are currently
11 adolescents and adults.

12 Q. (BY MR. RAMER) And I guess if you're
13 isolating the category that identified as gender
14 incongruent as adolescents, does it hold true that
15 it is very unlikely that they will later come to
16 identify with their birth-assigned sex?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: I'm not sure I understood
19 that.

20 Q. (BY MR. RAMER) Well, I guess in your
21 answer I thought you were saying it includes --
22 when you use the word "adolescents" in this
23 sentence, it includes individuals who identified
24 as gender incongruent as adolescents and also
25 individuals who identified as gender incongruent

1 during childhood and then aged into adolescence;
2 is that right?

3 A. Correct.

4 Q. And my question is specifically about the
5 first category of individuals who identified as
6 gender incongruent in adolescence.

7 And if you're talking only about that
8 category, is it true that it is very unlikely that
9 they will later come to identify with their
10 birth-assigned sex?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: I'm not aware of any
13 research that indicates that that subgroup has
14 higher rates of detransition.

15 Q. (BY MR. RAMER) What about higher rates
16 of desistance?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: If by "desistance" you mean
19 identified as gender diverse and then now identify
20 as their assigned sex -- is that how you're
21 defining "desistance"?

22 Q. (BY MR. RAMER) I guess how do you define
23 "desistance"?

24 A. So sometimes desistance is also just
25 talking about stopping medical intervention.

1 But in my terminology, I guess
2 "desistance" would be identifying as cisgender or
3 aligning with the assigned sex at birth later.

4 Q. Okay. Yeah, let's take your definition.

5 And are there any studies analyzing
6 desistance rates for individuals specifically who
7 identified as gender incongruent during
8 adolescence?

9 A. Not to my knowledge.

10 Q. Do you keep statistics of regret at your
11 clinic?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Keep in what way?

14 Q. (BY MR. RAMER) Do you know how many
15 patients have ever expressed regret about their
16 treatment?

17 MS. NOWLIN-SOHL: Object to form.

18 THE WITNESS: Of our clinic patients?

19 Q. (BY MR. RAMER) Yes.

20 A. We do not keep record of, like, the
21 number, no.

22 Q. How do you define "regret"?

23 A. "Regret" to me would mean someone who has
24 done a medical intervention and wishes that they
25 hadn't.

1 Q. Has a patient in your clinic ever
2 expressed regret at having taken puberty blockers?

3 A. Not to my knowledge.

4 Q. Has a patient in your clinic ever
5 expressed regret at having taken cross-sex
6 hormones?

7 A. Not to my knowledge.

8 Q. Have you ever had any patients receive
9 what's called a gender-affirming mastectomy?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: Masculinizing top surgery?

12 Q. (BY MR. RAMER) Yes.

13 A. Yes.

14 Q. Have you ever had a patient express
15 regret about receiving masculinizing top surgery?

16 A. No, not to my knowledge.

17 Q. In your declaration, page 6 -- we're
18 there. Sorry. Page 6, paragraph 20.

19 And the second sentence, you refer to six
20 individuals who were your patients who later came
21 to identify with their sex assigned at birth; is
22 that right?

23 A. Yes.

24 Q. And do you recall how -- whether these
25 individuals were diagnosed with gender dysphoria

1 during childhood or adolescence?

2 A. I believe all six met criteria at some
3 point.

4 Q. Right. And I'm not suggesting they
5 didn't.

6 I guess my question is when they met the
7 criteria -- when they were formally diagnosed, do
8 you recall whether it was their childhood or
9 adolescence?

10 A. So I know for sure two that had received
11 the puberty blockade in childhood. The other four
12 I'm not sure. I don't remember.

13 Q. Do you recall whether the six were natal
14 females or females assigned at birth?

15 A. I believe it was pretty 50/50 of the six,
16 three and three. It might have been two and four,
17 but...

18 Q. And when you say in your declaration that
19 "none expressed regret around their gender
20 exploration or care," do you just mean they didn't
21 tell you that they regretted their care?

22 A. No. So I supported them after they --
23 you know, I supported them through retransition or
24 coming off their medications. And so we continued
25 to do therapy with these patients and, you know,

1 explored, you know, if they were experiencing any
2 side effects, whether that be socially or
3 physically or mentally, and none of them endorsed
4 any negative side effects and were glad that they
5 had done the exploration process and glad that
6 they -- in the case of the two, done the puberty
7 blockade.

8 Q. I think in your answer you had referred
9 to "retransition." Is that -- first of all, did
10 you use that word?

11 A. Yes.

12 Q. Is that something distinct from
13 "detransition"?

14 A. It's -- it can be used interchangeably, I
15 just prefer the term "retransition."

16 Q. Okay. Because I've heard --

17 A. Sorry.

18 Q. It's all right. Go ahead.

19 A. To transition back to the assigned sex.

20 Q. Okay. Because I -- okay. Got it.

21 If a patient regretted a medical
22 intervention, do you think the patient would
23 return to the provider who gave them that
24 intervention to express their regret?

25 MS. NOWLIN-SOHL: Object to form; calls

1 for speculation.

2 THE WITNESS: I certainly hope so. We
3 create -- we try to create an environment that is
4 welcoming to all. We're not a transgender clinic;
5 we are a gender clinic. And so we will support
6 patients regardless of how their identity shifts
7 and changes.

8 And so we, you know, often check in with
9 patients along the path to make sure that, you
10 know, are you happy with your medicines? Do you
11 want to stop your medicines for whatever reason?

12 And so we welcome that conversation and
13 we're very open to all the pathways that a youth
14 might take. So I would hope we're creating an
15 environment in which families and patients feel
16 safe to do so.

17 Q. (BY MR. RAMER) Yeah, and I wasn't asking
18 the question to cast doubt on your clinic in
19 particular. I think I was asking the question
20 more from the perspective of the psychology of the
21 individual patient and if the patient regretted a
22 medical intervention as a psychologist, do you
23 think that that patient would have reservations
24 about returning to the provider who gave them that
25 intervention to express their regret?

1 MS. NOWLIN-SOHL: Object to form; calls
2 for speculation, foundation.

3 THE WITNESS: Given that these six
4 reached out to us and wanted my support through
5 that process, I mean, it's possible that that is
6 happening. But in the case of these six, they
7 felt very comfortable coming back and wanted the
8 gender clinic to support them through
9 retransition.

10 MR. RAMER: I'm going to send an exhibit.
11 It's going to probably take a minute. I just sent
12 it, so just let me know whenever it arrives.

13 MS. NOWLIN-SOHL: Okay.

14 MR. RAMER: Are we looking?

15 MS. NOWLIN-SOHL: Still looking.

16 MR. RAMER: All right. Well, maybe I can
17 ask a question to introduce this, and we can deal
18 with it when it arrives.

19 Q. (BY MR. RAMER) But, Dr. Brady, did you
20 help author an article entitled "Understanding and
21 Supporting Patients With Dynamic Desires For
22 Gender-Affirming Medical Interventions"?

23 A. Yes.

24 MS. NOWLIN-SOHL: Okay. We have it now.
25 (Deposition Exhibit No. 7 was marked.)

1 Q. (BY MR. RAMER) And my question will be
2 is this that article?

3 A. Yes.

4 Q. And in the second paragraph, you first
5 highlight a study from the Netherlands.

6 Do you see that?

7 A. Yes.

8 Q. And I assume that even though the study
9 included participants from the Netherlands, you
10 still deem it useful with respect to your work in
11 the United States?

12 A. Yes.

13 Q. With respect to the last sentence of that
14 paragraph, I'll read it and ask if I read it
15 correctly.

16 It says "Studies of adolescents who start
17 pubertal suppression had found that only a few
18 percent ultimately chose to discontinue
19 gender-affirming medical care."

20 Did I read that correctly?

21 A. Yes.

22 Q. And so that sentence speaks only about
23 adolescents who chose to discontinue care, right?

24 A. Yes.

25 Q. Do you think that metric adequately

1 captures regret?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: So, no, because not all of
4 these individuals, such as the two in my clinical
5 practice who chose not to pursue further
6 intervention and stopped puberty blockers -- they
7 did not express regret. So this doesn't
8 necessarily -- this number doesn't equate to
9 regret.

10 Q. (BY MR. RAMER) So you actually think
11 this is over-counting potentially?

12 A. [Indiscernible due to cross-talk.]

13 Q. Do you think it's potentially
14 under-counting?

15 A. In many studies some people are lost to
16 follow-up, and that happens in our clinic as well,
17 so potentially.

18 Q. Well, I mean, even leaving aside lost to
19 follow-up, just because somebody chooses not to
20 discontinue the care, does that mean they don't
21 regret it?

22 MS. NOWLIN-SOHL: Object to form; calls
23 for speculation.

24 THE WITNESS: Are you saying -- so
25 somebody who does a blocker and stays on a blocker

1 might still be experiencing regret while still on
2 that blocker?

3 Q. (BY MR. RAMER) I mean, I guess I take a
4 more advanced example of somebody who was on a
5 blocker and then took cross-sex hormones and so
6 has, short of surgery, fully medically
7 transitioned.

8 Isn't it possible for that person to
9 regret where they currently are, even though they
10 don't want to go through the process of
11 retransition?

12 MS. NOWLIN-SOHL: Object to form; calls
13 for speculation.

14 THE WITNESS: Regret where they currently
15 are or regret having made the decision to do
16 hormone therapies?

17 Q. (BY MR. RAMER) I guess what's the
18 distinction you're drawing there?

19 A. Because many people might regret where
20 they are in life, that might -- may or may not
21 involve their gender.

22 Q. Yes, sorry. For purposes of the
23 question, the regret was specific to the
24 transition.

25 MS. NOWLIN-SOHL: Same objections.

1 THE WITNESS: So it's possible. Anything
2 is possible. However, in my clinical experience,
3 it would be difficult to hide that level of
4 distress if I'm working with somebody in a
5 therapeutic context. And that might be something
6 I'd become suspicious of, even if someone is
7 trying to hide that.

8 Q. (BY MR. RAMER) And you mentioned "lost
9 to follow-up."

10 Can you just explain what that is?

11 A. So it can mean a number of different
12 things, but typically, you know, in the medical
13 world, it's -- you know, they maybe moved and
14 didn't tell us they were moving. And so we don't
15 really know where that person is.

16 It might be that they transferred care,
17 even if they didn't move but they just transferred
18 care to another hospital.

19 Maybe insurance changed and they had to
20 change providers.

21 And so people get lost to follow-up in
22 that way.

23 Q. Do you recall as you sit here the
24 percentage of participants that were lost to
25 follow-up in this study out of the Netherlands

1 that you cite?

2 A. Let me look at the citation.

3 I shouldn't have touched it. If I could
4 look at the citation form.

5 These particular studies I do not
6 remember what particular percent was lost to
7 follow-up, no.

8 Q. Do you think that particularly with
9 respect to a study that is assessing regret that
10 lost to follow-up is a significant limitation?

11 MS. NOWLIN-SOHL: Object to form.

12 THE WITNESS: In all research, you know,
13 we hope for complete data. That's often not able
14 to be obtained. You know, you do wonder about
15 the -- those who were not able to participate in
16 the study and where they are and how they feel,
17 but we can't know for sure what's going on with
18 them.

19 Q. (BY MR. RAMER) Would it surprise you to
20 know that the loss to follow-up in this study you
21 cite is over 35 percent?

22 A. That's not uncommon for research. That's
23 longitudinal.

24 Q. Do you think that high of a loss to
25 follow-up is concerning when the purpose of the

1 study is measuring regret?

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: Given that it's a pretty
4 standard number with regards to other fields and
5 other studies, it doesn't necessarily give me
6 cause for concern.

7 Q. (BY MR. RAMER) Wouldn't the conservative
8 estimate be that you have to treat that percentage
9 as individuals who regret the care?

10 MS. NOWLIN-SOHL: Object to form; calls
11 for speculation.

12 THE WITNESS: That seems like an
13 inappropriate leap to just consider that whole
14 group.

15 Statistically there might be ways of
16 applying the rates and percentages that are seen
17 in those who were able to participate and
18 translating that to the lost-to-follow-up group
19 and proportionately applying those percentages.

20 Q. (BY MR. RAMER) You don't see any
21 methodological issue with taking the .6 percent of
22 the people who were not lost to follow-up and just
23 applying that percentage to the lost-to-follow-up
24 group?

25 MS. NOWLIN-SOHL: Objection to form;

1 mischaracterizes prior testimony.

2 THE WITNESS: I mean, I'm just giving
3 that as an example of maybe something that's a
4 little more appropriate. The researchers didn't
5 choose to do that, so clearly they didn't feel
6 like that was appropriate to do, nor did they feel
7 like it was appropriate to assume that that
8 32 percent experienced regret.

9 Q. (BY MR. RAMER) Do you acknowledge that
10 that amount of lost to follow-up is a study
11 limitation of that article?

12 MS. NOWLIN-SOHL: Object to form.

13 THE WITNESS: Yeah, lost to follow-up is
14 a limitation of any article.

15 Q. (BY MR. RAMER) In your -- oh, no. On
16 this article, sorry, first page, fourth paragraph,
17 in the first sentence you refer to the fact that
18 some individuals discontinue or reverse
19 gender-affirming medical or surgical care.

20 Do you see that?

21 A. Yes.

22 Q. And then you say that fact has been,
23 quote, woefully politicized.

24 Do you see that?

25 A. Yes.

1 Q. And can you explain what you mean by
2 that?

3 A. So this concern that those who choose to
4 discontinue or reverse their gender affirmation or
5 interventions are seen as a reason not to do this
6 work, even though that percentage is low, and even
7 though there are many more who benefit from such
8 interventions. And so the few are being used,
9 unfortunately, to make a case that has a lot of
10 limitations.

11 Q. And so you think that these individuals
12 are being used; is that what you said?

13 MS. NOWLIN-SOHL: Object to form;
14 mischaracterizes prior testimony.

15 THE WITNESS: I think the data on these
16 individuals is being used to make a case that has
17 limitations.

18 Q. (BY MR. RAMER) Can you explain what you
19 mean by "a case that has limitations"?

20 A. So again, those who discontinue don't
21 necessarily regret and haven't necessarily
22 detransitioned. So many sought medical
23 intervention because they're happy and have met
24 their transition goals.

25 They still identify as gender diverse,

1 and so sometimes those numbers are used to say
2 that many discontinue or many regret their
3 decisions, but that's not necessarily the case.

4 Q. Do you think we know the percentage that
5 will ultimately discontinue or regret
6 gender-affirming medical or surgical care?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: We have estimates.

9 Q. (BY MR. RAMER) And what estimates are
10 you referring to?

11 A. So, you know, some of the citations are
12 included in my declaration talk about the percents
13 in those studies who detransition or choose to
14 stop medical care.

15 Q. Do you agree that in the last ten years,
16 there has been a substantial increase in the
17 number of individuals under 18 who have been
18 diagnosed with gender dysphoria?

19 A. So in the last ten years, I know that the
20 instance of gender -- excuse me.

21 There has been a rise in the number of
22 individuals who will -- who endorse that they are
23 transgender or gender diverse, and that's, you
24 know -- like, the Williams study is .6 percent, .7
25 percent to 1.4 percent over the last four years --

1 sorry, ten years.

2 Q. When you say "a rise in the number of
3 individuals who will endorse that they are
4 transgender or gender diverse," what did you mean
5 by that?

6 A. So specifically you asked me about
7 individuals who are diagnosed with gender
8 dysphoria, and I don't know what the estimates are
9 in terms of the increase in gender dysphoria.

10 All I know is the increase in the number
11 of people who will self-declare that they are
12 transgender or gender diverse.

13 Q. So you do not know whether the rate --
14 let me rephrase.

15 You do not know whether the number of
16 minors diagnosed with gender dysphoria in the last
17 ten years has significantly increased?

18 A. I can assume because the number of those
19 who are self-identifying as transgender or gender
20 diverse has increased, that the number of people
21 who are getting diagnosed with gender dysphoria is
22 also increasing.

23 Q. But you're saying that would be an
24 assumption on your part?

25 A. Yeah. I don't know of any, like,

1 specific rates or, you know, numbers.

2 Q. Do you agree that the majority of
3 individuals under 18 who are currently being
4 diagnosed with gender dysphoria in the last three
5 years are natal females or females assigned at
6 birth?

7 MS. NOWLIN-SOHL: Object to form.

8 THE WITNESS: Again, I don't know of any
9 data that's looking at differential rates in terms
10 of gender -- like, sex ratio in the diagnosis of
11 gender dysphoria. In our clinic it's 50/50, so...

12 Q. (BY MR. RAMER) And you do not know the
13 ratio outside of your clinic; is that right?

14 A. I don't know if there are reports of
15 gender -- a sex ratio difference.

16 Q. In the same paragraph --

17 MR. RAMER: Actually we've been going for
18 a little over an hour. Do you just want to take a
19 quick break?

20 MS. NOWLIN-SOHL: Yeah, let's take five.

21 MR. RAMER: Okay.

22 THE VIDEOGRAPHER: All right. So the
23 time is 5:26 p.m. Mountain time, and we are off
24 the record.

25 (Break taken from 5:26 p.m. to 5:36 p.m.)

1 THE VIDEOGRAPHER: So we are recording.
2 The time is 5:36 p.m., and we are back on the
3 record.

4 Q. (BY MR. RAMER) Dr. Brady, I'd like to
5 stick with your article we were previously
6 discussing. And specifically I'd like to go to
7 page 2 and the last paragraph on the page and the
8 first sentence of that paragraph.

9 Do you see where you say, "The field of
10 gender medicine has historically focused on binary
11 and static conceptualization of gender identity"?

12 A. Yes.

13 Q. Do you think the DSM-5 focuses on static
14 conceptualizations of gender identity?

15 A. So DSM-4 certainly did. I think
16 improvements were made in DSM-5 to be more
17 inclusive such as criteria that we were talking
18 about earlier.

19 Q. Do you think there are still improvements
20 to be made with respect to the eventual DSM-6?

21 MS. NOWLIN-SOHL: Object to form.

22 THE WITNESS: In every iteration of DSM
23 they're always integrating new research and new
24 understanding, so every diagnosis gets a facelift
25 with the next DSM.

1 Q. (BY MR. RAMER) Do you think there are
2 improvements that can be made in the DSM-5 with
3 respect to static conceptualizations of gender
4 identity?

5 MS. NOWLIN-SOHL: Object to form.

6 THE WITNESS: I think the current DSM
7 criteria capture gender dysphoria well.

8 Q. (BY MR. RAMER) Same page, the top
9 paragraph, I think it's the third and fourth
10 sentences, you refer to a nocebo effect.

11 Can you just explain what you're saying
12 in those two sentences?

13 A. Sure. Let me find it. I'm sorry. You
14 said second page, first paragraph.

15 Q. Second page, first paragraph, and I think
16 it's the third and fourth sentences. The third
17 sentence looks like it starts with "For example."

18 A. Okay. It's difficult for -- I can try.
19 I didn't write that sentence. I have two
20 coauthors.

21 But would you want me to guess what it
22 is?

23 Q. Yeah, I'd just be curious if you -- you
24 know, to the extent you understand that, what it's
25 saying.

1 A. Yeah. So a placebo effect would be, you
2 know, administering a sugar pill or something that
3 we know doesn't have an effect and feeling as
4 though it does have an effect.

5 So in this case I think "nocebo" would
6 mean like knowing that they're without something
7 feels like it's having an effect when maybe it's
8 not.

9 So having lower testosterone -- just
10 knowing that your testosterone is lower might make
11 you feel like you have less energy when you
12 actually might not have less energy.

13 Q. Do you know which one of your coauthors
14 wrote those sentences?

15 A. I believe it's Dr. Turban.

16 Q. I think going back to the first page, and
17 in the fourth paragraph, second sentence, you
18 refer to "dynamic gender-affirming needs."

19 Do you see that?

20 A. Yes.

21 Q. Could you explain what you mean by
22 "dynamic gender-affirming needs"?

23 A. If you'll just give me a minute, I'm
24 going to read the whole sentence.

25 Q. Please, go ahead.

1 A. So in this case, we're referring to --
2 so, for example, a nonbinary-identifying
3 individual, let's say designated female nonbinary
4 identifying, might want some masculinization from
5 testosterone but not full masculinization. And
6 they may even from the outset know that they do
7 not want to stay on testosterone indefinitely.
8 And so they are going to be on testosterone until
9 they've acquired some of the changes but not all
10 of the changes and then choose to discontinue that
11 intentionally.

12 And so that's sort of what we were
13 considering to be, like, of a dynamic need because
14 traditionally we think of you start on hormone
15 therapies and you stay on hormone therapies. But
16 there are kind of -- we're understanding more and
17 more that there are some more dynamic or maybe
18 non-traditional ways of doing gender-affirming
19 medical intervention.

20 Q. Were you talking about examples, though,
21 where the individual knows from the outset what
22 treatment they're desiring?

23 A. In some cases people know, you know, that
24 "I only want to be on testosterone for however
25 long it takes to achieve X, Y, Z."

1 For other folks it's something that
2 evolves over time.

3 And while they're on testosterone, if
4 they become comfortable with the changes and are
5 happy with the changes, they may choose to
6 discontinue at that time too, so either case.

7 Q. For individuals whose gender identity
8 changes at some point, do they still satisfy the
9 criteria for gender dysphoria under the DSM-5?

10 MS. NOWLIN-SOHL: Object to form.

11 THE WITNESS: It depends. Because again,
12 they can still identify as gender diverse even
13 though their identity has evolved or changed, and
14 they still might meet criteria for gender
15 dysphoria.

16 Q. (BY MR. RAMER) So -- and maybe it's
17 easiest if we can go back to your declaration to
18 page 6, paragraph 19 and just return to 19A where
19 we're talking about the marked incongruence and
20 the six months' duration.

21 And I guess I'm struggling to understand
22 how if the gender -- if someone's gender identity
23 is changing, how they could show a marked
24 incongruence of six months' duration.

25 MS. NOWLIN-SOHL: Is there a question

1 there?

2 Q. (BY MR. RAMER) Can you explain that?

3 MS. NOWLIN-SOHL: Object to form.

4 THE WITNESS: So a lot of things can
5 qualify as an incongruence. So in the case of,
6 again, let's say again a nonbinary individual who
7 later identifies as transmasculine. So their
8 identity has evolved and changed, but both of
9 those identities were incongruent with the
10 assigned sex at birth.

11 And so we don't necessarily need six
12 months' duration in the new identity to meet
13 criteria for gender dysphoria.

14 Q. (BY MR. RAMER) So basically all
15 incongruences are created equal for purposes of
16 the DSM-5 diagnostic criteria; is that right?

17 MS. NOWLIN-SOHL: Object to form;
18 mischaracterizes prior testimony.

19 THE WITNESS: In terms of criterion A and
20 1 where it states "marked incongruence," it can be
21 any identity, any donor identity that's not
22 congruent with assigned sex.

23 Q. (BY MR. RAMER) And so your gender
24 identity could be changing every week, but so long
25 as at no point during a six-month period your

1 gender identity is congruent with your assigned
2 gender, you still fall within DSM-5 diagnostic
3 criteria in paragraph A?

4 MS. NOWLIN-SOHL: Object to form;
5 mischaracterizes prior testimony.

6 THE WITNESS: If they have other criteria
7 and needs, yes.

8 Q. (BY MR. RAMER) So the duration part of
9 paragraph A here, the only thing that matters is
10 that at no point during the six months was your
11 gender identity congruent with your assigned
12 gender; is that fair?

13 MS. NOWLIN-SOHL: Object to form;
14 argumentative, mischaracterizes prior testimony,
15 asked and answered.

16 THE WITNESS: Yes.

17 Q. (BY MR. RAMER) Have you ever had a
18 patient whose gender identity goes from being --
19 let me rephrase.

20 Have you ever had a patient who was
21 gender-fluid and as part of the fluidity at times
22 would have a gender identity that is consistent
23 with the individual's assigned gender?

24 A. So I've not had a case -- again,
25 gender-fluid is a more rare identity, so that's

1 only a small subset of my patients.

2 But I've not had clinically a patient who
3 part of the fluid identity involved their cis --
4 like a cisgender identity.

5 Q. Have you ever heard of that, though?

6 A. Not to my knowledge.

7 Q. I think I only have a few more questions,
8 though it potentially depends on the answers to
9 the questions.

10 But I just want to clarify a few things
11 from -- for the record, which is with respect to
12 the Endocrine Society guidelines, you do not
13 recall ever reading the systematic reviews that
14 those guidelines commissioned, correct?

15 A. Correct.

16 Q. With respect to the WPATH guidelines, you
17 do not recall ever reading the systematic review
18 that those guidelines commissioned, correct?

19 MS. NOWLIN-SOHL: Object to form.

20 THE WITNESS: Only as it is described in
21 SOC-8, so the summarization of the systematic
22 review.

23 Q. (BY MR. RAMER) So in other words you've
24 not read the separate systematic review; is that
25 right?

1 A. Correct.

2 MS. NOWLIN-SOHL: Object to form.

3 THE WITNESS: Correct.

4 Q. (BY MR. RAMER) Have you read any
5 publication from a European health authority
6 regarding the treatment for gender dysphoria?

7 A. No.

8 MR. RAMER: Okay. I think that's all
9 that I have. Thank you very much, Dr. Brady. At
10 this point I'm going to turn it over to your
11 counsel.

12 And, Li, I understand if you need a few
13 minutes off the record to prep, but I'll turn
14 things over to you.

15 MS. NOWLIN-SOHL: Yeah. I know we just
16 took a break. Do you mind if we just take ten
17 minutes so I can speak with my co-counsel?

18 MR. RAMER: Yeah, not a problem at all.

19 MS. NOWLIN-SOHL: Okay. Thank you.

20 THE VIDEOGRAPHER: Okay. So the time is
21 5:50 p.m. Mountain time, and we are off the
22 record.

23 (Break taken from 5:50 p.m. to 5:56 p.m.)

24 THE VIDEOGRAPHER: All right. So we are
25 recording. The time is 5:56 p.m. Mountain time,

1 and we are back on the record.

2 MS. NOWLIN-SOHL: Okay. I have no
3 questions.

4 MR. RAMER: Well, great. Well, that's it
5 for me. Thank you, Dr. Brady, for your time.

6 THE WITNESS: Thank you.

7 THE VIDEOGRAPHER: Okay. Then this
8 concludes our video deposition with Dr. Christine
9 Brady. It is August 31, 2023. The time is
10 5:56 p.m. Mountain time, and we are off the
11 record.

12
13 (Whereupon the deposition was concluded at 5:56 p.m.)

14 *****

15 (Signature requested.)
16
17
18
19
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21
22
23
24
25

Christine Brady, Ph.D. August 31, 2023

VERIFICATION

STATE OF _____)

)

COUNTY OF _____)

I, CHRISTINE BRADY, Ph.D., being first duly sworn on my oath, depose and say:

That I am the witness named in the foregoing deposition taken the 31st day of August, 2023, consisting of pages numbered 1 to 204, inclusive; that I have read the said deposition and know the contents thereof; that the questions contained therein were propounded to me; the answers to said questions were given by me, and that the answers as contained therein (or as corrected by me therein) are true and correct.

Corrections Made: Yes_____ No_____

CHRISTINE BRADY, Ph.D.

Subscribed and sworn to before me this _____ day of _____, 2023, at _____, Idaho.

Notary Public for Idaho

Residing at _____, Idaho

My commission expires: _____.

Page 205

Christine Brady, Ph.D. August 31, 2023

REPORTER'S CERTIFICATE

STATE OF IDAHO)
)
COUNTY OF ADA)

I, Amy E. Simmons, Certified Shorthand Reporter and
Notary Public in and for the State of Idaho, do hereby
certify:

That prior to being examined, the witness named in
the foregoing deposition was by me duly sworn to testify
to the truth, the whole truth, and nothing but the truth;

That said deposition was taken down by me in
shorthand at the time and place therein named and
thereafter reduced to typewriting under my direction, and
that the foregoing transcript contains a full, true, and
verbatim record of said deposition.

I further certify that I have no interest in the
event of the action.

WITNESS my hand and seal this 31st day of August,
2023.



AMY E. SIMMONS
ID CSR No. 685
CA CSR No. 14453
WA CSR No. 22012915
OR CSR No. 22-009
RDR, CRR, CRC,
and Notary Public

My commission expires: 6/13/28.

Page 206

[& - 37]

&	12:20 90:16,18	98:20 162:16	212.549.2584
& 2:6,21 3:3,12 5:16 6:2,7,23	12:44 105:22 105:24	169:12,16,19 195:7	2:18
0	13 73:4 161:13	20 4:20 78:24	22 19:17 153:6 153:24 174:20
00269 1:4 5:11	134 4:16	149:6 168:20	22-009 2:8 206:23
1	14 82:22 84:24 94:17 129:20 140:21 158:4	170:10,25 171:16 172:2,9 175:13 179:18	22012915 2:8 206:23
1 4:10,15 12:17 12:22 59:1,22 131:1 162:15 200:20 205:9	14453 206:22	200 3:21	23 19:17
1,000 19:22	14553 2:7	20006 2:22	25 19:16 23:14 24:3
1.4 192:25	15 157:2	20036 3:13	29 128:23
10 4:11 23:7 49:20 128:23	1523 3:13	2015 129:19	29423 206:20
100 22:5,16 131:11	16 4:12 143:12 144:2 146:9,18	2017 129:16	3
10004 2:18	168 4:19	202.220.9621 3:14	3 4:13,24 63:8 71:5 73:4 94:16 98:13 162:17
10019 3:4	17 171:22	202.539.6620 2:23	30 28:2 149:12 168:2
1050 2:22	17th 2:22	2020 13:13,22	31 1:20 5:5 204:9
10:06 2:11 5:5	18 4:12,20 22:24 23:1,3,6 23:11 38:25 50:7 119:24 120:1,7,10 121:3 156:19 156:23 168:20 171:16 172:19 192:17 194:3	2022 168:23	3191 3:21
11 109:11 150:11	183 4:23	2023 1:20 2:10 5:5 204:9 205:8,22 206:19	31st 2:10 205:8 206:18
11:05 49:24 50:1	19 199:18	204 205:9	32 150:11 190:8
11:11 50:1,3	19a 86:22 199:18	208.287.7700 3:22	33 4:18 109:11 154:22
12 4:10 43:8 71:5,5 109:13 109:14 126:22 174:5	1:23 1:4 5:11	208.334.2400 3:17	34 126:23
123 4:15	2	208.742.6789 3:8	35 43:9,12 174:5 188:21
125 2:17	2 4:12 13:9 16:11,14,16 22:13 63:15	208.854.8073 3:18	36 115:9
1285 3:4		21 96:2	37 161:13
12:14 90:14,16		212.373.3000 3:5	

[39 - acknowledge]

39 140:22 3:14 105:24 106:1	200:16 201:2 50/50 28:12,17 28:21 29:7 180:15 194:11 5:26 194:23,25 5:36 194:25 195:2 5:50 203:21,23 5:56 203:23,25 204:10,13	165:23 173:15 202:21 8's 117:19 801 2:22 812 3:7 833 134:13 83702 3:8,22 83720 3:16,17	153:19 155:22 161:24 165:2 172:24 173:3 173:14,15,23 173:25 174:19 188:13,15 189:17 above 2:12 120:10 129:1 absolutely 169:8 absorb 155:22 161:24 academic 152:24 academically 78:17 accepted 129:2 130:10 153:18 accessories 91:18 accordance 136:13 165:6 165:10 account 53:3 142:15 accounted 99:15 accurate 22:19 22:22 69:21 achieve 50:13 198:25 acknowledge 190:9
4	6	9	
4 4:15 57:6 58:22 96:13,15 96:20,24 97:13 100:15,20 101:6 123:2,5 131:2 195:15 40 158:4 43 157:3 4:17 150:4,6 4:23 150:6,8	6 4:5,19 50:8 52:23 57:7 59:19 65:5 66:23 69:1,2 86:21 168:4,7 175:12 179:17 179:18 189:21 192:24 195:20 199:18 6/13/28 206:25 685 2:7 206:22	90 35:10 98 4:13 a a.m. 2:11 5:5 49:24 50:1,1,3 a1 59:9 a2 63:23 64:2 a6 65:5 69:9 70:21 aaron 3:16 6:9 abilities 102:11 110:23 161:25 ability 110:2,5 111:4 118:13 142:18 155:7 155:10,11 able 27:7 48:5 60:25 69:24 70:25 84:6 105:3,11 110:16 111:19 114:6 117:21 118:25 137:5 140:10 143:6 152:17 153:17	
5	7		
5 4:13,16,22 38:25 39:14 41:23 44:5 50:6 51:22 52:20 54:23 55:3,6,11,25 56:17 57:11 60:3,16 65:2 66:7 96:23,25 97:10,14,15,17 98:15 99:7,11 99:16,23 100:10,17,21 101:1 106:4,13 106:15,21 120:10 123:3 132:23 134:4,7 195:13,16 196:2 199:9	7 4:14,23 22:12 96:3 151:24 174:20 183:25 192:24 70 21:22,23 28:3 75 25:1 8 8 127:8,11 129:13 137:12 137:20 165:7		

[aclu - al]

aclu 5:23,24 16:23 aclu.org 2:19 2:19 acquired 138:8 198:9 act 170:15 acting 170:14 170:15 171:8,9 action 206:17 actions 32:25 33:12 active 21:20 activities 33:3 50:21 52:7,10 52:24 53:3,7 54:7,11,21 55:8,12,19 61:14 activity 52:4 54:15 55:15 56:16,23,23,25 57:3 60:5,15 62:15 actual 94:15 actually 20:20 28:11 30:25 109:12 113:3 185:10 194:17 197:12 ada 1:13 2:9 3:20 206:3 adacounty.id.... 3:23	addition 53:5 132:15 additionally 154:14 address 43:18 45:7,24 46:4,6 addresses 97:12 addressing 47:6 adds 41:15 adequately 184:25 adhd 112:21 113:1 116:9 139:20 administering 197:2 admitted 6:8 adolescence 147:21,23 158:9 175:23 176:4,10 177:1 177:6 178:8 180:1,9 adolescent 4:21 11:18 18:21 26:9,21 27:25 31:8 70:18 108:3 150:17 155:16 161:19 162:4,7 168:21 adolescent's 150:16	adolescents 26:16 27:2 65:3 109:4,8 147:5,9 148:6 148:16,25 149:3 173:5,23 173:25 175:15 176:11,14,22 176:24 184:16 184:23 adopting 33:5 adoption 162:18 adult 23:24 adulthood 120:14 adults 19:16 22:25 23:2,14 40:11 45:15 48:21 65:3 175:15 176:11 advanced 186:4 advice 25:9,10 affect 103:15 103:22 104:15 105:1 107:25 108:3 affirmation 191:4 affirmed 33:6 affirming 4:24 34:2 106:5,16 107:3 129:12 133:2,15 141:1	141:6,8,12,23 142:8,22 143:8 143:15 179:9 183:22 184:19 190:19 192:6 197:18,22 198:18 age 19:11 22:24 23:1,6,11 28:13 35:20 70:7,9,17 120:1 149:10 153:5 170:10 170:25 172:9 aged 4:20 168:20 177:1 agender 29:18 67:18,23,24 68:7 aggregation 145:23 ago 16:10 28:16 agree 164:16 172:1,10,12 192:15 194:2 ahead 45:4 171:19 172:5 181:18 197:25 aimed 45:21 aiming 46:22 aisle 53:13,15 aisles 53:19,21 al 5:10,10

[alerts - asked]

alerts 131:22 131:25 aligned 89:6 aligning 178:3 alleviate 35:2 alleviating 46:17,23 48:2 alliance 83:25 allow 158:11 159:16 alter 158:11 alternative 66:24 alters 85:7 amassed 138:13 american 2:16 4:18,21 14:12 14:15 129:11 130:11,23 168:12,14 americas 3:4 amount 125:21 190:10 amy 1:25 2:6 5:16 51:12 98:1 146:11 206:5,21 analyses 146:24 analysis 163:17 analyze 129:22 analyzed 129:3 130:3,6 167:4	analyzes 109:2 109:6 analyzing 178:5 androgenous 68:11 91:24 androgyny 86:5 91:4 anger 65:25 66:3 annual 13:22 answer 7:3 8:2 8:3,6 17:9,10 51:4 55:13 56:14 57:17 62:1 64:1 104:12 107:8 108:17 142:5 147:1 163:1 176:21 181:8 answered 53:9 60:7,18 61:11 62:7 161:10 172:15 201:15 answering 7:15 answers 108:14 124:12 202:8 205:12,13 anxiety 35:2 48:24 anybody 34:11 34:12 61:20 114:6 anyway 24:2	apa 4:19 129:17,25 134:9,23 135:13 136:20 168:18 apart 61:9 67:14 69:7 appear 12:24 16:18 17:18 108:22 appearances 2:15 3:1 5:19 appeared 6:10 applies 100:16 apply 175:22 176:2 applying 189:16,19,23 appointment 37:10,15 appreciate 22:4 approached 173:12 appropriate 106:10 161:18 161:23 162:3 190:4,6,7 approximately 20:3 archetypes 75:25 area 15:24 31:20 33:22 124:1 131:18 151:19 158:23	areas 33:24 argumentative 59:3,16 66:19 95:12 103:4 153:15 201:14 arose 175:23 176:3 arrives 97:23 183:12,18 art 54:12,14 55:14 article 97:9,17 98:15,17 100:3 100:8,12,15,16 100:25 133:6 134:9 145:9 146:10,14,15 183:20 184:2 190:11,14,16 195:5 articles 9:23 143:11,13,18 144:1,8,10,15 144:18,20,22 146:17 articulated 106:15 asd 114:19 149:3 asian 81:11,11 82:5 aside 151:9 185:18 asked 7:16 14:3 17:5,13 18:17

[asked - background]

53:8 60:6,17 61:10 62:6 107:23 142:3 148:17,18 161:9 172:14 193:6 201:15 asking 9:19 26:17 37:21 38:7,8 52:22 55:10 71:6,7 74:11 84:20 114:14 133:7 136:2,3 139:18 182:17,19 aspect 77:23 126:3 aspects 77:14 125:11 aspirational 135:20 136:7 assertion 175:21 assess 64:8 98:24 99:6 110:16 155:22 173:21 assessed 99:10 assessing 188:9 assessment 99:14 111:15 115:7 116:18 116:23 117:9 118:23 127:1,3 127:10,18,20	assigned 66:25 86:7,24 87:8 87:19 88:17,18 89:17,20 94:5 124:19,23 140:4,6 157:12 157:14 159:6 159:20 166:6 166:14 175:16 175:18 176:16 177:10,20 178:3 179:21 180:14 181:19 194:5 200:10 200:22 201:1 201:11,23 associate 61:22 associated 2:6 5:16 51:2 54:2 64:24,25 150:15 160:2 160:13 162:2 associating 62:18 association 4:18,21 14:13 14:16 104:3 129:11 130:23 168:12,15 associations 129:6 assume 7:7,14 63:25 68:25 184:8 190:7 193:18	assuming 145:9 assumption 193:24 attempt 7:13 attend 63:20 attended 12:5 attorney 1:11 1:12 2:5 3:15 6:9 august 1:20 2:10 5:5 168:23 204:9 205:8 206:18 authentically 35:1 author 13:19 146:11 183:20 authorities 146:2 authority 95:4 203:5 authors 136:4 146:13 autism 113:7,9 113:13,15 116:9 autonomy 135:17 available 129:3 130:4,6 139:13 162:25 ave 3:13 avenue 3:4 averaging 145:23	avoid 160:9,14 avoiding 142:10 award 13:14,17 awards 13:11 aware 76:5 103:25 104:18 108:24 109:2,6 134:23 135:3,4 147:10,11,15 148:4,8,14 170:23 171:4 177:12 awareness 174:14 b b 4:8 39:23,24 40:3 143:5,5 bachelor's 11:22,24 back 31:11 50:4,6 84:23 86:20 90:9,19 106:2 114:23 134:5 136:23 143:10 146:8,9 146:15 150:9 155:24 163:16 166:25 176:7 181:19 183:7 195:2 197:16 199:17 204:1 background 11:22 12:8 37:7

[backing - bodily]

backing 154:2	behavior 121:8	bennetts 1:11	bit 19:1 23:10
ball 61:16,19	121:12,13,18	3:19	71:22 106:13
61:20,20 62:5	139:16 170:13	best 7:21,22	black 53:21
62:14,17	171:7,19 172:5	44:21 142:17	64:15
ballpark 149:6	behavioral	143:23 144:1,5	blockade 30:11
bank 163:12	32:19 116:1	161:25 165:23	149:2 151:15
barrier 104:9	122:14 170:12	better 38:22	151:18,22
based 44:6,9	171:6	71:1 81:8	152:2,6 159:11
89:17 93:4	behaviorally	118:1,11	165:16 180:11
96:24 113:14	65:15 69:14	125:23	181:7
114:22 122:12	115:23	beyond 148:2	blocked 164:22
123:15,17	behaviors	164:13	blocker 151:6
127:2,18,25	120:11 121:7	bill 128:6,11	185:25,25
128:15 131:3	121:20	binary 29:13	186:2,5
132:7 137:13	belief 74:7,10	29:15 87:2,4	blockers 30:2
138:3,7,16,17	74:13	89:7 195:10	36:12 72:13
138:19,22	believe 36:10	bioethicist	117:20 148:5
139:3 152:17	53:5 54:19	10:21	148:15 150:14
basically	61:19 63:9	biological	151:1,6 152:8
160:16 168:17	66:5 70:6	74:17,19,20,25	152:19,23
200:14	90:20 95:5	76:10,15,17	156:20 158:8
basis 102:6	100:1,4 124:21	77:1 78:25	158:16,25
143:13 144:11	142:1,18 146:4	biologically	164:17 165:4
baughman	154:3 157:6	79:9	166:20 179:2
2:21 6:2	164:9 166:4	biology 74:23	185:6
bears 172:20	167:9 172:7	79:19	blood 27:10
beat 98:2	180:2,15	birth 86:7	blue 53:21
beginning	197:15	87:19 88:17	58:12,13,14,16
25:15 27:18	believes 78:14	124:19 159:6	59:20 61:9
116:17 133:12	benefit 49:8	166:6,14	64:15
begins 27:13	191:7	175:17,18	blush 110:11
164:17	benefits 48:20	176:16 177:10	board 14:4
behalf 5:20,23	107:10,17	178:3 179:21	84:22
6:2,5	155:13,19	180:14 194:6	bodily 77:7
	160:22	200:10	

[body - case]

body 74:2 77:4 86:9 110:10,13 158:23 159:8,8 159:11 boiling 58:25 boise 3:8,17,22 bold 134:15 borderline 4:15 119:11 120:17 120:18,21 122:13 123:24 born 67:7 121:10 bottom 15:9 39:22 154:19 box 3:16 boy 51:6,7,23 51:24 53:13,15 56:23,25 57:2 57:3 58:19 59:21,22,24,25 60:11 61:23 62:18 boys 52:18 53:11,14,18,23 54:8 66:3 70:16,17 114:20 bpd 119:14,16 119:19,23 120:7 121:1,10 121:14,15,24 122:11 123:4 124:4,11,14,18 125:1,7,15	brady 1:19 2:1 2:4 4:4,11,12 5:8 6:15,22 8:10 10:1,8 12:17,23 16:14 16:17 50:5 56:22 90:20 98:14 106:3 123:2 132:23 150:10 168:4 183:19 195:4 203:9 204:5,9 205:5,19 brain 73:23 74:1,3 170:8 170:10,11,24 171:5,17,20,22 172:3,23 brains 171:15 172:7 break 8:6,7 49:15,18 50:1 90:6,10,16 105:19,24 107:20 150:1,6 194:19,25 203:16,23 breaks 8:4 breast 154:11 brief 7:9 briefly 11:15 broad 2:17 broadly 121:18 building 61:14	button 63:22 64:12 c c 5:1 143:5 154:22 ca 206:22 california 2:7 call 12:17 50:7 86:6 109:15 128:10,12 called 122:14 179:9 calls 17:7 88:19 130:19 181:25 183:1 185:22 186:12 189:10 capacities 1:14 capacity 1:10 1:12 154:23 155:1,9,17 156:3,15,19,24 170:12 171:6 173:2,16 capture 33:21 196:7 captures 185:1 care 23:11,19 23:20 35:19,24 81:23 94:13 106:5,17 129:12 130:17 135:16 136:10 136:13,20 141:12,23 142:9,22 143:8	143:16 161:22 180:20,21 184:19,23 185:20 187:16 187:18 189:9 190:19 192:6 192:14 career 79:6 caregivers 35:25 37:7 40:10 45:15 69:13 161:19 162:7 carries 173:7 carry 20:22 cars 58:18 61:13 case 1:4 5:10 6:24 8:18,22 8:23 16:19,22 17:14 22:20 26:4 31:3 32:8 41:13 43:17 47:11 50:16 51:2 68:18 69:4 74:3 88:14 108:9 110:15 113:3 114:18 142:11 164:22 166:13 167:10 173:17 181:6 183:6 191:9,16,19 192:3 197:5 198:1 199:6

[case - cited]

200:5 201:24 caseload 21:21 cases 13:24 58:11,17 60:20 60:24 85:11 109:24 119:25 120:2 166:18 167:6 198:23 cass 146:6 cast 182:18 categories 76:20 categorize 75:8 83:11 categorized 62:21 categorizes 57:21 category 121:19 173:5 176:13 177:5,8 causation 141:16,17,20 142:12,19 cause 142:4,7 142:11 189:6 causes 38:3 84:2 141:12,23 142:9,22 causing 39:20 central 152:8 certain 34:1,20 34:22 65:15 83:24 128:7	certainly 34:3 52:8 69:12 104:8 182:2 195:15 certificate 206:1 certified 14:4 206:5 certify 206:7,16 challenging 114:16,19,24 115:19,22,24 116:2 117:11 change 83:5,20 84:2,24 142:16 187:20 changed 83:1 104:8 158:2 187:19 199:13 200:8 changes 44:23 93:3 150:16 154:20 157:11 182:7 198:9,10 199:4,5,8 changing 33:1 93:12 115:10 199:23 200:24 character 170:20 characteristic 63:3 157:9 158:1 characteristics 148:7,16 149:1	157:4 158:11 159:20 characterize 93:8 charged 170:16 check 118:14 146:24 182:8 chest 157:5,7 157:18 158:19 159:1,3,5 child 11:2,12 12:2 26:9,16 26:20 30:16 31:5 44:21 62:11 152:1 160:3 164:25 166:16 child's 25:11 36:1 childhood 27:25 40:13 51:16 63:1 147:21 176:9 177:1 180:1,8 180:11 children 26:25 39:2,5 55:7 99:3 167:6 children's 12:11,14,15 choice 34:4 44:17 choose 32:25 33:12 83:11 91:16,20 151:5	190:5 191:3 192:13 198:10 199:5 chooses 185:19 choosing 162:22 chose 184:18 184:23 185:5 chris 3:24 5:15 christine 1:19 2:1,4 4:4,10,12 5:8 6:15 204:8 205:5,19 circumstances 23:15 cis 126:20 202:3 cisgender 178:2 202:4 citation 96:15 97:13 100:20 100:21 101:6 188:2,4 citations 9:21 134:18 170:3 171:13 192:11 cite 18:1 96:12 97:9,9 98:15 134:9 143:20 144:22 146:10 188:1,21 cited 9:24 98:18 144:12 144:19,20

[civil - commissioned]

civil 2:16	clinic's 19:20	139:17,19	combine
clarifies 128:20	19:25	cognitive 10:23	141:21
clarify 7:13	clinical 10:5	11:3,12 114:1	combining
17:10 111:5	12:6 22:16	122:22 152:24	133:24 134:1
142:21 202:10	33:15 37:25	153:21 154:23	come 16:21
clarity 109:20	38:4 40:9	155:8,16 156:2	25:4,7 34:21
110:16,18	114:12 130:16	156:19,24	34:25 80:5
111:11	141:18,22	173:16	90:9 107:10,17
class 4:21	152:22 185:4	coherent 93:5	128:18 145:6
168:21	187:2	collaborate	151:5 157:11
clause 171:12	clinically 29:5	32:17	165:1 174:13
clean 7:24	52:2 68:16,21	collaborative	175:18 176:15
140:10	104:6,21 105:3	32:17	177:9
clear 142:8	108:8,22	collateral	comes 31:24
171:15	141:14 143:4,4	118:24	135:17 139:13
clearly 110:23	143:7 153:16	collecting	comfortable
190:5	202:2	163:12	33:9 183:7
clerk 3:3	clinician 40:5	collective 6:5	199:4
clinic 11:18	158:7	college 23:17	coming 12:20
18:7,10,13,14	clinics 24:20	23:21 153:18	21:2 24:19,24
18:17,19,21,23	31:15 153:9	153:18	30:14,19,21
19:2,11,17,19	clitoral 154:19	color 58:12,14	32:3 33:23
20:5,12 21:3	closely 100:13	58:16 64:13	35:10 45:8
23:12 24:6,24	108:25	114:1	105:17 119:3
25:4,8 28:2,10	closer 23:20	colorado 98:9	180:24 183:7
30:14 31:2,24	closeted 34:24	colors 54:1,3	commencing
32:3 33:22	clothing 33:5	64:16,20,23,24	2:11
35:8,20 106:11	63:16,17 64:3	column 98:21	comment 68:18
128:5 131:11	64:11,13,14	134:15 169:13	commentary
149:11,17	91:17 92:19	169:14,17,19	16:7
167:12 178:11	cloud 155:6	169:22 170:1	commission
178:18 179:1,4	coauthors	171:11	1:14 3:11
182:4,5,18	196:20 197:13	combination	205:25 206:25
183:8 185:16	code 1:14 3:11	74:22 137:14	commissioned
194:11,13	135:14 136:19		202:14,18

[committed - considerations]

committed 135:13	complex 36:4 115:20 117:10	conclusion 27:5 130:20 143:14	201:1,11
committee 135:25	156:10,12	conclusions 134:3	conjunction 136:18
common 27:22 27:25 42:14 76:1 111:24 113:21 124:15 124:18 153:8	complexity 111:15 156:7	condition 95:7 114:10	connelly 16:11
commonly 64:19 68:2 124:23 175:10	complicated 31:19	conditions 109:17,19 110:17,20 111:10 140:5	cons 160:22 163:1
communicating 45:14	component 42:13 74:19	conduct 49:11 115:24 135:14 136:19 139:1,6	conscientious... 170:19
communication 17:8 24:6,11	components 77:1	conducted 101:2 127:10 127:12 136:25 143:5 146:1 153:1	conscious 85:4
communicati... 17:12	comprehend 155:10 161:25	consequence 152:6 155:14 155:20 170:14 171:8,19 172:5	consent 102:12 111:4,6 117:22 155:11,17 156:20,24 172:20 173:6 173:17 174:1
community 31:22 32:16,20 33:25 120:12 121:1 129:2 130:11,12	conceptualiz... 195:11	conducting 40:9 127:3,19	consequences 152:6 155:14 155:20 170:14 171:8,19 172:5
comorbid 32:13 109:25	conceptualiz... 195:14 196:3	conference 13:20,22	conservative 189:7
companies 163:14	concern 117:24 148:9,18,23 172:18 173:4 189:6 191:3	confidence 123:17	consider 10:1,4 11:8,11,14 21:13,14 27:5 36:18,20,22 46:12 65:14 74:9 78:5 79:7 123:19 145:1 145:18 170:14 171:8 189:13
company 2:6 163:16	concerning 188:25	confirm 43:11 60:2 69:19 72:24 146:16	consideration 155:25
compare 26:4	concerns 96:14 96:17	confirming 37:20 55:13	considerations 127:5
compared 101:6	concluded 41:8 141:11,22 142:8 204:13	conflict 45:9	
complete 188:13	concludes 204:8	confused 86:11	
		congruence 58:3 83:13,15	
		congruent 71:11 200:22	

[considered - course]

considered 56:5 57:19 115:5,6 116:2 124:24 125:5 140:16	continued 3:1 170:17 180:24	cope 162:21	126:25 127:6
considering 47:11 79:6 150:19 198:13	continues 170:10,24	copied 45:22 122:21	128:25 129:7 140:23 141:2
consistent 25:17 33:6 65:19 69:6 70:16 201:22	continuing 20:23 131:12 171:16 172:2 172:24	copy 12:24	150:13,20 158:5,13 161:15,20 170:5,21 171:14,24 175:14,19 184:15,20
consisting 42:1 205:8	contribute 79:20,24	core 73:9 74:5 74:12,16 77:9 77:12,14,17,20 77:21,22 78:2 78:5,7,18 80:10,16,21,23 81:1,15,22 82:5,11 91:14	correlate 141:8
constantly 57:20	contributed 79:1,4,13,16	correct 14:7 15:17 21:10 25:20 28:1 60:5 61:6 72:7 72:15 75:17 80:24 82:9 83:21 89:23 91:25 129:23 130:2,4 146:11 147:2 152:9 168:15 177:3 202:14,15,18 203:1,3 205:14	counsel 5:18 7:25 8:1,11 9:7 17:12 18:4 162:24 203:11 203:17
construction 52:14 61:13	control 140:9 140:12 142:14 171:18 172:4	controlled 139:24 140:8 146:22	counseling 163:4
consultation 19:6	controls 49:4,7	corrected 205:13	count 154:15
consumer 132:6	conversation 182:12	corrections 205:16	counting 185:11,14
contact 153:4	conversations 36:4 118:23	correctly 43:13 43:20 73:7,11 82:24 83:2 87:14 93:9 94:18,21 98:23 99:4 117:7	countries 15:2 102:11 130:14 130:15
contained 205:11,13	conviction 66:12		country 102:25 145:6
contains 206:14	cooking 54:12		counts 89:19
contents 18:4 205:10	cooper 2:17 3:12 5:24,24 6:23		county 1:12 2:9 3:20 205:3 206:3
context 7:4 33:19 47:18 92:2 139:9 142:7 187:5	cooperative 3:6		couple 169:3
continue 23:19 23:22	cooperkirk.c... 3:14		course 52:4 61:19 78:11 85:5,7 122:23 155:18
	coordinate 32:16		

[courses - decisions]

courses 11:5 138:15,25 court 1:1 3:25 5:12 6:12 7:18 7:23 17:18 crafts 50:19,23 50:24 51:1 54:12 crc 1:25 206:24 create 134:2 182:3,3 created 200:15 creates 132:18 160:1 creating 84:16 104:9 182:14 criteria 4:15 25:16,18,19 37:24 38:8 39:2,5,15,24 40:22,24 41:12 41:13 42:2,3 43:2,6,7,15 44:4 45:18 47:10,13,15,20 50:11 51:16,17 52:5 54:24 55:4,6,18,24 57:24 58:4 59:6,18 65:2 86:15 88:22 89:1 94:1,7 96:19,21 97:2 97:14,18 98:25 99:7 117:19,25	119:7 121:15 123:3 158:3 173:15 180:2,7 195:17 196:7 199:9,14 200:13,16 201:3,6 criterion 44:6 58:22,25 59:9 59:19,22 61:24 63:19,23 64:2 65:5,13 66:10 69:1,10 96:24 96:25 123:11 123:12 200:19 critical 41:18 41:21 94:10 132:6 criticism 100:15,16 criticizing 96:12 cross 63:9 72:14 77:24 154:5,8 156:20 156:25 158:8 164:18,23 165:5 166:15 179:5 185:12 186:5 crr 1:25 206:24 cry 70:13 csr 1:25 2:7,7,8 2:8 206:22,22 206:23,23	cultural 74:25 75:3 76:9,15 76:18 79:13 culture 61:1 75:21 cultures 76:2 cunningham 3:3 6:6,6 curiosity 124:14 curious 116:13 196:23 current 9:4 11:16 21:12,13 21:14 23:5 24:13,17 25:11 28:6 131:10 196:6 currently 18:20 20:4 22:8,15 129:25 153:1 176:10 186:9 186:14 194:3 curriculum 4:10 cutoff 120:7 cutting 77:24 cv 1:4 5:11 12:24 15:8 cwd 1:4 5:11 d d 4:1 5:1 109:15 d.c. 2:22 3:13	dad 63:14 daily 39:21 data 139:4,17 139:17,19 140:10 141:17 145:23 146:14 147:11 188:13 191:15 194:9 date 5:4 13:1 17:18 131:17 david 3:7,9 6:4 day 2:10 92:22 126:19 205:8 205:21 206:18 days 91:21 92:21 dayton 3:21 dbt 122:14 de 122:21 144:23 145:1,4 145:6,14 deal 162:21 183:17 death 4:20 168:19 169:2 decade 129:23 decent 21:22 decide 82:10 decided 121:1 decision 25:7 110:5,24 119:3 119:9 186:15 decisions 155:7 170:13 171:7 192:3

[declaration - desistance]

declaration 4:12 8:20 16:18 17:16,20 18:1,4 22:12 38:24 43:9 50:6 71:5 73:3 86:21 94:16 96:2 109:10 115:8 126:22 128:22 131:1,3 134:11 140:21 143:10,20 144:12 146:8 150:11 154:21 157:2 161:12 174:4 179:17 180:18 192:12 199:17	deeper 114:15 defendant 3:19 defendants 1:15 2:5 3:10 5:9,21 6:24 defense 122:7 deferring 147:17 define 68:1 77:19,25 92:7 127:15 135:11 174:17 175:3 177:22 178:22 defined 68:9 175:11 defines 77:23 defining 123:14 177:21 definitely 80:19 definition 86:14 178:4 degree 11:23 11:25 40:21,23 degrees 12:9 delayed 173:11 deliberately 170:16 deliver 136:13 delivering 136:11 delivery 135:18 delving 114:14 demonstrated 140:24 141:5 143:14	department 163:20 depend 62:9 depending 38:12 92:21 93:19 151:25 156:7 175:3 depends 38:22 64:22 93:15 166:11 199:11 202:8 depose 205:6 deposed 7:1,4 deposition 1:19 2:1,4 5:8,13,15 8:17 9:6,17 12:22 16:16 17:17 98:13 123:5 134:7 168:7 183:25 204:8,13 205:8 205:10 206:9 206:11,15 depression 48:23 110:21 111:2,2 112:16 112:17 155:5 depressive 110:22 deroin 3:7 6:4 6:4 describe 11:15 23:8,9 39:25 68:3 71:10 76:14,17,18	86:2 91:2 described 57:5 74:6,12 75:15 85:19 92:2 106:21 115:2 132:8 165:19 202:20 description 9:12 94:14 121:19 design 140:11 designated 28:12,12 29:8 29:23 52:6 63:1,3,12,13 65:17,20 67:13 67:15 69:6 70:4,5,9,19 71:10 83:13,15 83:18 87:15 89:5 113:25 157:17 158:18 158:24 159:7 166:19,19 198:3 desire 59:8 desires 4:23 183:21 desiring 198:22 desistance 103:16,22 104:15 105:1 107:20,25 108:4,15 109:3 109:7 177:16

[desistance - difficult]

177:18,21,23 177:24 178:2,6 detail 18:25 37:21 137:16 determinate 94:8 determination 62:2 119:1 determine 31:10 56:15,17 60:4,14,22,25 69:8,24 80:25 81:20 94:2 114:6,9 132:2 155:15 determined 55:19,20,25 56:6,8 80:8 determining 41:22 57:12 detransition 177:14 181:13 192:13 detransitioned 174:23 191:22 develop 152:23 159:1,22 171:16 172:2 172:24 developed 15:2 158:19 174:12 developing 159:19,21,23 172:8	development 10:24 11:3,4 11:12 85:5 96:10 120:14 121:3 147:20 147:23 154:11 157:5,8,18 159:5 170:8,18 171:20 developmental 170:6 development... 161:18,23 162:3 developments 131:20 develops 121:11 173:9 device 98:6 devoted 131:11 diagnose 55:1 57:25 99:8,9 110:3 diagnosed 24:14,18 25:24 27:14,17 28:19 30:1 31:4,7 72:9 99:11,16 99:23 100:9 109:3,7 112:1 112:8,20 113:8 113:9 118:3 119:16,19,23 124:23 179:25 180:7 192:18	193:7,16,21 194:4 diagnoses 32:13 39:15 42:8,14 45:3 54:23 109:25 111:14,18 112:11,15,24 115:21 120:6 120:13 135:15 diagnosing 60:2,15 diagnosis 27:21 30:25 36:25 41:16,22 44:6 51:15 55:11 62:16 66:6 69:18,20 99:2 99:20 106:4,15 111:7,22 120:3 120:5 121:2 123:8 194:10 195:24 diagnostic 4:15 38:8 39:1,4 65:2 99:1 109:19 110:18 111:11 121:15 123:3 200:16 201:2 diagnostically 118:11 dialectical 122:14	difference 26:16,18 46:16 46:17 130:16 194:15 differences 116:14 174:15 different 7:4 26:22 29:3 31:16,17 36:3 36:4 44:23 46:12,14 61:2 66:24 68:2,12 71:17,22 72:19 86:19 87:17 88:4 92:19,20 92:21 93:19 96:6 101:15,22 102:1,7,8,10,11 102:11,19,21 106:14 109:1 122:18 127:25 128:15 140:4 156:1,2 159:10 162:19 187:11 differential 194:9 differently 84:7 84:8 differs 175:16 difficult 23:18 36:17 61:18 88:22,25 115:24 142:13 187:3 196:18

[difficulties - dsm]

difficulties 105:5	discussions 155:21	150:15 159:18 159:22 187:4	42:8 55:10 101:8,10 138:9
difficulty 39:20	disorder 4:15	distresses 38:2	138:13 166:25
diffusion 123:20,23	96:21 110:7	district 1:1,2	198:18
direct 39:13	112:3,9 113:7	5:12,12	dolls 50:18
direction 88:15	113:10,15	disturbance	54:11
89:19 104:20	116:10 117:4	121:25 123:23	donor 162:18
206:13	119:11 120:19	125:1,2,7,8	200:21
directly 37:13	120:21 122:13	diverse 13:25	dosing 165:25
143:8	123:24	19:4 25:6	doubt 161:1
discipline	disorders 99:2	32:25 33:24	182:18
127:2,19 128:2	116:10 120:9	44:25 48:21	dr 5:8 6:22
128:15,16	120:10	71:17,19,24	8:10 10:1,8
discontinue	dispositioned	72:3,6,8,12,18	12:23 16:3,5
184:18,23	79:10	72:25 83:9,17	16:17 50:5
185:20 190:18	distinct 47:5	97:7 126:18	56:22 90:20
191:4,20 192:2	112:19 181:12	152:12 175:6	98:14 106:3
192:5 198:10	distinction 26:9	177:19 191:25	150:10 183:19
199:6	27:7,8 46:19	192:23 193:4	195:4 197:15
discrimination	76:8,14,19,25	193:12,20	203:9 204:5,8
102:9,16	130:24 134:15	199:12	draft 17:19
discuss 18:25	134:24 135:7	diversity 22:21	drafting 17:23
36:1 39:1 55:7	136:12 186:18	85:12,13	drawing 135:8
63:19 162:1,9	distinguished	doctor 14:6	186:18
162:13 165:11	171:21	54:22 132:25	dreed 3:23
discussed 16:24	distinguishes	134:8 168:8	dsm 37:24
discussing	77:20	document	39:14,15,24
24:22 62:1	distinguishing	168:9,11	41:23 42:15
96:5,8 107:20	29:16 46:9	documented	44:5 50:12
152:14 157:11	distress 34:9,23	167:11	51:22 54:23
195:6	35:2 43:19	documents	55:3,6,11,25
discussion	45:2,7,8,12,13	8:13	56:17 57:11
51:13 145:12	45:19,23,25	doe 1:5,7,7,7	60:3,16 65:2
	46:10,13,14,23	doing 17:17	66:7 69:19
	47:6 48:2 89:4	28:24 31:17	86:16 96:20,23

[dsm - emotions]

96:24,25 97:14 97:15,17 99:7 99:11,16,23 100:10 106:4 106:13,15,21 120:10 123:3 125:22 195:13 195:15,16,20 195:22,25 196:2,6 199:9 200:16 201:2 due 43:16 111:15 118:4 185:12 duly 6:16 205:5 206:9 duration 41:24 42:1,10,13,22 43:24,25 44:3 199:20,24 200:12 201:8 dynamic 4:23 183:21 197:18 197:22 198:13 198:17 dyslexia 116:15 dysmorphia 110:13 dysphoria 10:7 24:15,18 25:1 25:19,24 27:15 27:18,25 28:19 30:1 31:1,5,8 32:12,13 37:23 38:2 41:12	43:3,15 44:6 45:18 47:10,13 47:16,21 48:3 48:6,9,13,16,25 51:8,15,19,25 55:2 71:13 72:1,10,14 86:14,15,18 94:1 96:25 97:3 99:3 100:10 107:2,7 107:9,16 109:4 109:8 110:3,12 110:14 112:2,4 112:8,10,17,21 113:2,9,16 114:11 118:3 119:19 120:22 124:16 131:6 137:7 146:1 158:21,21 179:25 192:18 193:8,9,16,21 194:4,11 196:7 199:9,15 200:13 203:6 e e 1:25 2:6 4:1,2 4:8 5:1,1 206:5 206:21 e.g. 117:11 170:18 earlier 9:16 14:4 35:15 40:8 68:18	90:21 95:18 106:22 145:12 151:25 152:14 155:4 195:18 early 27:12 40:12 63:1 97:24 147:20 176:9 easier 63:18 93:10 easiest 199:17 edition 99:2 education 30:15 32:10 44:19 131:13 155:19 educational 12:8 139:14 effect 102:14 148:5,14 162:6 196:10 197:1,3 197:4,7 effective 48:13 48:15 160:17 161:3,5 effectively 170:4 effects 147:4,8 148:1 150:24 150:25 151:10 151:14,17 152:15,18 153:13 154:7 154:11 155:13 155:20 156:9	156:14 181:2,4 egg 163:18,21 eggs 164:2 167:4 eight 21:8 28:24 either 43:16 53:17 98:6 104:20 106:22 116:20 199:6 electrolysis 159:10 eligibility 119:7 eligible 30:5 118:4,20 119:21 elucidate 110:4 email 12:20 16:23 131:22 embedded 18:12 173:20 emotion 122:20 emotional 65:19,21 119:4 154:22 155:1,5 155:16 156:2 156:19,24 170:17,18 171:20 172:6 173:16 emotionally 65:15 emotions 110:24

[emphasis - example]

emphasis 139:3	epidemiologi...	et 5:10,10	evolution 174:6
endo 129:13,25	124:22	ethical 135:13	evolved 29:1
137:18	episode 110:22	136:19	126:1 199:13
endocrine	equal 200:15	europe 15:5,6	200:8
127:9 129:14	equally 160:17	101:16 102:2	evolves 83:25
137:24 202:12	161:3,5	european 146:2	199:2
endocrinolog...	equate 185:8	203:5	evolving 57:20
10:9	erin 4:10	evaluate	104:10
endogenous	escalation	170:12 171:6	exact 72:25
151:7,9 152:9	122:21	evaluated	exactly 29:11
157:11,18	especially	43:14	132:16
158:25 164:23	40:12 170:11	evaluation	examination
165:6	esq 2:16,17,21	82:15 110:12	6:20
endorse 192:22	3:7,12,16,21	111:16 117:5	examined
193:3	essential 77:25	125:10,16	206:8
endorsed 129:4	94:19 95:2,7	173:20	example 33:21
181:3	95:10,16,17,21	evaluations	34:20 53:11
energy 116:1	95:23	115:25	59:19 63:11
197:11,12	essentially 96:8	event 206:17	65:17 68:19
english 170:4	174:12	eventual	69:24 70:1,24
enlargement	establish 42:15	195:20	71:2,3 75:25
154:19	establishes	eventually	77:18 81:8,9
ennis 3:24 5:15	170:9	152:8	95:14,18
ensure 58:2	establishing	everybody	102:25 110:6,7
69:21 161:24	42:18	81:11 95:6,9	110:10 111:17
ensures 132:12	estimate 28:10	95:22 173:9	112:12 113:24
entail 122:16	30:3 149:6	evidence 47:22	115:18 117:1
entails 122:20	189:8	47:25 48:7,14	121:23 126:4
entitled 2:12	estimates 192:8	48:18 122:12	128:6,9 137:12
183:20	192:9 193:8	133:2,14 134:3	139:13,15
environment	estrogen 154:9	138:3,7,9,12,16	155:4 157:5,13
84:17 182:3,15	154:10,10,12	138:17,19,22	158:18 159:5
environments	154:16 157:16	139:3,3 140:11	160:12 162:2
170:17	166:21 167:10	140:13	186:4 190:3
			196:17 198:2

[examples - fair]

examples 54:8 69:11,12,16,17 69:19 70:25 78:1,10 112:6 116:11 159:4 198:20 except 157:19 159:9 exclusively 130:12 excuse 20:16 26:18 28:5 76:16 173:23 176:7 192:20 executive 171:18 172:4 exhibit 4:10,12 4:13,15,16,19 4:23 12:17,22 16:11,14,16 97:21 98:13 121:20 122:6 122:24 123:2,5 132:23 134:7 168:4,7 183:10 183:25 existence 19:25 104:23 expect 70:23 experience 15:24 38:1 39:17 86:24 93:8 94:4 101:14,16,20 101:21,24	102:1,18 103:1 111:10 141:18 141:22 152:22 158:7 167:14 187:2 experienced 87:8 94:11 125:7 159:19 190:8 experiences 102:9 experiencing 22:9 32:14 45:19 153:21 181:1 186:1 experiment 140:5 expert 4:12 7:2 8:21 10:2,23 11:8,10,11,14 16:18 17:1,14 104:24 115:8 123:25 124:12 144:11 145:1 147:17 166:10 expertise 10:5 54:4 124:1 148:2 expires 205:25 206:25 explain 13:17 14:1,22 19:2 23:9 29:21 31:12,18 32:23 44:15 85:24	90:25 115:14 116:8 123:11 127:13 133:22 138:5 155:1,8 160:6 187:10 191:1,18 196:11 197:21 200:2 explaining 96:4 explanation 7:13 exploration 84:6,20 114:5 180:20 181:5 exploratory 84:13 115:3,5 116:20 explore 30:17 explored 24:25 181:1 exploring 24:21 45:10 125:11 126:11 express 30:18 84:18 91:16,21 167:19 179:14 181:24 182:25 185:7 expressed 18:16 86:24 87:9 94:4,11 113:25 178:15 179:2,5 180:19 expression 44:23 91:7,10	91:13,15,23,23 91:24 92:3 93:18 126:15 expressions 92:18 extensive 116:25 extent 17:7 130:19 131:8 131:16 196:24 external 33:8 75:4,9,16 76:6 91:15 externalized 121:8 externally 69:14 extracurricular 33:3
f			
face 36:5 facelift 195:24 faceted 77:13 facilitate 84:20 facilitating 24:11 facsimile 3:18 fact 190:17,22 factor 76:15,18 76:19 132:17 factors 78:25 79:13,16 128:1 132:9,15 fair 66:6 75:4 92:3 96:11			

[fair - fluidity]

97:8 100:14	feeling 68:3	femininity 86:4	158:5 162:9
124:3 144:20	70:2 77:18,19	89:12 91:3	169:14,22
145:5 152:14	77:21 197:3	fertility 154:15	170:2 171:12
201:12	feelings 65:6,10	162:2,11,12,25	174:5,13
fairly 21:21	66:11,16 68:23	163:4,6,20	175:13 176:2
31:20	69:3,5 74:3	165:15 166:22	177:5 181:9
fall 115:3 201:2	84:8,18	166:23 167:19	184:4 190:16
falls 82:17	feels 57:22	167:23	190:17 195:8
familiar 84:12	197:7	fewer 96:24	196:14,15
116:12 119:10	fellows 15:13	field 26:8,12	197:16 205:5
133:19 138:2	15:20,22,25	138:17 139:2	five 42:21
139:7,23	16:2	195:9	49:17 90:6,8
140:18 144:13	fellowship	fields 189:4	123:9 149:23
144:16	12:10,13	fifth 99:2	150:1 194:20
families 21:9	felt 29:12 58:13	figure 45:12	flexibility
25:7 30:14	58:19 143:23	96:6	114:25
37:5 56:1,14	183:7	filings 8:18	flies 122:6
119:8 163:5	female 63:13	fill 69:20	flip 54:8 109:14
182:15	65:11 73:10	filter 131:24	fluctuate 83:10
family 24:23	114:8 126:20	final 15:9 43:12	126:17
31:24,25 32:6	157:16,17	84:23	fluctuating
33:4 34:20	158:18,24	finally 174:16	126:17
37:19 38:21	159:5,6 198:3	find 23:19	fluctuations
55:21 56:7	females 28:7,12	174:16 196:13	92:9 125:25
60:25 61:1,2	29:23 51:3	fine 124:13	fluid 29:19
117:5	124:19,19,23	finish 82:18	67:18,20 89:25
far 87:24 98:5	166:19 180:14	finished 134:21	90:22 91:19,21
favorable	180:14 194:5,5	firm 6:1,23	91:25 92:2,8
158:12 159:17	feminine 50:15	first 6:16,25	92:14 93:2,11
favorably 97:8	54:6,14,20	13:14 29:1	93:16,18
feel 23:23 59:21	55:7,12,15,23	37:9 39:8 73:5	126:12,15,19
65:18 69:15	56:6 60:23	73:6 98:21,22	201:21,25
70:14 106:10	61:5 64:25	110:11 116:12	202:3
182:15 188:16	65:18 87:20	128:23 130:9	fluidity 92:3,5
190:5,6 197:11	88:7 91:22	134:19 157:3	92:10,24 93:5

[fluidity - fourth]

93:14 201:21 fluidly 91:5 focus 12:2 32:7 110:9 focused 42:7 195:10 focuses 195:13 focusing 162:5 folks 83:12 91:19 93:15,17 199:1 follow 23:13 38:8 106:13 131:19 185:16 185:19 187:9 187:21,25 188:7,10,20,25 189:18,22,23 190:10,13 following 140:25 141:5 143:15 follows 6:18 footnote 96:13 97:10 98:15 100:15,17 101:1 129:20 143:12 144:2 146:9,18 force 34:3,11 34:12 44:5 forcing 83:23 foreclose 104:24	foregoing 205:7 206:9,14 forget 132:16 form 10:3,25 22:7 24:8 26:2 26:10,23 27:23 28:8 29:10 33:17 41:10,17 42:11,24 44:2 46:1 47:7 48:10 49:9 51:9 52:1 53:8 54:16,25 55:16 56:2,19 57:15 59:2,10,15 60:6,17 61:10 61:17 62:6 64:5,17 65:12 66:8 67:16 70:22 72:16 73:18,24 74:8 74:14,21 75:6 75:18 76:11,21 79:2,21 80:17 81:2,17,25 84:3 85:1,9 86:10 87:5,11 87:22 88:11,19 89:9,22 92:16 93:6 94:6 95:11 97:11 99:24 100:18 101:4,17 102:4 102:17 103:3 103:17,24	104:16 105:8 106:8,18,24 107:13 108:5 108:12,19 111:12 112:22 113:17 118:21 120:23 121:4 121:24 122:1 124:4,20 125:3 130:5,18 131:9 132:4 133:4,16 135:1,21 136:15 137:21 138:23 140:14 141:25 143:2 144:3 145:2,7 145:15 146:3 146:20 148:10 149:9 151:12 152:20 153:7 153:14 156:4 156:16 160:20 161:9 164:20 165:8,13 166:8 166:17 167:17 167:25 172:14 172:22 173:8 175:24 176:17 177:11,17 178:12,17 179:10 181:25 183:1 185:2,22 186:12 188:4 188:11 189:2 189:10,25	190:12 191:13 192:7 194:7 195:21 196:5 199:10 200:3 200:17 201:4 201:13 202:19 203:2 formal 24:6 63:19 64:4,10 formally 25:24 28:18 180:7 format 127:24 128:13 formats 122:18 forms 62:23 123:22 formula 132:18 forth 114:23 forward 118:13 119:9 found 18:10 184:17 foundation 42:12 135:22 140:15 152:21 183:2 founded 18:7 137:13 four 13:24 35:14 126:6 167:10 180:11 180:16 192:25 fourth 22:13 190:16 196:9 196:16 197:17

[franklin - gender]

franklin 3:7	g	68:1,4,6,10,20	113:16 114:11
freezing 163:17	g 5:1	68:24 71:10,13	118:3 119:19
163:25 164:3,4	gaining 118:24	71:17,19,24	120:21 124:15
164:12	game 60:5,15	72:1,3,6,8,9,12	125:2,8,12,13
frequency	games 54:11	72:14,18,19,25	125:18 126:9
21:22	garrison 3:3	73:1,8,9 74:17	126:10,12,13
friends 1:4,6	6:7	78:2 80:10,11	126:14,18,19
front 3:21 8:14	gastrointestinal	80:12,15,16	129:12 131:6
frozen 163:13	14:2	81:14,15,21,23	131:11,15
full 11:19 45:17	gather 128:14	82:11,12,25	133:2,15
47:10,12,20	gender 4:13,17	83:4,9,9,17	136:20 137:7
48:5 98:21	4:24 10:6	84:19,25 85:8	141:1,6,8,12,23
111:19 115:16	11:18 13:25	85:12,13,19,22	142:8,22 143:8
169:14 171:12	18:7,16,21	86:1,2,8,14,15	143:15 146:1
173:1 198:5	19:2,4 22:9,21	86:18,24,24	150:17,18
206:14	24:14,18,20,24	87:4,9,10,15,18	151:21,24
fully 110:3	25:1,6,8,19,24	87:21,25 88:17	152:4,12
117:10,16,22	27:15,18,25	89:25 90:22	158:21 175:6
186:6	28:19 29:18	91:12,13,13,14	175:16,22
function 170:8	30:1,18 31:1,5	91:17,19,20,25	176:3,13,24,25
functioning	31:8 32:2,3,12	92:2,3,6,8,10	177:6,19 178:7
39:21 48:23	33:7,24 34:2	92:14,24 93:2	179:9,25
functions	36:2 37:22	93:3,5,11,12,16	180:19 182:5
171:18 172:4	41:12 43:2,15	94:1,4,5,11,23	183:8,22
further 84:21	44:5,23,25	95:2,6,20 96:9	184:19 186:21
110:12 114:5	45:10,18,19	96:20,25 97:3	190:19 191:4
116:17,18,22	47:10,13,15,21	97:7 99:2	191:25 192:6
117:9 126:11	48:2,5,8,13,16	100:9 101:22	192:18,20,23
163:4 185:5	48:21,25 51:8	102:1,2 106:5	193:4,7,9,12,16
206:16	51:15,19,24	106:16 107:2,3	193:19,21
future 158:9,12	55:1 58:23	107:9 109:4,8	194:4,10,11,15
159:14,16,17	59:8 61:3 63:9	110:1,3,12,14	195:10,11,14
162:14	65:7,11 66:13	110:16 112:1,3	196:3,7 197:18
	66:24,25 67:5	112:8,10,14,17	197:22 198:18
	67:6,8,11,18,20	112:21 113:2,8	199:7,9,12,14

[gender - guess]

199:22,22 200:13,23 201:1,2,11,12 201:18,21,22 201:23,25 203:6 gendered 62:12 62:13 genderqueer 29:18 126:18 general 1:11 3:15 7:7 9:11 11:1 17:4,13 28:9,9 31:14 general's 6:10 generality 11:20 19:1 generally 121:16 getting 31:25 32:1 37:12 40:11 69:12 70:10,20 114:14 118:10 160:14 193:21 gi 13:25 14:1 girl 51:5 56:24 57:2,3,22 60:12 114:3 girls 50:18 52:17 53:18,23 54:2,3,10 56:24 65:20,22 65:24 66:1	give 9:11 78:1 95:13 115:16 172:18 189:5 197:23 given 13:6 19:22 28:24 101:12 112:12 120:3,4 145:11 155:24 161:22 183:3 189:3 205:12 giving 36:1 190:2 glad 181:4,5 globally 166:2 go 7:8 8:7 13:9 15:8 22:11 23:17 25:12 38:24 43:8 45:4 46:21,25 50:5 53:18 65:1 82:22 86:20,20 87:24 88:2,5,9 89:18 90:5,9 98:7,20 104:21 109:10 128:22 132:17 134:13 136:23 139:16 146:8 146:15 150:10 152:9 153:17 157:16 158:25 165:5 181:18 186:10 195:6 197:25 199:17	goal 107:4,15 goals 32:2 38:3 38:10,13,18,20 107:5 191:24 goes 7:8 89:19 126:9 132:19 136:16 157:18 201:18 going 17:6 42:5 45:14 49:13 50:7 62:12 70:11,20 73:5 75:1 79:7 84:23 87:12 90:4 104:10 109:12 111:19 118:11 140:21 144:8 149:22 151:25 161:13 163:11 165:4,5 170:2 171:2 183:10,11 188:17 194:17 197:16,24 198:8 203:10 good 44:1 49:14,16 78:18 78:20 79:7 90:11 105:18 105:20 125:21 144:6 150:1 160:4 google 131:24 gotcha 128:20	goth 126:7 gotten 97:24 grade 140:19 graduate 11:1 123:25 granting 106:12 gravitate 91:22 gravitating 52:16 great 204:4 green 3:16 6:9 6:9 146:11 groombridge 2:21 6:2 groombridge... 2:23 ground 7:9 group 15:1 19:12 148:22 189:14,18,24 groups 15:3 28:13 35:24 122:19 growing 159:12 grown 20:12,14 20:21 154:17 growth 154:19 guess 21:20 22:11 30:8 31:11 34:14 39:22 50:21 56:11 59:5,13 61:12 71:6 77:2 85:3

[guess - hormones]

86:13,19 94:2 95:15 107:8 113:13 118:17 122:3,9 123:6 135:23 136:1 147:25 149:4,4 149:11,22 154:1 160:25 167:2,22 168:1 168:4 176:12 176:20 177:22 178:1 180:6 186:3,17 196:21 199:21 guidance 36:1 guidelines 4:16 127:9 129:1,9 129:12,13,15 129:17,22 130:3,10,17,24 134:9,16,25 135:20 136:6 136:14,18 137:25 165:11 165:20 202:12 202:14,16,18 guys 70:7 gyn 163:19 gynecologist 10:19	haircuts 33:7 hairstyles 91:17 half 37:8,10 129:23 hampshire 3:13 hand 169:16 206:18 handful 119:25 happen 32:5 60:9 104:11 happened 58:15 happening 183:6 happens 23:10 118:7 185:16 happier 107:6 107:7 happy 182:10 191:23 199:5 hard 21:17 30:3 49:11 88:23 harm 160:24 head 7:20 63:7 110:20 133:18 146:21 health 18:18 19:6 27:6 32:8 32:19 36:17 37:22 109:17 109:19,25 110:20 112:2,9	114:10 118:5 118:12,19 120:12 121:1 127:12,14,15 128:5 129:5 139:12 140:25 141:10,13,24 142:2,9,23 146:2 203:5 healthcare 18:8 hear 67:22 92:1 153:9 heard 67:19,20 85:19 126:5 146:5 181:16 202:5 held 5:13 51:13 74:7,13 help 7:23 15:19 17:22 34:8 46:2,6 69:20 80:3,4 150:15 183:20 helpful 34:7,20 35:4 44:4 92:25 helping 36:3 38:21 46:9,13 helps 105:10 hennepin 18:8 hey 35:3 hi 6:22 hide 187:3,7 high 11:20 19:1 110:25 188:24	higher 25:25 156:14 171:17 172:3 177:14 177:15 highlight 184:5 highly 170:16 historically 195:10 history 111:20 hit 97:22 hmm 21:24 22:2 hold 80:2 115:25 176:14 home 163:15 honors 13:10 hope 182:2,14 188:13 hopefully 16:11 98:5 hoping 38:14 hormone 150:24 158:7,8 166:15,22,24 186:16 198:14 198:15 hormones 36:12 72:14 117:20 147:24 154:5,8 156:21 156:25 158:16 164:19,23,25 165:5,5,16 166:25 167:8 179:6 186:5
h			
h 4:8 hair 154:17,18 159:8,8,12			

[horseplay - improvements]

horseplay 62:22	176:10,13,23 176:25 177:5	91:12,13,20 92:6,9,14 93:3	impact 108:15 132:9,14,17
hospital 12:12 12:15,15 163:9 187:18	177:19 178:7 identifies 81:12 87:16 92:13	93:12,13,16,24 94:20,24 95:2 95:3,6,10,20,21	impacting 110:1,22 111:3 impacts 154:14
hour 2:11 37:8 37:8,10 49:14 49:21 90:5 149:23 194:18	126:19 200:7 identify 17:25 29:23 59:25 67:9 78:3,21	95:24 96:9,21 101:22 102:1,3 104:2,5,8,10 114:8 121:25	impairment 39:16,20 152:24
hours 33:23 37:11,18	81:10 83:16,17 83:24 97:7	123:20,20,22 123:23 124:25	impairments 153:21
house 54:13 63:12	158:20 175:18 176:16 177:9	125:2,6,8,11,13 125:18,25	imperfect 106:22
human 95:7	177:19 179:21	126:13,14,16	implicated 170:11 171:5
hyper 110:9	191:25 199:12	150:17,18	implying 42:7 77:6
hypothetical 162:15,16,17	identifying 29:13 65:18	174:7,12 175:16 182:6	important 51:14 55:22
hypothetically 162:13	66:14 92:22 126:20 157:16	195:11,14 196:4 199:7,13	57:2 78:4 80:13 81:6,13
i	178:2 193:19 198:2,4	199:22 200:8 200:12,21,21	81:16 82:6,13 125:12,18
idaho 1:2,11,13 1:14 2:7,10 3:11 5:12 6:9 205:22,24,24 206:2,6	identities 67:5 71:25 200:9 identity 4:13 32:2 34:21	201:11,18,22 201:25 202:3,4 ignorance 15:16	126:1 134:24 imposition 4:19 168:19 169:2
idea 44:1 102:14	71:11 73:8 77:13 78:4,7	ii 27:12,13,15 27:19 30:7	improve 38:17
ideal 136:9	79:1,13,17,20	35:6 39:5,7	improvements 48:22 140:25
ideas 61:3 84:22 147:12 147:14	80:16 81:10,14 81:16 82:5,11 82:12,25 83:4	149:12 164:17 166:7	141:5,9,12,23 142:2,9,23
identification 92:11	83:9,24 84:25 85:6,8 86:8	iii 27:13 30:7 149:12	143:9,15 195:16,19
identified 81:7 126:5,7 176:9	87:21 88:17 89:15 91:6,10	imagine 88:24	196:2

[impulsive - inquiry]

impulsive 119:4	incongruences 200:15	93:20 103:23 109:24 112:1,7	179:20,25 185:4 189:9
inappropriate 189:13	incongruent 176:14,24,25	117:21 121:2 122:18 127:4	190:18 191:11 191:16 192:17
include 43:17 44:18,20,22 45:1 107:6 116:9,24,25 144:14	177:6 178:7 200:9	135:17 156:18 156:23 164:16 172:2 173:12 173:13 182:21 198:3,21 200:6	192:22 193:3,7 194:3 199:7 infertile 164:19 infertility 172:21 173:7
included 11:3 13:3 97:2 144:15 145:22 184:9 192:12	increase 192:16 193:9,10	individual's 73:22 83:4 86:9 87:10 92:5 94:11 124:25 125:6 201:23	information 32:17 37:4,7 37:12,18,20 85:15 114:24 118:10,24 127:25 128:4,8 128:14,14 155:23,23,24 161:17 162:8 174:18
includes 33:1 144:19 176:6,8 176:21,23	increased 20:18,24 105:16 193:17 193:20	individualized 33:18 80:21 84:4 85:10	informed 111:4 111:6 117:22 155:7,11,17 172:19 173:17 174:1
including 154:5 170:7	increasing 20:20 193:22	individuals 22:24 25:22,23 26:21 29:13 33:12 54:23 56:15 60:3,15 67:25 80:12,14 91:1 92:7 100:5 101:9,10 101:15,16,21 101:23,25 102:2 103:1 109:3,7 112:20 112:23 113:1 152:7 167:7 172:19 175:22 176:3,23,25 177:5 178:6	infrequently 21:16 ingrained 75:21 120:11 121:7 initiating 117:12,17 innate 76:3 innately 75:22 inquiry 100:22 102:20 133:25
inclusion 96:20 97:14,18	indefinitely 198:7		
inclusive 67:5 71:24 195:17 205:9	indiana 13:24 indicate 51:18 51:24 67:10 74:18		
incongruence 39:9 40:14,21 40:25 41:2,6,8 41:24 42:18,22 42:22 86:23 87:16,18,20,25 89:17 94:3 174:14 175:22 176:3 199:19 199:24 200:5 200:20	indicates 151:14 177:13 indication 33:15 51:7 indiscernible 185:12 individual 1:13 3:10 37:15 38:11 69:7 70:21 71:12 72:5,8,12 75:16 80:9 86:6 87:7,19		

[inquiry - item]

134:2 148:24 ins 156:10 insight 41:5 instance 192:20 instances 34:6 83:8 113:12 institution 18:11 instructs 8:1 insurance 187:19 intake 37:6 integrate 114:21 integrated 19:7 integrating 195:23 intent 135:24 intentional 85:4 intentionally 198:11 interactions 121:21 interchangea... 68:21 71:19 72:21,23 115:19 181:14 interdisciplin... 31:15 interest 18:16 52:8 206:16 interested 18:18 28:23,25 29:3 163:5	interfere 109:19 110:18 111:6 interfered 111:11 interfering 110:2,15 118:13 intern 3:25 internal 73:9 73:13,15,16 74:6,12,16 75:9 77:10,11 77:16,20,21 78:2,8 80:10 80:16,19 81:15 81:21 91:14,17 121:9 123:16 internalized 75:11,13,14,23 76:7 internally 73:17 international 15:1 internship 12:10,11 interpersonal 121:20 interpret 59:17 140:10 interpretation 135:10 interpreting 59:6	interrupt 7:21 7:23 51:11 interruption 164:18 intervention 30:5,20,22 36:18,21,23 43:18 44:12 45:7 47:12 108:14 117:13 117:18,21 118:4,20 119:22 124:5 138:10,13,14 141:9 155:12 157:20 159:24 160:10 162:10 162:22 173:18 177:25 178:24 181:22,24 182:22,25 185:6 191:23 198:19 interventions 4:24 30:6,13 35:21 36:9,14 47:1,4 48:3,15 48:20 49:2 107:3,16 133:3 133:15 141:1,6 146:18 150:23 160:23 167:21 175:5,7 183:22 191:5,8	interview 37:25 38:5,7 40:9 114:13 introduce 183:17 invasive 160:18 160:18 161:6,6 161:7 investigating 137:20,25 investigation 110:13 involuntary 84:25 involve 74:2 87:20 121:24 186:21 involved 16:21 74:4 124:6 145:10 202:3 involves 124:4 irrelevant 103:6 irreversible 157:4,8,25 159:9 irritability 65:25 66:2 isolated 146:18 isolating 176:13 issue 118:5,19 121:14 189:21 item 57:7

[iteration - know]

iteration 195:22 iv 13:10 ix 15:10	178:13,20 key 132:1 170:11 171:5 171:17,22 172:3	knew 78:23 know 7:11,17 8:5 9:2 12:19 19:18 20:3 21:15,18 23:20 25:6,13 26:3 27:11 28:6,23 28:23,25,25 29:6 31:25 32:1 33:7 34:21,25 35:25 36:2,12,19,20 37:17 38:21 39:14,18 40:7 40:14,18 41:4 41:5 44:4,17 45:10,19 46:15 46:19 47:9 49:6,11,14 50:12,13 52:13 52:16 53:13,22 54:9,11,12 55:20 58:12,17 58:18 59:18,19 61:1,2,19 62:23 63:20,21 66:9 67:7 68:5 68:9 69:11,20 70:6,8,10,12,13 70:16 71:21,23 77:3,17 78:12 78:13,16,17,19 78:20 79:5 80:7 81:4,5,10 81:11 83:25	84:5,18 89:5 92:19,21 93:24 95:18,19 100:2 100:20 102:8 102:19,19,21 102:23 105:10 105:11 107:5 108:17,20 110:4,6,23 111:17 114:15 114:19,21 115:18,20,22 117:4 118:10 121:21 123:14 124:3,11,12,14 124:18 125:20 126:1,4,6,7,9 128:3,5,8 130:22,25 132:5 133:6,18 134:20 135:24 136:17 137:12 137:19,22,23 139:4,5 142:6 143:5 145:3,3 145:5 146:23 147:1,25 152:25 153:2 153:12 156:6 159:9,23 160:1 160:1,22 162:9 162:11,14,17 162:19 164:13 164:24 165:22 165:24 166:1
j	kids 23:13 35:7 41:4 63:11 96:22 97:1 100:23 101:2 113:22 145:20 162:15,17 kind 22:13 29:2 31:12 32:2,4 33:8 34:3 35:19,25 37:6 37:25 38:6 46:23 49:18 52:6 53:13 55:20 62:22 68:7,19 69:4 77:24 86:2 95:6 96:3,8 114:12,23 117:8 119:6 121:19 123:16 132:9 136:9,10 137:14 147:11 147:14,19 163:9 174:19 198:16 kinds 54:13 58:21 147:18 kirk 3:12 6:23 kit 163:15		
jack 16:2,3 jacket 63:22 james 11:25 jan 1:11 3:19 jane 1:5 jewelry 33:7 joan 1:6,7 jobs 153:19 jocelyn 3:25 john 1:6,7 3:12 5:20 6:22 90:2 122:25 journal 132:10 journals 131:13 journey 25:3 25:15,23 journeys 24:20 jramer 3:14 judged 55:19 judgment 56:4 60:11 118:18 155:6 judgments 132:7 justify 133:2,14			
k			
keep 7:24 131:17 178:10			

[know - longer]

173:11 178:14 180:10,23,25 181:1 182:8,10 183:12 187:12 187:13,15 188:12,14,17 188:20 192:4 192:11,19,24 193:8,10,13,15 193:25 194:1,8 194:12,14 196:24 197:2,3 197:13 198:6 198:23,23 203:15 205:10 knowing 75:23 197:6,10 knowledge 76:3 108:6 130:13 131:4,8 145:24 147:3,7 151:13 152:18 165:23 167:12 178:9 179:3,7 179:16 202:6 known 4:20 75:22 80:20 168:20 170:20 knows 198:21 kosair 12:14	labeled 36:15 labeling 120:12 labels 83:10 174:17 labrador 1:10 3:10 5:10 lack 43:16 133:2,14 lam 4:11 larger 14:24 19:7 larsson 3:25 laser 159:9 late 4:21 24:20 168:21 law 3:3 6:1,23 laws 102:10,15 lcooper 2:19 lead 34:18 114:8 142:5 146:11 leads 102:20 141:19 142:1 142:20 leap 189:13 learned 122:23 learning 85:14 116:14,15 122:20 leave 59:13 leaving 185:18 led 18:10 80:3 114:2 left 169:13,19 170:1	legal 9:7 17:7 102:12 130:19 length 43:16,22 leslie 2:17 5:24 letters 128:18 level 11:20 19:1 111:3 156:2,14 187:3 li 2:16 5:22 12:16 16:9,23 63:25 97:25 122:7 132:22 168:3 203:12 liberties 2:16 life 23:15 38:3 69:12 77:23 81:5 118:25 162:19 186:20 light 58:18 likelihood 103:15,22 104:15 105:1 107:25 108:4 likely 25:16 liking 57:8 limit 19:13,16 23:25 24:3 limitation 97:4 188:10 190:11 190:14 limitations 97:13 100:19 191:10,17,19 line 133:25 134:2	linked 143:8 list 131:14 143:11 listed 116:12 listing 111:23 lists 15:13 literature 137:14 167:11 litigation 8:25 9:3 little 16:10 18:25 23:10 71:22,24 106:13 190:4 194:18 live 101:12 lives 33:20 living 23:21 llp 3:3 lnowlin 2:19 local 23:22 located 73:16 74:1 logical 119:4 long 21:19 24:23 90:6,9 122:8 151:14 151:17 152:5 153:13 155:14 167:7 198:25 200:24 longer 25:17 49:18 97:7 111:14,19 152:3
l			
label 67:25 68:4,20 75:4 93:24 94:10			

[longitudinal - masculine]

longitudinal 188:23	121:8 122:17 131:21 135:17	92:24 118:17 119:1,8 155:7	manifest 92:14 125:1
look 28:14 29:7 39:22 48:19 49:1 52:4 75:20 110:11 127:25 134:1 145:8 169:7 188:2,4	139:2 147:19 155:24 162:5 191:9 200:4 lots 86:1 88:4 louisville 12:14 29:2,9 loving 113:25 low 41:4 191:6 lower 19:13 96:22 145:19 197:9,10	170:13 171:7 175:21 182:9 191:9,16 197:10 makes 103:5 113:5 149:4 makeup 33:7 149:10 making 23:18 30:25 33:9 46:24 107:6,7 110:5,24 119:3 132:7	manifestation 77:5,7 manifested 58:3 manifests 38:2 manner 161:18 161:23 162:3 manual 99:1 marked 12:22 16:16 39:9,12 39:18 40:3,5 40:14,17,17 41:1,9 86:22 94:3 98:13 123:5 134:7 168:7 183:25 199:19,23 200:20
looked 28:10 28:22 104:1			
looking 17:11 49:4 62:25 66:10 82:16 103:11 129:20 133:25 152:5 153:1 183:14 183:15 194:9	m		
looks 49:12 108:7,11,13 123:9 196:17	m 1:11 3:19 4:2 m.d. 2:1,4 4:4 6:15 made 79:10 130:23 134:23 169:3 186:15 195:16,20 196:2 205:16 madison 11:25 mail 163:14,15 main 107:4 163:9 major 78:19 125:24 129:5 majority 22:25 25:1 131:12,13 149:14,16 151:19 194:2 make 7:9 8:8 25:7 27:7,8 62:2 63:9	maladaptive 121:21 male 52:6 58:13 63:12 65:17 70:4,5,9 70:19 73:9 86:7,7 87:8,15 87:16,19 88:16 89:17,20 113:25 126:5 126:21 157:12 157:14 159:7 166:5,6,13,14 males 28:13 63:3 166:19 manage 46:2,6 118:11 159:14 managing 45:23 46:10,13 46:16	marketed 53:11,17 54:9 marketing 54:2 54:4 58:2 marks 174:23 masculine 29:24 50:10,14 50:16,21 52:7 52:10,24 53:2 53:7 54:20 55:23 56:5,16 57:11,13 58:8 60:4,14,23 61:5,9 62:3,5 62:24 63:16,17
lose 51:12 153:4			
loss 188:20,24			
lost 154:18 185:15,18 187:8,21,24 188:6,10 189:18,22,23 190:10,13			
lot 24:19,25 25:6 29:12 31:25 37:12 55:17 74:23 116:1 120:14			

[masculine - members]

64:3,11,16,24 86:8 87:9 88:7 88:10,18 89:20 91:23 158:20 159:3 masculinity 86:4 89:5,12 91:3 masculinizati... 198:4,5 masculinizing 179:11,15 mastectomy 179:9 master's 12:1,4 math 78:18,20 matter 2:12 5:9 17:4,13 60:12 93:25 matters 59:7 201:9 maturation 170:9,24 171:4 mature 166:6 maturing 173:1 maturity 26:22 173:6 mean 8:24 9:12 9:14,19 14:1 19:9,25 20:14 20:19 22:23 25:18 29:21 30:8,13 32:23 33:5 36:11 38:4,11 39:12	40:4,15 41:2 43:4 44:15 47:24 56:10,11 56:11 60:9 63:10 69:4 71:8 72:25 73:14 79:25 83:14,22 84:10 85:24 86:18 88:4 91:9 95:8 107:11 109:23 112:13 121:18 125:19 127:23 130:11 135:19 139:11 140:2 141:4 145:13 150:22 151:4 165:10 172:24 174:10 175:4 176:6 177:18 178:23 180:20 183:5 185:18 185:20 186:3 187:11 190:2 191:1,19 193:4 197:6,21 meaning 21:5 27:24 56:16 73:15 88:9 meaningfully 170:14 171:8 means 39:18 40:3,5 67:7 73:20 90:25 94:14 115:15	127:13 172:25 174:12 meant 136:4 measuring 189:1 medical 4:24 14:15 19:4 24:10 27:8 30:4,5,13,19,22 35:21 36:9,15 47:1,4,12 48:3 48:15,20 49:1 49:12 57:12 106:5,16 107:3 107:16 108:14 117:13,17 118:4,20 119:22 124:4 129:5 133:3,15 141:1,6,9,12,23 142:9,22 143:8 143:15 146:18 147:16,17 150:23 155:12 158:10 159:16 159:24 160:10 162:10 166:10 167:20 173:18 175:5,6 177:25 178:24 181:21 182:22 183:22 184:19 187:12 190:19 191:22 192:6,14 198:19	medically 30:10 108:2 186:6 medication 124:8 medications 124:6,7 180:24 medicine 14:10 26:13 138:3,7 138:16,18,22 156:7 160:2 161:16 195:10 medicines 182:10,11 meet 25:16 37:9 39:15 41:12,13 43:2 43:6,15 45:17 47:10,20 88:22 89:1 94:1 97:2 119:7 163:19 173:15 199:14 200:12 meeting 37:6 37:13,14 86:15 128:10,11 meetings 32:9 38:15 meets 61:23 163:20 member 14:12 14:15,18,20 32:19 168:14 members 1:13 3:10 34:20

[memberships - necessarily]

memberships 131:22	methodology 100:5 137:16	103:4 104:17	187:17
menstrual 36:13	140:19	107:14 121:5	moved 187:13
mental 18:18	methods 138:25 141:7	145:16 190:1	moving 63:8
19:6 27:6 32:8	159:10 163:9	191:14 200:18	91:7,10,11
36:17 37:22	metric 184:25	201:5,14	93:17,18
99:1 109:16,18	middle 22:13	mishap 76:4	187:14
109:25 110:19	86:5 91:4	misremember... 82:8	multi 77:13
112:2,9 114:10	98:20	missed 105:14	multidiscipli... 31:16
118:5,12,19	mind 61:12	misunderstan... 115:4	multiple 111:18 115:20
120:12 121:1	134:6 139:14	mix 29:8	myths 75:25
129:5 139:12	203:16	model 155:11	76:1
140:25 141:9	minimize 159:24 160:24	mom 63:12	n
141:13,24	minimizes 159:18	moment 43:3	n 4:1,2,2 5:1
142:2,9,23	minors 133:3	110:25 115:16	name 6:22 33:1
mentally 181:3	133:15 193:16	month 41:24	63:6 128:19
mention 115:10	minute 150:1	42:1,9 43:24	137:6
121:17	183:11 197:23	43:25 44:8	named 205:7
mentioned 9:8	minutes 90:7	200:25	206:8,12
32:22 35:3,15	97:21 122:6	months 42:3,21	natal 28:7 86:7
40:8 89:24	149:24 203:13	118:14 125:22	124:19 159:5
111:9 157:6	203:17	126:6,6 199:20	166:5,13
163:24 187:8	misattribute 113:23	199:24 200:12	180:13 194:5
mess 134:18	mischaracteri... 42:25 48:11	201:10	natural 85:5
met 37:14	51:10 54:17	mountain 2:11	nature 50:18
47:15 98:25	56:3,20 57:16	5:6 49:24 50:3	77:3 102:13
99:7 180:2,6	59:16 64:6,18	90:14,18	navigate 36:3
191:23	81:18 82:1	105:22 106:1	necessarily 24:1 32:18
methodologi... 96:14,16	85:2 89:10	150:4,8 194:23	46:24 51:18
189:21	99:25 101:5	203:21,25	58:20 68:9
methodologies 132:8		204:10	73:25 75:7
		move 16:10	76:5 77:19
		66:21 91:5	83:23 88:6
		118:13 119:9	

[necessarily - nowlin]

89:4 93:23	neurodevelop...	145:18 198:18	56:2,19 57:15
110:14 111:1	148:6,15	nonbinary	59:2,10,15
112:13 114:7,8	neurodiverse	29:16,18 67:17	60:6,17 61:10
121:9 122:2	148:6,16 149:1	67:19 68:11,22	61:17 62:6
125:14 135:16	149:5	68:24 70:2,3	64:5,17 65:12
138:18 145:17	neurodiversity	88:6 91:4	66:8,18 67:16
148:20,23	116:5 117:3,12	198:2,3 200:6	70:22 72:16
151:21 156:5	127:4	nonconforming	73:18,24 74:8
159:2 166:1	neurological	4:17 72:19	74:14,21 75:6
172:8 185:8	147:4,8 148:1	73:1	75:18 76:11,21
189:5 191:21	152:15,18	nonmedical	79:2,21 80:6
191:21 192:3	neurologist	19:5 43:18	80:17 81:2,17
200:11	10:11	44:11 45:6	81:25 82:14
necessary	neuronal	normal 151:7	84:3 85:1,9
106:4,16	147:20,23	norton 12:15	86:10 87:5,11
need 22:3 33:19	neuropsychol...	notary 2:9	87:22 88:11,19
38:16 51:16	11:4,9	205:24 206:6	89:9,22 90:2,4
60:19,24 70:25	neuroscience	206:24	90:11 92:16
87:24 117:16	170:7	noted 40:6,15	93:6 94:6
123:9 158:9,16	never 60:8	notice 53:19	95:11 97:11
159:2,13,15	83:20 113:3	nowlin 2:16	98:1,4,10,12
198:13 200:11	159:21 164:23	5:22,22 10:3	99:24 100:18
203:12	new 2:18 3:4,13	10:25 12:18	101:4,17 102:4
needed 60:8	20:19 21:1,5	16:13,15 17:6	102:17 103:3
117:10	24:5 85:14	22:7 24:8 26:2	103:17,24
needs 127:5	131:19,25	26:10,14,23	104:16 105:8
197:18,22	195:23,23	27:23 28:8	105:20 106:8
201:7	200:12	29:10 33:17	106:18,24
negative 34:9	niche 148:21	41:10,17 42:11	107:13 108:5
181:4	149:1	42:24 44:2	108:12,19
netherlands	nocebo 196:10	46:1 47:7	111:12 112:22
145:11 184:5,9	197:5	48:10 49:9,16	113:17 118:21
187:25	nodded 45:5	49:19 51:9	120:23 121:4
neurocognitive	non 62:12	52:1 53:8	122:1,24
116:10 117:3	77:21 142:25	54:16,25 55:16	124:20 125:3,9

[nowlin - objection]

130:5,18 131:9	200:3,17 201:4	51:9 52:1 53:8	135:1,21
132:4,24 133:4	201:13 202:19	54:16,25 55:16	136:15 137:21
133:9,16 134:4	203:2,15,19	56:2,19 57:15	138:23 140:14
135:1,21	204:2	59:2,10,15	141:25 143:2
136:15 137:21	number 19:21	60:6,17 61:10	144:3 145:2,7
138:23 140:14	20:15,17,19,24	61:17 62:6	146:3,20
141:25 143:2	21:3,5 44:8	63:25 64:5,17	148:10 149:9
144:3 145:2,7	97:6 105:16	65:12 66:8	151:12 152:20
145:15 146:3	132:15,18,18	67:16 70:22	153:7,14 156:4
146:20 148:10	132:20 143:11	72:16 73:18,24	156:16 160:20
148:19 149:9	178:21 185:8	74:8,14,21	161:9 164:20
149:25 151:12	187:11 189:4	75:6,18 76:11	165:8,13 166:8
152:20 153:7	192:17,21	76:21 79:2,21	166:17 167:17
153:14 156:4	193:2,10,15,18	80:17 81:2,17	167:25 172:14
156:16 160:20	193:20	81:25 84:3	172:22 173:8
161:9 164:20	numbered	85:1,9 86:10	175:24 176:17
165:8,13,21	205:9	87:5,11,22	177:11,17
166:8,17	numbers 192:1	88:11,19 89:9	178:12,17
167:17,25	194:1	89:22 92:16	179:10 181:25
168:5 169:6	numeral 13:10	93:6 94:6	183:1 185:2,22
172:14,22	15:10	95:11 97:11	186:12 188:11
173:8 175:24	nw 3:13	99:24 100:18	189:2,10
176:5,17	ny 2:18 3:4	101:4,17 102:4	190:12 191:13
177:11,17	o	102:17 103:3	192:7 194:7
178:12,17	o 4:2 5:1	103:17,24	195:21 196:5
179:10 181:25	oath 205:6	104:16 105:8	199:10 200:3
183:1,13,15,24	object 7:25	106:8,18,24	200:17 201:4
185:2,22	10:25 17:7	107:13 108:5	201:13 202:19
186:12,25	22:7 24:8 26:2	108:12,19	203:2
188:11 189:2	26:10,23 27:23	111:12 112:22	objection 10:3
189:10,25	28:8 29:10	113:17 118:21	26:14 66:18
190:12 191:13	33:17 41:10,17	122:1 124:20	80:6 120:23
192:7 194:7,20	42:11,24 44:2	125:3 130:5,18	121:4 125:9
195:21 196:5	46:1 47:7	130:18 131:9	133:9 145:15
199:10,25	48:10 49:9	132:4 133:4,16	148:19 165:21

[objection - p.m.]

176:5 189:25 objections 82:14 186:25 observational 139:8,21 140:13 observations 40:11 observe 34:17 139:16,19 observed 40:15 41:3 observing 6:11 obsessive 110:7 obtain 128:13 163:10,15 174:18 obtained 37:21 127:25 128:4,9 146:14 188:14 occurred 120:1 occurring 112:2,9 114:10 116:5 117:12 118:5,12,19 120:15 125:15 occurs 171:5 ocd 110:9,15,15 110:17 111:9 112:13 113:23 office 3:15,16 3:20 6:10 29:6 37:2 official 1:10,12 1:14	oftentimes 24:21 25:8 31:2 33:1 34:23 oh 59:10 75:3 98:7 128:16 190:15 ohio 12:5 okay 7:3 8:10 16:17 40:16 41:14 49:20,22 49:23 60:1 61:4,8 62:20 65:1 66:22 69:3 73:3 76:24 88:8 90:11,13 93:10 97:22 98:4,10 99:21 100:7 105:21 123:1 128:20,22 130:2 134:5,22 136:22 144:1,7 144:18,22 146:8 148:4 149:21 150:2,3 157:23 168:6 169:21,24,25 171:2,11 178:4 181:16,20,20 183:13,24 194:21 196:18 203:8,19,20 204:2,7	old 19:15 24:3 35:16 36:6 96:19 153:24 older 119:24 olds 171:16,22 olson 4:14 97:9 97:17 103:10 once 23:10 75:10 157:13 one's 66:24 73:15 77:14,17 94:19 95:3,24 ones 64:21 111:23 126:16 144:13,16 open 8:13 19:20 67:12 182:13 opinion 60:23 74:20 104:24 141:11 144:11 opinions 131:3 opportunity 34:25 64:1 opposed 142:25 opposite 67:15 option 89:14 options 89:14 162:23,24 163:6 164:5 167:24 170:13 171:6 order 87:25 171:17 172:3 173:1	oregon 2:8 organ 164:11 organic 77:2 organization 14:25,25 original 14:7,9 18:11 outcome 160:4 outcomes 102:21 140:10 158:12 159:17 outdated 96:18 outs 156:10 outset 198:6,21 outside 24:22 194:13 ovary 164:10 overinflates 97:6 overlap 112:18 overlapping 110:1 oversimplific... 88:3 oversimplified 88:5 own 15:3,16 61:1 68:5,6 99:14 132:7 173:10
p			
p 3:21 5:1 p.m. 90:14,16 90:16,18 105:22,24,24			

[p.m. - patients]

106:1 150:4,6 150:6,8 194:23 194:25,25 195:2 203:21 203:23,23,25 204:10,13 pace 173:10 page 4:4,9,15 7:10 13:9 15:9 22:13 38:25 39:23 43:8 50:6 57:6 65:1 71:5 73:4 82:22 86:20,21 94:16 96:3 98:20 109:11 109:13,14 115:8,9 122:7 126:22 128:23 131:1 134:13 134:14 140:21 143:11 150:11 154:21 157:2 158:4 161:13 169:12,16,19 169:22 171:11 174:5,20,21,22 175:12,12 179:17,18 190:16 195:7,7 196:8,14,15 197:16 199:18 pages 4:11,12 4:14,18,22,24 205:9	pam 1:4 pants 63:21 papers 132:2,8 paragraph 22:12,14 38:25 43:9,12 50:6 71:5,5 73:3,4,4 82:22,23 84:24 86:22 94:17 96:2,4,12 98:21 109:11 109:13 115:9 126:23 128:23 129:10 130:9 131:2 134:20 135:2,5 136:17 140:22 150:11 154:22 157:2 158:4 161:13 169:13,15,17 169:20,23 170:2 172:13 174:5,20 175:13 179:18 184:4,14 190:16 194:16 195:7,8 196:9 196:14,15 197:17 199:18 201:3,9 paragraphs 169:12 172:18 parentheses 67:4,6,10	parenthetical 66:23 115:10 116:4 174:6 parents 1:4,6 36:3 41:4 44:20 51:1 part 11:3 40:4 60:3,16 61:25 74:1,2 78:4 82:15,16 89:6 94:7,19 95:2,7 95:10,23 109:12 110:10 115:6 139:5 140:7 160:8 163:23,24 167:2 193:24 201:8,21 202:3 participants 98:25 99:7,21 100:8 103:12 105:11,16 140:4 145:11 184:9 187:24 participate 188:15 189:17 particular 19:11 40:21 55:18 92:22 93:21 110:10 110:25 122:20 133:25 134:14 138:15 154:9 156:11 157:10 162:6 169:12	170:15 171:9 182:19 188:5,6 particularly 188:8 parts 159:23 past 149:17 path 182:9 pathopsychol... 115:11 pathways 182:13 patient 19:14 20:11 29:25 31:11 35:5,12 35:19 37:1,3 41:7,8 44:25 58:6 92:13 113:24 119:18 119:21 125:16 126:5 127:4 179:1,4,14 181:21,22 182:21,21,23 201:18,20 202:2 patients 4:23 18:23 19:18,23 20:4,15,17,20 20:22 21:1,2 21:12,23 22:5 22:9 23:5,10 24:5,13,17,19 27:14,17,21 28:3,6,18 35:16 43:14

[patients - phone]

57:25 60:9	penalty 4:20	percentage	person's 69:12
66:12 83:16	168:19 169:2	23:5 24:17	73:8 81:5,21
101:12 110:8	pending 8:6	25:23 28:7,17	93:8 118:25
112:17 113:8	penny 1:5,5	30:1 167:22	170:12 171:6
113:13,22	people 4:17	187:24 189:8	personal
118:2 119:23	23:3 32:25	189:23 191:6	167:13
119:25 120:6	33:8,23 34:22	192:4	personality
148:22 149:5	47:15 50:13	percentages	4:15 119:11
149:17 151:5	65:14 66:4	26:4 189:16,19	120:9,10,18,18
152:4,23 153:5	68:1,12,20	percents	120:21 122:13
153:8,17,24	70:9 71:10,20	192:12	123:24 126:8
163:18,21	72:1 78:11	perfect 50:12	170:18
166:12 167:19	80:3,4,20,23	106:22	personally
167:23 178:15	81:15 84:17	perfectly 161:3	17:19,25 31:4
178:18 179:8	86:2 91:5,16	period 35:22	31:7 141:21
179:20 180:25	93:24 97:7	200:25	145:4
182:6,9,15	105:3 106:10	permanent	persons 4:20
183:21 202:1	115:25 118:24	150:24 154:1,7	168:20
pattern 42:16	120:13 121:20	154:10,16,18	perspective
120:11 121:7	123:14,18	154:19,20	142:24 143:1
121:12,17	132:10 175:5,6	159:9	153:20 182:20
paul 3:2 6:6	185:15 186:19	persistence	pertains 103:7
paulweiss.com	187:21 189:22	96:9 108:15	131:18
3:5	193:11,20	persistent	pertinent 8:19
pausing 150:14	198:23	25:17 125:20	9:8,12,18
pediatric 11:17	people's 71:21	person 31:3	peter 1:5,5
13:21,22 18:21	percent 22:5,16	33:20,25 70:3	ph.d. 1:19 4:11
pediatrician	23:7 25:1 28:2	70:11,21 75:5	4:12 12:5
18:15 25:10	28:3 35:10	78:14 93:2	139:5 205:5,19
pediatrics	131:11 149:6	114:18 119:2	phase 27:5
18:13,14	149:12 168:2	120:16 121:10	philip 2:21 6:1
peer 14:6,9	184:18 188:6	121:10 126:19	philip.may
131:5 132:11	188:21 189:21	128:11 155:22	2:23
peers 33:4	190:8 192:24	160:14 186:8	phone 12:19
45:15	192:25,25	187:15	97:25 128:9,12

[phrase - present]

phrase 46:3,6 71:15 89:25 90:21 103:18 physical 38:19 62:15,23 77:3 77:4,4,7 150:16 physically 181:3 pick 32:4 picking 126:8 piece 32:8 93:18 pigeon 122:6 pill 197:2 pink 53:20,24 114:1,2,7,20 pivot 134:5 place 13:14 53:23 84:17 119:4 121:3 206:12 placebo 197:1 placed 139:3 places 164:10 plaintiffs 1:8 2:16 3:2 5:23 5:25 6:3,5,7 plan 32:5 38:12 43:17 planning 90:5 171:19 172:5 play 52:12,17 52:18 53:6 58:20 61:20,22	62:20,23 63:1 63:2,9 162:20 played 69:11 playing 54:13 63:11 plays 81:5 please 5:18 6:13 7:12 169:15 197:25 pllc 3:12 plugging 118:9 plus 141:18 poe 1:4,5,5,5 5:9 point 24:24 25:3,13,21 35:23 100:7,11 153:13,22 157:23,24 180:3 199:8 200:25 201:10 203:10 points 147:19 politicized 190:23 pop 21:18 popularly 170:20 population 20:11 29:25 124:15 131:12 position 11:16 11:19 18:11 131:10	possess 173:5 possibilities 162:14 possibility 102:7 103:14 103:21 104:14 104:25 108:2 114:20 124:25 125:6 possible 71:25 88:16 111:25 183:5 186:8 187:1,2 possibly 17:18 156:22 post 3:16 27:3 28:4,4 35:22 poster 13:14,19 13:20,23 potential 16:24 160:23 potentially 51:24 101:18 102:9 111:8,11 111:22 147:22 152:15 185:11 185:13,17 202:8 practice 4:17 22:16 106:6 112:7 127:2 185:5 practices 130:15	pre 37:6 39:5 79:10 precocious 151:20,22 152:8 173:11 predominately 53:20,21 prefer 71:20,23 160:18 161:7 181:15 preferable 145:21 preference 54:3 145:12 preferred 58:22 pregnant 164:25 prep 203:13 preparation 9:25 prepare 8:16 9:9,17 preparing 9:15 prepubertal 27:5 28:3 30:8 39:2 55:7 96:22 113:21 prepuberty 27:1 preschool 36:7 presence 127:3 147:24 present 3:24 34:25 75:10

[present - providers]

87:10 92:17 119:6 125:21 162:8 presentations 117:11 presented 76:22 114:17 141:18 161:17 presenting 35:8 88:23 89:1 presents 123:13 preservation 162:25 163:7,8 163:18,22,24 164:10,11 165:15 166:22 166:23 167:1 167:20,23 pretty 21:6,17 29:7 32:24 71:18 84:4 180:15 189:3 prevent 150:15 158:9,16 159:11,12,13 160:3 preventing 159:15 previous 143:24 148:13 175:12 previously 75:16 157:6 195:5	primary 107:15 principle 160:6 principles 135:14 136:19 138:21 prior 9:14 35:10 81:18 82:1 85:2 89:10 101:5 103:4 104:17 107:14 117:12 117:17 121:5 145:16 190:1 191:14 200:18 201:5,14 206:8 probably 24:11 47:11 78:24 79:23 149:11 149:12 183:11 probing 84:21 114:15 problem 203:18 problems 13:25 116:1 118:12 procedure 156:8,11 160:2 160:19 161:7 165:12 procedures 127:1,18 159:14 160:17 161:2,5	proceed 173:18 proceeding 7:17 117:4 proceeds 164:18 process 17:23 31:13 37:1 84:20 114:13 115:2,7 125:11 132:12 155:23 165:19 173:21 181:5 183:5 186:10 profession 78:13 80:3 professional 11:21 27:6 36:17 127:12 127:14 129:2 130:10,11 professionals 25:9 127:16 program 12:5 18:16 programs 18:14 progressed 25:22 prolonged 166:14 pronounce 40:17 pronouns 33:2 92:20	proper 32:21 properly 165:12 proportionately 189:19 proposed 8:25 proposition 95:4 176:1 propounded 205:11 pros 160:22 163:1 prosecuting 1:12 prosecutor's 3:20 protecting 102:10 prove 142:14 provide 8:2 17:16 19:3 32:9 111:4,5 117:22 150:17 155:17,19 157:5 163:3 172:19 173:6 173:16 174:1 provided 155:4 provider 24:5 24:10 30:24 32:20 57:12 127:3,19 128:3 181:23 182:24 providers 25:25 31:17,22

[providers - questions]

128:6 187:20 providing 18:18 19:5 23:19 31:21 35:23 36:19 114:24 118:8 psychiatric 124:8 psychiatry 15:13,20,22,25 psychoeducat... 44:19 psychoeducat... 116:25 psychological 4:16,18,21 12:2 14:13 34:9 48:23 129:11 130:23 168:12,15 psychologist 11:17 15:17,23 18:12 30:24 78:3,7,22,24 79:14,17,20 81:9 136:2 182:22 psychology 10:5 12:3,6 13:21,22 75:20 79:11 182:20 psychopathol... 115:20,23 116:2 117:11	psychosocial 111:16 116:21 psychotherapy 19:10 45:1,21 45:24 46:22 47:5,14,18 48:4,8,12 84:10 114:5 135:18 146:19 psychotropic 124:7 pubertal 27:2,3 28:4,4,5 30:10 35:22,22 147:4 147:8 148:1 149:8 151:10 152:15,18 184:17 pubertally 151:25 puberty 27:13 30:2 36:12 72:13 147:24 148:5,15 149:2 149:18 150:14 151:1,6,7,9,15 151:18,20,22 152:6,7,8,9,19 156:20 157:12 157:18 158:16 158:19 159:1 159:11 164:17 164:24 165:4,6 179:2 180:11 181:6 185:6	public 2:9 205:24 206:6 206:24 publication 130:7 133:1,13 203:5 publications 9:24 13:7 131:17,25 139:20 publish 14:6 published 16:6 16:7 129:15,18 131:23 132:13 153:3 168:22 pulled 98:11 pulling 134:6 purple 53:20 53:25 purpose 107:2 188:25 purposes 186:22 200:15 pursue 167:23 185:5 put 44:5 119:1 q qualified 127:12,14,15 144:4 qualify 164:7 200:5 quality 132:12 145:19	quarter 105:18 question 6:25 7:12,15,15,25 8:2 9:16 14:3 30:9 34:14 50:9 51:20,22 53:4 57:18 62:4 63:25 71:6 73:6 77:11 81:22 82:10,12 88:1 99:10 104:13 106:13 108:1,7 108:11,14,18 109:1,11 114:4 117:8 122:10 123:6 142:3 147:1 148:13 153:2 157:7 161:1,4 165:18 169:3 171:3 177:4 180:6 182:18,19 183:17 184:1 186:23 199:25 questioning 22:10 questions 7:11 8:6 38:9 42:6 61:4 84:21 107:23 114:14 137:19,24 163:2 168:25 169:11 202:7,9 204:3 205:11

[questions - raúl]

205:12 quick 51:11 90:2 194:19 quickly 7:9 quite 20:21 33:22 quiz 121:17 quotation 174:23 quote 190:23	60:1,13,21 61:16,25 62:9 64:9,21 65:21 66:15,21 67:19 71:2 72:18 73:21 74:5,11 74:16,24 75:12 76:8,13,24 79:12,25 80:9 80:22 81:14,20 82:4,18 84:9 85:7,17 86:13 87:7,17 88:1 88:13,25 89:16 89:24 90:3,8 90:20 92:23 93:10 94:9 95:15 97:15,20 98:11,14 100:2 100:25 101:8 101:19 102:6 102:24 103:10 103:20 104:12 104:23 105:13 105:17 106:3 106:12,20 107:1,19 108:10,16,24 111:25 112:25 113:20 119:10 120:25 121:13 122:3,5,9 123:1,6 124:24 125:5,17 130:8 130:22 131:19	132:14,22,25 133:7,11,19 134:5,8 135:4 136:1,22 137:23 139:7 140:18 142:3 143:10 144:7 145:5,10,24 146:5,25 148:13,25 149:14,22 150:2,10 151:16 153:4 153:11,23 156:13,18 160:25 161:12 165:3,11,17 166:5,12 167:2 167:22 168:3,6 168:8 169:8,10 172:17 173:4 173:22 176:1 176:12,20 177:15,22 178:14,19 179:12 182:17 183:10,14,16 183:19 184:1 185:10 186:3 186:17 187:8 188:19 189:7 189:20 190:9 190:15 191:18 192:9 194:12 194:17,21	195:4 196:1,8 199:16 200:2 200:14,23 201:8,17 202:23 203:4,8 203:18 204:4 random 126:8 140:7 randomized 139:24 140:12 142:14 randomly 140:4,6 range 67:5 71:25 89:11,14 89:15 rare 201:25 rarely 120:2 rate 193:13 rates 29:3,9 108:15 109:3,7 177:14,15 178:6 189:16 194:1,9 rather 7:19 30:18 65:20,25 66:2 86:19 94:14 96:18 119:4 139:18 ratio 124:21 194:10,13,15 rational 170:13 171:7 raúl 1:10
r			
r 5:1 race 95:18,19 95:23 racial 81:10 95:20 ramer 3:12 4:5 5:20,20 6:21 6:22 10:8 11:5 12:16,23 16:9 16:14,17 17:10 17:11 22:11 24:13 26:5,13 26:17 27:4 28:1,14 29:15 34:10 41:14,20 42:17 43:4 44:8 46:3 47:14 48:14 49:13,17,20 50:5 51:20 52:9 53:15 54:22 55:3,24 56:9 57:4,24 59:5,12,13			

[rcunningham - refer]

rcunningham 3:5 rdr 1:25 206:24 reach 23:25 120:13 132:9 173:1 reached 16:24 117:25 183:4 react 70:12,17 reaction 70:2 169:4 reactions 65:6 66:11,13,16 68:24 69:4,5 read 8:18 43:13 43:13,20 63:4 73:5,6,11 82:24,24 83:2 94:18,18,21 98:17,22,22 99:4,18 100:12 115:16 117:6,7 117:14 126:24 126:24 127:6 128:24,24 129:7 132:11 133:1,8,13 134:17,19 135:5 136:2,5 137:3,8,9,16 140:22,23 141:2 150:13 150:13,20 158:4,5,13 161:14,14,20	169:11 170:3,4 170:5,21 171:2 171:12,13,24 172:18 175:13 175:14,19 184:14,14,20 197:24 202:24 203:4 205:9 readily 139:13 reading 55:11 134:21 135:2 137:11 168:18 202:13,17 ready 23:23 24:1 30:10 122:25 real 51:11 90:2 really 35:23 41:15 45:21 59:7 66:10 69:20 77:23 110:23 113:25 135:13 165:23 187:15 reason 28:22 60:10 82:5 142:4 143:22 182:11 191:5 reasons 62:12 62:13 recall 107:21 137:11 146:13 146:17,22 179:24 180:8 180:13 187:23	202:13,17 recede 154:13 receive 11:2 30:2 72:13 98:3 106:5,16 149:7 152:7 179:8 received 11:13 11:22 12:1,18 13:13 16:12 98:2 123:25 132:22 138:25 180:10 receiving 11:24 20:4,15,17 35:20 49:5,7 146:23 160:4 179:15 recent 19:21 101:2 131:17 recently 28:11 100:23 recommend 34:15,18 152:3 recommenda... 127:11 136:9 165:25 recommended 35:5 136:17 recommending 35:24,25 record 5:4,7,19 49:25 50:4 51:13 90:15,19 105:23 106:2	150:5,9 178:20 194:24 195:3 202:11 203:13 203:22 204:1 204:11 206:15 recorded 5:15 recording 5:4 50:3 90:18 106:1 146:19 150:8 195:1 203:25 recruiting 100:5 recruitment 100:4 red 53:21 64:15 reduce 107:16 reduced 206:13 reducing 34:8 107:2,6,9 reduction 107:10 reductions 48:24 reed 3:21 reevaluate 118:16 refer 38:10 43:22 44:11 109:16 116:5 116:18 117:5 154:22 174:6 179:19 190:17 196:10 197:18

[referenced - representing]

referenced 129:4	regards 25:11 85:14 189:4	113:19 114:10 114:16 131:15	remotely 2:15 3:1 5:14
referencing 40:23	regimen 165:4	136:20 172:3	removal 164:11
referrals 21:6 118:8 163:3	regret 178:10 178:15,22,23	relating 137:6	remove 158:10
referred 37:5 38:23 116:16	179:2,5,15	relationship 14:22 104:20	repeat 125:4 147:6 148:11
119:13 181:8	180:19 181:24	108:21,23	155:23
referring 21:2 23:3 26:21,25	182:25 185:1,7	147:12	rephrase 75:13
29:21 43:10	185:9,21 186:1	relationships 144:6	87:3,13 97:16
52:23 63:23	186:9,14,15,19	relatively 28:11	193:14 201:19
64:3,9,10	186:23 188:9	relevance 79:3 79:22 80:6	replication 105:10,13
66:15 67:3	189:1,9 190:8	relevant 8:19 37:22 62:16,19	report 8:19 9:15,21,22,24
68:25 73:22	191:21 192:2,5	80:13 101:12	39:24 69:21,22
94:23 116:22	regretted 180:21 181:21	103:1 131:5	70:4 146:6
117:23 128:17	182:21	reliable 101:1,9 101:11 132:3	reported 1:25 5:16 99:20,22
129:9 154:4	regularly 21:17 21:21	140:12 145:14	100:9
157:3 192:10	regulation 122:21 171:20	reliably 171:21	reporter 6:13 7:18,23 98:3
198:1	172:6	rely 27:7 57:20 69:22	206:5
refers 39:9 63:8 63:15 64:2	rejecting 52:7 56:7 57:8	relying 144:11	reporter's 206:1
65:5 66:23	58:14,21 62:11	remained 20:21 21:4	reporting 2:6 3:25 5:16
86:22	62:14,17	remember 29:11 40:13	reports 194:14
regard 171:22	rejection 51:6 51:23 52:3	180:12 188:6	represent 123:2 168:17
regarding 37:25 84:19	53:1,2 54:10	remembered 2:3	representation 143:24
145:25 147:3,7	56:18 58:7	remembering 90:1,23	representations 144:6
147:12 155:19	relate 171:17	remote 1:19 2:1 2:3 5:7	representing 6:24
155:21 162:11	related 14:10 78:12 108:25		
203:6	111:21 112:3		
regardless 64:13 182:6	112:10,14		
	113:1,4,15,18		

[request - right]

request 8:5	residing 205:24	resume 151:7	revisiting 44:5
requested 204:15	resolution 4:19 168:19	resumes 151:9	ridan 6:6
require 69:17 156:1,14	resourced 31:20	retransition 105:4 180:23 181:9,15 183:9 186:11	rifkind 3:2 6:7
required 12:10 136:13	resources 30:15 32:10 118:9	retrieval 163:21,23 167:3	right 5:3 7:5 9:9 12:8,20 14:13 15:14 16:3 18:8,21 20:8 21:4 22:6 25:19 26:6 29:17 33:13 35:17 38:13 39:2,6 40:6,10 41:16,25 42:19 46:7 48:9 50:2 51:20,25 52:20 59:12 60:16 64:16 65:3 66:17 73:1 80:23 81:16,24 83:20 87:4 89:16 90:17,23 94:5,24 100:12 101:3 105:25 108:18 111:7,9 117:14 122:5 124:9 129:21 131:6 134:6,14 136:23 139:10 141:24 142:23 149:19 150:7 153:13,24 158:1 160:19 161:8 169:14 169:16,22 171:11 174:2
requirement 42:10 96:23 127:8	respect 23:11 42:9 47:5 95:1 101:22,25 102:2 103:10 108:16 113:6 116:20 140:11 163:25 164:1 184:10,13 188:9 195:20 196:3 202:11 202:16	return 181:23 199:18	
requires 41:23 157:24	respond 7:19 65:24 66:1 70:7,10,15,19	returning 182:24	
research 8:19 9:9,13,18 14:7 14:10 34:7 44:7,9 108:7 108:11,13,17 129:4,23 130:4 130:7 131:5,20 132:6 133:1,13 138:25 140:3 141:14,16,20 141:21 143:6 151:14,16,19 170:7 175:11 177:13 188:12 188:22 195:23	responded 38:9	reverse 57:7 190:18 191:4	
researchers 190:4	response 114:14	reversed 157:15,19,22	
researching 148:5,14	responses 65:15,19,22	reversible 150:19,22,25 151:2 152:19 154:4	
reservations 182:23	restart 101:23 172:11	revert 154:13	
reserved 120:12	restrictive 102:15	review 9:23 133:20 137:1,3 137:6,13,15,17 137:20 144:14 202:17,22,24	
	restructuring 122:22	reviewed 8:21 9:8,18,20 14:6 14:9 131:5 132:11	
	results 137:15 146:19	reviews 133:24 136:24 137:10 137:10,24 145:25 202:13	

[right - see]

177:2 179:22 180:4 181:18 183:16 184:23 194:13,22 200:16 202:25 203:24 rights 102:12 rigidity 114:1 rigorous 100:21 140:17 rise 192:21 193:2 risk 160:24 162:1 172:20 risks 155:13,19 160:2,13,22 173:7 robust 134:2 142:18 145:20 role 19:5 31:12 31:18 81:4 roles 63:9 roman 13:10 15:10 room 3:21 8:11 rotate 15:25 rough 52:12 53:6 62:20 63:2 roughly 107:21 rule 114:22 rules 7:9 113:23 run 106:11	running 18:14 110:24 runs 109:13 rural 33:23 s s 2:21 4:8 5:1 sadness 65:24 66:2 safe 34:1 84:16 84:17 182:16 sample 163:10 163:12,16 samples 143:17 satisfied 69:9 70:21 satisfy 199:8 saw 20:22 saying 22:1 26:1 40:2 50:24 56:14,21 57:14 61:21 66:1 69:5,7,22 83:19 84:24 89:18 92:1 95:2 99:17,21 107:8 142:20 149:16 158:15 170:3 176:21 185:24 193:23 196:11,25 says 13:13 22:15 43:14 55:11 57:11 67:6 73:8 82:25 93:2	94:19 98:24 100:8 104:19 117:9 125:22 127:1 133:10 135:19 145:9 150:14 161:16 168:18,22 170:6 171:15 175:15 184:16 scenario 63:13 63:14 162:15 162:16,17 scenarios 165:24 schedule 29:7 scholar 131:24 scholarly 139:1 school 11:2 33:3,25 36:2,6 139:15 sciences 12:2 scientific 100:22 102:20 108:17 129:3 130:4 142:17 169:4 scientist 105:9 139:5 scope 148:2 scouts 61:15 screening 116:21 scrolling 99:13 seal 206:18	seattle 12:11 second 94:17 95:1 126:23 131:2 134:14 135:8 146:10 147:21,23 150:12 169:7 169:13,17,18 169:19,25 170:1 179:19 184:4 196:14 196:15 197:17 secondary 107:5,17 157:4 157:8,25 158:11 159:20 section 157:10 see 12:21 13:10 13:15 15:11 16:10 17:16 20:23 21:15,16 22:15 25:18 29:4 32:18 33:9 39:10 41:5,18,20 44:13 52:3 59:20,25 65:8 67:1 76:8,14 76:19 86:25 87:13,23 89:3 91:16 97:22 109:21 115:12 116:6 118:15 120:20 127:21 133:5 143:7

[see - shorthand]

144:24 154:24 157:23 168:4 168:11,22 171:3 174:8,24 184:6 189:20 190:20,24 195:9 197:19 seeing 21:21 25:5,14 29:6 29:12 37:3 143:9 seek 159:2 seeking 25:9,10 30:4,12,19,21 seem 46:20 58:24 seems 59:5 89:18 160:4 189:12 seen 21:19 35:13 57:1 58:7 69:13 104:21,21 105:3 108:8,22 141:15 143:4 158:6 168:9 189:16 191:5 sees 55:22 57:21 self 69:22 73:15 77:15,17 78:12 80:8 99:20,22 121:10 123:15 123:20 171:18 172:4 193:11	193:19 semi 38:6 114:13 send 12:16 97:21,22 163:16 183:10 sending 16:9 sense 8:8 48:1 73:9,16,21 74:6,12,17 77:10,20,21 78:2,6,8,11 80:10,10,16,19 81:15,21,22 89:13 91:14 95:21 113:5 121:9 123:16 senses 77:12,16 sent 16:23 183:11 sentence 22:13 39:8 43:12 73:5 77:9 82:19,20,23 84:23 93:1,5,7 94:17 95:1 98:22 115:10 115:17 116:16 116:17 117:7 126:24 127:17 128:23 130:9 131:2 135:8 140:22 150:12 157:3 158:5 161:14 174:5	174:21,22 175:13 176:2 176:23 179:19 184:13,22 190:17 195:8 196:17,19 197:17,24 sentences 134:20 196:10 196:12,16 197:14 separate 59:25 91:12 112:15 202:24 series 118:23 serious 156:14 serve 19:11 served 17:1 19:22,24 serves 19:19 131:14 services 19:3,6 19:8 23:16,24 31:22 sessions 155:18 set 32:25 80:8 113:23 121:7 122:20 sets 78:14 setting 127:2 128:3 139:14 151:8 several 18:13 33:23 152:25 166:24	severe 155:5 severity 111:3 sex 29:8 65:20 67:13,15 69:6 71:10 72:14 83:13,15,18 89:5 147:24 154:5,8 156:20 156:25 157:4,8 157:25 158:8 158:11 159:20 159:20 164:18 164:23 165:5 166:15 175:16 175:18 176:16 177:10,20 178:3 179:5,21 181:19 186:5 194:10,15 200:10,22 sexes 63:2 sexually 166:6 shaking 7:19 share 34:21 142:10 sheridan 3:3 shifting 91:6 shifts 182:6 shirt 63:22 64:12 short 49:15 186:6 shorthand 86:17 119:14 206:5,12

[shortly - sohl]

shortly 12:20	simple 159:8	slightly 108:25	16:13,15 17:6
show 48:22	simplified 86:4	small 148:22	22:7 24:8 26:2
141:20 143:6	91:3	202:1	26:10,14,23
152:24 199:23	simply 53:4	soc 117:19	27:23 28:8
showing 142:19	93:13	127:8,11	29:10 33:17
shown 54:2	simultaneously	129:13 137:12	41:10,17 42:11
141:8	111:18	137:20 165:7	42:24 44:2
shows 34:7	sincerely 40:18	165:23 173:15	46:1 47:7
49:7 141:14,16	sit 137:5	202:21	48:10 49:9,16
side 54:8 67:12	146:25 187:23	soccer 61:16	49:19 51:9
67:12,14	situation 70:5	62:4,14	52:1 53:8
155:13,20	75:15 80:15	social 4:14	54:16,25 55:16
156:9,14 162:6	118:7 165:1	10:15 32:10,22	56:2,19 57:15
181:2,4	situations	32:24 33:16	59:2,10,15
signature	34:19 36:4	34:8,11,24	60:6,17 61:10
204:15 206:20	62:10 65:16	36:22 44:22	61:17 62:6
significance	70:15 117:17	104:1,25	64:5,17 65:12
25:2 53:24	161:2 162:21	107:24	66:8,18 67:16
significant 45:2	six 19:20 20:1	socially 30:18	70:22 72:16
157:20 170:9	20:24 21:7	34:13,18 35:6	73:18,24 74:8
170:23 188:10	41:24 42:1,2,3	35:8,13 100:6	74:14,21 75:6
significantly	42:3,9 43:24	103:12,15,21	75:18 76:11,21
81:23 193:17	43:25 44:8	104:3,6,7,14	79:2,21 80:6
similar 8:25	51:16 58:3	105:4 181:2	80:17 81:2,17
113:22 155:3	96:23 118:14	societal 74:25	81:25 82:14
similarities	125:22 126:6	75:3 76:9,19	84:3 85:1,9
120:24	167:9 179:19	79:16	86:10 87:5,11
similarity	180:2,13,15	society 13:21	87:22 88:11,19
120:20	183:3,6 199:20	54:20 127:9	89:9,22 90:2,4
similarly	199:24 200:11	129:13,14,25	90:11 92:16
112:16 137:18	200:25 201:10	137:18,25	93:6 94:6
145:19 157:17	skill 78:13	202:12	95:11 97:11
simmons 1:25	skills 45:22	sohl 2:16,19	98:1,4,10,12
2:7 5:16 206:5	122:21	5:22,22 10:3	99:24 100:18
206:21		10:25 12:18	101:4,17 102:4

[sohl - spectrum]

102:17 103:3	177:11,17	21:25 42:4	198:12
103:17,24	178:12,17	45:4 49:3 51:5	sorts 91:18
104:16 105:8	179:10 181:25	51:11 55:24	sought 191:22
105:20 106:8	183:1,13,15,24	59:11 63:24	sounding 84:21
106:18,24	185:2,22	69:2 72:24	sounds 49:16
107:13 108:5	186:12,25	75:1 82:2	90:11 105:20
108:12,19	188:11 189:2	92:23 97:16	speak 9:5 18:3
111:12 112:22	189:10,25	99:12 100:7	106:9 203:17
113:17 118:21	190:12 191:13	105:15 109:17	speaking 25:8
120:23 121:4	192:7 194:7,20	128:16 134:11	121:18
122:1,24	195:21 196:5	138:11 144:8	speaks 184:22
124:20 125:3,9	199:10,25	160:9 169:16	specialists
130:5,18 131:9	200:3,17 201:4	170:1 174:21	163:4
132:4,24 133:4	201:13 202:19	179:18 181:17	specialization
133:9,16 134:4	203:2,15,19	186:22 190:16	10:6
135:1,21	204:2	193:1 196:13	specific 20:13
136:15 137:21	somebody	sort 15:3,4	42:6 74:1,2
138:23 140:14	33:16 51:18	21:17 22:9	122:22 137:6
141:25 143:2	59:18 70:2	23:14 24:1,20	165:24 186:23
144:3 145:2,7	86:17 93:11	24:23 25:5	194:1
145:15 146:3	110:6 117:1	29:1 35:3	specifically
146:20 148:10	118:18 166:2	37:20 39:20	30:19,21 37:23
148:19 149:9	185:19,25	42:15 45:9	47:9 48:22
149:25 151:12	186:4 187:4	46:16 52:3	50:7 52:22
152:20 153:7	somebody's	57:19 62:21	61:22 108:8
153:14 156:4	77:22	68:3,5,10,21	109:14 137:22
156:16 160:20	someone's	80:20 84:19	139:18 142:12
161:9 164:20	69:22 82:11	86:5 96:5	150:12 153:2
165:8,13,21	83:8 85:5,8	99:20 110:19	177:4 178:6
166:8,17	86:23 110:4,4	114:1,13,15,19	193:6 195:6
167:17,25	125:13 128:18	114:24 118:14	specify 26:11
168:5 169:6	199:22	118:25 120:11	spectrum 85:13
172:14,22	somewhat 76:7	153:13 155:3	85:20,22 86:3
173:8 175:24	sorry 9:14	155:22 162:9	87:24 89:8,12
176:5,17	13:21 16:14	162:13,20	89:15 91:3,5,8

[spectrum - structured]

92:9 113:7,10 113:15 116:9 126:18 speculation 88:20 182:1 183:2 185:23 186:13 189:11 spend 31:25 81:3 162:5 sperm 154:15 163:8,12,25 167:4 split 28:12,17 28:21 sports 50:17,20 51:7,23 53:1,5 61:14 stability 42:16 42:18 170:19 stable 20:21 21:2,4,6 91:20 125:13,18 126:13,15 stage 27:4,11 27:12,15,19 30:6,7 35:6 39:5,7 149:17 164:17 166:7 stages 26:22 staging 27:9 stand 47:21,23 49:12 51:17 100:20 standard 189:4	standards 130:17,24 134:16,24 135:11,12,16 136:12 standing 51:21 stanford 11:18 18:20 163:20 164:6,8 start 34:11 76:16 95:16 133:11 144:9 154:10 169:25 170:1 184:16 198:14 started 23:9 29:1 114:4 151:23 starting 18:16 167:20 starts 196:17 state 1:11 2:9 5:18 59:4 131:2 205:2 206:2,6 stated 129:1 statement 22:19 136:6 statements 169:3,5 172:10 172:12,17 states 1:1 5:11 15:4 23:18 100:24 101:3,9 101:13,15,21	101:25 102:22 102:23 103:2,8 103:9 145:13 145:21 184:11 200:20 static 195:11 195:13 196:3 statistical 99:1 141:7,17 142:13,24,25 statistically 142:19 143:7 189:15 statistics 139:1 178:10 status 9:2,4 stay 23:22 24:6 198:7,15 stays 185:25 steps 33:9 34:2 stereotypes 50:25 66:7 stereotypical 52:14 58:13 66:16 stereotypically 50:14 53:22 57:1 65:23 66:4 stick 195:5 stipulations 5:19 stone 2:21 6:2 stop 85:16 151:6 175:5,6	182:11 192:14 stopped 164:24 165:16 166:22 185:6 stopping 177:25 stops 154:12 172:9 store 53:12,16 53:19 straight 90:5 street 2:17,22 3:7,21 strength 104:2 strengthening 104:4 strengths 78:15 79:10 stressful 70:6 170:16 strong 40:23 51:6,23 52:25 56:18 58:7 59:7 66:12 123:16,21 stronger 100:21 103:7 strongly 74:6 74:13 78:3 81:6,12 82:16 structure 76:1 76:4 114:13 170:8 structured 38:6 82:20

[struggles - sure]

struggles 152:24	188:9,16,20 189:1 190:10	subset 25:5 202:1	32:11 35:24 36:20 43:18
struggling 32:12 45:16 199:21	192:24 style 33:6 sub 15:3	substance 17:12 169:1	44:11,21 45:6 45:22 118:10
student 13:23	subcategory 68:11	substantial 192:16	138:9,13,14 182:5 183:4,8
students 139:16,18	subclinical 43:2,5 44:24 47:9	succeed 153:17 successful 167:1,3	supported 180:22,23
studies 18:1 48:19 49:1,10 62:25 63:4 74:18 105:10 105:13 134:1 139:21 140:24 141:5 142:18 143:14,17,25 145:6,10,13,14 145:18,20,22 152:4,25 178:5 184:16 185:15 188:5 189:5 192:13	subgroup 15:4 148:21 149:1 177:13 subjective 57:19 submitted 13:6 13:20 16:19 submitting 17:15 subparagraph 50:8 52:20,23 57:6 59:1 109:15	suffering 110:21 153:12 sufficient 48:5 70:24 106:23 sugar 197:2 suggest 46:20 47:22 suggesting 40:21 180:4 suggests 151:17 suite 2:22 suited 79:11 summaries 137:9,11	supporting 4:23 183:21 supportive 35:23 44:24 supports 38:16 suppressed 149:18 suppression 36:13 147:4,8 148:1 149:8 151:11 152:16 152:19 184:17
study 49:6 96:12,18,20 97:1,5 98:24 99:6,8,15,22 101:8,10 102:24 103:11 103:12 104:1 104:19,24 105:2,6 108:25 109:2,6 139:8 140:11,13,17 148:4,14 175:4 184:5,8 187:25	subpart 154:22 subscribe 131:14 132:10 subscribed 205:21 subscribers 132:15,19 subsection 109:15 subsequently 166:15	summarization 202:21 summarize 96:7 summarized 143:24 supervised 15:23 supervising 15:25 support 18:18 30:15,16 32:9	sure 7:9 11:24 14:24 15:7,21 24:9,12 31:19 32:24 40:19 49:4 57:17 73:19 74:15 76:12,13 92:24 96:5 105:12 123:13 124:2 130:14,21 132:20 134:22 138:12 144:4 165:9,10 166:9 176:18 180:10 180:12 182:9

[sure - terms]

188:17 196:13 surgeon 10:13 surgeries 158:10,17 159:16 surgery 117:20 156:25 157:19 157:24 158:3 158:22 159:2 160:4,12,13,15 179:11,15 186:6 surgical 190:19 192:6 surprise 28:21 188:19 surprising 29:5 suspicion 117:2 suspicious 187:6 swear 6:13 sweden 102:25 switched 142:5 sworn 6:16 205:5,21 206:9 symptom 43:16 43:22 110:9,11 symptoms 38:1 39:17 42:16 43:16,19 45:7 45:17,20,25 46:10,13,14,17 46:21,24,24 47:6 48:2,24 111:2 112:14	systematic 133:20,24 136:23,25 137:3,6,9,10,13 137:15,17,19 137:24 145:25 202:13,17,21 202:24 systems 170:11 171:5,17,23 172:3	talk 162:7,18 162:20 163:21 185:12 192:12 talking 26:6,25 27:1,2 40:10 43:23 47:8 91:2 102:22 103:8 116:19 156:12 177:7 177:25 195:17 198:20 199:19 talks 13:5 63:24 tanner 27:9,11 27:12,15,19 30:6,7 35:6 39:5,7 149:12 164:17 166:6 target 53:18 task 44:4 tasks 122:23 172:25 taxonomy 71:21 teaching 45:22 team 19:7 27:8 31:21 32:5,19 147:18 163:19 teenagers 78:17 teens 70:7 telephone 2:18 2:23 3:5,8,14 3:17,22	tell 6:16 93:1 169:10 180:21 187:14 ten 97:20 149:23 192:15 192:19 193:1 193:17 203:16 tend 71:23 tends 54:20 tennessee 8:22 8:23 9:1 term 22:21 26:20 47:19 68:13,14 71:9 71:16,20 72:2 72:3,25 84:12 84:15 91:1 119:11 133:20 133:23 138:2,6 139:8,11,23 140:1,19 142:13 151:14 151:17 152:5 153:13 155:14 174:11 181:15 terminal 12:4 terminology 26:18 36:16 178:1 terms 34:8 44:18 63:19 71:18,21 72:20 79:5 83:10 92:18 102:12 115:23 128:2
	t		
	t 4:2,8 table 94:15 take 7:3 8:4 33:1,12 34:1 41:14 49:17 53:3 88:8 90:6 90:8 105:19 111:14,19 121:3 122:5 149:23 157:21 169:15 178:4 182:14 183:11 186:3 194:18 194:20 203:16 taken 2:4 5:9 50:1 90:16 105:24 138:15 150:6 179:2,5 194:25 203:23 205:8 206:11 takes 25:6 198:25		

[terms - think]

154:15 156:6 162:25 193:9 194:9 200:19 testicle 164:10 testified 6:17 testify 206:9 testimony 42:25 48:11 51:10 54:17 56:3,20 57:10 57:16 59:16 64:6,18 81:18 82:1 85:2 89:10 99:25 101:5 103:4 104:17 107:14 121:5 145:16 190:1 191:14 200:18 201:5 201:14 testing 116:18 116:23 117:1,9 testosterone 154:17 157:21 166:1,21 167:9 197:9,10 198:5 198:7,8,24 199:3 tests 173:2 text 71:7 thank 90:12 128:21 169:24 203:9,19 204:5 204:6	thanks 49:22 169:9 theoretical 138:21 147:11 147:14 161:1 theoretically 123:10 theories 75:19 theory 161:5 therapeutic 19:5,8 187:5 therapies 138:18,19 139:4 150:24 166:24 186:16 198:15,15 therapist 24:22 25:11 32:15 84:19 120:4 therapy 15:22 16:1 36:18,20 38:13 49:5,7 84:13 115:4,6 115:25 116:20 122:12,15,17 122:23 138:20 146:23 158:8 180:25 thereof 205:10 thing 57:8 58:19 60:12 68:5 73:1 75:14 105:14 128:24 156:12 174:19 201:9	things 24:21 29:1 31:17 33:8 37:22 50:13,17,19 51:15 52:11,13 52:14 53:10 54:13 57:9,22 58:18 59:20,21 59:24,24 61:3 61:9 65:24 66:2 74:23 91:15,18 95:9 102:12 111:20 114:16 116:24 117:24 118:15 128:7 131:4,22 131:23 132:11 136:20 139:19 147:13,18 156:8 158:2 187:12 200:4 202:10 203:14 think 16:11 22:13 23:8 33:11 35:15 40:4,5,16,20,22 41:15 43:8,9 43:25 44:3 46:5 47:1,4 49:10 50:14 57:4 61:13 71:15 74:5,12 74:22 75:8,9 78:25 79:4,9 79:12,16 80:18	84:5 85:3,18 85:22 86:3 88:1,3,14,16,21 89:23,24 92:1 95:8,17,23 96:2 99:15 100:25 101:14 101:20,20,24 102:15,18,21 102:24 103:5,6 103:14,20 104:13 105:2,6 105:17 106:3 106:14,21,23 107:1,4 108:1 110:23 123:1 124:22 126:22 129:19,20 135:12 136:8 142:4,7 149:5 149:15,25 151:1,8,10 156:5,6 157:23 159:18 160:5 160:21 163:23 163:25 165:2 165:17,22 166:9,10 172:8 173:22 176:7 181:8,22 182:19,23 184:25 185:10 185:13 188:8 188:24 191:11 191:15 192:4

[think - transition]

195:13,15,19	time 2:11 5:5,6	together 16:7	training 11:2,2
196:1,6,9,15	11:19 21:19	16:25 38:15	11:13 15:21,22
197:5,16	23:23 24:23	44:5 52:5 84:6	32:21 123:25
198:14 202:7	31:25 37:1,3	84:9 119:1	124:1 138:19
203:8	40:12 43:3	134:2	138:20,21,24
thinking 49:3	49:14,23,24	took 11:4,6	139:6
57:5 58:24	50:3,3 76:2	138:25 186:5	traits 120:18
114:22	81:3 83:12,14	203:16	170:18
third 82:23	83:25 90:13,14	top 63:7 110:20	trans 102:10
115:9 123:7,11	90:18,18 104:5	133:17 146:21	126:21
140:22 161:13	105:18,22,22	168:18 179:11	transcribed
196:9,16,16	106:1,1 109:5	179:15 196:8	7:18
thorough	121:11 125:21	topic 137:4	transcript 7:24
111:15 155:20	130:7 147:19	148:11	206:14
thoroughly	148:12 150:3,4	totality 19:25	transfer 23:16
99:18	150:8,8,18	touched 188:3	23:24 24:2,5
thought 9:17	153:5,22 162:5	toward 15:9	153:9,22
52:25 82:4	169:15 174:13	towards 34:2	transferred
107:24 114:25	194:23,23	52:17 53:11	187:16,17
155:25 176:21	195:2 199:2,6	54:9 91:22	transgender
thoughtful	203:20,21,25	toy 53:12 56:22	4:17 14:10
119:3	203:25 204:5,9	57:1 58:11,15	22:6,17,20
thoughts 74:3	204:10 206:12	60:4,14 62:3,5	26:13 51:18
84:18 114:17	times 55:18	toys 50:10,16	71:8,9,12,16
thousand 21:9	62:13 201:21	51:1 53:17,23	72:2,6,9,13
three 19:15	tissue 154:11	54:9,10 57:11	182:4 192:23
20:7,9,10 21:3	154:12 158:20	57:13 58:8,10	193:4,12,19
35:16 36:6	159:1	58:21,23 61:9	transition 4:14
37:17 163:9	today 9:6,9,14	61:13,14 62:11	30:18 32:10,24
180:16,16	9:25 17:17	traditional	33:16 34:8,13
194:4	68:15 90:21	163:11 198:18	34:18,24 35:6
thursday 1:20	106:22 137:5	traditionally	36:22 38:19,19
2:10	145:12	198:14	44:22 104:1,7
tie 63:22	today's 5:4	trainees 15:10	105:4 107:24
			181:19 186:24

[transition - unclouded]

191:24 transitioned 35:9,13 100:6 103:12 104:4,7 186:7 transitioning 19:17 32:22 103:15,21 104:14,25 108:3 translating 189:18 transmasculine 29:14,20,22 200:7 treat 18:23 48:5 72:14 158:21,23 189:8 treated 21:9 119:16 treating 10:6 46:14,24 48:1 48:1 treatment 20:4 20:16,18 32:4 38:12 43:17 46:18,20 47:2 47:19,22,24 48:8,13,16 122:11 124:4 131:5 137:7 145:25 156:13 158:10 159:16 165:3 166:15	172:20 173:6 174:1 178:16 198:22 203:6 treatments 150:19 154:4 156:1 166:23 trial 139:24 140:12 trials 142:14 tried 12:16 16:9 164:25 triggers 147:22 trucks 50:17 52:14 58:18 61:9 true 57:23 60:13 69:18 95:5 104:22 176:14 177:8 205:14 206:14 truly 48:1 truth 6:16,17 6:17 206:10,10 206:10 try 92:25 97:21 113:13 131:16 182:3 196:18 trying 42:4 45:10,12 50:12 65:13 67:4 96:6 121:16,22 142:6 187:7 tumble 52:12 53:6 62:20 63:2	turban 16:2,3,5 197:15 turn 23:11 71:4 174:4 203:10 203:13 turning 96:1 174:20 turns 66:7 two 37:11 75:3 76:20 112:15 112:18 113:4 116:12 134:19 144:22 147:13 147:19 160:16 161:5 167:6,21 180:10,16 181:6 185:4 196:12,19 type 61:13,14 64:14 83:19 140:3,17 types 62:25 70:15 92:19 typewriting 206:13 typical 54:19 57:19 60:11 63:15,17 64:3 64:11 65:6,10 65:14,22 66:13 68:23 69:3 70:1 typically 19:14 19:16 24:10 25:14 26:24	27:9,12 37:5,8 37:10,17 39:14 39:18 40:7 42:15 44:18 50:9,20,23 51:2 52:23 53:2,7,12,17 54:1,6,14 55:7 55:12,14 56:15 57:1,11,13 58:7 59:20 60:4,14,23 61:5,8 62:3,5 62:21,24 68:10 88:12 91:6,12 117:23 118:8 120:3,17 123:13 132:5 139:12 175:4 187:12 u u.s. 129:5 145:18 ultimately 118:17 119:8 184:18 192:5 um 21:24 22:2 umbrella 14:25 22:21 71:9,16 71:20 72:2,3 115:3 unaware 108:10 unclouded 110:5

[uncommon - verbatim]

uncommon 188:22	114:25 126:2 129:24 133:22	184:11	useful 184:10
under 13:9 22:24 23:1 51:22 60:3,16 66:6 99:11,16 99:23 100:10 106:4 120:1 156:18,23 172:19 185:14 192:17 194:3 199:9 206:13	135:9 136:3,6 138:5,8 147:10 156:10 175:1,2 175:8 183:20 195:24 198:16	universe 144:18	using 22:20 46:6 68:15,19 83:10 92:20 93:1 94:15 95:15 97:13,15 97:17 130:15 143:4
understand 7:12 15:19 26:8,15 33:19 38:21 39:23 45:11 51:4 56:13 61:25 71:1,15 84:7,7 92:24 111:20 117:10,16,21 118:1 123:8 126:2 135:7 139:10 140:1 149:15 150:18 155:11 160:5 163:23 165:9 196:24 199:21 203:12	understands 119:2	university 11:19 12:1,5 12:12,13 13:24	uspath 14:20 14:23 15:3
undertake 154:16 155:13	understood 7:14 87:13 176:18	upset 70:11,20	usually 98:2 147:17
undertaking 156:8	undertake 154:16 155:13	urologist 10:17	v
underwent 166:14	undertake 154:16 155:13	use 26:20 37:23 37:24 39:4 47:14,19 55:3 57:24 68:1,1 68:13,14,16,20 68:21 71:20 72:2,22,23 91:1 92:25 93:9,22,24 115:19 136:18 139:17 158:7 158:15 174:11 174:19,22 176:22 181:10	v 1:9
undiagnosed 117:2	undertaking 156:8	used 9:21 46:3 68:1,2,8 71:18 72:21 90:21 93:19 96:19 146:14 175:4 175:10 181:14 191:8,12,16 192:1	validation 121:22
unethical 136:21	underwent 166:14		value 123:17 123:18
unfortunately 191:9	undiagnosed 117:2		values 79:23 80:1,2,5,8
unhealthy 121:22	unethical 136:21		variable 132:19 147:22
union 2:16	unfortunately 191:9		variables 77:1 132:16,20 140:9 142:15
unique 68:6	unhealthy 121:22		varies 156:6
united 1:1 5:11 15:4 100:23 101:2,9,13,15 101:21,25 102:22,23 103:2,7,8 145:13,20	union 2:16		variety 19:3
	unique 68:6		various 141:7
	united 1:1 5:11 15:4 100:23 101:2,9,13,15 101:21,25 102:22,23 103:2,7,8 145:13,20		vary 127:1,18
understanding 4:23 7:8 31:14 32:1 46:5 81:4 82:3 84:15,16 85:12 93:4 94:10 99:19			vast 33:22 149:14,16
			verb 142:4
			verbally 7:19
			verbatim 206:15

[verbiage - williams]

verbiage 39:13	vocabulary	169:11 182:11	49:13,18 90:4
verification	71:22	186:10 194:18	149:22 194:17
205:1	voice 154:20	196:21 198:4,7	weakening
veritext 2:6	157:13,14	198:24 202:10	104:4
version 88:5	159:12	wanted 78:23	weaknesses
versus 50:18	voluntarily	79:6,24 183:4	78:15
64:24 85:4	83:1	183:7	wealth 37:4
91:14	voluntary	wanting 30:17	145:22
viability 167:5	83:20 85:4	52:17,18 80:2	wear 63:19,21
viable 167:5	vries 144:23	155:12 167:19	64:4,10
video 2:6 5:17	145:1,4,6,14	wants 63:12,13	wearing 92:18
204:8	vs 5:10	warning 97:24	wedding 63:21
videoconfere...	w	washington 2:8	week 21:6
2:5 5:14	wa 206:23	2:22 3:13	126:20 131:25
videographer	wait 121:2	12:12	200:24
3:24 5:3 6:12	waiting 122:10	way 59:6,17	weigh 160:21
49:23 50:2	walk 11:21	64:7 69:8,15	weighing
90:13,17	36:25 42:5	70:8,12,14	171:19 172:5
105:21,25	96:3	76:23 77:24	weiss 3:2 6:7
150:3,7 194:22	walks 37:1	81:12 86:4,19	welcome
195:1 203:20	want 8:4 23:16	87:18 88:2,9	182:12
203:24 204:7	34:4 42:6	88:23 89:2	welcoming
videotaped	43:10 49:17	93:11,21	182:4
1:19 2:1,3 5:8	52:2 53:14	158:22 170:15	went 11:25
5:13,14	56:13 58:20	171:9 178:13	107:19 164:22
view 51:1 54:20	61:21 68:9	187:22	165:15
72:25 87:2	69:10,19,23	ways 30:17	west 3:7,21
123:15 157:25	70:13,13,14,19	68:2 79:5 86:1	wharton 3:3
viewing 57:3	75:8 78:19	88:4 93:19	6:7
views 40:11	92:23 102:23	120:24 121:22	wide 89:14
64:23 169:1	117:4 119:9	135:11 162:19	widely 129:2,4
virtual 128:10	149:23 156:6	175:3 189:15	130:10
visit 163:10	158:21 159:24	198:18	williams
vitae 4:10	160:10,15,23	we've 20:1	192:24
	162:15,16,18	23:14 37:20	

[wishes - yeah]

wishes 178:24	100:1,19 101:6	177:18 178:13	139:1 184:10
withdraw	101:18 102:5	178:18 179:11	191:6
70:13	102:18 103:5	182:2 183:3	worker 10:15
witness 6:13,16	103:18,25	185:3,24	working 16:25
7:2 10:4 11:1	104:18 105:9	186:14 187:1	29:2 37:19
12:21 17:1	106:9,19,25	188:12 189:3	44:20 129:25
22:8 24:9 26:3	107:15 108:6	189:12 190:2	187:4
26:11,15,24	108:13,20	190:13 191:15	world 136:9
27:24 28:9	111:13 112:23	192:8 194:8	139:9 187:13
29:11 33:18	113:18 118:22	195:22 196:6	worried 125:14
41:11,18 42:13	120:24 121:6	199:11 200:4	worth 37:18
43:1 44:3 46:2	122:2 124:21	200:19 201:6	123:15 126:11
47:8 48:12	125:4,10 130:6	201:16 202:20	wpath 14:18,23
49:10,22 51:14	130:21 131:10	203:3 204:6	14:24 15:4
52:2 53:10	132:5 133:5,10	205:7 206:8,18	129:12 202:16
54:18 55:1,17	133:17 135:2	woefully	wrest 3:6 6:4
56:4,21 57:17	135:23 136:16	190:23	wrest.coop 3:9
59:4,17 60:8	137:22 138:24	women 65:23	wrestling 62:22
60:19 61:12,18	140:16 142:1	wonder 188:14	write 196:19
62:8 64:7,19	143:3 144:4	wondering	wrong 57:4
65:13 66:9,20	145:3,8,17	87:23	58:24 59:14
67:17 70:23	146:4,21	word 39:12	89:21 92:1
72:17 73:19,25	148:11,20	40:2,16 41:15	93:1 135:12
74:9,15,22	149:10 151:13	41:19 95:16	wrote 135:25
75:7,19 76:12	152:22 153:8	128:16 142:7	197:14
76:22 79:4,23	153:16 156:5	142:10 174:22	wu 2:21 6:2
80:7,18 81:3	156:17 160:21	175:1,2,9	x
81:19 82:2,15	161:11 164:21	176:22 181:10	x 4:1,2,8
84:4 85:3,10	165:9,14,22	words 70:18	198:25
86:11 87:6,12	166:9,18	132:1 153:11	y
87:23 88:12,21	167:18 168:1	174:16,19	y 198:25
89:11,23 90:12	169:9 172:16	202:23	yeah 9:20 20:2
92:17 93:7	172:23 173:9	work 22:3	21:5 34:16
94:7 95:13	175:25 176:6	27:10 28:24	36:16 39:7,13
97:12 98:8	176:18 177:12	84:6,9 131:18	

[yeah - zoom]

42:4 49:16,19 50:11 56:11 66:5 72:4 74:15 77:13 81:20 88:3,14 90:3,8 94:8 99:12 100:11 105:20 115:18 129:21,24 132:16 136:1 139:10 145:5 148:21 149:25 156:17 160:25 165:17 167:13 169:8 178:4 182:17 190:13 193:25 194:20 196:23 197:1 203:15,18 year 12:11 20:20,22,23,24 28:16 129:14 129:17 171:16 171:22 years 4:13 19:15,21 20:1 20:7,10,25 21:3,7,8 23:11 24:3 28:25 35:16 36:6 120:8 153:24 166:24 167:10 192:15,19,25 193:1,17 194:5	yelling 70:10 70:20 york 2:18 3:4 young 19:16 22:25 23:2,14 35:7,16 48:21 84:17 114:18 118:25 155:22 160:14 younger 120:16 151:23,23 youngest 19:14 35:12 youth 10:6 13:25 19:4 21:9 22:6,17 22:23 23:17,22 25:6,14 30:4 30:16,16 32:1 32:11 37:13 38:9 40:9,13 41:3,11 45:9 48:21 53:13 55:21,22,25 56:6,21 57:2 57:21,22,23 58:13,19 60:24 61:21 64:23 102:10,22,23 103:7,8 104:3 104:7 119:8 152:2,6 161:24 164:22 173:19 182:13	youth's 38:1 youths 40:12 z z 198:25 zoom 2:4 5:14

Idaho Rules of Civil
Procedure

Rule
30

(e) Review by the Witness; Changes.

(1) Unless waived by the deponent and the parties, 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. (3) Witness Failure to Sign. (A) In General, If the deposition is not signed by the witness within the 30-day period, the officer must sign it and state on the record the fact of the waiver of signature, or of the illness or absence

of the witness or the fact of the refusal to sign the deposition together with any reason given for not signing.

(B) Use of Unsigned Deposition. The deposition may be used as if it were signed, unless pursuant to Rule 32 (d)(4) the court determines that the reasons given for the refusal to sign require rejection of the deposition in whole or in part.

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO**

PAM POE, by and through her parents and next friends, et al. <i>Plaintiffs,</i> v. RAÚL LABRADOR, in his official capacity as Attorney General of the State of Idaho, et al. <i>Defendants.</i>	Case No. 1:23-cv-00269-BLW

EXPERT DECLARATION OF DANIEL WEISS MD

I, Daniel Weiss MD, hereby declare and state as follows:

Background and Qualifications:

1. I am a physician who is Board Certified in Internal Medicine and Diabetes/Endocrinology and Metabolism.
2. I completed my undergraduate work at Columbia University in New York, where I majored in chemistry. Although I was offered a fully paid scholarship to continue graduate work in chemistry at the Massachusetts Institute of Technology, I chose to become a physician. I have been fascinated by the wonders of the human body since grade school.
3. I obtained my medical degree from the University of Texas Southwestern Medical Center in Dallas. I went on to a residency in Internal Medicine at Upstate Medical Center in New York and then to the University of Iowa Hospitals and Clinics, where I completed a fellowship in Endocrinology. After my fellowship, I accepted a teaching staff position at the University of Iowa Hospitals and Clinics, where I received the award for Teacher of the Year.
4. Since the end of my fellowship in 1986, I have been in the active and continuous practice of Endocrinology to the present day. I served as the sole endocrinologist in a group of 110 physicians

at University Mednet before establishing an independent practice in 2003. I have provided care for both adults and children.

5. Throughout my years in in Iowa and Ohio, I held academic appointments. I mentored and helped to train many medical students, medical residents, endocrinology fellows, and advanced practice nurses. I am a manuscript reviewer for peer reviewed journals and have authored original research papers.

6. I joined The Endocrine Society in 1990. However, I cancelled my membership in 2022 after this organization failed to respond to my concerns about its guidelines promoting hormonal interventions in children who felt that they were the opposite sex.

7. I have been a Certified Physician Investigator, and I have served as the principal investigator in over 100 clinical research trials of new treatments for adults and children. In this capacity, I have developed insight and expertise into the strict international principles and ethical standards governing clinical research.

8. For about a decade (2003-2013) while providing care in my independent practice, I became the key physician in my region offering hormonal interventions for adults with “gender dysphoria”. My name was listed on the principal LGBTQ website as the “go to” physician in northeastern Ohio. I provided hormonal care for approximately 100 persons as young as 18. During this period, I observed that my patients had minimal psychologic evaluation and treatment for their significant psychic distress. Although I continued to care for my established patients, I stopped accepting new patients with “gender dysphoria” when I realized the lack of benefit and the harm these interventions caused.

9. I joined a group practice in Utah in January 2023, providing internal medicine and endocrine care for adolescents and adults.

10. Depression is common in patients suffering from chronic disease, including diabetes.

Therefore, I have taken additional training in various mental health disorders.

11. I am licensed to practice medicine in Ohio, Utah, and Nevada.

12. My comments do not reflect the views of my employer, Intermountain Health.

Compensation and Previous Testimony:

13. I am compensated at five hundred dollars per hour. My compensation does not depend on the outcome of this case.

14. I have been designated an expert witness in three other cases: *Susan Platz et al. v. Mike Karpinecz*, et al. (Geauga County Court of Common Pleas Case No. 20P000218) (2022). In this case, a driver, Mr. Karpinecz, with diabetes was accused of causing a motor vehicle accident because of a low blood sugar.

15. *William Blair v. US Airways* (Northern District of Ohio) (1994). The plaintiff, Blair, was a passenger on a US Air flight that crashed after takeoff. He claimed that the crash caused him to get diabetes.

16. *K.C vs. Individual members of the Medical Licensing Board of Indiana in their official capacities et.al* (U.S District Court Southern District of Indiana, Indianapolis Division) (2023) relating to Indiana Senate Enrolled Act 480 regarding interventions on minors with “gender dysphoria”.

17. I have been designated and asked by defendants to provide expert opinion based upon my clinical experience treating adults with “gender dysphoria” and my review of the scientific literature concerning the diagnosis and treatment of “gender dysphoria.”

Bases for Opinions:

18. In preparing this declaration, I have reviewed Idaho House Bill 71, the complaint for declaratory and injunctive relief, the declarations of the plaintiffs' experts, and the references that I have cited in this declaration.

19. I formed my opinion from my clinical expertise and experience, my rationality or common sense, and my critical review of the scientific literature and the publications on this subject. I use the same approach that others in my field would rely upon in forming an opinion.

20. My commentary in areas of psychology and surgery is based upon analysis of published evidence and its methodology. Well-trained practicing physicians must analyze scientific evidence through careful reading in order to provide the best care for their patients.

Summary of this declaration:

21. In this document I will analyze and summarize the evidence in support of these five key points.

- “Gender dysphoria” is a construct. In minors, in most cases, it arises from previous trauma, abuse, social isolation, depression, and other psychosocial factors.
- Hormonal and surgical interventions usually leave psychologic issues unexplored and unresolved. These interventions can cause substantial harm and create permanent patients out of healthy young people.
- Professionals who advocate for medical intervention fail to admit that the evidence base is poor. The extrapolation of the flimsy existing evidence to a “one size fits all” generalized approach is profoundly unscientific. These interventions are experimental and violate the foundational principles of medical ethics and informed consent.

- The interventions that Idaho House Bill 72 bans are neither safe nor effective. I will review the harms of puberty blockers and opposite sex hormones, the risk of post-surgical complications, and the experience of desisters and detransitioners.
- There is no medical consensus in support of the “gender affirmation” model. Medical societies that endorse these interventions are politicized and do not represent the viewpoint of their members. Countries with much more experience than the US have curtailed hormonal and surgical interventions in minors. Unfortunately, a set of perverse financial incentives is likely to play an important role in the massive expansion of these harmful interventions in the U.S.

Point #1 - “Gender dysphoria” is a construct. In most cases in minors, it arises from previous trauma, abuse, social isolation, depression, and other psychosocial factors.

The DSM criteria for diagnosing “gender dysphoria” is based on feelings and behavior.

22. The Diagnostic and Statistical Manual of Mental Disorders (DSM) is used by clinicians and researchers to diagnose and classify mental disorders. The latest version is called DSM-5-TR.¹ In the DSM, “gender dysphoria” is defined in children as: A marked incongruence between one’s experienced/expressed gender and “assigned” gender, lasting at least six months, as manifested by at least six of the following (one of which must be the first criterion):

- a. A strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one’s assigned gender);

¹ American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders. 5th Ed. Text Revision.*, (American Psychiatric Association., 2022).

- b. In boys (assigned gender), a strong preference for cross-dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing;
- c. A strong preference for cross-gender roles in make-believe play or fantasy play;
- d. A strong preference for the toys, games or activities stereotypically used or engaged in by the other gender;
- e. A strong preference for playmates of the other gender;
- f. In boys (assigned gender), a strong rejection of typically masculine toys, games, and activities and a strong avoidance of rough-and-tumble play; or in girls (assigned gender), a strong rejection of typically feminine toys, games, and activities;
- g. A strong dislike of one's sexual anatomy; or
- h. A strong desire for the physical sex characteristics that match one's experienced genders.

23. In adolescents, the DSM-5-TR criteria "clinically significant distress" is a criterion for diagnosis.²

² Ibid.

24. More than 70% of children with “gender dysphoria” have had recent trauma, or have a history of abuse, autism spectrum disorder, homosexual orientation, depression, anxiety, or bullying.^{3,4,5,6,7} The DSM fails to consider these diagnoses in its descriptions of “gender dysphoria”.

25. Hormonal or surgical interventions do not address deep-seated emotional and psychologic problems, as I will review in more detail below^{8,9} (sections 2b and 4a).

26. “Gender dysphoria” can be influenced by what society considers stereotypic masculine and feminine behavior. Dr. Stephen Levine is an internationally known psychiatrist with expertise in “gender dysphoria”. He writes: “What must a 12-year-old, for example, understand about masculinity and femininity that enables the conviction that ‘I can never be happy in my body’?”¹⁰ Children and adolescents are unable to imagine life as an adult man or woman.

27. Feeling disconnected from or uncomfortable with one’s body is a normal and common experience for adolescents. This discomfort during normal puberty is not a disease state. Importantly, discomfort or distress is especially common in those with anxiety, autism, eating disorders or a history of trauma.^{11,12}

³ J. Elkadi and others, 'Developmental Pathway Choices of Young People Presenting to a Gender Service with Gender Distress: A Prospective Follow-up Study', *Children (Basel)*, 10 (2023).

⁴ L. Engel and others, 'Assessment of Quality of Life of Transgender and Gender-Diverse Children and Adolescents in Melbourne, Australia, 2017-2020', *JAMA Netw Open*, 6 (2023).

⁵ L. Littman, 'Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners', *Arch Sex Behav*, 50 (2021).

⁶ J. W. Wanta and others, 'Mental Health Diagnoses among Transgender Patients in the Clinical Setting: An All-Payer Electronic Health Record Study', *Transgend Health*, 4 (2019).

⁷ T. A. Becerra-Culqui and others, 'Mental Health of Transgender and Gender Nonconforming Youth Compared with Their Peers', *Pediatrics*, 141 (2018).

⁸ A. L. de Vries and others, 'Young Adult Psychological Outcome after Puberty Suppression and Gender Reassignment', *Pediatrics*, 134 (2014).

⁹ A. L. de Vries and others, 'Puberty Suppression in Adolescents with Gender Identity Disorder: A Prospective Follow-up Study', *J Sex Med*, 8 (2011).

¹⁰ S. B. Levine, 'Ethical Concerns About Emerging Treatment Paradigms for Gender Dysphoria', *J Sex Marital Ther*, 44 (2018).

¹¹ A. N. Nabbijohn and others, 'Gender Variance and the Autism Spectrum: An Examination of Children Ages 6-12 Years', *J Autism Dev Disord*, 49 (2019).

¹² E. L. Lantz and others, 'Conceptualizing Body Dissatisfaction in Eating Disorders within a Self-Discrepancy Framework: A Review of Evidence', *Eat Weight Disord*, 23 (2018).

28. The famous psychiatrist Carl Jung stated in 1957: “Just as people can catch measles and scarlet fever from one another, so can they catch the ways of feeling, thinking, and behaving. The more people live together in heaps, the less each individual counts, and the more he or she will be inclined to take his or her cue from the collective rather than pursue an individual ideal.”¹³

29. Eating disorders are also associated with social contagion.^{14,15}

30. Adolescents are strongly influenced by their peers and by their peer group on social media.^{16,17} One study of 1655 young people with a mean age of 15.7 years reported that of those who wanted to change their sex, 55% had friends who also “came out” as transgender at around the same time.¹⁸ This large study was retracted after activist pressure on the publisher; the conclusions and the methodology remain sound.¹⁹

b. The medical and scientific diagnosis of sex in human beings is based on biology.

31. Human beings live their lives as one of two biologic sexes, male and female.²⁰ Sex is almost always simply observed at birth, not “assigned.” Examination of an infant’s external genitalia will immediately and accurately reveal whether that infant is male or female. The incidence of intersex

¹³ Carl Jung, *The Undiscovered Self*, (Signet Books, 1957).

¹⁴ D. M. Hutchinson and R. M. Rapee, 'Do Friends Share Similar Body Image and Eating Problems? The Role of Social Networks and Peer Influences in Early Adolescence', *Behav Res Ther*, 45 (2007).

¹⁵ T. A. Meyer and J. Gast, 'The Effects of Peer Influence on Disordered Eating Behavior', *J Sch Nurs*, 24 (2008).

¹⁶ L. Littman, 'Parent Reports of Adolescents and Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria', *PLoS One*, 13 (2018).

¹⁷ S. Diaz and J. M. Bailey, 'Rapid Onset Gender Dysphoria: Parent Reports on 1655 Possible Cases', *Arch Sex Behav*, 52 (2023).

¹⁸ Ibid.

¹⁹ 'Springer to Retract a Key Paper in Response to Activist Demands', (<https://segm.org/retraction-of-key-publication-in-response-to-activist-pressures>).

²⁰ A. Bhargava and others, 'Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scientific Statement', *Endocr Rev*, 42 (2021).

or ambiguous genitalia is estimated to occur in less than 1 in 10,000 births.²¹ These rare conditions are the only occasions in which the sex of a newborn may be uncertain.

32. Males have XY chromosomes and females have XX chromosomes in every cell in their body. Therefore, genetic analysis, performed at birth, can reveal the sex of the rare child born with ambiguous genitalia.

33. As defined by biology and reproductive function, sex is clear, binary, and cannot be changed. The Endocrine Society states that sex is a biological concept, that “all mammals have two distinct sexes” and that “in mammals, numerous sexual traits (gonads, genitalia, etc.) that typically differ in males and females are tightly linked to each other.”²²

34. While hormonal and surgical procedures may enable some individuals to appear to others to be the opposite sex during some parts of their lives, no procedure can enable an individual to perform the reproductive function of the opposite sex. Dr Christiane Nusslein-Volhard the Nobel prize winning biologist has stated, “all mammals have two sexes and man is a mammal.” “There are people who want to change their gender, but they can’t do it”²³

Point #2- Hormonal interventions and surgery leave psychologic issues unexplored and unresolved.

a. “Gender dysphoria” in minors usually resolves if left untreated.

²¹ 'Intersex Society of America, Incidence of Intersex'.

²² Bhargava and others

²³ Michael Tennant, 'Nobel Prize-Winning German Biologist: Multiple Genders Are “Nonsense” and “Unscientific”', in *The New American*, (<https://thenewamerican.com/nobel-prize-winning-german-biologist-multiple-genders-are-nonsense-and-unscientific/?print=pdf>: TheNewAmerican.com, 2022).

35. Eleven studies reveal that approximately 90% of children who are diagnosed with “gender dysphoria” will “desist” if left untreated (no medical interventions).^{24,25,26,27} In other words, “gender dysphoria” will resolve on its own by the end of puberty or adulthood.²⁸ Among teens and young adults who have experienced “rapid onset gender dysphoria” (those with no sign of discomfort with their biologic sex during childhood), desistance is frequent.²⁹ Minors who develop “gender dysphoria” during or shortly after adolescence are susceptible to psychosocial factors including pressure from peers and social media.³⁰

36. There are few studies of the long-term outcome of the interventions made in gender clinics. One paper from gender clinics in the Netherlands, Germany, and Norway reported the experience of 201 young adults followed for an average of five years after treatment. Fourteen percent of that group had no medical interventions. Yet these untreated persons exhibited a 67% reduction in their “gender dysphoria” score.³¹

37. The Endocrine Society clinical practice guidelines state that “in most children diagnosed with GD/gender incongruence, (the symptoms) did not persist into adolescence.”³² No test can predict whether “gender dysphoria” will persist or not.

²⁴ S. L. Adelson, Child American Academy of, and Issues Adolescent Psychiatry Committee on Quality, 'Practice Parameter on Gay, Lesbian, or Bisexual Sexual Orientation, Gender Nonconformity, and Gender Discordance in Children and Adolescents', *J Am Acad Child Adolesc Psychiatry*, 51 (2012).

²⁵ J. M. Cantor, 'Transgender and Gender Diverse Children and Adolescents: Fact-Checking of Aap Policy', *J Sex Marital Ther*, 46 (2020).

²⁶ J. Ristori and T. D. Steensma, 'Gender Dysphoria in Childhood', *Int Rev Psychiatry*, 28 (2016).

²⁷ D. Singh, S. J. Bradley, and K. J. Zucker, 'A Follow-up Study of Boys with Gender Identity Disorder', *Front Psychiatry*, 12 (2021).

²⁸ Ristori and Steensma.

²⁹ Littman.

³⁰ Ibid.

³¹ T. C. van de Grift and others, 'Effects of Medical Interventions on Gender Dysphoria and Body Image: A Follow-up Study', *Psychosom Med*, 79 (2017).

³² W. C. Hembree and others, 'Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline', *Endocr Pract*, 23 (2017).

38. It is notable that “gender dysphoria” is the only diagnosis listed in the DSM that for which medication and/or surgery might be used with the goal of altering body appearance.

b. Psychotherapy is underutilized in treating “gender dysphoria.”

39. In 2021, the Royal Australian and New Zealand College of Psychiatrists issued a position statement with the key message that there is “mixed evidence regarding (medical) treatment options for people with gender concerns, especially children and young people.”³³

40. The goal of treatment in patients with “gender dysphoria” should be to resolve gender related distress. Therefore, it is essential to understand the factors that might have led to the patient’s rejection of their natal sex.^{34,35,36,37} Exploratory, non-judgmental psychotherapy can alleviate suffering in patients with “gender dysphoria” and may help them accept their natal sex.^{38,39}

41. World Professional Association for Transgender Health (WPATH) guidelines (discussed in more detail 3a below) have gained influence along with the rapid proliferation of gender clinics that emphasize medical interventions. However, the WPATH guidelines are not universally accepted, either internationally or within the United States. Many endocrinologists refuse to treat “gender dysphoria” patients, though few speak out about their concerns.

³³ 'Recognizing and Addressing the Mental Health Needs of People Experiencing Gender Dysphoria/Gender Incongruence', in *Position Statement of the Royal Australian and New Zealand College of Psychiatrists*, (2021).

³⁴ S. B. Levine, 'Reflections on the Clinician's Role with Individuals Who Self-Identify as Transgender', *Arch Sex Behav*, 50 (2021).

³⁵ L. Griffin and others, 'Sex, Gender and Gender Identity: A Re-Evaluation of the Evidence', *BJPsych Bull*, 45 (2021).

³⁶ M. Evans, 'Freedom to Think: The Need for Thorough Assessment and Treatment of Gender Dysphoric Children - Corrigendum', *BJPsych Bull*, 45 (2021).

³⁷ R. Withers, 'Transgender Medicalization and the Attempt to Evade Psychological Distress', *J Anal Psychol*, 65 (2020).

³⁸ R. D'Angelo and others, 'One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria', *Arch Sex Behav*, 50 (2021).

³⁹ A. Churcher Clarke and A. Spiliadis, 'Taking the Lid Off the Box': The Value of Extended Clinical Assessment for Adolescents Presenting with Gender Identity Difficulties', *Clin Child Psychol Psychiatry*, 24 (2019).

42. Some clinicians may think that children must simply be “affirmed” in their expression of transgender identity. As a result, psychosocial factors remain unexplored and untreated.^{40,41}

43. Clinicians who prioritize the child’s self-diagnosis will fail to address psychiatric co-morbidities that may underlie that child’s rejection of their sex. A history of bullying, sexual abuse, social isolation, anxiety, emotional or physical trauma all may contribute to the child’s distress.

44. Dr. Erica Anderson is a psychologist and former president of the United States Professional Association of Transgender Health (USPATH), a division of WPATH. Dr. Anderson has expressed this same concern about rushing into medical interventions after prioritizing the child’s self - diagnosis.⁴²

45. Recent studies show that more than 70% of children with “gender dysphoria” have had recent trauma, history of abuse, autism spectrum disorder, depression, anxiety, or bullying.^{43,44,45,46,47}

46. I am concerned about “the one size fits all” protocol of puberty blockers, opposite-sex hormones, and soon, surgery, for complex children who have already been terribly traumatized.

⁴⁰ Hannah Barnes, *Time to Think : The inside Story of the Collapse of the Tavistock's Gender Service for Children*, (London: Swift, 2023).

⁴¹ Jamie Reed, 'Affidavit of Jamie Reed', (https://ago.mo.gov/docs/default-source/press-releases/2-07-2023-reed-affidavit---signed.pdf?sfvrsn=6a64d339_2, 2023).

⁴² Laura Davis, 'A Trans Pioneer Explains Her Resignation from the Us Professional Association for Transgender Health.', (<https://quillette.com/2022/01/06/a-transgender-pioneer-explains-why-she-stepped-down-from-uspath-and-wpath/>: Quillette, 2022).

⁴³ Elkadi and others

⁴⁴ Engel and others

⁴⁵ Littman.

⁴⁶ Wanta and others

⁴⁷ Becerra-Culqui and others

47. An “assembly line” of harm has been revealed by whistle-blowers at gender clinics. In these clinics, open exploratory supportive psychotherapy or talk therapy is often dispensed with entirely when young patients present with gender identity issues.^{48,49}

48. A study was commissioned by the United Kingdom (UK) government to evaluate the care provided at their world-famous Gender Identity Development Service (GIDS). That study revealed that an inappropriate focus on “gender” overlooked or “overshadowed” other psychologic issues.⁵⁰ In the GIDS clinic, healthcare needs were not addressed once “gender related distress” was diagnosed.⁵¹

Point #3- Weak science and disregard for medical ethics characterizes published literature on medical interventions for “gender dysphoria” in minors.

a. Two influential European studies are misunderstood.

49. Researchers in the Netherlands hypothesized that an effective intervention for “gender dysphoria” in children would be to stop puberty before secondary sexual characteristics have developed and subsequently administer opposite sex hormones. The results of the so-called “Dutch protocol” were published in 2006.⁵² This research was funded by the pharmaceutical company that manufactures triptorelin, used to block pituitary hormones, and in this study triptorelin was used to block the onset of puberty.⁵³

⁴⁸ Barnes.

⁴⁹ Reed.

⁵⁰ H. Cass, 'Independent Review of Gender Identity Services for Children and Young People: Interim Report. ', (2022).

⁵¹ Ibid.

⁵² H. A. Delemarre-van de Waal, Cohen-Kettenis, P., 'Clinical Management of Gender Identity Disorder in Adolescents: A Protocol on Psychological and Pediatric Aspects', *Eur J Endocrinology*, 155 (2006).

⁵³ Ibid.

50. To participate in this study, adolescents were required to have a “comprehensive psychologic evaluation with many sessions.” The study participants could not have “psychosocial problems interfering with assessment or treatment.”⁵⁴ Further, participants required a “good comprehension of the impact of medical interventions.” Therefore, the study subjects were highly selected at the start.^{55,56}

51. Because of depression, anxiety and self-harm behavior, neither of the minors in the case before the US District Court for the District of Idaho have demonstrated that they would have qualified for treatment in the Dutch study which excluded from treatment with puberty blockers and/or hormones those with multiple serious “psychosocial problems.”⁵⁷

52. Serious flaws in the scientific design and methodology used in the “Dutch protocol” study, include: 1) the study lacked an untreated comparison group, i.e., it was not a controlled study; and 2) many participants dropped out of the study. The reasons for drop out were not reported in the final analysis.^{58,59,60} Though 111 children began the trial, only 55 were analyzed at its conclusion.

53. The principal author of the Dutch studies, a psychiatrist named Dr. Annelou de Vries, interpreted her study as showing that “the main finding remains the resolution of gender dysphoria.”⁶¹ This statement deserves critical analysis. “Dysphoria” was measured using a 12 item Utrecht Gender Dysphoria Scale (UGDS) that was not designed to be used after treatment.”⁶² In fact,

⁵⁴ de Vries and others

⁵⁵ Ibid.

⁵⁶ de Vries and others

⁵⁷ de Vries and others

⁵⁸ E. Abbruzzese, S. B. Levine, and J. W. Mason, 'The Myth of "Reliable Research" in Pediatric Gender Medicine: A Critical Evaluation of the Dutch Studies-and Research That Has Followed', *J Sex Marital Ther*, (2023).

⁵⁹ S. B. Levine, E. Abbruzzese, and J. W. Mason, 'Reconsidering Informed Consent for Trans-Identified Children, Adolescents, and Young Adults', *J Sex Marital Ther*, 48 (2022).

⁶⁰ M. Biggs, 'The Dutch Protocol for Juvenile Transsexuals: Origins and Evidence', *J Sex Marital Ther*, (2022).

⁶¹ A. L. C. de Vries, 'Ensuring Care for Transgender Adolescents Who Need It: Response to 'Reconsidering Informed Consent for Trans-Identified Children, Adolescents and Young Adults'', *J Sex Marital Ther*, 49 (2023).

⁶² Ibid.

after opposite sex hormone treatment, treated children showed no improvement in gender distress, anxiety, or anger.⁶³ This finding was downplayed in the final discussion.

54. At the end of the study 55 children remained, all of whom had received “surgical reassignment.” These research subjects showed a marked reduction in “gender dysphoria” using the UGDS scale.⁶⁴ This dramatic change in UGDS score is best explained by the researchers’ decision to switch the scale from male to female, or the other way around. In other words, females were measured as females before surgery then evaluated as males after surgery, and vice versa. To be clear, changing measurements scales in the middle of a scientific experiment invalidates that experiment.

55. How would changing the measurement tool alter the study outcome?⁶⁵ Abbruzzese’s rigorous critique describes this scenario: A severely dysphoric biologic female “is asked to answer two of the UGDS questions: ‘Every time someone treats me like a girl I feel hurt’ and ‘Every time someone treats me like a boy I feel hurt.’ It is likely that this female patient would *strongly agree* with the first statement and *strongly disagree* with the second. The first answer would lead to the score of ‘5’ on the UGDS “gender dysphoria” scale, indicating the highest possible level of dysphoria. The second answer—which is effectively the same answer—would result in the score of ‘1’ indicating the lowest possible gender dysphoria. In other words, unlike the first question, which belongs to the ‘female’ battery of questions, the second question belongs to the ‘male’ battery of questions and effectively assumes the subject to be male—hence, the lack of distress of being associated with ‘maleness’ receives the minimum ‘gender dysphoria’ score.⁶⁶

⁶³ de Vries and others

⁶⁴ de Vries and others

⁶⁵ Abbruzzese, Levine, and Mason.

⁶⁶ Ibid.

56. Others have challenged the validity of the “Dutch protocol” results, because switching the UGDS score invalidates any interpretation.^{67,68}

57. A little known, and poorly acknowledged tragedy occurred during the Dutch study.⁶⁹ After surgery to create a vagina like structure, a boy died from necrotizing fasciitis (“flesh eating disease”).

58. The Gender Identity Development Service (GIDS) in the United Kingdom began treatment of minors with “gender dysphoria” in 1989 and is slated to close in March of 2024⁷⁰. It is the largest and oldest center in the world treating children with “gender dysphoria”. Psychologist Dr. Polly Carmichael became the director of the center in 2009. In 2011, GIDS embarked on a clinical trial in children aged 12-15 to investigate the benefits of pubertal suppression. Before 2011, GIDS offered puberty blockers to slightly older children, admittedly without adequate evidence. The GIDS research team, sought to confirm the claims of the Dutch group. The British study included only 44 children. As in the Dutch study, there was no untreated control or comparison group. The children were observed over the course of 3 years of treatment with puberty blockers. The study results, published in 2021, showed no change whatsoever in psychiatric distress with puberty suppression.⁷¹ Dr. Carmichael and her colleagues concluded that more studies were needed to “fully quantify the harms and benefits of pubertal suppression.”⁷²

b. In the United States, the experimental “Dutch Protocol” has been misapplied and fails.

⁶⁷ J. K. McGuire and others, 'Utrecht Gender Dysphoria Scale - Gender Spectrum (Ugds-Gs): Construct Validity among Transgender, Nonbinary, and Lgbq Samples', *Int J Transgend Health*, 21 (2020).

⁶⁸ Biggs.

⁶⁹ de Vries and others

⁷⁰ 'Closure of Tavistock Gender Identity Clinic Delayed', (<https://www.bbc.com/news/uk-65564032>, 2023).

⁷¹ P. Carmichael and others, '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', *PLoS One*, 16 (2021).

⁷² Ibid.

55. Dr. Norman Spack, a pediatric endocrinologist at Boston Children's Hospital began to recommend using the Dutch Protocol for children with "gender dysphoria" in 2009. In collaboration with researchers from the Dutch group, Dr. Spack wrote the first set of practice guidelines for the Endocrine Society in 2009.⁷³

56. Those Endocrine Society guidelines have been updated, most recently in 2017, and conclude with the following disclaimer: "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."⁷⁴

57. The Endocrine Society guidelines have been widely implemented, despite the Endocrine Society disclaimer. For example, a publication appeared in the high-impact New England Journal of Medicine (NEJM) early in 2023.⁷⁵ This observational study described the treatment of transgender youth with opposite sex hormones at four U.S. clinics over a two-year period. The subjects' ages ranged from 12-20 with a mean age of 16. The exact medical treatment protocols varied but included the use of puberty blockers.⁷⁶

58. Like the Dutch and British studies, this U.S. research did not include control or comparison groups, and it provided no description of psychologic assessment or treatment. The authors found no change in depression, anxiety, or life satisfaction in biologic males after they had received the medicalized interventions.⁷⁷

⁷³ W. C. Hembree and others, 'Endocrine Treatment of Transsexual Persons: An Endocrine Society Clinical Practice Guideline', *J Clin Endocrinol Metab*, 94 (2009).

⁷⁴ Hembree and others

⁷⁵ D. Chen and others, 'Psychosocial Functioning in Transgender Youth after 2 Years of Hormones', *N Engl J Med*, 388 (2023).

⁷⁶ Ibid.

⁷⁷ Ibid.

c. The quality of medical guidelines can be judged using GRADE criteria.

59. Medical evidence varies in quality. Not all evidence that guides current standard medical treatment is of the same quality. To assess the safety, efficacy, and quality of a treatment recommendation, it is important to understand the meaning of the term “evidence-based.”

60. GRADE (Grading of Recommendations, Assessment, Development, and Evaluations) is a standard accepted method for judging the quality of medical research.⁷⁸ There are four levels of evidence in GRADE. When the GRADE score is “low,” the true effect is likely to be markedly different from the estimated effect.

61. In 2022 the Endocrine Society summarized the evidence for hormonal interventions in “gender diverse adolescents” as sparse and of low quality.⁷⁹ Last year, they restated that systematic reviews of the evidence and the use of GRADE are key factors in establishing the “trustworthiness” of their clinical practice guidelines.⁸⁰

62. The ECRI Guidelines Trust⁸¹ is a portal to trustworthy guidelines from an independent nonprofit patient safety organization called ECRI⁸². ECRI evaluated Endocrine Society guidelines published since 2015. The 2017 guidelines on “gender dysphoric/gender incongruent” persons⁸³ was not “eligible for formal ECRI Transparency and Rigor Using Standards of Trustworthiness (TRUST) scoring.”⁸⁴ Those guidelines were not “based on verifiable systematic evidence review with explicit descriptions of search strategy, study selection, and evidence summaries.”⁸⁵

⁷⁸ 'Bmj Best Practice: What Is Grade ?'.

⁷⁹ M. A. O'Connell and others, 'Approach to the Patient: Pharmacological Management of Trans and Gender-Diverse Adolescents', *J Clin Endocrinol Metab*, 107 (2022).

⁸⁰ C. R. McCartney and others, 'Enhancing the Trustworthiness of the Endocrine Society's Clinical Practice Guidelines', *J Clin Endocrinol Metab*, 107 (2022).

⁸¹ 'Ecri Guidelines Trust', (<https://www.ecri.org/solutions/ecri-guidelines-trust>).

⁸² ECRI, 'Ecri Institute Opens Access to Clinical Practice Guidelines', (<https://www.ecri.org/press/ecri-institute-opens-access-to-clinical-practice-guidelines>, 2018).

⁸³ Hembree and others

⁸⁴ McCartney and others

⁸⁵ Ibid.

63. The key authoritative Endocrinology textbook, published in 2023, includes a chapter on Transgender Healthcare,⁸⁶ written by Dr. Madeline Deutsch, WPATH member and current president of USPATH. Dr. Deutsch writes: “long-term prospective outcome studies of the effects of GAHT (gender affirming hormone therapy) of any type are lacking. What data that do exist are mostly retrospective and have numerous limitations.”⁸⁷

64. Cochrane Reviews are highly respected rigorous analyses of published data. A Cochrane Review looked at hormonal interventions in females with “gender dysphoria”. The authors found “insufficient evidence to determine the efficacy or safety of hormonal treatment approaches in transgender women in transition.”⁸⁸

65. There is simply no high-quality evidence that hormonal or surgical interventions in youth with “gender dysphoria” reduce psychic distress. A systematic review published in 2023 in the journal Transgender Health⁸⁹ decried the “lack of high-quality studies” and emphasized that all studies to date are observational. The authors found no randomized controlled trials.

66. The most recent Endocrine Society guidelines were published in 2017. The authors of those guidelines judged their evidence to be of low or very low quality.⁹⁰ Higher quality evidence of the efficacy of a treatment would require, among other elements, a minimum of two groups that were very well matched and were followed prospectively over time. One group would be randomly

⁸⁶ Madeline Deutsch, 'Transgender Healthcare ', in *Degroot's Endocrinology* ed. by R. Paul Robertson (Elsevier, 2023), pp. 1752-57.

⁸⁷ Ibid.

⁸⁸ C. Haupt and others, 'Antiandrogen or Estradiol Treatment or Both During Hormone Therapy in Transitioning Transgender Women', *Cochrane Database Syst Rev*, 11 (2020).

⁸⁹ T. R. van Leerdam, J. D. Zajac, and A. S. Cheung, 'The Effect of Gender-Affirming Hormones on Gender Dysphoria, Quality of Life, and Psychological Functioning in Transgender Individuals: A Systematic Review', *Transgend Health*, 8 (2023).

⁹⁰ Hembree and others

assigned to the treatment to be tested; the other group would be followed as the comparator or control group. Such a study would be said to be a “controlled” study.

67. Only when researchers are willing to admit uncertainty can we learn what is best for our patients. Here is an example from my own experience as a Clinical Investigator. In the early 2000’s, I participated as a Principal Investigator in a large National Institute of Health (NIH) sponsored trial called ACCORD (Action to Control Cardiovascular Risk in Diabetes).⁹¹ Before that study, many doctors were sure that the systolic blood pressure should be below 120 in persons with Type 2 Diabetes. And many doctors thought the closer the blood sugar was kept to normal the better. The ACCORD study⁹² showed that both of these convictions were incorrect in persons with Type 2 diabetes. The results of the ACCORD study changed the treatment approach for many adults with Type 2 Diabetes.

d. Experimental procedures require rigorous adherence to principles of medical ethics and informed consent .

68. Informed consent is an essential element of patient care. There is much more to informed consent than simply getting a signature on a form.

69. Informed consent is foundational to the ethical conduct of clinical research. Strict international principles prohibit minors from providing consent because children cannot fully

⁹¹ F. Ismail-Beigi and others, 'Effect of Intensive Treatment of Hyperglycaemia on Microvascular Outcomes in Type 2 Diabetes: An Analysis of the Accord Randomised Trial', *Lancet*, 376 (2010).

⁹² Ibid.

comprehend risk versus benefit. Although minors can *assent* to a treatment or intervention, they are not legally able to give *informed consent* until they turn 18.^{93,94}

70. Medical decision-making competence is inadequate in adolescents. In one study from the Netherlands, clinicians and parents concluded that failure to understand the consequences of puberty suppression “is inherent to the adolescent’s age and/or development stage.”⁹⁵

71. Adolescence is a time of “suboptimal choice behavior”, increased risk taking and vulnerability.⁹⁶

72. The American Academy of Pediatrics states that adolescent decision-making “relies more on their mature limbic system (socioemotional) than on the impulse-controlling, less-developed prefrontal cognitive system.”⁹⁷ In other words, adolescents have immature brains. Even Dr. Daniel Metzger, an endocrinologist associated with WPATH, admits that “most of the kids (we treat) are nowhere in any kind of brain space” and “I know I am talking to a blank wall” when informing them of the possibility of infertility.⁹⁸

73. Anthony Latham, Chair of the Scottish Council on Bioethics, wrote “risk taking that would seem dangerous to an adult is part of the adolescent make-up.”⁹⁹ He pointed out that “children cannot consent, and therefore should not be asked to consent to being treated with puberty blockers for “gender dysphoria”.”¹⁰⁰

⁹³ 'Assent Versus Informed Consent'.

⁹⁴ 'Fda Informed Consent'.

⁹⁵ Ljjj Vrouwenraets and others, 'Medical Decision-Making Competence Regarding Puberty Suppression: Perceptions of Transgender Adolescents, Their Parents and Clinicians', *Eur Child Adolesc Psychiatry*, (2022).

⁹⁶ B. J. Casey, R. M. Jones, and T. A. Hare, 'The Adolescent Brain', *Ann N Y Acad Sci*, 1124 (2008).

⁹⁷ Committee On Bioethics, 'Informed Consent in Decision-Making in Pediatric Practice', *Pediatrics*, 138 (2016).

⁹⁸ Dr Daniel Metzger, 'Wpath Gender Affirming Doctor Expresses Concern for Mental Capacity and Informed Consent of Minors for Transition Surgeries... “Reproductive Regret”... “ I Don’t Think Any of That Surprises Us” ', (<https://www.projectveritas.com/news/wpath-gender-affirming-doctor-expresses-concern-for-mental-capacity-and/>, 2022).

⁹⁹ A. Latham, 'Puberty Blockers for Children: Can They Consent?', *New Bioeth*, 28 (2022).

¹⁰⁰ Ibid.

74. Professor Carl Heneghan, director of the Centre of Evidence Based Medicine at Oxford University stated that the “quality of evidence in this area is terrible.”¹⁰¹ And “in the absence of evidence, I just do not understand how they can inform children, adolescents, and parents and families in a way that helps them make an informed decision.”¹⁰²

75. The United States is a signatory to the United Nations Convention on the Rights of the Child. The *Declaration of the Rights of the Child* states that “the child, by reason of his physical and mental immaturity, needs special safeguards and care.”¹⁰³ These safeguards are uniquely important when it comes to an experimental intervention. The Declaration of Helsinki¹⁰⁴ allows individual parents to consent to an experimental treatment for their child. Usually, this choice is made in an extraordinary circumstance, to save that child’s life, and with the child’s assent. Opposite sex hormonal interventions to change physical appearance should not be an exception to these requirements.

76. Psychiatrist Dr. Stephen Levine and his colleagues have discussed the inadequacies in the informed consent process for minors with “gender dysphoria”.¹⁰⁵ Clinicians are required to provide balanced and thorough information on all the potential risks and benefits and unknowns of the treatment as well as alternative treatments available. Clinicians must assess the competence and understanding of the patient and caregiver.

77. Often the informed consent process is “perfunctory”¹⁰⁶ with “poor evaluation”¹⁰⁷ of children and “incorrect and incomplete information.”¹⁰⁸ Evidence of this inadequate consenting process has

¹⁰¹ Dr. Faye Kirkland, 'Transgender Teen Care “Needs Urgent Regulation”', (<https://www.bbc.com/news/health-47456938>, 2019).

¹⁰² Ibid.

¹⁰³ 'United Nations Declaration of the Rights of Children', (1989).

¹⁰⁴ 'Code of Ethics of the World Medical Association. Declaration of Helsinki ', (1964).

¹⁰⁵ Levine, Abbruzzese, and Mason.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

been revealed by those who have desisted or detransitioned and by whistleblowers at gender clinics.^{109,110,111}

78. Dr Connelly’s declaration neglects to mention alternative treatments during the consent process. She endorses the “gender affirming” model, despite contrary data.

79. Clinical equipoise is “uncertainty about the relative effects of the treatments” offered to a patient.¹¹² Clinical equipoise is an “ethical standard” in clinical research. Dr. Connelly’s approach falls short of this equipoise required of clinicians and researchers.

80. It is clearly unethical to cause harm to an increasing number of vulnerable children with medical interventions that do not have a sound evidence base. Clinicians must not rely on weak evidence and flimsy data. Below, I describe historical examples of harm by doctors when they fail to recognize the limits of their knowledge.

e. “Gender affirming” guidelines evade the scrutiny of science and ethics.

81. WPATH^{113,114} did not use GRADE criteria in creating recommendations. WPATH used the Delphi process which is based upon “collective opinion”¹¹⁵. The majority of WPATH’s guidelines are based on opinions, and not supported by science.

¹⁰⁹ Barnes.

¹¹⁰ Littman.

¹¹¹ Reed.

¹¹² B. Dewar and others, 'What Do We Talk About When We Talk About "Equipoise"? Stakeholder Interviews Assessing the Use of Equipoise in Clinical Research Ethics', *Trials*, 24 (2023).

¹¹³ E. Coleman, 'Correction, Standards of Care for the Health of Transgender and Gender Diverse People, Version 8', *International J of Transgender Health*, 23 (2022).

¹¹⁴ E. Coleman and others, 'Standards of Care for the Health of Transgender and Gender Diverse People, Version 8', *Int J Transgend Health*, 23 (2022).

¹¹⁵ P. Nasa, R. Jain, and D. Juneja, 'Delphi Methodology in Healthcare Research: How to Decide Its Appropriateness', *World J Methodol*, 11 (2021).

82. The Guidelines International Network and the Institute of Medicine have established criteria for “trustworthy guidelines”.^{116,117} These criteria include transparency of the development process, management of conflicts of interest and multiple factors in the development process (high quality systematic reviews, judgmental processes and more).¹¹⁸ WPATH guidelines do not meet most of these criteria.

83. WPATH guidelines do not require dysphoria or distress for a child to “access gender-affirming treatments”.¹¹⁹ WPATH guidelines have no lower age limit for hormonal or surgical interventions on children.¹²⁰

84. WPATH provides guidance for those males who feel they are “nonbinary,” i.e., neither male nor female.¹²¹ Those males may wish to have their testes removed to become a eunuch.¹²² Here too, WPATH offers no lower age limit for these orchiectomies.

85. WPATH’s “goals have shifted from reducing suffering to achieving personal ‘embodiment goals.’” “Although achieving body modification goals can be very satisfying to patients, clinicians should not confuse it with improved functioning in relational, sexual, educational, substance dependence, and vocational aspects of life—the domains of mental health. Nor can it be claimed to be ‘lifesaving.’”¹²³

¹¹⁶ 'Clinical Practice Guidelines We Can Trust from the Institute of Medicine', (<https://www.ncbi.nlm.nih.gov/books/NBK209538/>).

¹¹⁷ 'Guidelines International Network', p. Guidelines International Network.

¹¹⁸ Clinical Practice Guidelines We Can Trust from the Institute of Medicine.

¹¹⁹ Coleman; Coleman and others

¹²⁰ Coleman; Coleman and others

¹²¹ Coleman and others

¹²² Ibid.

¹²³ S. B. Levine and Abbruzzese E., 'Current Concerns About Gender-Affirming Therapy in Adolescents', *Current Sexual Health Reports*, 15 (2023).

86. WPATH states: “gender diversity in prepubescent children may, for some, be fluid; there are no reliable means of predicting an individual child’s gender evolution and the gender-related needs for a particular child may vary over the course of their childhood.”¹²⁴

87. The American Psychiatric Association states that “families should be informed about potential outcomes including the possibility that the child’s experience/perception of the gendered self may change as they mature.”¹²⁵

88. Fluidity was also described in a recent analysis of adolescents at a “gender services” program.¹²⁶ Of 68 adolescents, mean age 15 years, 29% changed their requests for opposite sex hormones over time.¹²⁷

89. Psychiatrist Dr. Stephen Levine was a member of WPATH for twenty-five years. He served as chairman of the International Standards of Care Committee that issued the fifth version of the “Standards of Care”. He wrote: “WPATH claims to speak for the medical profession; however, it does not welcome skepticism and therefore, deviates from the philosophical core of medical science.”¹²⁸ Dr. Levine resigned from WPATH when WPATH completely dropped the requirement for a letter of support from a psychotherapist before opposite sex hormones were to be prescribed.¹²⁹

90. In the case of the Endocrine Society Guidelines, there was no discussion or member referendum. Those guidelines were announced without soliciting the input from members with alternative views.¹³⁰

¹²⁴ Coleman and others

¹²⁵ W. Byne and others, 'Report of the American Psychiatric Association Task Force on Treatment of Gender Identity Disorder', *Arch Sex Behav*, 41 (2012).

¹²⁶ A. Cohen and others, 'Shifts in Gender-Related Medical Requests by Transgender and Gender-Diverse Adolescents', *J Adolesc Health*, 72 (2023).

¹²⁷ Ibid.

¹²⁸ Miriam Grossman, *Lost in Trans Nation* (Skyhorse Publishing, 2023).

¹²⁹ Ibid.

¹³⁰ S. Ayad and S. O'Malley, 'Gender. A Wider Lens', in *Hormonal interventions from fringe to mainstream: a conversation with Dr. William Malone*, (2021).

91. Similarly, the position of the American Academy of Pediatrics (AAP) on “gender dysphoria” was written by 36 members without input from the remainder of its 66,000 members. Furthermore, efforts to reassess the guidelines, in light of scientific evidence have been repeatedly rebuffed.^{131,132}

92. After international pressure from the medical community, AAP has stated publicly that their organization will now conduct a systematic review of the evidence, and potentially amend its policies.¹³³

93. Recently, the AAP rejected an application from The Society for Evidence Based Gender Medicine to present alternative opinions at an exhibitor table during its annual conference.¹³⁴

94. Dr Stephen Levine has written: “Nowhere in Medicine has free speech been as limited as it has been in the trans arena. Skeptics are being institutionally suppressed. Critical letters to the editor in journals that published affirmative data are refused publication, symposia submitted for presentation at national meetings are rejected, scheduled lectures are canceled, and pressure has been exerted to get respected academics fired.”¹³⁵

95. Dr Christopher Gillberg, a world-renowned Child and Adolescent Psychiatrist from Sweden called medical interventions in children with “gender dysphoria” “possibly one of the greatest scandals in medical history.”¹³⁶

¹³¹ Bernard Lane, 'Gagging the Debate', in *Gender Clinic News*, (2022), pp.

<https://www.genderclinicnews.com/p/gagging-the-debate>.

¹³² Julia Mason and Leor Sapir, 'The American Academy of Pediatrics' Dubious Transgender Science', *Wall Street Journal*, (2022).

¹³³ 'Aap Reaffirms Gender-Affirming Care Policy, Authorizes Systematic Review of the Evidence to Guide Update', (<https://publications.aap.org/aapnews/news/25340/AAP-reaffirms-gender-affirming-care-policy?autologincheck=redirected>, 2023).

¹³⁴ 'The Aap Silences the Debate on How to Best Care for Gender-Diverse Kids. American Academy of Pediatrics Annual 2021 Conference Blocks Segm's Participation', (https://www.segm.org/AAP_silences_debate_on_gender_diverse_youth_treatments, 2021).

¹³⁵ Stephen Levine, 'Should Transgender Youth Be Guided by Beliefs or Science ?', (<https://www.psychotherapy.net/article/transgender-youth-care-science-or-beliefs>, 2023).

¹³⁶ Van Maren Jonathon, 'World-Renowned Child Psychiatrist Calls Trans Treatments “Possibly One of the Greatest Scandals in Medical History”', in *The Bridgehead*, (<https://thebridgehead.ca/2019/09/25/world-renowned-child-psychiatrist-calls-trans-treatments-possibly-one-of-the-greatest-scandals-in-medical-history/>, 2019).

96. Some medical groups that do not endorse puberty blockers, opposite sex hormones or surgery for children with “gender dysphoria” include the American College of Pediatricians, the Society for Evidence Based Gender Medicine, the Association of American Physicians and Surgeons, the Catholic Medical Association, the Christian Medical and Dental Associations, and the Jewish Orthodox Women’s Medical Association.

f. The history of medicine offers lessons in humility.

97. Just because an intervention is popular does not prove it to be safe or beneficial. The neurosurgeon who pioneered the once popular brain surgery pre-frontal lobotomy for mental disorders was awarded the Nobel Prize.¹³⁷ In our day, we react to the idea of lobotomy with horror. This brutal intervention has been scientifically discredited.

98. High quality data is essential to judging whether a treatment causes long-term harm. Until the 1990’s it was very popular to prescribe post-menopausal women the female hormones estrogen and progesterone. Doctors believed, without solid evidence, that such treatments would reduce the risk of heart attacks and help women stay healthy. Only after a large high quality, randomized, controlled trial was it revealed that such hormonal treatments increase the risk of stroke, blood clots, and breast cancer.¹³⁸

Expert Opinion #4 – The medical and surgical interventions in minors with “gender dysphoria” are not effective and cause harm.

¹³⁷ L. M. Terrier, M. Leveque, and A. Amelot, 'Brain Lobotomy: A Historical and Moral Dilemma with No Alternative?', *World Neurosurg*, 132 (2019).

¹³⁸ J. E. Rossouw and others, 'Risks and Benefits of Estrogen Plus Progestin in Healthy Postmenopausal Women: Principal Results from the Women's Health Initiative Randomized Controlled Trial', *JAMA*, 288 (2002).

a. Hormonal and surgical treatments for “gender dysphoria” do not reduce suicide risk.

“Would you rather have a dead daughter or a living transgender son?” - words of gender specialist to parents of Chloe Cole.¹³⁹

89. Suicidal thoughts should not be confused with the act of suicide or suicide attempts. The rate of suicide in youth with distress attributed to gender appears similar to the suicide rate in youth with other mental health disorders including depression, post-traumatic stress disorder, anxiety, and autism spectrum disorder.¹⁴⁰ In a recent study in the U.K., the annual suicide rate of transgender youth in a gender-clinic setting was 13 per 100,000.¹⁴¹ In the United States, the number of suicides in young people aged 15-19 is 11.8/100,000 population.¹⁴²

90. The Dutch study provided no data on suicide. However, existing data suggest that hormonal and surgical interventions in persons with “gender dysphoria” may increase the risk of suicide, as I describe next.

91. A long-term study of transgender persons in Sweden¹⁴³ found a 19-fold overall higher suicide rate, 40-fold higher in females, and a 3-fold higher overall mortality during an average of 11 years of follow up compared to population-based controls. Most significantly, these suicides occurred in patients who had completed interventions with opposite sex hormones and surgery.

¹³⁹ Chloe Cole, 'Chloe Cole Testifies before Congress', (<https://donoharmmedicine.org/2023/07/27/do-no-harm-senior-fellow-chloe-cole-testifies-before-congress/>, 2023).

¹⁴⁰ N. M. de Graaf and others, 'Suicidality in Clinic-Referred Transgender Adolescents', *Eur Child Adolesc Psychiatry*, 31 (2022).

¹⁴¹ M. Biggs, 'Suicide by Clinic-Referred Transgender Adolescents in the United Kingdom', *Arch Sex Behav*, 51 (2022).

¹⁴² 'Suicide and Homicide Death Rates among Youth and Young Adults Aged 10-24: United States, 2001-2021 from the Centers for Disease Control, U.S. Department of Health and Human Services', (<https://www.cdc.gov/nchs/data/databriefs/db471.pdf>, 2023).

¹⁴³ C. Dhejne and others, 'Long-Term Follow-up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden', *PLoS One*, 6 (2011).

92. In another study of more than 8,000 transgender persons, two-thirds of those who died by suicide had remained on their opposite-sex hormones at the “gender clinic”.¹⁴⁴

93. One of few long-term outcome studies, performed at a “gender clinic” in the Netherlands, found that the suicide rate was six times higher in male to female persons than in an age-matched normal population, over the course of 18 years of follow-up.¹⁴⁵

94. In the NEJM study previously mentioned, there was a 45-fold higher than expected suicide rate in the adolescents receiving opposite sex hormone therapy during their care at gender clinics (compared to the Center for Disease Control age-matched population).^{146,147}

95. Dr. Connelly makes no mention of the suicides reported in this NEJM paper with those interventions that she endorses.

96. A Danish gender clinic reported its experience with suicide in treated patients followed for up of 6 years.¹⁴⁸ Despite ready access (since 2017) to opposite sex hormones and “surgical reassignment”, transgender persons had a 7-fold higher rate of suicide attempts, a 3½ fold higher rate of death by suicide and were twice as likely to die from non-suicide related causes.¹⁴⁹

97. In summary, persons with “gender dysphoria” continue to have significant psychiatric issues despite hormonal and surgical interventions.

¹⁴⁴ C. M. Wiegjes and others, 'Trends in Suicide Death Risk in Transgender People: Results from the Amsterdam Cohort of Gender Dysphoria Study (1972-2017)', *Acta Psychiatr Scand*, 141 (2020).

¹⁴⁵ H. Asscheman and others, 'A Long-Term Follow-up Study of Mortality in Transsexuals Receiving Treatment with Cross-Sex Hormones', *Eur J Endocrinol*, 164 (2011).

¹⁴⁶ Chen and others

¹⁴⁷ Suicide and Homicide Death Rates among Youth and Young Adults Aged 10-24: United States, 2001-2021 from the Centers for Disease Control, U.S. Department of Health and Human Services.

¹⁴⁸ A. Erlangsen and others, 'Transgender Identity and Suicide Attempts and Mortality in Denmark', *JAMA*, 329 (2023).

¹⁴⁹ Ibid.

98. Psychotherapy has known efficacy in reducing the risk of suicide.¹⁵⁰ In my opinion, psychotherapy remains an essential treatment for “gender dysphoria,” and the best prevention against suicide.

99. Gender is not to be confused with sexual orientation. It is therefore simplistic and misleading to “amalgamate aversion therapy for adult homosexuals, c.1970, with cautious exploratory psychotherapy with gender non-conforming children today.”¹⁵¹

b. Puberty blockers are not a “pause button.” Puberty is a necessary stage in human development.

100. I will start this discussion with a quote by Dr Joshua Safer, an endocrinologist who has repeatedly minimized the risk of hormonal and surgical interventions for “gender dysphoria”. In a probable conflict of interest, he has co-authored the Endocrine Society guidelines while at the same time serving as the director of a gender clinic. He writes of the “need for appropriate humility regarding what we know versus what we only predict.” He writes: “Even the most logical conclusions extrapolated from our understanding of physiology must remain suspect until demonstrated in actual clinical environments.”¹⁵² Elsewhere this author writes that there are “numerous gaps in knowledge”¹⁵³ in transgender medicine.

101. I agree with these statements, and I will now describe what we, in fact, do know.

¹⁵⁰ P. Mendez-Bustos and others, 'Effectiveness of Psychotherapy on Suicidal Risk: A Systematic Review of Observational Studies', *Front Psychol*, 10 (2019).

¹⁵¹ D. Pilgrim, 'British Mental Healthcare Responses to Adult Homosexuality and Gender Non-Conforming Children at the Turn of the Twenty-First Century', *Hist Psychiatry*, (2023).

¹⁵² J. D. Safer, 'Using Evidence to Fill Gaps in the Care of Transgender People', *Endocr Pract*, 26 (2020).

¹⁵³ J. D. Safer, 'Are the Pharmacokinetics of Sublingual Estradiol Superior or Inferior to Those of Oral Estradiol?', *Endocr Pract*, 28 (2022).

102. Background: The ovaries make the principal female hormone called estrogen. The testes make the principal male hormone called testosterone. Ovaries are the site of production of gametes called ova (singular is ovum). When an ovum is fertilized with a sperm, an embryo can form and lead to the birth of a newborn baby. At the moment of fertilization, the sex of the future baby is determined by the sex (X and Y) chromosomes.

103. The testes and ovaries are both regulated by a small gland in the brain called the pituitary. The pituitary is considered a master gland because it regulates other hormone producing glands, not just the ovaries and testes. The pituitary makes many hormones, two of which are Luteinizing hormone (LH) and Follicle stimulating hormone (FSH). LH and FSH are called gonadotropins; they regulate the ovaries and testes.

104. The pituitary gland is, in turn, controlled by an area located above it called the hypothalamus. The hypothalamus produces many vital substances. One of these is gonadotropin releasing hormone, abbreviated GnRH. GnRH stimulates the release of LH and FSH.

105. The chemical structure of GnRH has been modified by pharmaceutical companies into chemicals called GnRH analogs. GnRH analogs are often called puberty blockers. GnRH analogs are administered, usually as an injection (every 1-6 months). There is also an implanted version (under the skin) of GnRH analogs. GnRH analogs block or stop the GnRH signals that come from the hypothalamus. Blockade of those signals means there is no secretion of LH and FSH and, consequently, the testes and ovaries are turned off.

106. GnRH analogs are called puberty blockers. GnRH analogs are not FDA approved for use in children with “gender dysphoria”. They are approved for use in children who have the relatively rare disorder called central precocious puberty. Central precocious puberty is a condition

in which puberty occurs at an abnormally early age, generally below the age of 8 in girls and 9 in boys.

107. GnRH analogs are approved for treatment of endometriosis in women. GnRH analogs will stop the signals from the brain that cause ovulation and menstruation. They will markedly lower estrogen and reduce bone density.¹⁵⁴

108. GnRH analogs have also been used in the treatment of prostate cancer because they markedly lower the male hormone, testosterone. Testosterone increases the growth of diagnosed prostate cancer.¹⁵⁵ The cancer is suppressed by reducing testosterone.

109. There are no controlled trials that prove the safety of GnRH analogs in children with normal puberty.¹⁵⁶ There are many unknowns with puberty blockers even in those conditions for which treatment is FDA approved. Some have called GnRH analogs use in these children with normal puberty a “momentous step in the dark.”¹⁵⁷

110. Puberty blockers may cause hot flashes, weight gain, fatigue, and mood alterations.^{158,159} Seizures have also been reported.

111. A disorder affecting the hip, slipped capital femoral epiphysis, has been reported in children on puberty blockers.¹⁶⁰

¹⁵⁴ 'Lupron for Endometriosis, Prescribing Information'.

¹⁵⁵ 'Lupron for Prostate Cancer, Prescribing Information', (https://www.rxabbvie.com/pdf/lupronuro_pi.pdf).

¹⁵⁶ C. Richards, J. Maxwell, and N. McCune, 'Use of Puberty Blockers for Gender Dysphoria: A Momentous Step in the Dark', *Arch Dis Child*, 104 (2019).

¹⁵⁷ Ibid.

¹⁵⁸ Hembree and others

¹⁵⁹ 'Lupron Prescribing Information'.

¹⁶⁰ K. Bangalore Krishna and others, 'Use of Gonadotropin-Releasing Hormone Analogs in Children: Update by an International Consortium', *Horm Res Paediatr*, 91 (2019).

112. Reductions in bone density are seen with the use of puberty blockers; those reductions increase the risk of bone fractures.^{161,162,163}

113. Pseudotumor cerebri (also known as idiopathic intracranial hypertension) has been associated with puberty blockers. This condition causes severe headache and loss of vision.^{164,165}

114. Early administration of puberty blockers reduces penile growth. The surgery for creation of a vagina-like structure (or pseudo-vagina) in male to female transgender individuals is called vaginoplasty. This surgery uses penile tissue. The pre-pubertal penis does not provide sufficient tissue to create a vagina-like structure, leading to more complex surgeries with more post-surgical complications.¹⁶⁶

115. Dr. Marci Bowers, a surgeon and vaginoplasty specialist, described another important adverse effect of puberty blockers in transgender people. These persons will not be able to achieve an orgasm as adults.¹⁶⁷

116. Children who fail to progress through puberty are infertile. This is a biologic fact. The same physiology means that early initiation of puberty blockers will stop maturation of the testes

¹⁶¹ M. Biggs, 'Revisiting the Effect of GnRh Analogue Treatment on Bone Mineral Density in Young Adolescents with Gender Dysphoria', *J Pediatr Endocrinol Metab*, 34 (2021).

¹⁶² D. Klink and others, '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*, 100 (2015).

¹⁶³ Lupron Prescribing Information

¹⁶⁴ U. Gul and others, 'Pseudotumour Cerebri Presentation in a Child under the Gonadotropin-Releasing Hormone Agonist Treatment', *J Clin Res Pediatr Endocrinol*, 8 (2016).

¹⁶⁵ A. A. Omar, G. Nyaga, and L. N. W. Mungai, 'Pseudotumor Cerebri in Patient on Leuprolide Acetate for Central Precocious Puberty', *Int J Pediatr Endocrinol*, 2020 (2020).

¹⁶⁶ T. C. van de Grift and others, 'Timing of Puberty Suppression and Surgical Options for Transgender Youth', *Pediatrics*, 146 (2020).

¹⁶⁷ Transleithanian@genderthehun, in "Gender affirming" surgeon admits children who undergo transition before puberty never attain sexual satisfaction (2022).

and the ovaries. If the testes or ovaries fail to mature, sperm and ova cannot be produced. Infertility will likely occur, especially if followed by opposite sex hormones.^{168,169,170}

117. Gender clinics now are advised to routinely counsel children about the loss of fertility and steps they might take to preserve it.¹⁷¹ An informed consent form for a research study at Children’s Hospital of Los Angeles included this language, 7 years ago: “If your child starts puberty blockers in the earliest stages of puberty, and then goes on to gender affirming hormones, they will not develop sperm or eggs. This means that they will not be able to have biological children. This is an important aspect of blocking puberty and progressing to hormones that you should understand prior to moving forward with puberty suppression.”¹⁷²

118. Authors this year wrote that “Research protocols for ovarian and testicular tissue cryopreservation have been developed at some centers and these methods can be also applied to children.”¹⁷³ These “research” approaches are costly and have uncertain efficacy.

119. Children given puberty blockers for “gender dysphoria” find themselves unable to get off the conveyor belt of “gender transition.” After puberty blockers, more than 95% go on to opposite sex hormones.¹⁷⁴

120. The Swedish government commissioned a study on hormonal therapy in children with “gender dysphoria”. The authors concluded in their systematic review¹⁷⁵ that “the long-term

¹⁶⁸ S. Baram and others, 'Fertility Preservation for Transgender Adolescents and Young Adults: A Systematic Review', *Hum Reprod Update*, 25 (2019).

¹⁶⁹ K. Rodriguez-Wallberg and others, 'Reproductive Health in Transgender and Gender Diverse Individuals: A Narrative Review to Guide Clinical Care and International Guidelines', *Int J Transgend Health*, 24 (2023).

¹⁷⁰ Hembree and others

¹⁷¹ E. Bayar and others, 'Fertility Preservation and Realignment in Transgender Women', *Hum Fertil (Camb)*, (2023).

¹⁷² Johanna Olsen Kennedy, 'Puberty Blockers for Minor in Early Adolescence. Parent or Guardian Consent', (https://defendinged.org/wp-content/uploads/2023/05/consent_forms-JOK.pdf, 2016).

¹⁷³ Rodriguez-Wallberg and others

¹⁷⁴ Carmichael and others

¹⁷⁵ J. F. Ludvigsson and others, 'A Systematic Review of Hormone Treatment for Children with Gender Dysphoria and Recommendations for Research', *Acta Paediatr*, (2023).

effects of hormone therapy on psychosocial and somatic health are unknown, except that GnRH analog treatment seems to delay bone maturation and a normal gain in bone mineral density.” They concluded that “GnRH analog treatment in children with “gender dysphoria” should be considered experimental.”¹⁷⁶

121. In 2021, the UK’s National Institute for Health and Care Excellence (NICE) published an extensive review, over 130 pages, examining puberty blockers for “gender dysphoria” in children.¹⁷⁷ They found “a lack of reliable comparative studies.” They concluded that “the studies that reported impact on the critical outcomes of “gender dysphoria” and mental health (depression, anger and anxiety), and the important outcomes of body image and psychosocial impact (global and psychosocial functioning) in children and adolescents with “gender dysphoria” are of very low certainty using modified GRADE.”

122. The UK authors wrote that these studies “suggest little change with GnRH analogues from baseline to follow-up.” They did note a loss of the expected increase in bone density that is normally seen in children not taking puberty blockers.

123. Blocking of puberty in a child with normal puberty is a powerful intervention that has psychologic and physical impacts. Brain maturation during puberty is crucial.^{178,179} There are no studies of the effect of blocking normal puberty on judgment, cognition, and emotional development.¹⁸⁰

¹⁷⁶ Ibid.

¹⁷⁷ 'New Systematic Review of Puberty Blockers and Cross Sex Hormones Published by the National Institute for Health and Care Excellence (Nice)', (2021).

¹⁷⁸ S. J. Blakemore, S. Burnett, and R. E. Dahl, 'The Role of Puberty in the Developing Adolescent Brain', *Hum Brain Mapp*, 31 (2010).

¹⁷⁹ M. Arain and others, 'Maturation of the Adolescent Brain', *Neuropsychiatr Dis Treat*, 9 (2013).

¹⁸⁰ K. Kozłowska and others, 'Attachment Patterns in Children and Adolescents with Gender Dysphoria', *Front Psychol*, 11 (2020).

124. However, one careful study is noteworthy. An 11-year-old male treated with a GnRH analog for “gender dysphoria” showed an abnormal failure to increase brain white matter. In addition, he had a reduction in IQ and memory over the course of 22 months of puberty blockers.¹⁸¹

125. The Endocrine Society pointed out the need for more data on the effects on the brain and wrote that “animal data suggest there may be an effect of GnRH analogs on cognitive function.”¹⁸²

126. Dr. Hilary Cass, a former president of the Royal College of Pediatrics and Child Health, in her interim report¹⁸³ (see below) expressed concern that blockade of puberty may impair “maturation and development of frontal lobe functions which control decision making, emotional regulation, judgement and planning ability.”

127. Furthermore, Dr. Cass stated: “The most difficult question is whether puberty blockers do indeed provide valuable time for children and young people to consider their options, or whether they effectively ‘lock in’ children and young people to a treatment pathway which culminates in progression to feminising/masculinising hormones by impeding the usual process of sexual orientation and gender identity development.”¹⁸⁴ Dr. Cass concluded that more research is needed.

128. Advocates for “gender affirming care” hope that GnRH analogs will reduce the patient’s dysphoria. Yet the risks of this treatment approach are high, and effects on bone and brain development may be irreversible.

¹⁸¹ M. A. Schneider and others, ‘Brain Maturation, Cognition and Voice Pattern in a Gender Dysphoria Case under Pubertal Suppression’, *Front Hum Neurosci*, 11 (2017).

¹⁸² Hembree and others

¹⁸³ Cass.

¹⁸⁴ *Ibid.*

129. In summary, GnRH analogs are not a “pause button.” They are a powerful intervention and are neither safe nor effective.

c. Hormones have powerful effects.

130. Most of the data on the effects of opposite sex hormones come from follow up studies of adults. There are very little data on minors. Despite Dr. Connelly’s belief, there are no studies on the safety of opposite sex hormones in children with “gender dysphoria.” Furthermore, pediatricians and pediatric endocrinologists are unlikely to see the long-term harms of opposite sex hormones begun in childhood, because they rarely provide care for persons after the age of 18.

131. The dose of the principal male hormone, testosterone, that is recommended by the Endocrine Society for gender dysphoric females would produce levels 20-40 times higher than the normal blood level of testosterone in females.¹⁸⁵

132. Estradiol is the main female hormone. Males normally have levels below 30 pg/ml.¹⁸⁶ For “gender dysphoria” in biologic males, the Endocrine Society recommends an estradiol level of 100-200 pg/ml, about 5 times higher than a normal male.¹⁸⁷

c1. For natal females treated with testosterone

¹⁸⁵ Hembree and others

¹⁸⁶ C. Ohlsson and others, 'Comparisons of Immunoassay and Mass Spectrometry Measurements of Serum Estradiol Levels and Their Influence on Clinical Association Studies in Men', *J Clin Endocrinol Metab*, 98 (2013).

¹⁸⁷ Hembree and others

133. Short term effects of testosterone given to natal females include acne,¹⁸⁸ baldness, facial hair, clitoral enlargement, and pelvic pain.¹⁸⁹ The voice may deepen.

134. Infertility is frequent in those females treated with testosterone even if not given puberty blockers.^{190,191,192,193} Testosterone causes obstruction of the fallopian tubes which transport the ovum.¹⁹⁴ Dr. Connelly provides a reference in her claim that females can get pregnant despite use of testosterone. That reference does not support her belief. That 9-year-old publication¹⁹⁵ was a web-based convenience sample with lots of missing data. And over 60% stated that they were not on testosterone and those who did get pregnant required fertility drugs or costly assisted reproduction.

135. In fact, effective treatment for the infertility in natal females on opposite sex hormones is so uncertain that mouse studies are being done to try to understand how to mitigate the harm.¹⁹⁶

136. Increases in the red blood cells with consequent thickening of the blood, called erythrocytosis, is a known risk of testosterone therapy especially when testosterone is given by injection.¹⁹⁷

¹⁸⁸ L. Chu and others, 'Incidence and Factors Associated with Acne in Transgender Adolescents on Testosterone: A Retrospective Cohort Study', *Endocr Pract*, 29 (2023).

¹⁸⁹ S. Zwickl and others, 'Pelvic Pain in Transgender People Using Testosterone Therapy', *LGBT Health*, 10 (2023).

¹⁹⁰ Baram and others

¹⁹¹ Rodriguez-Wallberg and others

¹⁹² K. Dulohery and others, 'How Do Elevated Levels of Testosterone Affect the Function of the Human Fallopian Tube and Fertility?-New Insights', *Mol Reprod Dev*, 87 (2020).

¹⁹³ Hembree and others

¹⁹⁴ Dulohery and others

¹⁹⁵ A. D. Light and others, 'Transgender Men Who Experienced Pregnancy after Female-to-Male Gender Transitioning', *Obstet Gynecol*, 124 (2014).

¹⁹⁶ A. R. Schwartz and others, 'Impaired Ivf Outcomes Following Testosterone Treatment Improve with Washout in a Mouse Model of Gender-Affirming Hormone Treatment', *Am J Obstet Gynecol*, (2023).

¹⁹⁷ M. K. Laidlaw and others, 'Letter to the Editor from Laidlaw Et Al: "Erythrocytosis in a Large Cohort of Transgender Men Using Testosterone: A Long-Term Follow-up Study on Prevalence, Determinants, and Exposure Years"', *J Clin Endocrinol Metab*, 106 (2021).

137. Increases in blood pressure and reduced elasticity of the arteries has been reported with testosterone treatment in adolescent females.¹⁹⁸

138. Testosterone use in females has also caused pseudotumor cerebri.¹⁹⁹

139. After testosterone use in females, breast cancer onset is 20 years earlier than the onset seen in females not administered testosterone.^{200,201} Breast cancer has been seen even in those females who have had mastectomies—euphemistically called “top surgery”—as the procedure leaves some residual breast tissue.^{202,203}

140. Testosterone use in females causes abnormalities in the pap smear making it more difficult to diagnose cervical cancer.²⁰⁴

141. Testosterone use increases the risk of myocardial infarctions (heart attacks) by three and half times that of women not given testosterone.^{205,206,207}

142. Testosterone increases the risk of strokes almost two-fold compared to women not given testosterone.^{208,209,210} Strokes are usually caused by blockage of blood flow to the brain.

¹⁹⁸ F. S. Cunha and others, 'Arterial Stiffness in Transgender Men Receiving Long-Term Testosterone Therapy', *J Endocr Soc*, 7 (2023).

¹⁹⁹ N. E. Gutkind and others, 'Idiopathic Intracranial Hypertension in Female-to-Male Transgender Patients on Exogenous Testosterone Therapy', *Ophthalmic Plast Reconstr Surg*, (2023).

²⁰⁰ M. Berliere and others, 'Effects of Hormones on Breast Development and Breast Cancer Risk in Transgender Women', *Cancers (Basel)*, 15 (2022).

²⁰¹ G. Corso and others, 'Risk and Incidence of Breast Cancer in Transgender Individuals: A Systematic Review and Meta-Analysis', *Eur J Cancer Prev*, 32 (2023).

²⁰² C. S. Cortina and A. L. Kong, 'Chest Mass in a Transgender Man after Top Surgery', *Lancet Oncol*, 24 (2023).

²⁰³ C. J. M. de Blok and others, 'Breast Cancer Risk in Transgender People Receiving Hormone Treatment: Nationwide Cohort Study in the Netherlands', *BMJ*, 365 (2019).

²⁰⁴ J. C. Wang and others, 'Factors Associated with Unsatisfactory Pap Tests among Sexually Active Trans Masculine Adults', *LGBT Health*, (2023).

²⁰⁵ T. Alzahrani and others, 'Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population', *Circ Cardiovasc Qual Outcomes*, 12 (2019).

²⁰⁶ D. Getahun and others, 'Cross-Sex Hormones and Acute Cardiovascular Events in Transgender Persons: A Cohort Study', *Ann Intern Med*, 169 (2018).

²⁰⁷ N. M. Nota and others, 'Occurrence of Acute Cardiovascular Events in Transgender Individuals Receiving Hormone Therapy', *Circulation*, 139 (2019).

²⁰⁸ Alzahrani and others

²⁰⁹ Getahun and others

²¹⁰ Nota and others

c2. For natal males treated with estrogen

143. Biologic males treated with estrogen have a 22-fold increase in the rate of breast cancer.²¹¹

144. Biologic males treated with estrogen may have an increased risk of prostate cancer.²¹²

145. Prostate cancer can be easily overlooked in these men who, though they may appear as women, still have a prostate gland.

146. Estrogen treatment in biologic males may increase the risk of other cancers.²¹³

147. Biologic males treated with estrogen have a 36-fold higher risk of strokes. Venous thromboembolism (clots in veins that can pass to the lung and can cause death) is increased more than six times that of males who are not given estrogen.^{214,215,216}

148. Biologic males treated with estrogen may have an increased risk of retinal vein occlusion (blockage in blood flow from the eye).²¹⁷

149. Prescribing estrogen to biologic males may alter their immune systems and increase the risk of autoimmune disorders.²¹⁸

d. Post-surgical complications for biologic females who undergo bilateral mastectomies

²¹¹ R. R. Gurralla and others, 'The Impact of Exogenous Testosterone on Breast Cancer Risk in Transmasculine Individuals', *Ann Plast Surg*, 90 (2023).

²¹² K. Chandran and others, 'A Transgender Patient with Prostate Cancer: Lessons Learnt', *Eur Urol*, 83 (2023).

²¹³ J. O. Santellan-Hernandez and others, 'Multifocal Glioblastoma and Hormone Replacement Therapy in a Transgender Female', *Surg Neurol Int*, 14 (2023).

²¹⁴ Alzahrani and others

²¹⁵ Getahun and others

²¹⁶ Nota and others

²¹⁷ V. Andzembe and others, 'Branch Retinal Vein Occlusion Secondary to Hormone Replacement Therapy in a Transgender Woman', *J Fr Ophtalmol*, 46 (2023).

²¹⁸ A. A. White and others, 'Potential Immunological Effects of Gender-Affirming Hormone Therapy in Transgender People - an Unexplored Area of Research', *Ther Adv Endocrinol Metab*, 13 (2022).

150. The most common surgery performed on minors with “gender dysphoria” is bilateral mastectomy.²¹⁹ Bilateral mastectomy has been euphemistically called “top surgery” and “chest contouring.” Physicians who perform these surgeries use this phrase. It is notable that physicians do not speak of “top surgery” or “chest contouring” when women have their breasts removed because of cancer. This phrase has been applied only in reference to girls who have their healthy breasts removed.

151. The majority of boys have normal breast tissue development during puberty. This pubertal gynecomastia resolves in almost all boys with no treatment. Less than 5% of boys have persistent pubertal gynecomastia²²⁰. Surgery is rarely done to remove this tissue.

152. Dr. Connelly trivializes the removal of healthy breasts in girls by making a comparison to gynecomastia in boys.

153. A recent paper reports on a series of 81 girls who underwent bilateral mastectomies.²²¹ Follow-up was for three months only and was not available for 13% of the group. The youngest child was 13 years old.

154. Between 15-38% of children who undergo mastectomies require additional surgeries.^{222,223,224} Up to a third have post-operative complications.²²⁵ These complications include

²¹⁹ J. C. Uffman and others, 'Characteristics of Transgender and Gender-Diverse Youth Presenting for Surgery in the United States', *Anesth Analg*, (2023).

²²⁰ Bradley Anawalt, 'Gynecomastia', in *Degroot's Endocrinology 8th Edition* (Elsevier, 2023), pp. pp. 1811- 24.

²²¹ M. Ascha and others, 'Top Surgery and Chest Dysphoria among Transmasculine and Nonbinary Adolescents and Young Adults', *JAMA Pediatr*, 176 (2022).

²²² S. Kuhn and others, 'Mastectomy in Female-to-Male Transgender Patients: A Single-Center 24-Year Retrospective Analysis', *Arch Plast Surg*, 46 (2019).

²²³ W. J. Rifkin and others, 'Gender-Affirming Mastectomy: Comparison of Periareolar and Double Incision Patterns', *Plast Reconstr Surg Glob Open*, 10 (2022).

²²⁴ A. Tang and others, 'Gender-Affirming Mastectomy Trends and Surgical Outcomes in Adolescents', *Ann Plast Surg*, 88 (2022).

²²⁵ R. Rysin, R. Skorochod, and Y. Wolf, 'Implications of Testosterone Therapy on Wound Healing and Operative Outcomes of Gender-Affirming Chest Masculinization Surgery', *J Plast Reconstr Aesthet Surg*, 81 (2023).

excessive scarring, pain and swelling from blood or fluid buildup, wound dehiscence (opening up where the surgical incisions were sewn together), and nipple necrosis (death of the nipple tissue).

155. Most studies did not assess patient satisfaction, had short term follow up, and had no formal, unbiased method of determining regret. The literature on this subject clearly illustrates the inadequate assessment of children undergoing mastectomy.

e. Desisters and detransitioners expose the lack of efficacy and the harm.

156. Gender clinics have failed to follow-up on children to determine the outcome of medical interventions. In general, pediatricians and pediatric endocrinologists stop caring for children once those children turn 18 years of age. Therefore, these physicians cannot recognize long-term complications that they may have caused.

157. There is increasing evidence of regret²²⁶. There are over 49,000 members of the reddit.com detransition site.²²⁷ Detransition tends to occur at least four years after interventions.^{228,229,230,231} Therefore, short-term follow-up after medical interventions is insufficient.^{232,233,234,235}

²²⁶ S. C. J. Jorgensen, 'Transition Regret and Detransition: Meanings and Uncertainties', *Arch Sex Behav*, (2023).

²²⁷ 'R Detrans/Detransition Subreddit', (<https://www.reddit.com/r/detrans/>).

²²⁸ E. Vandenbussche, 'Detransition-Related Needs and Support: A Cross-Sectional Online Survey', *J Homosex*, 69 (2022).

²²⁹ Littman.

²³⁰ C. M. Roberts and others, 'Continuation of Gender-Affirming Hormones among Transgender Adolescents and Adults', *J Clin Endocrinol Metab*, 107 (2022).

²³¹ R. Hall, L. Mitchell, and J. Sachdeva, 'Access to Care and Frequency of Detransition among a Cohort Discharged by a Uk National Adult Gender Identity Clinic: Retrospective Case-Note Review', *BJPsych Open*, 7 (2021).

²³² Vandenbussche.

²³³ Littman.

²³⁴ Roberts and others

²³⁵ Hall, Mitchell, and Sachdeva.

158. When individuals decide to detransition, they find a far less supportive medical and social environment.^{236,237} 76% of those who detransition do not inform their physicians about their decision.²³⁸

159. The largest recent series, 952 adolescents, were evaluated for treatment discontinuation over 4 years. Their average age was 19. Among those who had started hormonal intervention before age eighteen, 26% discontinued treatment. Among all the natal females in this follow up study, 36% discontinued treatment.²³⁹

160. In my practice, I treated about 100 individuals with “gender dysphoria”. My youngest patient was 18.

161. I stopped accepting new patients for “gender dysphoria” in 2013. Those patients who discontinued their care with me did not inform me of their decision to do so. They simply did not return for office visits, and I knew of no other source for those prescriptions.

162. As young people mature, they develop more self-acceptance. 23% of the detransitioners in the recent study reported difficulty in accepting themselves as lesbian, gay, or bisexual.²⁴⁰ They expressed that it might be easier to become “trans” than to acknowledge the choice of a gay lifestyle. This group suffered from a form of “internalized homophobia.”²⁴¹ I speculate that psychotherapy would help these individuals acknowledge their difficulty, without medical complications or harm.

²³⁶ Jorgensen.

²³⁷ Daniela Valdes and Kinnon Mackinnon, 'Take Detransitioners Seriously', in *The Atlantic*, (<https://www.theatlantic.com/ideas/archive/2023/01/detransition-transgender-nonbinary-gender-affirming-care/672745/>, 2023).

²³⁸ Littman.

²³⁹ Roberts and others

²⁴⁰ Littman.

²⁴¹ Ibid.

163. The majority of those who detransitioned believed that their evaluation before starting “transition” was inadequate. Many concluded that their “gender dysphoria” was related to other psychological issues.^{242,243} A full 48% of people who detransitioned reported a history of trauma within the year preceding the diagnosis of “gender dysphoria”.²⁴⁴

164. A recent letter²⁴⁵ written to U.S. Attorney General Garland by six detransitioners describes the experience of transition and detransition with powerful clarity.

165. A fragment of it reads: “Many of us were young teenagers when we decided, on the direction of medical experts, to pursue irreversible hormone treatments and surgeries to bring our bodies into closer alignment with what we thought was our true ‘gender identity.’ Many of us had extensive histories of mental illness. Many of us had experienced significant childhood trauma. But all of this was ignored because we uttered the word ‘gender.’ This utterance placed us on a narrow medical pathway that led us to sacrifice our healthy bodies and future fertility in obeisance to the claim that our suffering was a result of having a ‘gender identity’ that did not ‘match’ our biological sex.”²⁴⁶

Expert Opinion #5 – There is no medical consensus to support the “gender affirmation” model.

²⁴² Vandenbussche.

²⁴³ Littman.

²⁴⁴ Ibid.

²⁴⁵ Chloe Cole and others, 'Detransitioners Respond: A Letter to Attorney General Garland. The Medical Safeguarding of Children Should Not Be a Political Issue', (<https://www.realityslaststand.com/p/detransitioners-respond-a-letter>, 2022).

²⁴⁶ Ibid.

a. Medical Societies that endorse “gender affirmation” are politicized and do not represent the viewpoint of their members.

166. I have reviewed this problem in my critique of the low evidence WPATH guidelines. Please see Section 3e above. The endorsement of professional societies must be viewed with skepticism until there is open scientific debate.

b. Countries with longer experience than the U.S. have curtailed hormonal and surgical interventions in minors.

167. European centers have offered hormonal and surgical treatments for “gender dysphoria”, for decades before the current explosion of interest in the U.S.

168. In the UK, the GIDS had been in operation since 1989 and is slated to close in March 2024²⁴⁷. It treated over 10,000 youth with “gender dysphoria”. Dr. Hilary Cass was asked to perform an independent review of GIDS. In February 2022, she issued an interim report.²⁴⁸ She noted many problems in the care of children treated by the center and pointed out that the “appropriate management of young people with “gender dysphoria” is inconclusive both nationally and internationally.” Dr. Cass stated that “given the gaps in the evidence base regarding hormone treatment” the child must have a thorough assessment of the full range of factors affecting their physical, mental, development and psychosocial wellbeing.” She stated that there should not be an “unquestioning affirmative” approach to children expressing the desire to live as the opposite sex.²⁴⁹

²⁴⁷ Closure of Tavistock Gender Identity Clinic Delayed.

²⁴⁸ Cass.

²⁴⁹ Ibid.

169. In the UK, there are now strict criteria for continuing (or discontinuing) opposite sex hormones for those children who have already been taking them.²⁵⁰ Among the 6 required criteria are: they must not have started those hormones before the age of 16. The primary intervention for persons under 18 years of age is psychosocial intervention and psychologic support²⁵¹

170. In February 2022, Sweden issued new guidelines²⁵² recommending psychologic care as its first line of treatment for children with “gender dysphoria.” Its new guidelines state that the risks of hormonal interventions outweigh benefits and that hormonal interventions in minors should only be used as part of a research protocol.

171. The French National Academy of Medicine has recommended extending as much as possible the psychological support phase. They advised “the greatest reserve” in the use of hormonal treatments.²⁵³

172. In Norway, the Norwegian Healthcare Investigation Board concluded that there was “insufficient evidence for the use of puberty blockers and opposite sex hormones in young people.”²⁵⁴

173. Finland issued new guidelines in 2020.²⁵⁵ In Finland, psychosocial support is the first line treatment including therapy for comorbid psychiatric disorders. The Finnish health care board stated

²⁵⁰ 'National Health Service England: Interim Specialist Service for Children and Young People with Gender Incongruence', (<https://www.england.nhs.uk/wp-content/uploads/2023/06/Interim-service-specification-for-Specialist-Gender-Incongruence-Services-for-Children-and-Young-People.pdf>, 2023).

²⁵¹ Ibid.

²⁵² 'Sweden National Board of Health and Welfare: Updated Recommendations for Hormone Therapy in Sex Dysphoria in Young People', (<https://www.socialstyrelsen.se/om-socialstyrelsen/pressrum/press/uppdaterade-rekommendationer-for-hormonbehandling-vid-konsdysfori-hos-unga/>, 2022).

²⁵³ 'Academie Nationale De Medecine: Medicine and Gender Trans Identity in Children and Adolescents', (2022).

²⁵⁴ J. Block, 'Norway's Guidance on Paediatric Gender Treatment Is Unsafe, Says Review', *BMJ*, 380 (2023).

²⁵⁵ 'Recommendations by the Board for Selection of Choices for Health Care in Finland: Medical Treatment Methods for Dysphoria Related to Gender Variance in Minors', (https://segm.org/sites/default/files/Finnish_Guidelines_2020_Minors_Unofficial%20Translation.pdf, 2020).

that “hormonal interventions may be considered “with a great deal of caution” and “no irreversible treatment should be initiated.”

174. Denmark will be revising their “gender dysphoria” guidelines this year, according to the Danish Health Authority website.²⁵⁶ In 2018, Denmark prohibited surgery to remove the ovaries or testes in minors with “gender dysphoria”.²⁵⁷

175. Psychiatrists in Australia criticized the “enthusiastic prescription of hormones and surgery for a condition of questionable construct validity and with such a high rate of natural desistance.”²⁵⁸

176. In contrast, WPATH guidelines have no lower age-limit for any intervention including surgery to remove ovaries or testes.

c. Financial incentives likely explain the massive expansion of medical interventions in U.S. children, despite the European experience.

177. In the United States there are over 400 clinics and medical offices offering medical interventions for minors with “gender dysphoria”.²⁵⁹ This total does not include Planned Parenthood sites where opposite sex hormones are easily obtained. In Idaho, opposite sex hormones can be obtained at Planned Parenthood clinics in Twin Falls and Meridian.^{260,261}

²⁵⁶ 'Danish Health Authority: Guidance on Medical Assistance in Connection with Gender Identity Issues (Google Translation from the Danish)', (<https://www.sst.dk/da/viden/Seksualitet-og-koen/Koensidentitet/Koensidentitetsforhold/Vejledning-om-sundhedsfaglig-hjaelp>, 2023).

²⁵⁷ 'Danish Health Authority: Guide on Healthcare Related to Gender Identity', (<https://www.sst.dk/-/media/English/Publications/2018/Guide-on-healthcare-related-to-gender-identity.ashx>, 2018).

²⁵⁸ J. C. d'Abrera and others, 'Informed Consent and Childhood Gender Dysphoria: Emerging Complexities in Diagnosis and Treatment', *Australas Psychiatry*, 28 (2020).

²⁵⁹ 'The Gender Mapping Project', (<https://www.gendermapper.org/>, 2023).

²⁶⁰ 'Planned Parenthood: Transgender Hormone Therapy in Twin Falls, Id', (<https://www.plannedparenthood.org/health-center/idaho/twin-falls/83301/twin-falls-health-center-2938-91810/transgender-hormone-therapy>).

²⁶¹ 'Planned Parenthood: Transgender Hormone Therapy in Meridian Id', (Planned Parenthood).

178. According to the Gender Mapping Project,²⁶² in Idaho, there are at least 2 medical practices that prescribe opposite sex hormones and puberty blockers for minors. There is also a practice where surgery is performed²⁶³ on minors with “gender dysphoria.”

179. In 2021, as compared to 2017, there was a tripling in the number of minors who feel they are a different sex.²⁶⁴ In the 3 years ending in 2021, there were at least 776 mastectomies in girls ages 13-17 in the U.S. This total does not include those surgeries paid for out of pocket.²⁶⁵

180. A 2016 report²⁶⁶ estimated the size of the U.S. market for mastectomies in adults with “gender dysphoria” to be at least \$11 billion. Revenues from interventions on minors are a substantial incentive.²⁶⁷ At present U.S. practitioners appear to ignore our European colleagues’ wisdom.

Conclusion:

181. In summary, some children may feel, despite reality, that they are a different sex. Any associated psychic distress is not improved by medical interventions to alter body appearance. These interventions do not constitute “care” and are not sensible. Furthermore, these medical interventions can cause irreversible harm and lead to lifelong regret. Many members of the medical community agree with this view and stress, as do I, that as physicians we must first, do no harm.

²⁶² The Gender Mapping Project.

²⁶³ Ibid.

²⁶⁴ Robin Respaut and Chad Terhune, 'Putting Numbers on the Rise in Children Seeking Gender Care', (<https://www.reuters.com/investigates/special-report/usa-transyouth-data/>, 2022).

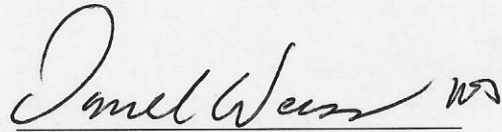
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²⁶⁶ Aaron Berhanu and Richard Bartlett, 'Understanding the Market for Gender Confirmation Surgery in the Adult Transgender Community in the United States: Evolution of Treatment, Market Potential and Unique Patient Characteristics', (<https://dash.harvard.edu/handle/1/40620231>: Harvard University, 2016).

²⁶⁷ 'Dr. Shayne Taylor Lectures at Vanderbilt on Revenue Generation at Vanderbilt from Gender Interventions', in *Dr. Shayne Taylor lectures at Vanderbilt on revenue generation at Vanderbilt from gender interventions*, (2022).

I declare under penalty of perjury that the foregoing is true and correct.

Executed Sept 1, 2023

A handwritten signature in black ink, reading "Daniel Weiss MD". The signature is written in a cursive style with a horizontal line underneath the name.

Daniel Weiss MD

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IN THE UNITED STATES DISTRICT COURT
UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO

Pam POE, et al.,

Plaintiffs,

v.

Case No. 1:23-cv-00269-CWD

Raúl LABRADOR, et al.,

Defendants.

_____ /

Expert Report of
James M. Cantor, PhD

Table of Contents

I. Credentials and Qualifications 1

 A. Education and professional background.....1

 B. Clinical expertise vs. scientific expertise 4

 C. The professional standard to evaluate treatment models is to rely on objective assessors, not treatment model users in a conflict of interest with its results. 4

II. Multiple international health care systems that had initially expanded medicalized transition to include minors have reversed that policy, as research on safety and effectiveness accumulated, in a growing international trend against the medicalized transition of minors. 7

 A. England.....7

 B. Finland.....9

 C. Sweden 11

 D. France 13

 E. Norway 14

 F. Assertions by U.S. organizations and officials that there is ‘no debate’ over medicalized transition are false. 15

III. Clinical research has a standard Pyramid of Evidence that summarizes the relative strength of potential sources of information. 17

 A. Clinical research comprises a standard *Pyramid of Evidence*, wherein studies from higher levels of evidence outrank even more numerous studies from lower levels of research. 17

 B. The highest level of evidence for safety and effectiveness research is the systematic review of clinical experiments.....18

 1. Systematic reviews prevent the ‘cherry-picking’ of studies that favor a particular result.....19

 2. Systematic reviews prevent biased assessment of individual studies by uniformly applying standard criteria to each study reviewed. The most widely used criteria set is “GRADE.” 20

 C. The highest level experimental study of clinical safety and effectiveness is the Randomized Controlled Trial (RCT). RCTs can demonstrate that a given treatment causes (rather than only correlates with) a given outcome. 21

 1. RCTs, but not lower levels of evidence, overcome biases representing ‘regression to the mean’ and other factors that can mimic clinical improvement. 22

 2. When a ‘no treatment control group’ is untenable, RCTs use an ‘active comparator’ group instead. 23

 D. Cohort studies are the highest level of evidence about medicalized transition currently available. 23

 E. Expert opinion represents the least reliable evidence. 23

F. Surveys and cross-sectional studies cannot demonstrate treatment effectiveness.	24
IV. Methodological defects limit or negate the evidentiary value of many studies of treatments for gender dysphoria in minors.	25
A. In science, to be valid, a claim must be objective, testable, and falsifiable.	25
B. Correlation does not imply causation.	25
C. When two or more treatments are provided at the same time, one cannot know which treatment caused observed changes (i.e., ‘confounding’).	26
D. Extrapolation to dissimilar populations and dissimilar conditions.	26
E. Mental health assessment used for gate-keeping medicalized transition establishes a <i>selection bias</i> , creating a statistical illusion of mental health improvement among the selected.	28
V. Systematic reviews of safety and effectiveness have been conducted by the health care ministries/departments of several governments. They <i>unanimously</i> concluded the evidence on medicalized transition in minors to be of poor quality.	30
A. Understanding safety and efficacy.	30
B. The McMaster University systematic review of systematic reviews.	31
C. The quality of the systematic reviews from governmental bodies and professional associations.	32
D. United Kingdom	35
E. Sweden	38
F. Finland.	38
G. Norway	39
VI. The Endocrine Society, WPATH, and the American Academy of Pediatrics did not conduct systematic reviews of safety and efficacy in establishing clinical guidelines, despite systematic reviews being the foundation and gold standard of evidence-based care.	40
A. The Endocrine Society reviewed cross-sex hormones, but not puberty blockers. They reviewed safety, but did not review effectiveness research.	40
B. WPATH reviewed effectiveness, but not the safety of medicalized transition of minors.	41
C. The American Academy of Pediatrics did not conduct a systematic review either of safety or effectiveness.	45
VII. Definitions of sex, gender identity, and gender dysphoria.	46
A. Sex and sex-assigned-at-birth represent objective features.	46
B. Gender identity refers to subjective feelings that cannot be defined, measured, or verified by science.	47
VIII. Gender Dysphoria is a mental health diagnosis.	48
IX. Distinct mental health phenomena must not be—but frequently are—confused or conflated.	49

A.	Adult-Onset Gender Dysphoria consists predominantly of males sexually attracted to females.....	49
B.	Childhood-onset gender dysphoria (prepubertal-onset) is a distinct phenomenon characterized by high rates of desistance in the absence of social or medical transition.....	50
1.	Eleven cohort studies followed children not permitted social transition, all showing the majority to desist feeling gender dysphoric upon follow-up after puberty.	50
2.	One cohort study followed children who were permitted social transition. In contrast with children not permitted to transition socially, most persisted in expressing gender dysphoria.	53
3.	There is no reliable method for predicting for which children who present with gender dysphoria will persist versus desist.	54
4.	Temple Newhook’s attempts to dismiss evidence of high rates of desistance from childhood gender dysphoria are invalid.....	56
C.	Adolescent-Onset Gender Dysphoria, the predominant clinical population today, is a distinct and largely unstudied phenomenon.....	59
X.	Suicide and suicidality are distinct phenomena representing different mental health issues and indicating different clinical needs.	61
A.	Rates of suicidality among all adolescents have skyrocketed with the advent of social media.....	61
B.	<i>Suicidality</i> is substantially more common among females, and <i>suicide</i> , among males. Sexual orientation is strongly associated with suicidality, but much less associated with suicide.	62
C.	There is no evidence that medicalized transition reduces rates of suicide or suicidality.	64
XI.	Mental health profiles differ across adult-, adolescent-, and childhood-onset gender dysphoria.	67
A.	Mental health issues in Adult-Onset Gender Dysphoria.	67
B.	Mental health issues in Childhood-Onset Gender Dysphoria.	67
C.	Mental health issues in Adolescent-Onset Gender Dysphoria (ROGD).	69
D.	Neuroimaging studies have associated brain features with sex and with sexual orientation, but not gender identity.	71
XII.	Medicalized transition of gender remains <i>experimental</i>, lacking causal evidence of mental health improvement.	73
A.	Criteria distinguishing ‘ <i>experimental</i> ’ from ‘ <i>established</i> ’.	73
B.	International consensus explicitly regards gender transition to be experimental.	73
C.	Claims that medical transition is “medically necessary” are undefined, unsupported, and self-interested.	75
D.	WPATH repeatedly warns of untested hypotheses, continuing unknowns, and lack of research.....	76

XIII. There have been 14 cohort studies of puberty blockers and cross-sex hormones in minors. They provide no reliable evidence of effectiveness for improving mental health relative to mental health treatments that lack medical risk.	79
A. Of the cohort studies, five found little to no improvement in mental health.	80
B. Six of the cohort studies confounded medical treatment with psychotherapy.	82
C. Two found no advantage of medicalization over psychotherapy.	85
D. One failed to report whether psychotherapy was provided.	86
XIV. Known and potential harms associated with administration of puberty blockers and cross-sex hormones to children and adolescents.	89
A. Sterilization without proven fertility preservation options.	90
B. Permanent loss of capacity for breast-feeding in adulthood.	90
C. Lifetime lack of orgasm and sexual function.	91
D. Hormonal treatments during puberty interfere with neurodevelopment and cognitive development.	91
E. Substantially delayed puberty is associated with medical harms.	93
F. Elevated risk of Parkinsonism in adult females.	93
G. Reduced bone density.	93
H. Short-term/Immediate side-effects of puberty blockers include sterile abscesses, leg pain, headache, mood swings, and weight gain.	95
I. Long-term use of cross-sex hormones in adults with gender dysphoria is associated with unfavorable lipid profiles (cholesterol and triglycerides) and other issues.	96
XV. Assertions that puberty blockers act only as a “fully reversible” “pause button” are not supported by scientific evidence.	97
A. Stopping puberty does not stop time: Patients’ peers continue to develop and mature, with patients falling increasingly behind.	98
B. Blocking puberty blocks the awareness of sexuality and sexual orientation that can play an important role in the individual’s understanding of gender identity.	99
C. Blocking puberty may block development of adult decision-making capacity. ...	100
D. Time spent on puberty blockers poses significant opportunity costs.	101
XVI. Assessments of clinical guidelines, standards, and position statements.	102
A. The Dutch Protocol (aka Dutch Approach).	102
B. World Professional Association for Transgender Health (WPATH).	104
C. Endocrine Society (ES).	105
D. American Academy of Pediatrics (AAP).	106
XVII. Assessment of expert declaration of Dr. Christine Brady.	108
A. Dr. Brady’s opinions are not the product of the principles and methods accepted as reliable by the fields of medical science or behavioral science.	108
B. Clinically evaluating rather than assuming literal accuracy of self-report represents competent mental health care, not conversion therapy.	111

C. DSM-5 criteria pre-date nearly all outcomes research on adolescents. 112

D. Dr. Brady’s analysis fails to distinguish between the distinct phenomena that
can lead to gender dysphoria. 117

E. Anecdotal claims based on one’s personal experiences do not constitute
reliable clinical evidence. 118

F. The mental health issues reported by gender dysphoric adolescents
correspond entirely to the mental health issues widely reported by youth of
the social media generation. 119

G. Dr. Brady is unaware of the status of the science of gender dysphoria. 125

References 127

List of Appendices 145

I. Credentials and Qualifications

A. Education and professional background

1. I am a sexual behavior scientist, with an internationally recognized record studying the development of human sexualities, and an expert in research methodology of sexuality. My curriculum vitae is attached as Appendix 1 to this report. My publication record includes both biological and non-biological influences on sexuality, ranging from pre-natal brain development, through adulthood, to senescence. The primary, but not exclusive, focus of my own research studies has been the development of atypical sexualities. In addition to the studies I myself have conducted, I am regularly consulted to evaluate the research methods, analyses, and proposals from sexual behavior scientists throughout the world. The methodologies I am qualified to assess span the neurochemical and neuroanatomic level, individual behavioral level, and social and interpersonal levels.

2. I am trained as a clinical psychologist and neuroscientist, and 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*. Although I have studied many atypical sexualities, the most impactful of my work has been MRI and other biological studies of the origins of pedophilia. That work has revolutionized several aspects of the sex offender field, both with regard to the treatment of offenders and to the prevention of sexual abuse of children. In 2022, I received the Distinguished Contribution Award from the Association for the Treatment and Prevention of Sexual Abuse in recognition of my research and its integration into public policy. My efforts in this regard have been the subject of several documentary films.

3. Over my academic career, my posts have included Senior Scientist and Psychologist

at the Centre for Addiction and Mental Health (CAMH), and Head of Research for CAMH's Sexual Behaviour Clinic. I was on the Faculty of Medicine of the University of Toronto for 15 years and have served as 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 and Prevention of Sexual Abuse. 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*. I am currently the Director of the Toronto Sexuality Centre in Canada. 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.

4. 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.

5. I have a decades-long, international, and award-winning history of advocacy for destigmatizing people with atypical sexualities. While still a trainee in psychology, I founded the

American Psychological Association's (APA) Committee for Lesbian, Gay, and Bisexual Graduate Students. Subsequently, I have served as the Chair for the Committee on Science Issues for APA's Division for the Psychology of Sexual Orientation and Gender Diversity and was appointed to its Task Force on Transgender Issues. Throughout my career, my writings and public statements have consistently supported rights for transgender populations and the application of science to help policy-makers best meet their diverse needs. Because my professional background also includes neurobiological research on the development of other atypical sexualities, I have become recognized as an international leader also in the destigmatizing of the broader range of human sexuality patterns.

6. I am highly experienced in the application of sex research to forensic proceedings: I have served as the Head of Research for the Law and Mental Health Program of the University of Toronto's psychiatric teaching hospital, the Centre for Addiction and Mental Health, where I was appointed to the Faculty of Medicine.

7. I have served as an expert witness in 21 cases in the past four years, as listed on my *curriculum vitae*. These cases included criminal, civil, and custody proceedings, preliminary injunction and Frye hearings, as well as trials. I have testified in courts in Canada and throughout the U.S., including Alabama, Arizona, Florida, Illinois, Indiana, Kansas, Kentucky, Massachusetts, New York, Texas, Utah, and West Virginia. I have provided expert testimony concerning the nature and origins of atypical sexualities, as well as concerning gender dysphoria and gender identity in children.

8. 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.

B. Clinical expertise vs. scientific expertise

9. In clinical science, there are two kinds of expertise: Clinicians' expertise regards applying general principles to the care of an individual patient and the unique features of that case. A scientist's expertise is the reverse, accumulating information about many individual cases and identifying the generalizable principles that may be applied to all cases. Thus, different types of decisions may require different kinds of experts, such that questions about whether a specific patient represents an exception to the general rule might be better posed to a physician's expertise, whereas questions about establishing the general rules themselves might be better posed to a scientist's.

10. In legal matters, the most familiar situation pertains to whether a given clinician correctly employed relevant clinical standards. Often, it is other clinicians who practice in that field who will be best equipped to speak to that question. When it is the clinical standards that are themselves in question, however, it is the experts in the assessment of scientific studies who are the relevant experts.

C. The professional standard to evaluate treatment models is to rely on objective assessors, not treatment model users in a conflict of interest with its results.

11. I describe in a later section the well-recognized procedures for conducting reviews of literature in medical and scientific fields to evaluate the strength of evidence for particular procedures or treatments. Importantly, the standard procedure is for such evaluations to be conducted by objective assessors with expertise in the science of assessment, and not by those with an investment in the procedure being assessed. Because the people engaged in providing clinical services are necessarily in a conflict of interest when claiming that their services are effective, formal evaluations of evidence are routinely conducted by those *without* direct

professional involvement and thus without financial or other personal interest in whether services are deemed to be safe or effective. This routine practice standard is exemplified by all of the only three systematic, comprehensive research reviews that have been conducted concerning the safety and efficacy of puberty blockers and cross-sex hormones as treatments for gender dysphoria in children.

12. In 2020, England’s National Health Service (NHS) commissioned a major review of the use of puberty blockers and cross-sex hormones in children and young people and appointed prominent pediatrician Dr. Hilary Cass to lead that review, explicating that “Given the increasingly evident polarization among clinical professionals, Dr. Cass was asked to chair the group as a senior clinician with *no prior involvement* or fixed views in this area.” (Cass 2022 at 35, *italics added*.) Dr. Cass’s committee in turn commissioned formal systematic reviews of evidence from the England National Institute for Health & Care Excellence (NICE), a government entity of England’s Department of Health and Social Care, established to provide guidance to health care policy, such as by conducting systematic reviews of clinical research, but without direct involvement in providing treatment to gender dysphoric individuals. (<https://www.nice.org.uk/>.) Similarly, the Finnish health care council commissioned its systematic review to an external firm, Summaryx Oy. (Pasternack 2019.) Summaryx Oy is a “social enterprise” (a Finnish organization analogous to a non-profit think-tank) that conducts systematic research reviews and other analyses for supporting that nation’s medical and social systems. Its reviews are conducted by assessment professionals, not by clinicians providing services. (www.summaryx.eu/en/.) The systematic review by Sweden’s National Board of Health and Welfare (NBHW) included four experts. (SBU Scoping Review 2019.) In addition to their own research fields, they provided clinical services in areas adjacent to but apart from gender

dysphoric children, such as physical disorders of sexual development (Dr. Berit Kriström) or gender dysphoria in adults (Dr. Mikael Landén).

13. My own most-cited peer-reviewed paper relating to gender dysphoria in minors illustrates the expertise in the evaluation of scientific evidence that I have and am recognized for. That is, that paper provided not clinical advice or a clinical study, but rather a review and interpretation of the available evidence concerning desistance in children who suffer from gender dysphoria, as well as of evidence (and lack of evidence) concerning the safety and efficacy of medical transition to treat gender dysphoria in minors. (Cantor 2019.)

14. My extensive background in the assessment of sexuality research and in the development of human sexuality places me in exactly the position of objectivity and freedom from conflict-of-interest required by the universal standards of medical research science.

15. I do not offer opinions about the best public policy. Multiple jurisdictions have attempted multiple different means of implementing that science into various public policies. Although I accept as an axiom that good public policy must be consistent with the scientific evidence, science cannot objectively assess societal values and priorities. Therefore, my opinions summarize and assess the science on which public policy is based, but I can offer no opinion regarding which public policy mechanisms would be best in light of that science.

II. Multiple international health care systems that had initially expanded medicalized transition to include minors have reversed that policy, as research on safety and effectiveness accumulated, in a growing international trend against the medicalized transition of minors.

16. Medicalized interventions for minors originated in European clinics (most prominently in the Netherlands and Sweden), and these precedents (and in particular the so-called “Dutch Protocol”) are frequently cited by American clinicians. However, growing concerns about safety together with the continuing absence of reliable evidence of benefit even after more than 20 years of experience have led respected and far-from “conservative” European health care ministries to step back and discourage or even cease providing medicalized transition of minors, other than in exceptional and carefully limited circumstances, such as within registered and approved research trials. Instead, these authorities now endorse psychotherapy as the treatment of choice for minors, with medical interventions representing a method of last resort, if permitted at all. These range from medical advisories to outright bans on the medical transition of minors. I provide details concerning these policy changes below, and provide additional details regarding the underlying systematic reviews in Sections V and VI below.

A. England

17. The National Health Service (NHS) of England centralized gender counselling and transitioning services into a single clinic, the Gender Identity Development Service (GIDS) of the Tavistock and Portman NHS Foundation Trust. Between 2008 and 2018, the number of referrals to the clinic had increased by a factor of 40, leading to a government inquiry into the causes. (Rayner 2018.) The GIDS was repeatedly accused of approving and endorsing medical transition in minors without adequate justification, including by 35 members of the GIDS own staff, who resigned by 2019. (BBC News 2021; Donnelly 2019). An ex-governor and psychotherapist of the Trust who resigned, Marcus Evans, said staff feared being called

transphobic, which was impacting their objectivity in their work. (Doward 2019).

18. In 2020, a former patient of the GIDS, Keira Bell, brought a lawsuit alleging that the GIDS practices with respect to prescribing puberty blockers for minors were unproven and potentially harmful in ways that meant that it was impossible for minors to give meaningful informed consent. After taking extensive expert evidence, the trial court concluded that puberty blockers might have “potentially irreversible” and “life-changing” effects on a young person (*Bell v. Tavistock*, [2020] EWHC 3274 (Admin), ¶148, 151), that there was “very limited evidence as to its efficacy” (¶134) such that “it is right to call the treatment experimental” (¶148), and that use of puberty blockers almost always led to use of cross-sex hormones that “may well lead to a loss of fertility” (¶¶ 137-138). While an appeals court later concluded that the trial court had exceeded the proper role of the court in making factual findings on these questions, the appeals court acknowledged that “Medical opinion is far from unanimous about the wisdom of embarking on treatment before adulthood. The question raises not only clinical medical issues but also moral and ethical issues, all of which are the subject of intense professional and public debate.” (*Bell v. Tavistock* 2021 at ¶3.)

19. Perhaps prompted by the Keira Bell litigation, also in 2020 the English National Health Service (“NHS”) commissioned the thorough independent review of the use of puberty blockers and cross-sex hormones to be chaired by Dr. Cass that I have described above. After an extensive process that included obtaining the systematic reviews of all published studies bearing on safety or efficacy of these hormonal interventions in minors as well as “extensive” listening sessions with clinicians, patients, and families, in February 2022 Dr. Cass issued an extensive “Interim Report” summarizing the state of the relevant medical science and in particular highlighting the presence of serious but unstudied risks and the lack of strong evidence of

efficacy. I will quote specific items from Dr. Cass’s Report as relevant to specific topics below. At a high level, Dr. Cass concluded that to date there has been “very limited research on the sexual, cognitive, or broader developmental outcomes” from the use of puberty blockers for gender dysphoria (Cass 2022 at 19), that it is an unanswered question “whether the evidence for the use and safety of [puberty blockers] is strong enough as judged by reasonable clinical standards” (at 37), and that “the available evidence was not strong enough to form the basis of a policy position” with regard to use of both puberty blockers and cross-sex hormones in minors (at 35).

20. Following issuance of Dr. Cass’s Interim Report, the National Health Service of England (NHS England) published a consultation document concerning a proposed revised service specification under which “NHS England will only commission [puberty blockers] in the context of a formal research protocol.” (NHS Interim Service Specification at 12.) As of June 9, 2023, the NHS England announced its implementation of its previously interim policy. They reasserted “there is not enough evidence to support their safety or clinical effectiveness as a routinely available treatment.” and that it will limit the use puberty-blockers to formal clinical trials. (Ghorayshi 2023; Moss & Parry 2023).

B. Finland

21. In Finland, minors were made eligible for medicalized transition in 2011 by that country’s health care service, the Council for Choices in Health Care in Finland (COHERE). Assessments of mental health and preparedness were centralized by law into two research clinics, Helsinki University Central Hospital and Tampere University Hospital.

22. In 2019, the Service Selection Council (Palko) of the Finnish Ministry of Social Affairs and Health commissioned a systematic review of the effectiveness and safety of

medicalized transition (Pasternack 2019), and in 2020, Finnish researchers published an analysis of the outcomes of adolescents diagnosed with gender dysphoria and receiving cross-sex hormone treatment in Finland’s Tampere University Hospital. (Kaltiala 2020.) Despite the purpose of medical transition being to improve mental health, the study showed:

Medical gender reassignment is not enough to improve functioning and relieve psychiatric comorbidities among adolescents with gender dysphoria. Appropriate interventions are warranted for psychiatric comorbidities and problems in adolescent development. (Kaltiala 2020 at 213.)

They concluded that the youth who were functioning well after transition were those who were already functioning well before transition, and those who were functioning poorly before transition continued to function poorly after transition.

23. Importantly, the results of this study exemplify why correlations reported from surveys cannot be interpreted as evidence of causality. Mental health assessment would exclude the most poorly functioning youth from among those permitted to transition, but transition itself did not improve the functioning of those who were permitted to transition.

24. Consistent with the results of the independent evidence review by Summaryx Oy and analysis of the ethical issues involved, Finland’s health care service ended the surgical transition of minors, ruling in 2020 that “Surgical treatments are not part of the treatment methods for dysphoria caused by gender-related conflicts in minors.” (COHERE Summary 2020.) The review of the research concluded that “[N]o conclusions can be drawn on the stability of gender identity during the period of disorder caused by a psychiatric illness with symptoms that hamper development.” (COHERE Summary 2020.) COHERE also greatly restricted access to puberty-blocking and cross-sex hormonal treatments, explicating that they may be considered for minors “only if it can be ascertained that their identity as the other sex is of a permanent nature and causes severe dysphoria,” and only “if the need for it continues *after* [any] other psychiatric

symptoms have *ceased* and adolescent development is progressing normally.” (COHERE Summary 2020, italics added.) They restricted the procedures to their centralized research clinics. The council was explicit in noting the lack of research needed for decision-making, “There is also a need for more information on the disadvantages of procedures and on people who regret them.” (COHERE Summary 2020.) In light of the special developmental and ethical considerations surrounding minors, COHERE recommended that “no decisions should be made that can permanently alter a still-maturing minor’s mental and physical development.” (COHERE Recommendation 2020 at 7.)

C. Sweden

25. Sweden’s national health care policy regarding trans issues has developed quite similarly to that of the UK. Already in place 20 years ago, Swedish health care policy permitted otherwise eligible minors to receive puberty-blockers beginning at age 14 and cross-sex hormones at age 16. At that time, only small numbers of minors sought medical transition services. An explosion of referrals ensued in 2013–2014. Sweden’s Board of Health and Welfare (“Socialstyrelsen”) reported that, in 2018, the number of diagnoses of gender dysphoria was 15 times higher than 2008 among girls ages 13–17. (Swedish Socialstyrelsen Support 2022 at 15.)

26. Sweden has long been very accepting with regard to sexual and gender diversity. In 2018, a law was proposed to lower the age of eligibility for surgical care from age 18 to 15, remove the requirement for parental consent, and lower the legal age for change of gender to age 12. A series of cases of regret and suicide following medical transition were reported in the Swedish media. (Orange 2020.) In 2019, the Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU) therefore initiated its own systematic review of the research. The SBU released English-language results first as a summary and then

published as a peer reviewed article. (Ludvigsson et al., 2023.) Like the UK, the Swedish investigation employed standardized review methods to ensure the encapsulation of all the relevant evidence and came to the same conclusions: “This systematic review of almost 10 000 screened abstracts suggests that long-term effects of hormone therapy on psychosocial and somatic health are unknown, except that GnRHa treatment seems to delay bone maturation and gain in bone mineral density.” (Ludvigsson 2023 at 12.) They emphasized, “The absence of long-term studies is worrying because many individuals start treatment as minors (<18 years) and CSHT is lifelong.” (Ludvigsson 2023 at 10.) Regarding the full set of studies, “No randomised controlled trials were found, but we could identify 24 relevant observational studies. However, these were limited by methodological weaknesses, for instance lack of or inappropriate control group, lack of intra-individual analyses, high attrition rates that precluded conclusion to be drawn.” (Ludvigsson 2023 at 9–10.)

27. In 2021, the leading Swedish pediatric gender clinic, at the Karolinska Institute, issued a new policy statement in which it stated that the Swedish evidence review “showed a lack of evidence for both the long-term consequences of the treatments, and the reasons for the large influx of patients in recent years.” (Karolinska 2021.) The Karolinska Institute further stated that “These treatments are potentially fraught with extensive and irreversible adverse consequences such as cardiovascular disease, osteoporosis, infertility, increased cancer risk, and thrombosis.” In a dramatic reversal of its policy, the Institute announced that “In light of the above, and based on the precautionary principle, which should always be applied, it has been decided that hormonal treatments (i.e., puberty blocking and cross-sex hormones) will not be initiated in gender dysphoric patients under the age of 16.” Further, the Karolinska clinic announced that patients ages 16–18 would receive such treatments *only* within research settings

(clinical trials monitored by the appropriate Swedish research ethics board). (Karolinska 2021.)

28. In 2022, the Swedish National Board of Health and Welfare published a major new national policy document concerning “Support, investigation and hormone therapy in gender incongruence in children and youth,” including an English-language summary. (Swedish Socialstyrelsen Support 2022.) The National Board of Health noted “the continued lack of reliable scientific evidence concerning the efficacy and the safety of both [puberty blockers and cross-sex hormones],” and concluded (based on the commissioned evidence reviews) that “the evidence on treatment efficacy and safety is still insufficient and inconclusive for all reported outcomes. Further, it is not possible to determine how common it is for adolescents who undergo gender-affirming treatment to later change their perception of their gender identity or interrupt an ongoing treatment.” As a result, the Board of Health concluded that, “[f]or adolescents with gender incongruence, the . . . risks of puberty suppressing treatment with GnRH-analogues and gender-affirming hormonal treatment currently outweigh the possible benefits.” (Swedish Socialstyrelsen Support 2022 at 10-12.) Accordingly, the Swedish Board of Health and Welfare “recommends restraint when it comes to hormone treatment.” (Swedish Socialstyrelsen Updated Recommendations 2/22/22.)

D. France

29. While medical authorities in France have not issued any actual restriction, in 2022, the Académie Nationale de Médecine of France issued a strongly worded statement, citing the Swedish ban on hormone treatments:

[A] great medical caution must be taken in children and adolescents, given the vulnerability, particularly psychological, of this population and the many undesirable effects, and even serious complications, that some of the available therapies can cause...such as impact on growth, bone fragility, risk of sterility, emotional and intellectual consequences and, for girls, symptoms reminiscent of menopause.” (Académie Nationale de Médecine 2022.)

For hormones, the Académie concluded “the greatest reserve is required in their use,” and for surgical treatments, “[T]heir irreversible nature must be emphasized.” The Académie warned “the risk of over-diagnosis is real, as shown by the increasing number of transgender young adults wishing to ‘detransition’.” Rather than medical interventions, it advised health care providers “to extend as much as possible the psychological support phase.” The Académie reviewed and emphasized the evidence indicating the very large and very sudden increase in youth requesting medical transition. It attributed the change, not to society now being more accepting of sexual diversity, but to social media, “underlining the addictive character of excessive consultation of social networks which is both harmful to the psychological development of young people and responsible, for a very important part, of the growing sense of gender incongruence.” (Académie Nationale de Médecine 2022.)

E. Norway

30. In 2022, Norway’s Healthcare Investigation Board (Ukom) began a review of that country’s guidelines for the medicalized transition of minors. (Block, Norway’s Guidance, 2023.) In 2023, it released its report, which concluded that the evidence for the use of puberty blockers and cross-sex hormone treatments in youth was insufficient, and acknowledged the international recognition of the dearth of evidence of safety and effectiveness. The report deemed medicalized transition to be experimental. (Ukom 2023, Summary and Section 11.) The report faulted the existing Norwegian guidelines, published in 2020, for concentrating on “equality and rights” while “deviating from the requirements for the development of knowledge-based guidelines.” (Ukom 2023, Summary.)

31. The Norwegian report concluded that “The knowledge base, especially research-based knowledge for gender-affirming treatment (hormonal and surgical), is insufficient and the

long-term effects are little known” and that “This applies particularly to the teenage population, which accounts for a large part of the increase in referrals to the specialist health service in the last decade.” (Ukom 2023, Summary and Section 7.)

32. In an interview about the report with the *British Medical Journal*, the Ukom Medical Director, Stine Marit Moen, said, “We’re concerned that there may be undertreatment, overtreatment, and the wrong treatment” and added:

We’ve seen a marked increase in referrals to specialised healthcare services in Norway for teenagers, as seen in many other western countries, and nobody knows the reason. The stability of the gender dysphoria of these teenagers is not known, and the evidence of long term effects of gender affirming treatments for this young population is insufficient. (Block, Norway’s Guidance, 2023.)

33. Ukom noted that referrals to its national treatment service increased by a factor of eight between 2007 and 2018, and that this increase was largely from young biological females. Seventy-five percent of the referrals to its National Treatment Service had other co-morbid psychiatric diagnoses, including not only depression and anxiety but also autism spectrum disorders, ADHD, and Tourette’s Syndrome. (Ukom 2023, Summary and Section 7.)

F. Assertions by U.S. organizations and officials that there is ‘no debate’ over medicalized transition are false.

34. The international consensus is clearly demonstrated by the multiple recent analyses, statements, and policy decisions from the health care service systems around the world. These include England’s National Health Service, which noted the “Scarce and inconclusive evidence to support clinical decision making [which] has led to a lack of clinical consensus on what the best model of care for children and young people experiencing gender incongruence and dysphoria should be.” (NHS 2022 at 5.)

35. As these several recent national policy reviews, statements, and recommendations make very clear, there is a great deal of doubt and debate among the sophisticated international

medical and mental health community as to whether the administration of puberty blockers and cross-sex hormones to children and young people is the best clinical practice, and as to whether these treatments have been shown to be safe and effective. Indeed, the lack of scientifically reliable data concerning safety and efficacy highlighted by the systematic evidence reviews commissioned by the English National Health Service, by the Swedish National Board of Health and Welfare, and by the Finnish Council for Choices in Health Care in Finland have caused those national health authorities and others to move sharply away from approving puberty blockers, cross-sex hormones, or surgery for minors.

36. In this report, I explain the evidence and lack of evidence behind that doubt, that debate, and the emerging international consensus of caution reflected in the several recent European policy statements or changes.

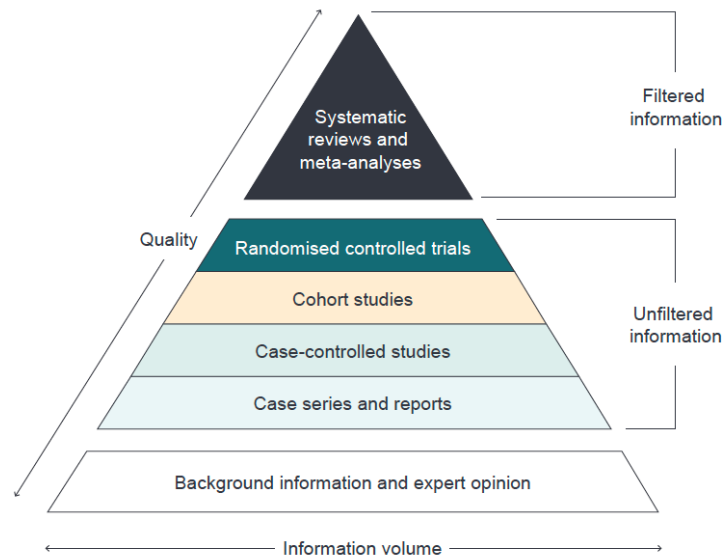
37. *I note that the plaintiffs' experts have excluded all mention of the international reversals of policy, suggesting a consensus that does not exist. In fact, practices at U.S. gender clinics and statements by U.S. advocacy voices increasingly represent an outlier view, failing to update policy despite the mounting evidence.*

III. Clinical research has a standard Pyramid of Evidence that summarizes the relative strength of potential sources of information.

38. The widely accepted starting point in evidence-based medicine is the recognition that clinical experiences and recollections of individual practitioners (often called “expert opinion” or “clinical anecdote”) do not and cannot provide a reliable, scientific basis for treatment decisions. Rather, in evidence-based medicine, clinical decision-making is based on objectively demonstrated evidence of outcomes from the treatment options. An essential first step in evidence-based medicine is identifying the relevant findings from among the immense flood of clinical journal articles published each year. Those studies and the evidence they report are then assessed according to the strength offered by the research methods used in each study. The research methods used in a study determine its reliability and generalizability, meaning the confidence one may have that using the same treatment again will have the same result again on other people. In this section, I explain the well-accepted criteria for evaluating the evidentiary value of clinical studies.

A. Clinical research comprises a standard *Pyramid of Evidence*, wherein studies from higher levels of evidence outrank even more numerous studies from lower levels of research.

39. The accepted hierarchy of reliability for assessing clinical outcomes research is routinely represented as a “Pyramid of Evidence” (Figure 1). Scientific questions are not resolved by the number of studies coming to one versus another conclusion. Studies representing higher levels of evidence outrank studies from lower levels. Even large numbers of lower-level studies cannot overcome a study representing a higher level of evidence. Indeed, because lower-level studies are generally faster and less expensive to conduct, it is typical for them to outnumber higher level studies. This is the property meant to be reflected by the pyramid’s shape, which is larger at the base and smaller at the apex.

Figure 1: Pyramid of Standards of Evidence

Source: Cass, H. (2022, February). *The Cass Review: Independent review of gender identity services for children and young people Interim report*. National Health Service (NHS), UK. Available from <https://cass.independent-review.uk/publications/interim-report/>, citing OpenMD, retrieved from <https://openmd.com/guide/levels-of-evidence>.

B. The highest level of evidence for safety and effectiveness research is the systematic review of clinical experiments.

40. The most reliable and conclusive method of determining what is actually known or not known with respect to a particular treatment is the *systematic review*. Systematic reviews employ standardized procedures to assess comprehensively all available evidence on an issue, minimizing opportunities for bias in gathering and evaluating research evidence. As described by Dr. Gordon Guyatt, the internationally recognized pioneer in medical research who invented the term *evidence-based medicine*, “A fundamental principle to the hierarchy of evidence [is] that optimal clinical decision making requires systematic summaries of the best available evidence.” (Guyatt 2015 at xxvi.)

1. Systematic reviews prevent the ‘cherry-picking’ of studies that favor a particular result.

41. Because systematic reviews are designed to prevent researchers from including only the studies they favor and other biases, systematic reviews are the routine starting point for developing clinical practice guidelines. (Moher 2009.) The methods of a systematic review include:

- Define the scope, including the “PICO”: Population/Patient, Intervention, Comparison/Control, and Outcome(s);
- Select and disclose the keywords used to search the (massive) available clinical research database(s) for potentially relevant articles, identify the databases they were applied to, and the date(s) of the searches, including any subsequent updates;
- Select and disclose the inclusion/exclusion criteria to be used to filter the “hits” from the keyword searches to identify research studies to be included in the detailed review;
- Review abstracts to select the final set of studies, using at least two independent reviewers to allow for measuring inter-rater reliability on the criteria;
- Code each study’s results impacting the research question(s), disclosing the list of all studies and the results coded from each;
- Evaluate the reliability of the results [risk of bias] of each included study, applying uniform criteria across them all.

42. As detailed in Section V, several systematic reviews have been conducted of the outcomes of medicalized transition of gender in minors. Their conclusions are highly consistent with each other. Much of the expert testimony offered by plaintiffs’ experts, however, depends on levels of evidence far lower on the pyramid of evidence (e.g., “expert opinion”) or beneath the pyramid entirely (e.g., survey studies) while ignoring the thorough, high-quality systematic reviews available in the research literature. Doing so is in direct conflict with foundational principles of evidence-based medicine.

2. Systematic reviews prevent biased assessment of individual studies by uniformly applying standard criteria to each study reviewed. The most widely used criteria set is “GRADE.”

43. In order to produce unbiased assessment of the studies within the systematic review, all the studies must be evaluated using the same evaluation criteria. Without such criteria, assessments can become influenced by researchers who, intentionally or not, hold the evaluative bar higher or lower for studies according to whether the studies’ conclusions support or challenge that researcher’s perspective. Several such systems have been developed. The most widely used system is the “Grading of Recommendations, Assessment, Development and Evaluations” (GRADE). (Goldet & Howick 2013.) In the GRADE system, studies’ findings are downgraded for:

- Risk of bias:¹
 - Lack of clearly randomized allocation sequence,
 - Lack of blinding,
 - Lack of allocation concealment,
 - Failure to adhere to intention-to-treat analysis,
 - Trial is cut short,
 - Large losses to follow-up;
- Inconsistency;
- Indirectness of evidence;
- Imprecision; and
- Publication bias (when studies with ‘negative’ findings remain unpublished).

Studies’ ratings are upgraded if their findings identify:

- A large effect of the treatment;
- A dose-response relationship (the size of the effect has a systematic association with the dose of the treatment given); or
- That all plausible biases only *reduce* the apparent effect of the treatment (necessarily making the estimated effect sizes conservative estimates).

¹ In science, including in the GRADE system, the term “bias” refers to any external influence leading to a systematic over- or underreporting of the outcome being measured. That is, in this context “bias” is not used in the sociopolitical sense of personal values.

44. GRADE assessments yield a four-point score representing the certainty that a reported treatment effect is true. These certainty scores are (GRADE Handbook, Section 5):

<u>Certainty</u>	<u>Meaning</u>
High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
Very Low	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

C. The highest level experimental study of clinical safety and effectiveness is the Randomized Controlled Trial (RCT). RCTs can demonstrate that a given treatment causes (rather than only correlates with) a given outcome.

45. Randomized Controlled Trials are the gold standard method of assessing the effects caused by an experimental treatment. The great scientific weight of RCTs follows from the randomization: People do not pick which research group they are in—a treatment group or a control group. Without random group assignment, it is not possible to identify which, if any, changes are due to the treatment itself or to the factors that led to who did and did not receive treatment.

46. Levels of evidence lower than RCTs are unable to distinguish when changes are caused by the experimental treatment, or by factors that can mimic treatment effects, such as ‘regression to the mean’ and the placebo effect.

47. In the absence of evidence that X causes Y, it is a scientific error to use language indicating there is causal relationship. In the absence of evidence of causality, it is scientifically unsupportable to describe a correlation with terms such as: increases, improves, benefits, elevates, leads to, alters, influences, results in, is effective for, causes, changes, contributes to,

yields, impacts, decreases, harms, and depresses. Scientifically valid terms for correlations include: relates to, is associated with, predicts, and varies with.

48. *I note that the plaintiffs' experts repeatedly misrepresent studies using causal language to describe studies that are unable to demonstrate causality. Such language incorrectly asserts that the evidence is stronger than it actually is.*

1. RCTs, but not lower levels of evidence, overcome biases representing 'regression to the mean' and other factors that can mimic clinical improvement.

49. 'Regression to the mean' arises when researching issues, such as mood, depression, or levels of emotional distress that typically fluctuate over time. People are more likely to seek out treatment during low points rather than high points in their emotional lives. Thus, when tracking emotional states over time, the average of a group of people in a treatment group may often show an increase; however, without an untreated control group to which to compare them, researchers cannot know whether the group average would have increased anyway, with only the passage of time.

50. Blinding or masking participants in an RCT from which group they are in has been described as a preferred strategy since the 1950s, in order to exclude the possibility that a person's expectations of change caused any changes observed (the "placebo effect"). In practice, however, it has often made little or no significant difference. For example, a study using very high quality methods—meta-analysis of meta-analysis research—has revealed no statistical difference in the sizes of the effects detected by blinded/placebo-controlled studies from non-blinded/non-placebo-controlled studies of depression. (Moustgaard 2019.) That is, the pre-/post-treatment differences found in placebo groups are not as attributable to participants' expectations of improvement as they are to expectable regression to the mean. (Hengartner 2020.)

2. When a ‘no treatment control group’ is untenable, RCTs use an ‘active comparator’ group instead.

51. It is not always possible to compare a group receiving a treatment to a group receiving only an inactive procedure, such as a placebo treatment or no treatment at all. In such situations, the standard, ethical, clinical research method is to compare two active treatments with each other.

52. The systematic reviews from England explicitly called for ‘active comparator’ studies to test whether medicalized transition of minors shows mental health benefits superior to those obtained from psychotherapy. (NICE 2020a at 40; NICE 2020b at 47.) Risk:benefit analysis cannot justify the greater risks associated with medicalization without evidence of correspondingly greater benefit.

D. Cohort studies are the highest level of evidence about medicalized transition currently available.

53. The highest-level study of medicalized transition of minors conducted thus far are cohort studies: gathering a sample of individuals who chose to undergo treatment and tracking them over time. Cohort studies are able to answer some questions that lower-level studies cannot, such as whether a high-functioning group improved over time versus having been composed of people who were already high-functioning. Cohort studies are, however, unable to demonstrate causality, to identify how much of any change was due to regression to the mean, or to detect any placebo effects.

E. Expert opinion represents the least reliable evidence.

54. As Figure 1 illustrates, in evidence-based medicine, opinion based on clinical experience is identified as the *least* reliable source of medical knowledge. Among other reasons, this is because non-systematic recollections of unstructured clinical experiences with self-

selected clientele in an uncontrolled setting is the most subject to bias. Indeed, mere “clinical experience” was long the basis of most medical and mental health clinical decisions, and it was precisely the scientific and clinical inadequacy of this type of “knowledge” that led to the development and widespread acceptance of the importance of evidence-based medicine. As Dr. Guyatt has written, “EBM places the unsystematic observations of individual clinicians lowest on the hierarchy,” both because EBM “requires awareness of the best available evidence,” and because “clinicians fall prey to muddled clinical reasoning and to neglect or misunderstanding of research findings.” (Guyatt 2015 at 10, 15.)

F. Surveys and cross-sectional studies cannot demonstrate treatment effectiveness.

55. Surveys represent observational research rather than experimental research. (In science, experiments are studies involving a manipulation, not merely observation, by the researcher.) Surveys and cross-sectional studies can provide only correlational data and cannot demonstrate causality. (See Section IV below). It is not possible for a survey to yield evidence that a treatment is effective. No number of surveys can test a treatment, advancing it from ‘experimental’ to ‘established’ status.

56. Survey studies do not even appear on the *pyramid of evidence*. In accordance with the routine standards, systematic reviews of treatment studies exclude surveys.

57. *I note that the plaintiffs’ experts’ reports rely largely on survey studies. The misplaced emphasis on surveys, open to whoever wanted to fill them out, masks how much the plaintiff’s experts are merely parroting the claims of these youth.*

IV. Methodological defects limit or negate the evidentiary value of many studies of treatments for gender dysphoria in minors.

A. In science, to be valid, a claim must be objective, testable, and falsifiable.

58. In behavioral science, people's self-reports do not represent objective evidence. It is when emotional and other pressures are strongest that the distinction between and need for objective over subjective evidence is greatest. Surveys do not represent objective evidence. This is especially true of non-random surveys and polls, recruited through online social networks of the like-minded.

B. Correlation does not imply causation.

59. Studies representing lower levels of evidence are often used because they are faster and less expensive than studies representing higher levels. A disadvantage, however, is that they are often limited to identifying which features are *associated* with which other features, but they cannot show which ones are *causing* which. It is a standard property of statistical science that when a study reports a correlation, there are necessarily three possible explanations. Assuming the correlation actually exists (rather than represents a statistical fluke or bias), it is possible that X causes Y, that Y causes X, or that there is some other variable, Z, that causes both X and Y. (More than one of these can be true at the same time.) To be complete, a research analysis of a correlation must explore all three possibilities.

60. For example, assuming a correlation between treatment of gender dysphoria in minors and mental health actually exists (rather than is a fluke): (1) It is *possible* that treatment causes improvement in mental health. (2) Yet, it is also possible that having good mental health is (part of) what enabled transition to occur in the first place. That is, because of gate-keeping procedures in the clinical studies, those with the poorest mental health are typically not permitted to transition, causing the higher mental health scores to be sorted into the transitioned group.

(See Section IV.E on *Selection Bias*.) (3) It is also possible that a third factor, such as wealth or socioeconomic status, causes both the higher likelihood of transitioning (by being better able to afford it) and the likelihood of mental health (such as by avoiding the stresses of poverty or affording psychotherapy).

61. This principle of scientific evidence is why surveys do not (cannot) represent evidence of treatment effectiveness: Surveys are limited to correlations. (See Section III.F. on *Surveys*.)

C. When two or more treatments are provided at the same time, one cannot know which treatment caused observed changes (i.e., ‘confounding’).

62. Confounding is a well-known issue in clinical research design. As detailed in the present report, it applies throughout treatment studies of gender dysphoria. Patients who undergo medical transition procedures in research clinics routinely undergo mental health treatment (psychotherapy) at the same time. Without explicit procedures to distinguish them, it cannot be known which treatment produced which outcome (or in what proportions). Indeed, that mental health improvement came from mental health treatment is a more parsimonious (and therefore, scientifically superior) conclusion than is medicalized treatment causing mental health improvement.

D. Extrapolation to dissimilar populations and dissimilar conditions.

63. The purpose of clinical science is to establish from a finite sample of study participants information about the effectiveness and safety, or other variables, of a treatment that can be generalized to other people. Such extrapolation is only scientifically justified with populations matched on all relevant variables. The identification of those variables can itself be a complicated question, but when an experimental sample differs from another group on variables already known to be related, extrapolation cannot be assumed but must be demonstrated directly

and explicitly.

64. Each of the systematic reviews from the UK, Sweden, and Finland emphasized that the recently observed, greatly increased numbers of youth coming to clinical attention are a population different in important respects from the subjects of often-cited research studies. Conclusions from studies of adult-onset gender dysphoria and from childhood-onset gender dysphoria cannot be assumed to apply to the current patient populations of adolescent-onset gender dysphoria. The Cass Report correctly advised:

It is also important to note that any data that are available do not relate to the current predominant cohort of later-presenting birth-registered female teenagers. This is because the rapid increase in this subgroup only began from around 2014-15. Since young people may not reach a settled gender expression until their mid-20s, it is too early to assess the longer-term outcomes of this group. (Cass 2022 at 36.)

The report also indicated:

[I]t is important that it is not assumed that outcomes for, and side effects in, children treated for precocious puberty will necessarily be the same in children or young people with gender dysphoria. (Cass 2022 at 63.)

65. Finland's review repeated the observation of greatly (20 times) increased numbers, an entirely different demographic of cases, and increased proportions of psychiatric co-morbidities. (Finnish Palko Preparation Memo at 4-6.) The Swedish review highlighted "the uncertainty that follows from the yet unexplained increase in the number of care seekers, an increase particularly large among adolescents registered as females at birth." (Swedish Socialstyrelsen Support 2022 at 11.)

66. It is well known that males and females differ dramatically in the incidence of many mental health conditions and in their responses to treatments for mental health conditions. Thus, research from male-to-female transitioners (the predominant population until recent years) cannot be extrapolated to female-to-male transitioners (the predominant population presenting at clinics today). Outcomes from patients who experienced clear pre-pubertal childhood gender

dysphoria cannot be extrapolated to patients who first manifest diagnosable gender dysphoria well into puberty. Outcomes from clinics employing rigorous and openly reported gate-keeping procedures cannot be extrapolated to clinics or clinicians employing only minimal or perfunctory assessments without external review. Developmental trajectories and outcomes from before the social media era cannot be assumed to apply to those of the current era or the future. Research from youth with formal diagnoses and attending clinics cannot be extrapolated to self-identifying youth and those responding to surveys advertised on social media sites.

67. Further, treatment of gender dysphoria in children and adolescents presents novel-use cases very dissimilar to the contexts in which puberty blockers and cross-sex hormones have previously been studied. Whereas use of puberty blockers to treat precocious puberty *avoids* the medical risks caused by undergoing puberty growth before the body is ready (thus outweighing other risks), use of blockers to treat gender dysphoria in patients already at their natural puberty pushes them *away* from the mean age of the healthy population. Instead of avoiding an objective problem, one is created: Among other things, patients become subject to the issues and risks associated with being late-bloomers, *very* late-bloomers. This transforms the risk:benefit balance, where the offsetting benefit is primarily (however validly) cosmetic.

68. Similarly, administering testosterone to an adult male to treat testosterone deficiency addresses both a different condition and a different population than administration of that same drug to an adolescent female to treat gender dysphoria; the benefits and harms observed in the first case cannot be extrapolated to the second.

E. Mental health assessment used for gate-keeping medicalized transition establishes a *selection bias*, creating a statistical illusion of mental health improvement among the selected.

69. Importantly, clinics are expected to conduct mental health assessments of applicants

seeking medicalized transition, disqualifying from medical services patients with poor mental health. (The adequacy of the assessment procedures of specific clinics and clinicians remains under debate, however.) Such gate-keeping—which was also part of the original “Dutch Protocol” studies—can lead to misinterpretation of data unless care is explicitly taken. A side-effect of excluding those with significant mental health issues from medical transition is that when a researcher compares the average mental health of the gender dysphoric individuals first presenting to a clinic with the average mental health of those who completed medical transition, then the post-transition group would show better mental health—but only because of the *selection bias*, (Larzelere 2004; Tripepi 2010) even when the transition had no effect at all.

V. Systematic reviews of safety and effectiveness have been conducted by the health care ministries/departments of several governments. They *unanimously* concluded the evidence on medicalized transition in minors to be of poor quality.

A. Understanding safety and efficacy.

70. Plaintiffs’ experts assert that use of puberty blockers and cross-sex hormones on adolescents is “safe.” This claim is unsupported by any substantial scientific evidence, depreciates widely recognized risks of serious harm to minors so medicalized, and ignores both the many unknowns and the growing international doubts about their use.

71. At the outset, it is important to understand the meaning of “safety” in the clinical context. The criteria for assessing safety involve two independent components, and discussion of the safety of hormonal interventions on the natural development of children requires consideration of both of them. The term *safety* in the clinical context represents a “risk:benefit ratio,” not an absolute statement that can be extrapolated across applications. In clinical research, assessing safety requires simultaneous consideration of both components of the risk:benefit ratio. That is, treatments are not deemed simply “safe” or “unsafe,” as the plaintiffs’ experts repeatedly use those words. These dual components are reflected in FDA regulation:

There is reasonable assurance that a device is safe when it can be determined, based upon valid scientific evidence, that *the probable benefits* to health from use of the device for its intended uses and conditions of use, when accompanied by adequate directions and warnings against unsafe use, outweigh *any probable risks*. (Code of Federal Regulations Title 21 Sec. 860.7, italics added.)

72. Thus, for example, as I explain in further detail below, because the Endocrine Society did not undertake (or rely on) any systematic review of the efficacy of hormonal interventions to relieve gender dysphoria in minors (i.e., their benefits), and WPATH did not undertake (or rely on) any systematic review of the safety of hormonal interventions in minors (i.e., their risks), neither gathered the evidence necessary to assess the risk:benefit ratio of medicalized transition

in minors.

73. In fact, as I also review below, after conducting systematic reviews, the English, Finnish, and Swedish national health care institutions all concluded that there is insufficient evidence to determine that hormonal interventions as treatments for gender dysphoria in minors are safe. Reasons for these consistent conclusions include lack of research, insufficient research quality among the existing investigations, and insufficient investigation of long-term safety.

74. To understand the uniform conclusions of these national health care bodies, it is important to understand that—at least where there is *prima facie* reason to be concerned that certain harms may result—when the research has not been done, the absence of evidence cannot be taken as evidence of the absence of such harms. “We don’t know” does not permit the conclusion “It is safe.” Plaintiffs’ experts and many advocates in the field of transgender medicine make this error.

B. The McMaster University systematic review of systematic reviews.

75. McMaster University is recognized as a center of expertise in the performance of methodologically sound systematic reviews. In 2022, authors associated with that McMaster University team (Dr. Romina Brignardello-Petersen and Dr. Wojtek Wiercioch) conducted a systematic review, “Effects of gender affirming therapies in people with gender dysphoria: evaluation of the best available evidence,” spanning all the available systematic reviews in this area, including their methodological strength, the evidence they cited, and the conclusions they reached. (Brignardello-Petersen & Wiercioch 2022.) Applying carefully disclosed criteria and methods, they identified on-point systematic reviews, and graded the methodological quality of each on-point review as high, moderate, low, or critically low. With regard to systematic reviews relating to the effects of puberty blockers or cross-sex hormones, the authors included in their

analysis all reviews that achieved at least a “low” rating of methodological quality, while excluding those rated as “very low.” No systematic reviews earned a “high” methodological rating, except a review performed by the highly respected Cochrane Library of the effects of cross-sex hormones on transitioning natal males (Haupt 2020), but that most careful review in turn found *no* published studies on this topic of sufficient methodological soundness to satisfy its inclusion criteria and thus merit review. After this careful review of the data and analysis contained in available systematic reviews, the McMaster authors concluded:

Due to important limitations in the body of evidence, there is great uncertainty about the effects of puberty blockers, cross-sex hormones, and surgeries in young people with gender dysphoria. This evidence alone is not sufficient to support whether using or not using these treatments. (Brignardello-Petersen & Wiercioch 2022 at 5.)

C. The quality of the systematic reviews from governmental bodies and professional associations.

76. To ensure consideration of all available evidence, I compiled into a single table all the cohort studies of safety and effectiveness included by any of the systematic reviews from the international health care systems and (although they were incomplete) by the U.S.-based clinical associations issuing guidelines or standards. I discuss their specific findings in the following sections.

77. New studies continue to be conducted and published. I have identified two additional studies that were published after these reviews were released, but that meet their inclusion criteria: Tordoff, *et al.*, 2022, and Chen, *et al.*, 2023. The findings from both these studies are consistent with those already included and are noted here for completeness.

Table 1. Cohort studies of effectiveness and safety of puberty-blockers and cross-sex hormones in minors.

	Finland (2019)	NICE (2020a,b)	Sweden (2022)	E.S. (2017)	AAP (2018)	Baker (2021) (WPATH)
Effectiveness GnRHa	Costa et al, 2015 de Vries et al, 2011	Costa et al, 2015 de Vries et al, 2011	Becker-Hebly et al, 2020 Carmichael et al, 2021 Costa et al, 2015 *** Hisle-Gorman et al, 2021			de Vries et al, 2011
Effectiveness Sex Hormones	de Vries et al, 2014*	Achille et al, 2020 Allen et al, 2019 Kaltiala et al, 2020 Lopez de Lara et al, 2020	*** *** Cantu et al, 2020* de Vries et al, 2014* ***			Achille et al, 2020 de Vries et al, 2014* López de Lara et al, 2020
Safety (Bones) GnRHa		Brik et al, 2020 Joseph et al, 2019 Khatchadourian et al, 2014 Klink et al, 2015 Vlot et al, 2017	Joseph et al, 2019 Klink et al, 2015 Navabi et al, 2021 Schagen et al, 2020 Stoffers et al, 2019 Vlot et al, 2017 Lee et al, 2020 van der Loos et al, 2021			
Safety (Bloods) GnRHa		Klaver et al, 2020 Schagen et al, 2016	Klaver et al, 2018 Klaver et al, 2020 Nokoff et al, 2020 Perl et al, 2020 Schagen et al, 2016 Schulmeister et al, 2021			
Safety (Bones) Sex Hormones	****	Khatchadourian et al, 2014 Klaver et al, 2020 Klink et al, 2015 Kuper et al, 2020 Stoffers et al, 2019 Vlot et al, 2017		Klink et al, 2015		
Safety (Bloods) Sex Hormones			Jarin, 2017 Mullins et al, 2021 Tack et al, 2016			

*Included both puberty-blockers and cross-sex hormones.

**The Endocrine Society review included bone/skeletal health, but did not explicate whether the scope included minors.

***Sweden explicitly excluded due to high risk of bias: Achille, *et al.*, (2020), Allen, *et al.* (2019), de Vries, *et al.*, (2011), and López de Lara, *et al.*, (2020).

****The Finnish review adopted the Endocrine Society review, but did not indicate whether minors were included.

D. United Kingdom

78. The National Health Service (NHS) of the United Kingdom conducted an independent review of its services for minors with gender dysphoria. (Cass 2022.) Included in that process were two systematic, comprehensive reviews of the research literature, conducted by England’s National Institute for Health Care Excellence (NICE) in 2020. One regarded the efficacy, safety, and cost-effectiveness of Gonadotrophin-Releasing Hormone (GnRH) analogs (or “puberty blockers”) in minors. (NICE 2020a.) The other regarded the efficacy, safety, and cost-effectiveness of cross-sex hormones, or “gender-affirming hormones,” in minors. (NICE 2020b.) (Only efficacy and safety are relevant to the present report.)

79. The puberty-blocker review was tasked with reviewing the research on two relevant questions. For one:

In children and adolescents with gender dysphoria, what is the clinical effectiveness of treatment with GnRH analogues compared with one or a combination of psychological support, social transitioning to the desired gender or no intervention? (NICE 2020a at 4.)

Clinical effectiveness of puberty-blockers was composed of three factors deemed “critical outcomes”: impact on gender dysphoria, impact on mental health, and impact on quality of life.

The second question addressed in the review was:

In children and adolescents with gender dysphoria, what is the short-term and long-term safety of GnRH analogues compared with one or a combination of psychological support, social transitioning to the desired gender or no intervention? (NICE 2020a at 6.)

Puberty-blocker safety was assessed as its effect on three categories of health: bone density, cognitive development or functioning, and “other.”

80. The second review, for cross-sex hormone treatment, was tasked with the corresponding questions. For one:

In children and adolescents with gender dysphoria, what is the clinical effectiveness of treatment with gender-affirming hormones compared with one or a combination of psychological support, social transitioning to the desired gender or no intervention? (NICE 2020b at 4.)

The critical outcomes were again deemed to be impact on gender dysphoria, on mental health, and on quality of life. The impact on mental health was composed of indicators of depression, anxiety, and suicidality and self-injury. The second question was:

In children and adolescents with gender dysphoria, what is the short-term and long-term safety of gender-affirming hormones compared with one or a combination of psychological support, social transitioning to the desired gender or no intervention? (NICE 2020b at 7.)

Cross-sex hormone treatment safety was assessed as its effect on bone density and on “clinical parameters,” which included insulin, cholesterol, and blood pressure levels.

81. These two reviews included a systematic consolidation of all the research evidence, following established procedures for preventing the “cherry-picking” or selective citation favoring or down-playing any one conclusion, carefully setting out the criteria for including or excluding specific studies from the review, and providing detailed analyses of each included study. The whole was made publicly available, consistent with good practice.

82. The reviews’ results were unambiguous: For both puberty blockers and cross-sex hormones, “The critical outcomes for decision making are the impact on gender dysphoria, mental health and quality of life.” The quality of evidence for these outcomes was assessed as “very low” using the established GRADE procedures for assessing clinical research evidence. (NICE 2020a at 4; NICE 2020b at 4.) The reviews also assessed as “very low” the quality of evidence regarding “body image, psychosocial impact, engagement with health care services, impact on extent of satisfaction with surgery and stopping treatment” or (in the case of cross-sex hormones) of “detransition.” (NICE 2020a at 5; NICE 2020b at 6.) The review of puberty blockers concluded that of the existing research, “The studies included in this evidence review

are all small, uncontrolled observational studies, which are subject to bias and confounding,” “They suggest little change with GnRH analogues [puberty blockers] from baseline to follow-up.” (NICE 2020a at 13.) The cross-sex hormone review likewise reported a lengthy list of methodological defects or limitations affecting all available studies. (NICE 2020b at 13-14.)

83. The NHS changed the language on its website describing puberty blockers and cross sex hormones. It removed the statement that “The effects of treatment with GnRH analogues are considered to be fully reversible,”² replacing that text with:³

Little is known about the long-term side effects of hormone or puberty blockers in children with gender dysphoria. . . . [I]t is not known what the psychological effects may be. It’s also not known whether hormone blockers affect the development of the teenage brain or children’s bones.

84. As mentioned in the McMaster review, the highly respected Cochrane Library, based in England, undertook a systematic review of studies of the safety and efficacy of the administration of cross-sex hormones to natal males. That review focused primarily on adults (age 16 and older). The results, including a detailed explanation of methodology and inclusion criteria, were published in 2020. Unfortunately, but importantly, the Cochrane review found *zero* studies, globally, that were sufficiently reliable to meet the inclusion criteria even at a “very low” level of evidentiary quality. The authors reported:

Despite more than four decades of ongoing efforts to improve the quality of hormone therapy for women in transition, we found that no RCTs or suitable cohort studies have yet been conducted to investigate the efficacy and safety of hormonal treatment approaches for transgender women in transition.... We found insufficient evidence to determine the efficacy or safety of hormonal treatment approaches... for transgender women in transition. The evidence is very incomplete, demonstrating a gap between current clinical practice and clinical research. (Haupt 2020 at 10-11.)

The authors’ frustration at the total lack of reliable research was evident: “The lack of reliable

² BBC. Retrieved from <https://www.bbc.co.uk/sounds/play/m000kgsj>; Kurkup, J. (2020, June 4). *The Spectator*. Available from <https://www.spectator.co.uk/article/the-nhs-has-quietly-changed-its-trans-guidance-to-reflect-reality/>

³ NHS. Retrieved from <https://www.nhs.uk/conditions/gender-dysphoria/treatment/>

data on hormone therapy for transitioning transgender women should encourage the development of well-planned RCTs and cohort studies to evaluate widespread empirical practice in the treatment of gender dysphoria.” (Haupt 2020 at 10.)

E. Sweden

85. Sweden similarly commissioned a systematic review, published in 2022 and charged with addressing these three questions:

Are there any scientific studies explaining the increase in numbers seeking for gender dysphoria?

Are there any scientific studies on long-term effects of treatment for gender dysphoria?

What scientific papers on diagnosis and treatment of gender dysphoria has been published after the National Board of Health and Welfare in Sweden issued its national support for managing children and adolescents with gender dysphoria in 2015? (SBU Scoping Review Summary 2019.)

The databases searched included CINAHL (EBSCO), Cochrane Library (Wiley), EMBASE (Embase.com), PsychINFO (EBSCO), PubMed (NLM), Scopus (Elsevier), and SocINDEX (EBSCO). A total of 8,867 abstracts were identified, from which 315 full text articles were assessed for eligibility. The review concluded that “literature on management and long-term effects in children and adolescents is sparse,” that no RCTs have been conducted, and that there remains no explanation for the recent and dramatic increases in numbers of minors presenting with gender dysphoria. (SBU Scoping Review Summary 2019.) I have quoted other conclusions from the Swedish systematic review in Section II above.

F. Finland

86. Finland’s Ministry of Social Affairs and Health commissioned a systematic review, completed in 2019, of the effectiveness and safety of medicalized transition. (COHERE Recommendation 2020.) The review spanned both minors and adults and included both puberty

blockers and cross-sex hormones (Pasternack 2019). Three reviewers tabulated the results. In total, 38 studies were identified, of which two pertained to minors: de Vries (2011) and Costa (2015). The report noted that, because the methodological quality of the studies was already “weak” (no study including any control groups), the assessors declined detailed quality assessment of the existing studies. (Pasternack 2019 at 3.) I have quoted other conclusions from the Finnish systematic review in Section II above.

G. Norway

87. Norway’s investigation of its health care policy for gender dysphoric minors also revealed substantial safety concerns:

There are unsettled questions related to puberty blockers in young people. A published study shows that puberty-inducing hormones cause slower height growth and a slower increase in bone density. It is also noted that the effects on cognitive development have not been mapped. Unexplained side effects and long-term effects of both puberty blockers (hormone treatment) and gender-affirming hormone treatments are increasingly being questioned. However, experience with other patient groups shows that long-term use of sex hormones can affect disease risk. When people with gender incongruence are treated, it is with significantly longer duration and intensity of hormone treatment than hormone treatments for other conditions. (Ukom 2023.)

VI. The Endocrine Society, WPATH, and the American Academy of Pediatrics did not conduct systematic reviews of safety and efficacy in establishing clinical guidelines, despite systematic reviews being the foundation and gold standard of evidence-based care.

88. I have also examined the reviews conducted by the U.S.-based professional associations that have published standards and guidelines for the treatment of gender dysphoric youth. As detailed herein, and unlike the European reviews, none of the U.S.-based professional associations conducted a systematic review of both effectiveness and safety, without which they are unable to assess the risk:benefit ratio posed by medicalized transition of minors.

A. The Endocrine Society reviewed cross-sex hormones, but not puberty blockers. They reviewed safety, but did not review effectiveness research.

89. The Endocrine Society appointed a task force which commissioned two systematic reviews as part of updating their 2009 recommendations. (Hembree 2017.) The scopes of the two reviews were limited to physiological effects of cross-sex hormones, narrowly defined: “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 second review summarized the available evidence regarding the effect of sex steroids on bone health in transgender individuals.” (Hembree 2017 at 3873.) As described in the Endocrine Society Guidelines, those reviews did not, however, include the effectiveness of any treatment on mental health (quality of life, suicidality, rates of detransition, cosmetic or functional outcomes, or improvements in feelings of gender dysphoria). What appears to be the referenced review of lipids and cardiovascular outcomes (Maraka 2017) did not identify any study of adolescents, noting “literature addressing this clinical question in the pediatric/adolescent population is completely lacking.” (Maraka at 3921.) What appears to be the referenced review of bone health (Singh-Ospina 2017) identified only one small study on adolescents, involving 15 male-to-female and 19 female-to-male cases.

(Klink 2015.) Notably, the median duration of puberty-blocker administration was 1.2 years, leaving unknown the effects on children receiving blockers from puberty onset (usually age 9–10) to age 14 or 16.

90. Further, the Endocrine Society does not claim to have conducted or consulted any systematic review of the efficacy of puberty blockers or cross-sex hormones to reduce gender dysphoria or increase mental health or well-being by any metric. Nor does it claim to have conducted or consulted any systematic review of safety of any of these treatments for minors with respect to brain development, future fertility, actual reversibility, or any other factor of safety or adverse event other than cardiovascular disease and bone strength.

91. For all these reasons, I concur with the opinion of Dr. Guyatt, who has said that he finds “serious problems” with the Endocrine Society guidelines, among other reasons because the only systematic reviews those guidelines refer to did not look at the efficacy of the recommended hormonal interventions to improve gender dysphoria, which he termed “the most important outcome.” (Block, *Gender Dysphoria* 2023 at 4.)

92. The current Endocrine Society guidelines, released in 2017, include this disclaimer:

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, special, incidental, or consequential damages related to the use of the information contained herein. (Hembree 2017 at 3895.)

The previous, 2009, version included no disclaimers. (Hembree 2009.)

B. WPATH reviewed effectiveness, but not the safety of medicalized transition of minors.

93. WPATH engaged in a multi-step process in updating its Standards of Care from version 7 to version 8. That process included commissioning a systematic review, which was published as Baker, *et al.* (2021) which included the disclaimer “The authors are responsible for

its content. Statements in this report do not necessarily reflect the official views of or imply endorsement by WPATH.” (Baker 2021 at 14.)

94. The literature search was completed in June 2020, and spanned 13 questions. Two questions related to the effectiveness of medicalized transition of minors: Question #10 was “[W]hat are the effects of suppressing puberty with GnRH agonists on quality of life?”, and question #11 was “[W]hat are the psychological effects (including quality of life) associated with hormone therapy?” (Sharma 2018; Baker 2021.) That is, the review included studies of the effectiveness of puberty blockers and cross-sex hormones, but, remarkably, did not include any effort to determine the *safety* of either.

95. Baker (2021) identified that among all experimental evidence published on medicalized transition, a total of “Three studies focused on adolescents.” (Baker 2021 at 1.) These were Achille, *et al.* (2020), López de Lara, *et al.* (2020), and de Vries, *et al.* (2011, 2014). (Baker 2021 considered the two de Vries articles as a single study, because the later one included the subset of patients from the earlier one who continued in treatment. I will refer to this set as four studies, however, to be consistent with the other reviews.) Notably, in contrast with WPATH’s review, the Swedish review entirely excluded Achille *et al.* (2020), López de Lara *et al.* (2020), and de Vries *et al.* (2011) due to their high risks of bias. (SBU Scoping Review Appendix 2.) The Baker team did not use the GRADE system for assessing the quality of evidence, instead using the Methods Guide for Conducting Comparative Effectiveness Reviews.

96. The Baker team noted “no study reported separate results by gender identity for transgender youth.” (Baker 2021 at 3.) They also found that “No study reported on hormone therapy among nonbinary people.” (at 3.) (Despite this finding, WPATH SOC-8 now includes recommendations for people who identify as nonbinary.)

97. My assessment of the Baker review revealed that there were substantial discrepancies and misleading ambiguities in their reporting: Baker, *et al.* indicated in the abstract that “Hormone therapy was associated with increased QOL [quality of life], decreased depression, and decreased anxiety” (Baker 2021 at 1,) and that “Associations were similar across gender identity and age” (Baker 2021 at 12). This is not what its actual data tables showed, however. Table 2 presented the only study of QOL specifically among adolescents included in the review and indicated that “Mean QOL scores did *not* change.” (Baker 2021 at 7, italics added.)

98. The review, however, did not rate the quality of the studies of adolescents on their own, instead combining them with the studies of adults. (at 10, italics added.) Table 4 of that study presented three analyses of anxiety: One showed a decrease, and on the other two, “Mean anxiety score did *not* change.” (at 11, italics added.) Finally, the review also concluded, “It was impossible to draw conclusions about the effects of hormone therapy on death by suicide.” (at 12.) Even for the combined set, the review read the strength of evidence to be “low” for each of QOL, depression, and anxiety, and to be “insufficient” for death by suicide. (Baker 2021 at 13, Table 6.) Specifically, the review indicated, “There is insufficient evidence to draw a conclusion about the effect of hormone therapy on death by suicide among transgender people.” (at 13, Table 6.) Overall, “The strength of evidence for these conclusions is low due to methodological limitations.” (at 12.) Of particular concern was that “Uncontrolled confounding was a major limitation in this literature.” (at 12.)

99. Additionally, although WPATH commissioned the Baker review, WPATH did not follow its results. Baker 2021 indicated the use of two systematic quality assessment methods, called RoB 2 and ROBINS-I (Baker 2021 at 3); however, WPATH modified the conclusions that that process yielded. WPATH SOC-8 states, “This evidence is not only based on the published

literature (direct as well as background evidence) but also on consensus-based expert opinion.”

(Coleman 2022 at S8.) Moreover:

Recommendations in the SOC-8 are based on available evidence supporting interventions, a discussion of risks and harms, as well as feasibility and acceptability within different contexts and country settings. Consensus on the final recommendations was attained using the Delphi process that included all members of the guidelines committee and required that recommendation statements were approved by at least 75% of members. (Coleman 2022 at S8.)

100. By allowing “consensus-based expert opinion” to modify or overrule conclusions supported by systematic reviews that apply accepted criteria of evidentiary strength, WPATH has explicitly abandoned evidence-based medicine. As indicated already by the Pyramid of Evidence, “expert opinion” represents the *lowest* level of evidence in science, whereas systematic review, the highest. (Also, it is unclear what the authors mean by “background evidence.”) To modify systematic results according to committee opinion is to re-introduce the very biases that the systematic process is meant to overcome. The WPATH document attempts to claim the authority of a systematic review, while reserving the ability to “overrule” results that WPATH members did not like.

101. As to evidence supporting hormonal interventions in minors, WPATH asserted that “a systematic review regarding outcomes of [hormonal] treatment in adolescents is not possible” due to the lack of “outcome studies that follow youth into adulthood.” (Coleman 2022 at S46.) WPATH is correct that essential outcome studies have not been done, but incorrect that this authorizes issuance of guidelines or standards in the absence of a systematic review. As Dr. Guyatt has stated, “systematic reviews are always possible”—and indeed an important conclusion from such a review may be (as here) that insufficient evidence exists to support any evidence-based guideline. As Dr. Guyatt further elaborated, if an organization issues recommendations without performing an on-point systematic review, “they’d be violating

standards of trustworthy guidelines.” (Block, Dysphoria Rising, 2023 at 3.)

102. Finally, the WPATH SOC-8 were revised immediately after their release, removing all age minimums to all recommendations. None of these studies and none of these reviews support such a change, and WPATH cites no studies or other document in support of the change.

103. In sum, the WPATH SOC8 cannot be called evidence-based guidelines under any accepted meaning of that term.

C. The American Academy of Pediatrics did not conduct a systematic review either of safety or effectiveness.

104. While the AAP policy statement is often referenced, the AAP did not report conducting any systematic review of any aspect of transgender care in producing its policy statement on gender-diverse children and adolescents. (Rafferty 2018.) Further, the AAP policy statement on its face is the work of a single author rather than of any committee or the membership more broadly (Dr. Rafferty “conceptualized,” “drafted,” “reviewed,” “revised,” and “approved” the statement), and the statement explicitly states that it does not “indicate an exclusive course of treatment” nor “serve as a standard of medical care.” (Rafferty 2018 at 1.)

VII. Definitions of sex, gender identity, and gender dysphoria.

A. Sex and sex-assigned-at-birth represent objective features.

105. Sex is an *objective* feature: It can be ascertained regardless of any declaration by a person, such as by chromosomal analysis or visual inspection. Gender identity, however, is *subjective*: There exists no means of either falsifying or verifying people's declarations of their gender identities. In science, it is the objective factors—and only the objective factors—that matter to a valid definition. Objectively, sex can be ascertained, not only in humans or only in the modern age, but throughout the animal kingdom and throughout its long history in natural evolution.

106. I use the term “sex” in this report with this objective meaning, which is consistent with definitions articulated by multiple medical organizations:

Endocrine Society (Bhargava 2021 at 220.)

“Sex is dichotomous, with sex determination in the fertilized zygote stemming from unequal expression of sex chromosomal genes.”

American Academy of Pediatrics (Rafferty 2018 at 2 Table 1.):

“An assignment that is made at birth, usually male or female, typically on the basis of external genital anatomy but sometimes on the basis of internal gonads, chromosomes, or hormone levels.”

American Psychological Association (APA Answers 2014):

“Sex is assigned at birth, refers to one's biological status as either male or female, and is associated primarily with physical attributes such as chromosomes, hormone prevalence, and external and internal anatomy.”

American Psychological Association (APA Resolution 2021 at 1):

“While gender refers to the trait characteristics and behaviors culturally associated with one's sex assigned at birth, in some cases, gender may be distinct from the physical markers of biological sex (e.g., genitals, chromosomes).”

American Psychiatric Association (Am. Psychiatric Ass'n Guide):

“Sex is often described as a biological construct defined on an anatomical, hormonal, or genetic basis. In the U.S., individuals are assigned a sex at birth based on external genitalia.”

107. The phrases “assigned male at birth” and “assigned female at birth” are increasingly

popular, but they lack any scientific merit. Science is the systematic study of natural phenomena, and nothing objective changes upon humans' labelling or re-labelling it. That is, the objective sex of a newborn was the same on the day before as the day after the birth. Indeed, the sex of a fetus is typically known by sonogram or amniocentesis many months before birth. The use of the term "assign" insinuates that the label is arbitrary and that it was possible to have been assigned a different label that is equally objective and verifiable, which is untrue. Infants were born male or female before humans invented language at all. Indeed, it is exactly because an expected child's sex is known before birth that there can exist the increasingly popular "gender reveal" events. Biologically, the sex of an individual (for humans and almost all animal species) as male or female is irrevocably determined at the moment it is conceived. Terms such as "assign" obfuscate rather than clarify the objective evidence.

B. Gender identity refers to subjective feelings that cannot be defined, measured, or verified by science.

108. It is increasingly popular to define gender identity as a person's "inner sense," however, neither "inner sense" nor any similar phrase is scientifically meaningful. In science, a valid construct must be both objectively measurable and falsifiable with objective testing. The concept of an "inner sense" fits none of these requirements.

VIII. Gender Dysphoria is a mental health diagnosis.

109. Gender Dysphoria is a mental health condition identified by diagnostic criteria set out in the *Diagnostic and Statistical Manual of Mental Disorders* (“DSM”) 5-TR. (American Psychiatric Ass’n 2022.) While the criteria contain multiple components and vary modestly for children, adolescents, and adults, all cases are characterized by a strong and lasting desire to be the opposite sex, and “clinically significant” distress of sufficient severity to impair the individuals’ ability to function in their daily life setting. Gender dysphoria is nowhere defined as a medical (as opposed to mental health) diagnosis, and it is not characterized by any disability or impairment or ill health affecting any part of the physical body.

IX. Distinct mental health phenomena must not be—but frequently are—confused or conflated.

110. One of the most widespread public misunderstandings about people expressing gender dysphoria is that all such cases represent the same phenomenon; however, the clinical science has long and consistently demonstrated that prepubescent children expressing gender dysphoria represent a phenomenon distinct from that of adults starting to experience it. That is, gender dysphoric children are not simply younger versions of gender dysphoric adults. They differ in virtually every objective variable measured, including in their 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—after the onset of puberty and before adulthood—and occur in the absence of any childhood history of gender dysphoria. Such cases have been called adolescent-onset or “rapid-onset” gender dysphoria (ROGD). Despite having only recently been observed, they have quickly and greatly outnumbered the better characterized types. Moreover, large numbers of adolescents are today self-identifying in surveys as “gender fluid” and “non-binary.” These are not recognized mental health diagnoses, and do not relate in any known way to gender dysphoric groups that have been the subject of previous treatment outcome studies. Because each of these phenomena differ in multiple objective features, it is scientifically invalid to extrapolate findings from one type to the others.

A. Adult-Onset Gender Dysphoria consists predominantly of males sexually attracted to females.

111. Whereas Childhood-Onset Gender Dysphoria occurs in biological males and females and is strongly associated with later homosexuality (next section), Adult-Onset Gender Dysphoria consists primarily of biological males sexually attracted to females. (Lawrence 2010.) They typically report being sexually attracted to women and rarely showed gender atypical

(effeminate) behavior or interests in childhood (or adulthood). Some individuals express being sexually attracted to both men and women, and some profess asexuality, but very few indicate having a primary sexual interest only in men. (Blanchard 1998.) Cases of adult-onset gender dysphoria are typically associated with a sexual interest pattern involving themselves in female form (a paraphilia called autogynephilia). (Blanchard 1989a, 1989b, 1991.)

112. Because of the numerous objective differences between adult-, childhood-, and adolescent-onset gender dysphoria, it is not possible to extrapolate from these results to juvenile populations, which responsible authors are careful not to do.

B. Childhood-onset gender dysphoria (prepubertal-onset) is a distinct phenomenon characterized by high rates of desistance in the absence of social or medical transition.

113. For many decades, small numbers of prepubescent children have been brought to mental health professionals for help with their unhappiness with their sex and in the belief they would be happier living as the other sex. 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. (Cohen-Kettenis 2003; Steensma Evidence 2018; Wood 2013.)

1. Eleven cohort studies followed children not permitted social transition, all showing the majority to desist feeling gender dysphoric upon follow-up after puberty.

114. Currently, the studies of outcomes among children who experience gender dysphoria before puberty that provide the most evidentiary strength available are only “cohort studies,” which follow people over time, recording the outcomes of the treatments they have undergone. Such studies supersede (i.e., overrule) the outcomes of surveys, which are much more prone to substantial error. As I have explained above, however, cohort studies can describe developmental pathways, but cannot provide evidence of causation.

115. In total, there have been 11 cohort studies showing the outcomes for these children, listed in Table 2. I first published this comprehensive list of studies in my own peer-reviewed article on the topic. (Cantor 2019.)

Table 2. Cohort studies of gender dysphoric, prepubescent children.

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. <i>American Journal of Psychiatry</i> , 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. <i>Comprehensive Psychiatry</i> , 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. <i>Journal of Pediatric Psychology</i> , 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. <i>Journal of Nervous and Mental Disease</i> , 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. <i>Archives of Sexual Behavior</i> , 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? <i>Medical Journal of Australia</i> , 146, 565–569.
21/54 33/54	trans- cis-	Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. <i>Journal of the American Academy of Child and Adolescent Psychiatry</i> , 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. <i>Developmental Psychology</i> , 44, 34–45.
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. <i>Journal of the American Academy of Child and Adolescent Psychiatry</i> , 52, 582–590.

17/139	trans-	Singh, D., Bradley, S. J., Zucker, K. J. (2021). A follow-up study
122/139	cis-	of boys with Gender Identity Disorder. <i>Frontiers in Psychiatry</i> , 12:632784.

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

116. The children in these studies were receiving professional mental health support during the study period, but did not “socially transition.” In sum, despite coming from a variety of countries, conducted by a variety of labs, using a variety of methods, at various times across 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 dysphoric are often called “persisters.”

117. This interpretation of these studies is widely accepted, including by the Endocrine Society, which concluded:

In most children diagnosed with GD/gender incongruence, it did not persist into adolescence. . . . [T]he large majority (about 85%) of prepubertal children with a childhood diagnosis did not remain GD/gender incongruent in adolescence. (Hembree 2017 at 3879.)

The developers of the Dutch Protocol, at the Vrije University gender clinic, likewise concluded based on these studies that “Although the persistence rates differed between the various studies...the results unequivocally showed that the gender dysphoria remitted after puberty in the vast majority of children.” (Steensma & Cohen-Kettenis 2011 at 2.)

118. 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. That

is, it cannot be assumed that gender identity is immune to influence such as from psychotherapy. Such is an empirical question, and there has not yet been any such research.

119. These same studies are often vaguely cited to assert that the high desistance rates uniformly reported in these 11 studies do not apply to children who have persisted until “the start of puberty” (which is taken to mean Tanner Stage 2), or in an alternative phrasing, that children “who persist until the start of puberty” are likely to continue to persist into adulthood. But these studies taken together do not support that degree of precision. Rather, the studies do not specify at exactly what developmental stage the reported desistance occurred—what they report is that the subjects had desisted by late adolescence or early adulthood. I am aware of no systematic study that establishes that—in the absence of social and/or medical transition—children who experience gender dysphoria are unlikely to desist if they have not desisted by the start of Tanner Stage 2.

2. One cohort study followed children who were permitted social transition. In contrast with children not permitted to transition socially, most persisted in expressing gender dysphoria.

120. In contrast, Olson et al. have now published a single cohort study of prepubescent children, ages 3–12 (average of 8), who had already made a complete, binary (rather than intermediate) social transition, including a change of pronouns. (Olson 2022.) The study did not employ DSM-5 diagnosis, as “Many parents in this study did not believe that such diagnoses were either ethical or useful and some children did not experience the required distress criterion.” (Olson 2022.) Unlike the prior research studies, only 7.3% of these (socially transitioned) children ceased to feel gender dysphoric.

121. Although the team publishing this cohort study did not discuss it, their finding matches the prediction of other researchers, that social transition itself represents an active

intervention, such that social transition may *cause* the persistence of gender dysphoria when it would have otherwise resolved, avoiding any need for subsequent medicalization and its attendant risks. Conversely stated, social transition seems to prevent desistance. (Singh 2021; Zucker 2018, 2020.)

122. As recognized by multiple authors, the potential impact of social transition on rates of desistance is pivotal. The Endocrine Society cautions that “social transition...has been found to contribute to the likelihood of persistence.” (Hembree 2017 at 3879.) WPATH has stated that after social transition, “A change back to the original gender role can be highly distressing and [social transition can] even result in postponement of this second transition on the child’s part.” (Coleman 2012 at 176.) In 2013, prominent Vrije University researchers observed:

Childhood social transitions were important predictors of persistence, especially among natal boys. Social transitions were associated with more intense GD in childhood, but have never been independently studied regarding the possible impact of the social transition itself on cognitive representation of gender identity or persistence. [Social transition] may, with the hypothesized link between social transitioning and the cognitive representation of the self, influence the future rates of persistence. (Steensma 2013 at 588-589.)

3. There is no reliable method for predicting for which children who present with gender dysphoria will persist versus desist.

123. The Endocrine Society Guidelines stated in 2017 that “With current knowledge, we cannot predict the psychosexual outcome for any specific child” (Hembree 2017 at 3876), and this remains true today. Research has not yet identified any reliable procedure for discerning which children who present with gender dysphoria will persist, as against the large 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 “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 any particular child. (Singh 2021; Steensma 2013.)

124. In contrast, one research team (the aforementioned Olson group) claimed the opposite, asserting that they 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." (Rae 2019 at 671.) They reported a statistical association (mathematically equivalent to a correlation) between that composite score and the probability of persistence. As they indicated, "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." (Rae 2019 at 673.) Although the Olson team declared that "social transitions may be predictable from gender identification and preferences" (Rae 2019 at 669), 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. (Rae 2019, Supplemental material at 6, Table S1.) 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. That is, Olson's model does not distinguish likely from unlikely to transition; rather, it distinguishes unlikely from even less likely to transition.

125. Further, in the absence of long-term follow-up, it cannot be known what proportion of those who transition and persist through the early stages of puberty will later (for example as young adults) come to regret having transitioned and then *detransition*. Because only a minority

of gender dysphoric children persist in feeling gender dysphoric in the first place, “transition-on-demand” increases the probability of unnecessary transition and unnecessary medical risks.

4. Temple Newhook’s attempts to dismiss evidence of high rates of desistance from childhood gender dysphoria are invalid.

126. The unanimous consistency across all 11 cohort studies of (non-transitioned) gender dysphoric children offers high confidence in the conclusion that most childhood-onset cases desist during the course of puberty. In 2018, however, a commentary was published, contesting that conclusion, criticizing four studies. (Temple Newhook 2018.) Multiple accomplished international researchers studying outcomes of gender dysphoric children responded (Zucker 2018; Steensma & Cohen-Kettenis 2018), to which the Temple Newhook team wrote a rejoinder. (Winters 2018.) I have reviewed each of these arguments, finding that the Temple Newhook comments rely on demonstrable falsehoods, whereas the responses remain consistent with the peer-reviewed evidence. The Temple Newhook commentary has not altered the consensus of the international medical community, which continues to cite and rely upon these cohort studies.

127. Before delineating each of their arguments, it should be noted that the Temple Newhook team based their analysis on the wrong research reports, attacking only a straw-person version of the contents of the research literature. Table 3 repeats the 11 cohort studies (on the left) and the four studies Temple Newhook criticized (right):

Table 3.

• Lebovitz (1972)	
• Zuger (1978)	
• Money & Russo (1979)	
• Davenport (1986)	
• Green (1987)	
• Kosky (1987)	
• Wallien & Cohen-Kettenis (2008)	Wallien & Cohen-Kettenis (2008)
• Drummond, <i>et al.</i> (2008)	Drummond, <i>et al.</i> (2008)

- Steensma, *et al.* (2013) Steensma, *et al.* (2011, 2013)
- Singh, 2012/Singh, *et al.* (2021)⁴

128. It should also be noted that the Temple Newhook 2018 commentary does not represent a systematic review. Temple Newhook did not indicate search strategies, inclusion/exclusion criteria, coding methods, reliability checks, or other standard procedures used for ensuring objective and unbiased assessment of all relevant studies. Rather, the Temple Newhook analysis targeted a small and selective subset of the research available—a scientifically invalid endeavor, which the systematic review process is meant to prevent. Not only did Temple Newhook skip most of the relevant science, but conversely, Temple Newhook inserted the Steensma 2011 study, which should have been rejected. (The data it reported was already included in Wallien & Cohen-Kettenis 2008.) The Temple Newhook commentary claimed it was “systematically engaging scholarly literature.” (Temple Newhook 2018 at 2.) However, as the above reference lists demonstrate, that commentary involved no such systematic procedures.

129. Temple Newhook does not report any research evidence of its own. Rather, the commentary hypothesizes issues they assert could, theoretically, have affected the rates of desistance consistently detected. Scientifically, such a criticism is vacuous: In science, it is always possible for additional, external factors to have affected what was observed.

130. Also, as already detailed herein, the currently available level of evidence for outcomes of medicalized transition is the cohort study. The methodological issues highlighted by Temple Newhook are exactly why randomized, controlled trials (RCTs) need to be conducted, as such studies would be capable of resolving exactly those questions (in whichever direction). In the absence of randomized, controlled studies, however, the correct scientific process is to follow the results of the cohort studies (that is, the systematic reviews of the cohort studies).

⁴ At the time of the 2018 Temple Newhook commentary, the Singh *et al.*, 2021 study was available as Singh, 2012.

131. In the science process, one cannot merely continue to retain a desired hypothesis, rejecting all counter-evidence until a perfect study emerges. This is especially important in clinical science, when the hypothesis relates to physical interventions, in children, with the potential to affect them for their entire lives. Rather, the scientific process proceeds by successive approximation, with results from the best available research replacing lesser quality research, increasing in confidence, but always with the possibility of changes imposed by future evidence.

132. By involving only a few of the full set of cohort studies, the Temple Newhook commentary removes one of the most compelling implications of the existing (cohort) studies: Their results are unanimous. However unlikely it might be for four studies to produce the same result randomly, it is even more unlikely for eleven studies all to come to the same result randomly.

133. Temple Newhook emphasized that gender identity issues differ across times and contexts/political environments, hypothesizing that children attending her clinic might differ from children attending the Toronto and the Amsterdam clinics. Returning once again to the full set of all studies, however, the evidence shows the very opposite: All studies yielded the same result, whether from the 1970s, 80s, 90s, 2000s, 2010s, and wherever in the world any clinic was. Acknowledging the possibility that future studies may lead to a different conclusion, the existing evidence shows majority desistance, constantly and across all time periods.

134. Consideration of the full set of studies also indicates that the contrast is not Toronto and Amsterdam versus whatever “reality” Temple Newhook perceives. Rather, they show the contrast is between Temple Newhook and every facility in every country ever reporting desistance data on childhood-onset gender dysphoria. Moreover, despite Temple Newhook’s

mention of influences of political cultures, that commentary does not point out that Canada and the Netherlands are much more politically liberal than the U.S. Although the commentary offers the hypothesis that the Canadian and Dutch contexts might decrease persistence, the commentary does not include the inverse possibility: that these liberal environments might be “iatrogenic”—that is, causing dysphoria to continue when it might otherwise remit.

135. Also, the very evidence suggesting that gender dysphoria can be influenced by local environmental factors is itself evidence that gender identity is not, in fact, an innate and immutable feature, potentially amenable to change.

C. Adolescent-Onset Gender Dysphoria, the predominant clinical population today, is a distinct and largely unstudied phenomenon.

136. Concurrent with the advent of social media, a third profile began appearing clinically and socially, characteristically distinct from the two previously identified profiles. (Kaltiala-Heino 2015; Littman 2018.) Despite lacking any history before the current generation, this profile has now numerically overwhelmed the previously known and better characterized types in clinics and on Internet surveys. Unlike adult-onset or childhood-onset gender dysphoria, this group is predominately biologically female. This group typically presents in adolescence, but lacks the history of cross-gender behavior in childhood like the childhood-onset cases have. It is that feature which led to the term Rapid Onset Gender Dysphoria (ROGD). (Littman 2018.)⁵ Cases commonly appear to occur within clusters of peers in association with increased social media use (Littman 2018), and among people with autism or other mental health issues. (Kaltiala-Heino 2015; Littman 2018; Warrier 2020.) (See section XI on Mental Health.)

137. There do not yet exist any cohort studies of people with adolescent-onset gender

⁵ After initial criticism, the publishing journal conducted a reassessment of the article. The article was expanded with additional detail and republished. The relevant results were unchanged. Littman’s paper as revised has been widely cited.

dysphoria undergoing medicalized transition. Current studies are limited to surveys typically of volunteers from activist and support groups on the Internet.

138. Moreover, no study has yet been organized in such a way as to allow for a distinct analysis of the adolescent-onset group, as distinct from childhood-onset or adult-onset cases. Many published studies fail to distinguish between people who had childhood-onset gender dysphoria and have aged into adolescence versus people whose onset was not until adolescence. (Analogously, there are reports 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 produces confounded results, representing unclear mixes according to how many of each type of case wound up in the final sample.

X. Suicide and suicidality are distinct phenomena representing different mental health issues and indicating different clinical needs.

139. *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. (Freeman 2017.) *Suicidality* refers to *para*-suicidal behaviors, including suicidal ideation, threats, and gestures.

A. Rates of suicidality among all adolescents have skyrocketed with the advent of social media.

140. The CDC’s 2019 Youth Risk Behavior Survey found that 24.1% of female and 13.3% of male high school students reported “seriously considering attempting suicide.” (Ivey-Stephenson 2020 at 48.)

141. The CDC survey reported not only that these already alarming rates of suicide attempt were still increasing (by 8.1%–11.0% per year), but also that this increase was occurring only among female students. No such trend was observed among male students. That is, the demographic increasingly reporting suicidality is the same demographic increasingly reporting gender dysphoria. (Ivey-Stephenson 2020 at 51.)

142. The U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) produces a series of evidence-based resource guides which includes their Treatment for Suicidal Ideation, Self-Harm, and Suicide Attempts Among Youth. It noted (*italics added*):

[F]rom 1999 through 2018, the suicide death rate doubled for females aged 15 to 19 and 20 to 24. For youth aged 10 to 14, the suicide death rate more than tripled from 2001 to 2018. Explanations for the increase in suicide may include bullying, social isolation, increase in technology and *social media*, increase in *mental illnesses*, and economic recession. (SAMHSA 2020 at 5.)

The danger potentially posed by social media follows from suicidality spreading as a social contagion, as suicidality increases after media reports, occurs in clusters of social groups, and in

adolescents after the death of a peer. (Gould & Lake 2013.)

143. Social media voices today loudly advocate “hormones-on-demand” while issuing hyperbolic warnings that teens will commit suicide unless this is not granted. Both adolescents and parents are exposed to the widely circulated slogan that “I’d rather have a living son than a dead daughter,” and such baseless threats or fears are treated as a justification for referring to affirming gender transitions as ‘life-saving’ or ‘medically necessary’. Such claims grossly misrepresent the research literature, however. Indeed, they are unethical: Suicide prevention research and public health campaigns repeatedly warn against circulating messages that can be taken to publicize or even glorify suicide, due to the risk of copy-cat behavior they encourage. (Gould & Lake 2013.)

144. Systematic review of 44 studies of suicidal thoughts and behaviors in LGBTQ youth and suicidality found only a small association between suicidality and sexual minority stress. (Hatchel 2021.) The quantitative summary of the studies (an especially powerful type of systematic review called *meta-analysis*) found no statistically significant association between suicidality and any of having an unsupportive school climate, stigma and discrimination, or outness/openness. There were, however, significant associations between suicidality and indicators of social functioning problems, including violence from intimate partners, victimization from LGBT peers and from non-LGBT peers, and sexual risk taking.

B. *Suicidality* is substantially more common among females, and *suicide*, among males. Sexual orientation is strongly associated with suicidality, but much less associated with suicide.

145. Notwithstanding public misconceptions about the frequency of suicide and related behaviors, the highest rates of death by suicide are among middle-aged and elderly men in high income countries. (Turecki & Brent 2016 at 3.) Males are at three times greater risk of death by

suicide than are females, whereas suicidal ideation, plans, and attempts are three times more common among females. (Klonsky 2016; Turecki & Brent 2016.) In contrast with completed suicides, the frequency of suicidal ideation, plans, and attempts is highest during adolescence and young adulthood, with reported ideation rates spanning 12.1–33%. (Borges 2010; Nock 2008.) Relative to other countries, Americans report elevated rates of each of suicidal ideation (15.6%), plans (5.4%), and attempts (5.0%). (Klonsky 2016.) Suicide attempts occur up to 30 times more frequently than completed suicides. (Bachmann 2018.) The rate of completed suicides in the U.S. population is 14.5 per 100,000 people. (WHO 2022.)

146. There is substantial research associating sexual orientation with suicidality, but much less so with completed suicide. (Haas 2014.) More specifically, there is some evidence suggesting gay adult men are more likely to die by suicide than are heterosexual men, but there is less evidence of an analogous pattern among lesbian women. Regarding suicidality, surveys of self-identified LGB Americans repeatedly report rates of suicidal ideation and suicide attempts 2–7 times higher than their heterosexual counterparts. Because of this association of suicidality with sexual orientation, one must apply caution in interpreting findings allegedly about gender identity: because of the overlap between people who self-identify as non-heterosexual and as transgender or gender diverse, correlations detected between suicidality and gender dysphoria may instead reflect (be confounded by) sexual orientation. Indeed, other authors have made explicit their surprise that so many studies, purportedly of gender identity, entirely omitted measurement or consideration of sexual orientation, creating the situation where features that seem to be associated with gender identity instead reflect the sexual orientation of the members of the sample. (McNeil 2017.)

C. There is no evidence that medicalized transition reduces rates of suicide or suicidality.

147. It is repeatedly asserted that despite the known risks, despite the lack of research into the reality or severity of unquantified risks, it is essential and “the only ethical response” to provide medical transition to minors because medical transition is known to reduce the likelihood of suicide among minors who suffer from gender dysphoria. This is simply untrue. *No studies* have documented any reduction in suicide rates in minors (or any population) as a result of medical transition. No methodologically sound studies have provided meaningful evidence that medical transition reduces suicidality in minors. Instead, multiple studies show tragically high rates of suicide after medical transition, with that rate beginning to spike several years after medical transition.

148. Among post-transition adults, completed suicide rates remain elevated. (Wiepjes 2020.) Among post-operative transsexual adults in Sweden’s highly tolerant society, death by suicide is 19 times higher than among the cisgendered. (Dhejne 2011.) Systematic review of 17 studies of suicidality in transsexual adults confirmed suicide rates remain elevated even after complete transition. (McNeil 2017.) Among post-operative patients in the Netherlands, long-term suicide rates of six times to eight times that of the general population were observed depending on age group. (Asscheman 2011 at 638.) Also studying patients in the Netherlands, Wiepjes et al. (2020) reported the “important finding” that “suicide occurs similarly” before and after medical transition. (Wiepjes 2020 at 490.) In other words, *transition did not reduce suicide*. A very large dataset from the U.K. GIDS clinic showed that those referred to the GIDS clinic for evaluation and treatment for gender dysphoria committed suicide at a rate five times that of the general population, both before and after commencement of medical transition (Biggs 2022). Finally, in a still-ongoing longitudinal study of U.S. patients, Chen *et al.* have reported a

shockingly high rate of completed suicide among adolescent subjects in the first two years *after* hormonal transition, although they provide no pre-treatment data for this population to compare against. (Chen 2023 at 245.)

149. WPATH’s systematic review of the effectiveness of puberty blockers and cross-sex hormones on suicide in minors concluded that “It was impossible to draw conclusions about the effects of [either] hormone therapy on death by suicide.” (Baker 2021 at 12.) In short, I am aware of no respected voice that asserts that medical transition reduces suicide among minors who suffer from gender dysphoria.

150. As to the separate and far more common phenomenon of suicidality, of course, that claim is widely made. McNeil’s systematic review revealed, however, a complicated set of interrelated factors rather than supporting the common hypothesis that rates of suicidal ideation and suicidal attempts would decrease upon transition. Rates of suicidal ideation did not show the same pattern as suicide attempts, male-to-female transitioners did not show the same patterns as female-to-male transitioners, and social transition did not show the same patterns as medical transition. Importantly, the review included one study that reported “a positive relationship between higher levels of social support from leaders (e.g., employers or teachers) and increased suicide attempt, which they suggested may be due to attempts instigating increased support from those around the person, rather than causing it.” (McNeil 2017 at 348.)

151. Moreover, the 2020 Kuper, *et al.* cohort study of minors receiving hormone treatment found *increases* in each of suicidal ideation (from 25% to 38%), attempts (from 2% to 5%), and non-suicidal self-injury (10% to 17%). (Kuper 2020 at Table 5.) Research has found social support to be associated with *increased* suicide attempts, suggesting the reported suicidality may represent attempts to evoke more support. (Bauer 2015; Canetto 2021.)

152. Overall, the research evidence is only minimally consistent with the hypothesis that an absence of transition causes mental health issues and suicide, but very strongly consistent with the hypothesis that mental health issues, such as *Borderline Personality Disorder* (BPD), cause both suicidality and unstable identity formation (including gender identity confusion). (See section XI.) BPD is repeatedly documented to be greatly elevated among sexuality minorities (Reuter 2016; Rodriguez-Seiljas 2021; Zancarini 2021), and both suicidality and identity confusion are symptoms of that disorder. Thus, diverting distressed youth towards transition necessarily diverts youth away from receiving the psychotherapies designed for treating the issues actually causing their distress.

153. Despite the fact that mental health issues, including suicidality, are repeatedly required by clinical standards of care to be resolved before transition, 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 does not support that hypothesis.

XI. Mental health profiles differ across adult-, adolescent-, and childhood-onset gender dysphoria.

A. Mental health issues in Adult-Onset Gender Dysphoria.

154. Systematic review of all studies examining mental health issues in transgender adults identified 38 such studies. (Dhejne 2016.) The review indicated that many studies were methodologically weak, but nonetheless consistently found (1) that the average rate of mental health issues among adults is highly elevated both before *and after* transition, (2) but that the average was less elevated among adults who completed transition. It could not be concluded that transition improves mental health, however. Patients were commonly receiving concurrent psychotherapy, introducing a confound (meaning, again, that it cannot be determined whether the change was caused by the transitioning or the mental health treatment). Further, several studies showed more than 40% of patients to become “lost to follow-up.” It remains unknowable to what extent the information from the remaining participants accurately reflects the whole population.

B. Mental health issues in Childhood-Onset Gender Dysphoria.

155. 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 that 52% fulfilled criteria for a formal DSM diagnosis of a clinical mental health condition other than Gender Dysphoria. (Wallien 2007 at 1307.) A comparison of the children attending the Canadian versus Dutch child gender dysphoria clinic showed only few differences between them, and 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 among 6–11-year-olds, 61.7% of the Canadian and 62.1% of the Dutch sample satisfied the diagnostic criteria for one or more mental health conditions other than gender dysphoria. (Cohen-Kettenis 2003 at 46-47.)

156. A systematic review of all studies of Autism Spectrum Disorders (ASDs) and Attention-Deficit Hyperactivity Disorder (ADHD) among children diagnosed with gender dysphoria was recently conducted. (Thrower 2020.) It was able to identify a total of 22 studies examining the prevalence of ASD or ADHD youth with gender dysphoria. Studies reviewing medical records of children and adolescents referred to gender clinics showed 6–26% to have been diagnosed with ASD. (Thrower 2020 at 695.) 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.” (Thrower 2020 at 703.) The rate of ADHD among children with GD was 8.3–11%. Conversely, 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.” (Janssen 2016 at 63.)

157. As shown by the outcomes studies (see Section XIII), there is little reliable evidence that transition improves the mental well-being of children. 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 isolation might develop the hope—and the unrealistic expectation—that transition will help them fit in, as a member of the other sex.

158. In cases where gender dysphoria is secondary to a different issue, efforts at transition

are aiming at the wrong target and leave the primary issue(s) unaddressed. Given the highly reliable, repeatedly replicated finding that childhood-onset gender dysphoria resolves with puberty for the large majority of children, the evidence indicates that blocking a child's puberty blocks the child's natural maturation that itself would resolve the dysphoria.

C. Mental health issues in Adolescent-Onset Gender Dysphoria (ROGD).

159. The literature varies in the range of gender dysphoric adolescents with co-occurring disorders. In addition to self-reported rates of suicidality (see Section X), clinical assessments reveal elevated rates not only of depression (Holt 2016; Skagerberg 2013; Wallien 2007), but also anxiety disorders, disruptive behavior difficulties, Attention Deficit/Hyperactivity Disorder, Autism Spectrum Disorder, and personality disorders, especially Borderline Personality Disorder (BPD). (Anzani 2020; de Vries 2010; Jacobs 2014; Janssen 2016; May 2016; Strang 2014, 2016; Swedish Socialstyrelsen, Evolution 2020.)

160. Of particular concern in the context of adolescent-onset gender dysphoria is Borderline Personality Disorder (BPD; diagnostic criteria in Table 4 below). Symptoms of BPD overlap in important respects with symptoms commonly interpreted as signs of gender dysphoria, and it is increasingly hypothesized that very many cases appearing to be adolescent-onset gender dysphoria actually represent cases of BPD. (E.g. Anzani 2020; Zucker 2019.) 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, is three times more common in biological females than males, and occurs in 2–3% of the population, rather than 1-in-5,000 people. (Thus, if even only a portion of people with BPD experienced an identity disturbance, and focused that disturbance on gender identity resulting in transgender identification, they could

easily overwhelm the number of genuine cases of gender dysphoria.)

Table 4. DSM-5-TR Diagnostic Criteria for Borderline Personality Disorder.

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.)
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.)

(American Psychiatric Association 2022 at 752-753.)

161. Mistaking cases of BPD for cases of Gender Dysphoria may prevent such youth from receiving the correct mental health services for their condition. A primary cause for concern is symptom Criterion 5: *recurrent suicidality*. (See Section X on suicide and suicidality.) Regarding the provision of mental health care, the distinction between these conditions is crucial: A person with BPD going undiagnosed will not receive the appropriate treatments (the currently most effective of which is Dialectical Behavior Therapy). The problem was not about *gender* identity, but about having an *unstable* identity.

162. Regarding research, there have now been several attempts to document rates of suicidality among gender dysphoric adolescents. 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.

D. Neuroimaging studies have associated brain features with sex and with sexual orientation, but not gender identity.

163. Claims that transgender identity is an innate property resulting from brain structure remain unproven. Neuroimaging and other studies of brain anatomy repeatedly identify patterns distinguishing male from female brains, but when analyses search for those patterns among transgender individuals, “gender identity and gender incongruence could not be reliably identified.” (Baldinger-Melich 2020 at 1345.) Although much smaller than male/female differences, statistically significant neurological differences are repeatedly associated with sexual orientation (termed “homosexual” vs “nonhomosexual” in the research literature). Importantly, despite the powerful associations between transsexuality and homosexuality, as explicated by Blanchard, many studies analyzing gender identity failed to control for sexual orientation, representing a problematic and centrally important confound. I myself pointed this out in the research literature, noting that neuroanatomical differences attributed to gender dysphoria should instead be attributed to sexual orientation. (Cantor 2011, Cantor 2012.) A more recent review of the science, by Guillamon, et al. (2016), agreed, stating:

Following this line of thought, Cantor (2011, 2012, but also see Italiano, 2012) has recently suggested that Blanchard’s predictions have been fulfilled in two independent structural neuroimaging studies. Specifically, Savic and Arver (2011) using VBM on the cortex of untreated nonhomosexual MtFs and another study using DTI in homosexual MtFs (Rametti et al., 2011b) illustrate the predictions. *Cantor seems to be right*. (Guillamon 2016 at 1634, italics added; see also Italiano 2012.)

In addition to this confound, because snapshot neurobiological studies can provide only correlational data, it would not be possible for such studies to distinguish whether brain

differences cause gender identity or if gender atypical behavior modifies the brain over time, such as through neuroplasticity. As noted by one team of neuroscientists, “[I]t remains unclear if the differences in brain phenotype of transgender people may be the result of a sex-atypical neural development or of a lifelong experience of gender non-conformity.” (Fisher 2020 at 1731.) In sum, at present assertions that transgender identity is caused by neurology represent faith, not science.

XII. Medicalized transition of gender remains *experimental*, lacking causal evidence of mental health improvement.

A. Criteria distinguishing ‘*experimental*’ from ‘*established*’.

164. In science, the term “experimental” has a specific technical meaning. Within the scientific method, research studies can be *observational* or *experimental*. Among observational studies, such as surveys, the researchers do not administer any treatment and instead only describe the features of the group observed. Among experimental studies, treatments are actively administered by the researchers, who then compare the treated and untreated groups (or compare a group to itself, before versus after treatment). Also, within a given treatment study, the term “experimental treatment” would be used to distinguish it from the “control treatment” or “treatment-as-usual” being provided to the control group.

165. Outside research studies and within public and legal contexts, the term ‘experimental’ typically denotes ‘*unverified by experimental evidence*’. A treatment would continue to be experimental until the demonstration of (1) reliable, clinically meaningful improvement and (2) the reliable estimation of safety risks in randomized, controlled trials (RCTs) or research of equivalent level of evidence. A treatment would remain experimental while its effects, including side effects, remain uninvestigated.

166. Being long-standing, popular, or familiar do not, of themselves, impact whether a treatment is experimental—they suggest opportunities for the experiments to have been done. Clinicians’ feelings of self-confidence do not impact status as experimental.

B. International consensus explicitly regards gender transition to be experimental.

167. In England, after a thorough review of the literature and the current practice, Dr. Cass stated that the critical and currently unanswered question “is whether the evidence for the use

and safety of the medication is strong enough as judged by reasonable clinical standards.” She recognized that these treatments cannot formally be called “experimental” not because they are proven, but because the experiments needed to test their efficacy and safety have not only not been done, but are not even being attempted. (Cass 2022 at 37.) To address this, Dr. Cass called for “the rapid establishment of the necessary research infrastructure to prospectively enrol young people being considered for hormone treatment into a formal research programme.” (Cass Review Letter 2022). In response, in its interim service specification NHS England states that it “will only commission GnRHa [i.e., puberty blockers] in the context of a formal research protocol.” (NHS 2022 at 12.)

168. Finland, by law, restricts all assessment and treatment activities for gender dysphoric minors to its two research clinics, Helsinki University Central Hospital and Tampere University Hospital. (COHERE Summary.) Further, after conducting a systematic review of the research, the council responsible for the assessment of public health care services in Finland (COHERE Finland) concluded, “In light of available evidence, gender reassignment of minors is *an experimental practice*.” (COHERE Summary, italics added.)

169. Sweden’s research on gender transition is conducted at the Karolinska Institutet in Stockholm. In 2015, that facility registered its research on medicalized transition with the U.S. National Institutes for Health (NIH), noting “[H]ormonal treatment includes inhibition of one’s own sex hormone production followed by treatment with testosterone or estrogen levels that are normal for the opposite sex. *Seen as experimental model*, this is a process that provides an opportunity to study the sex hormone dependent influences.” (Clinicaltrials.gov.) In its policy updates in 2021, Sweden limited medicalized treatments for gender dysphoria in minors to clinical research studies approved by the Swedish national research ethics board (“EPM”).

(Medscape Psychiatry 2021.)

170. Norway reviewed its own national policy on transition in minors in 2023, explicitly concluding such medical procedures to be experimental. (Ukom 2023.)

171. The widely cited Dutch studies were co-conducted by Dr. Thomas Steensma. Despite being an originator and international leader of medicalized transition of gender dysphoric minors, Dr. Steensma stated in an interview in 2021 that he still considers it to be experimental: “Little research has yet been done on the treatment with puberty inhibitors and hormones in young people. That is why it is also *seen as experimental*.” Dr. Steensma 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.” 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.” (Tetelepta 2021.) But few if any are doing so.

C. Claims that medical transition is “medically necessary” are undefined, unsupported, and self-interested.

172. While European health authorities have examined the science and concluded that medical transition for minors remains “experimental” and of unproven benefit, terminology has been distorted in the U.S. because the U.S. lacks a public health care system and the terms “medically necessary” and “experimental” impact health insurance coverage. “Medically necessary” justifies coverage for these procedures; advocates know or fear that the term “experimental” will preclude coverage.

173. WPATH’s 2016 statement asserting “medical necessity” was explicitly made in order to facilitate insurance claims, as is clear in their document entitled, “Position Statement on Medical Necessity of Treatment, Sex Reassignment, and Insurance Coverage in the U.S.A.”

(WPATH Position Statement.) The AMA released a similar statement supporting insurance coverage for medical transition as a result of being assertedly medically necessary.⁶ U.S. medical associations' advocacy corresponds to the financial interests of their members.

174. Moreover, there do not exist a scientific definition or objective criteria of “medically necessary.” An analysis published in the *Canadian Medical Association Journal*, however (not pertaining to gender dysphoria or transition), attempted to define ‘medically necessary.’ (Caulfield 2012.) The article quoted Timothy Caulfield, Research Chair in Health, Law, and Policy at the University of Alberta (Edmonton), Canada: “As for putting great effort into coming up with a tidy, all-encompassing definition of ‘medically necessary’—it’s probably a waste of time...Given the history of the concept of ‘medically necessary’ and the numerous failed attempts to define it, a practical, operational and meaningful definition is likely unattainable.” (Caulfield at 1771–1772.) According to Mark Stabile, director of the School of Public Policy and Governance and professor of economics and public policy at the Rotman School of Management at the University of Toronto, “Providers of those services will naturally be critical of the decision if they feel that the demand for their services will decline as a result.” (Caulfield at 1772.)

D. WPATH repeatedly warns of untested hypotheses, continuing unknowns, and lack of research.

175. The latest (2022) WPATH Standards of Care v8 document avoided the word “experimental” in its guidelines, but instead repeatedly deployed terms and phrases that are synonymous with being experimental: “The criteria in this chapter [on assessment of adults] have been significantly revised from SOC-7 to reduce requirements and unnecessary barriers to care. *It is hoped that future research will explore the effectiveness* of this model.” (Coleman

⁶ Available from <https://www.ama-assn.org/system/files/2019-03/transgender-coverage-talking-points.pdf>

2022 at S33, italics added.)

176. The WPATH Standards of Care v8 (Coleman 2022) indicates the lack of experimental evidence available again and again (italics added):

- “It primarily includes an assessment approach that uses specific criteria that are examined by [a Health Care Provider, or] HCP in close cooperation with a TGD adult and does not include randomized controlled trials or long-term longitudinal research” (at S33.)
- “While there was *limited supportive research*, this recommendation was considered to be good clinical practice as it allows a more reversible experience prior to the irreversible experience of surgery” (at S40.)
- “Due to *the limited research in this area*, clinical guidance is based primarily on individual case studies and the expert opinion of HCPs” (at S41.)
- “While available research shows consistent positive outcomes for the majority of TGD adults who choose to transition...some TGD adults may decompensate or experience a worsened condition following transition. *Little research has been conducted to systematically examine variables that correlate with poor or worsened biological, psychological, or social conditions following transition*” (at S42.)
- “Future research would shed more light on gender identity development if conducted over long periods of time with diverse cohort groups” (at S45.)
- “In addition, elevated scrotal temperatures can be associated with poor sperm characteristics, and genital tucking could theoretically affect spermatogenesis and fertility (Marsh 2019) although *there are no definitive studies evaluating these adverse outcomes*. Further research is needed to determine the specific benefits and risks of tucking in youth” (at S54.)
- “*There is no formal research evaluating* how menstrual suppression may impact gender incongruence and/or dysphoria” (at S54-55.)
- “Currently, there are only preliminary results from retrospective studies evaluating transgender adults and the decisions they made when they were young regarding the consequences of medical-affirming treatment on reproductive capacity. It is important not to make assumptions about what future adult goals an adolescent may have” (at S57.)
- “*Only limited empirical research exists* to evaluate such interventions” (at S75.)
- “*Research has not been conclusive* about when in the life span such detransition is most likely to occur, or what percentage of youth will eventually experience gender fluidity and/or a desire to detransition” (at S77.)
- “Research on pitch-lowering surgeries is limited” (at S139.)
- “The number and quality of research studies evaluating pitch-lowering surgeries are currently insufficient” (at S141.)

- “To date, *research on the long-term impact of [Gender Affirming Hormone Treatment or] GAHT on cancer risk is limited...* We have *insufficient evidence* to estimate the prevalence of cancer of the breast or reproductive organs among TGD populations (Joint et al., 2018.)” (at S144.)
- “Contraceptive *research gaps within this population are profound. No studies have examined* how the use of exogenous androgens (e.g., testosterone) may modify the efficacy or safety profile of hormonal contraceptive methods (e.g., combined estrogen and progestin hormonal contraceptives, progestin-only based contraceptives) or non-hormonal and barrier contraceptive methods” (at S162.)
- “TGD individuals AFAB undergoing abortion still represents a critical gap in research” (at S162.)
- “The effects of current TGD-related medical treatments on sexuality are heterogeneous (Ozer et al., 2022; T’Sjoen et al., 2020), and *there has been little research on the sexuality of TGD adolescents*” (at S163.)
- “While sex-positive approaches to counseling and treatment for sexual difficulties experienced by TGD individuals have been proposed (Fielding, 2021; Jacobson et al., 2019; Richards, 2021), to date *there is insufficient research on the effectiveness of such interventions*” (at S163.)

XIII. There have been 14 cohort studies of puberty blockers and cross-sex hormones in minors. They provide no reliable evidence of effectiveness for improving mental health relative to mental health treatments that lack medical risk.

177. Several studies are cited by plaintiffs' experts and in the media as purporting to show that medical transition in minors brings important improvements in mental health beyond the issues of suicide and suicidality that I have already addressed. In fact, there is no reliable evidence of any such benefit.

178. In this section, I summarize the results of all cohort studies investigating the mental health outcomes of puberty blockers and cross-sex hormones on minors. These include all such studies identified by any of the systematic reviews of effectiveness from England, Sweden, Finland, and WPATH. (Listed in Table 1, *Cohort studies of effectiveness and safety of puberty blockers and cross-sex hormones in minors.*)

179. As enumerated in the following section, all of these studies that reported improved mental health among transitioners were also providing psychotherapy at the same time. (See Section VI on confounding.) None of these studies was able to differentiate which of them was contributing to the improvement.

180. The problem imposed by confounding medicalized transition with psychotherapy is widely recognized. As explicated in the NICE review from England:

[V]ery little data are reported on how many children and adolescents needed additional mental health support, and for what reasons, or whether additional interventions, and what form and duration (for example drug treatment or counselling) that took. This is a possible confounder for the treatment outcomes in the studies because *changes in critical and important outcomes may be attributable to external care rather than the psychological support or GnRH analogues used in the studies.* (NICE 2020a at 41, italics added.)

Similarly, WPATH's own systematic review noted that "[T]his conclusion is limited by high risk of bias in study designs, small sample sizes, and *confounding with other interventions.*" (Baker

2021 at 1, italics added.)

181. The need to disentangle the roles of these two treatments has been largely ignored despite that several issues depend upon them. If medicalized transition does not show mental health improvement superior to that of mental health treatment, it cannot readily be called “medically necessary” for insurance purposes or other institutional needs. Clinicians may be subjecting minors to known and potential (but unstudied) harms without any scientific justification.

182. Moreover, without a control group for comparison (i.e., another group of similar age, sex, and mental health status), these studies are also unable to identify when and if any changes are due to regression to the mean or maturation over time.

A. Of the cohort studies, five found little to no improvement in mental health.

183. Cantu, *et al.* (2020) studied 80 youth, 11–18 years of age (average of 15.1 years), measuring patients’ levels of anxiety, depression, and suicidality. This sample was 18.75% male-to-female, 72.5% female-to-male, and 8.75% nonbinary, but the report did not include the patients’ ages of onset. The study authors compared youth according to those receiving puberty blockers only, cross-sex hormones only, both treatments, or neither. No significant differences in mental health were detected on any of these variables. Of the 27 youth reporting suicidality before medicalized treatment, 81% continued to report suicidality after medicalized treatment. Remarkably, although the authors reported that “the results of this study suggest that no clinically significant changes in mood symptoms occur” (Cantu 2020 at 199), they did not convey the logical interpretation that transition failed to help these youth. Instead, they emphasized that “findings suggest changes may actually take longer to occur.” (Cantu 2020 at 196.)

184. Kaltiala, *et al.* (2020) similarly reported that after cross-sex hormone treatment, “Those who had psychiatric treatment needs or problems in school, peer relationships and managing everyday matters outside of home continued to have problems during real-life.” (Kaltiala 2020 at 213.) They concluded:

Medical gender reassignment is not enough to improve functioning and relieve psychiatric comorbidities among adolescents with gender dysphoria. Appropriate interventions are warranted for psychiatric comorbidities and problems in adolescent development. (Kaltiala 2020 at 213.)

185. Carmichael, *et al.* (2021) released their findings from the Tavistock and Portman clinic in the U.K. (Carmichael 2021.) Study participants were ages 12–15 (Tanner stage 3 and above for natal males, Tanner stage 2 and above 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.

186. Hisle-Gorman, *et al.* (2021) analyzed military families’ healthcare data to compare 963 transgender and gender-diverse youth before versus after hormonal treatment, using their non-gender dysphoric siblings as a control group. The study participants included youth undergoing puberty-blocking as well as those undergoing cross-sex hormone treatment, but these subgroups did not differ from each other. Study participants had a mean age of 18 years when beginning hormonal treatments, but their initial clinical contacts and diagnoses occurred at a mean age of 10 years. According to the study, “mental health care visits overall did not significantly change following gender-affirming pharmaceutical care” (Hisle-Gorman 2021 at 1448), yet, “psychotropic medication use *increased*,” (Hisle-Gorman 2021 at 1448, italics added)

indicating *deteriorating* mental health.

187. Tordoff, *et al.* (2022) reported on the mental health of youth (mean age 15.8) as they underwent their first year of puberty blocker or cross-sex hormone treatment. The study began with 104 youth, 39 of whom dropped out by the end of the study. Of the initial 104, 62.5% were receiving psychotherapy at the same time. (Tordoff 2022 at 5 Table 1.) Tordoff did not separate participants into an experimental group and control group. Rather, the study began with the youth as non-medicated and then shifted them from the non-medicated to the medicated group when eligible. (Tordoff 2022 suppl eFigure 1.) At the beginning of the study, seven of the 104 initial participants were already receiving medication (6.7%). By the end of the study, 57 of the remaining 65 participants were receiving medication (i.e., 87.7%). At the beginning of the study, 59.0% of the youth were experiencing moderate to severe depression, and at the end, 58.5% were. At the beginning, 52.0% were experiencing moderate to severe anxiety, and at the end, 51.5%. At the beginning, 45% were experiencing suicidality or thoughts of self-harm, and at the end, 42.2%. Importantly, the report failed to indicate its procedures for assessing the mental health readiness of prospective transitioners, and the results are highly susceptible to selection bias between those deemed eligible for hormones or puberty blockers, and those who were not.

B. Six of the cohort studies confounded medical treatment with psychotherapy.

188. The initial enthusiasm for medical blocking of puberty followed largely from early reports from the Dutch clinical research team suggesting at least some mental health improvement. (de Vries 2011, 2014.)

189. The Dutch clinical research team followed up a cohort of youth at their clinic undergoing puberty suppression (de Vries 2011), and later cross-sex hormone treatment and surgical sex reassignment (de Vries 2014). 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 itself as a result of puberty suppression. Moreover, natal females suffered *increased* body dissatisfaction both with their secondary sex characteristics and with nonsexual characteristics. (Biggs 2020.)

190. The reports' own authors noted that while it remains possible that the improvement on some variables was due to the puberty blockers, it was also possible that the improvement was due to the mental health support or to natural maturation. The study authors noted this explicitly: "All these factors may have contributed to the psychological well-being of these gender dysphoric adolescents." (de Vries 2011 at 2281.)

191. van der Miesen, et al. (2020) provided an update of the Dutch clinic's sample, reporting continued improvement in transitioners' psychological functioning, but the medical and psychological treatments remained confounded. 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. The study authors expressly noted, "The present study can, therefore, not provide evidence about the direct benefits of puberty suppression over time and long-term mental health outcomes." (van der Miesen 2020 at 703.)

192. Allen, *et al.* (2019) reported on a sample of 47 youth, ages 13–20, undergoing cross-sex hormone treatment. They reported observing increases in measures of well-being and decreases in measures of suicidality; however, as the authors also noted, "whether a patient is actively receiving psychotherapy" may have been a confounding variable. (Allen 2019.)

193. Becker-Hebly, *et al.* (2021) assessed the quality of life and overall functioning of a sample of German youth both before and after undergoing treatment with GnRHa, CSHT, or

both. Excluded from participating were youth with severe psychiatric issues, including suicidality. Of the sample, 79% of the sample participated in psychotherapy at the same time. As the study authors were careful to indicate, “Because this study did not test for statistically significant differences between the four intervention groups or before and after treatment, the findings cannot be generalized to other samples of transgender adolescents.” (Becker-Hebly 2021 at 1755.)

194. In Kuper, *et al.* (2020), a multidisciplinary team from Dallas used a battery of mental health tests to assess 148 youth undergoing either puberty-blocking or cross-sex hormone treatment. The tests revealed highly inconsistent results: Most revealed no significant change, some indicated improvement, and some indicated deterioration. Because 144 of the 148 participants were also in treatment with a therapist or counselor (Kuper at 7, Table 4), no conclusions can be drawn regarding the cause of the improvements. Similarly, 47% of the sample were receiving psychiatric medication at the time of their initial assessments, but it was 61% of the sample at the follow-up time: It cannot be known to what extent mental health improvement was associated with transition-related or with psychiatric medication. Importantly, the variables demonstrating deterioration included each of the ones indicating suicidality and self-harm: At follow-up time, the sample showed *higher* levels of suicidal ideation (from 25% to 38%), suicide attempts (from 2% to 5%), and “non-suicidal self-injury” (from 10% to 17%) (Kuper at 8, Table 5).

195. This evidence of worsening mental health was highly obscured in the Kuper report, however. Rather than provide the standard comparison of pre- and post-treatment rates, Kuper instead listed the post-treatment rates alongside the full *lifetime* rates: “Lifetime and follow-up rates were 81% and 39% for suicidal ideation, 16% and 4% for suicide attempt, and 52% and

18% for NSSI, respectively” (p. 1). Rates from over a lifetime are necessarily higher numbers, and putting them where pre-treatment rates normally appear conveys the statistical illusion of a decrease, exactly opposite to the actual pattern.

C. Two found no advantage of medicalization over psychotherapy.

196. Costa, *et al.* (2015) provided preliminary outcomes from a small study conducted with patients of the GIDS 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 (representing an “active comparator” group. See Section III.C.2). The “untreated” group, however, was different from the treated group in another important respect, in that these were the patients who began with such severe psychiatric co-morbidities that they were deemed ineligible to begin puberty blockers until mental health improved. Further, the study suffered a dramatic loss-to-follow-up, with almost two thirds of participants dropping out across just 18 months. (Biggs 2019.) In this preliminary report, both groups improved in psychological functioning over the course of the study, but no statistically significant difference between the groups was detected at any point. (Costa 2015 at 2212, Table 2.) In any event, all these findings have been superseded, however, and are moot. The final outcomes report for this cohort was subsequently published (as Carmichael 2021, above), finding that neither group actually had experienced any significant improvement at all. (Carmichael 2021.)

197. Achille, *et al.* (2020) at Stony Brook Children’s Hospital in New York studied a sample of 95 youth with gender dysphoria, but 45 were lost-to-follow-up within just 12 months, failing to complete follow-up surveys at 6 month and or 1 year. That is, outcomes were available only for the 50 who remained in the study. 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.” (Achille 2020 at 2.) 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.*” (Achille 2020 at 3, italics added.) That is, puberty blockers did not improve mental health any more than did mental health care on its own. More specifically, only one of the 12 predictors reached statistical significance. (Achille 2020 at Table 4.) That is, medicalized transition was not associated with improved mental health beyond improvement associated with the mental health care received. Moreover, the single predictor reaching the threshold for statistical significance is not reliable: the study authors made a methodological error by failing to account for the multiple comparisons it conducted. Had the study applied the standard adjustment for correcting for multiple comparisons, that remaining predictor would also have ceased to be statistically significant.

D. One failed to report whether psychotherapy was provided.

198. Chen, *et al.* (2023) reported finding some improvement in some mental health variables associated with the cosmetic changes after two years of cross-sex hormone treatment in a sample of 315 youth (mean age, 16 years). Unlike the other studies, Chen et al. did not report how many participants were receiving psychotherapy or psychiatric medication at the same time as the hormone treatments. It is therefore not possible to assess to what extent any changes were due to hormone treatment versus the potential confounds. Because the study did not include a control group, it is not possible to assert that changes were due to hormone treatment rather than representing regression to the mean (see Section III.C.1. *Biases representing ‘regression to the mean’*). Potential conclusions are also hampered by the large proportion of mental health data

that were missing: Of the 315 youth in the sample, analyses could be conducted with only 208–217 (Chen 2023, supp. Material at 12, Table S5). The purported changes in mental health variables were statistically significant, but not clinically meaningful. The depression test used by Chen et al consisted of 21 items, with each item contributing up to 3-points to the total score. For example:

- 0 I do not feel sad.
- 1 I feel sad.
- 2 I am sad all the time and I can't snap out of it.
- 3 I am so sad and unhappy that I can't stand it.

Thus, the total scores range from 0 to 63. Scores 0–13 represent minimal difficulty; 14–19 represent mild depression; 20–28, moderate; and 29–63, severe. The change that Chen et al. found after two years of hormone treatment was from 16.39 to 13.95 (at Table S5). Changes of this size are unlikely to be associated with patients reporting they feel better. Such scores are below the “minimum clinically important difference.” (Button 2015.) Although the report did not include data on co-morbid mental health diagnoses, it noted that two patients receiving cross-hormone treatment died by suicide (representing 0.6% mortality within just two years). (Chen 2023 at 240.)

199. In addition to the incomplete reporting of key aspects of the project and large proportion of missing data, Chen et al appears to have provided only a selected subportion of the information it collected. A knowledgeable journalist investigating transgender issues, Jesse Singal, identified documentation representing the full set of information the Chen et al team planned to collect. I have verified that documentation and have come to the same conclusion. As described by Singal:

In their study protocol, including a version that they submitted into a preregistration database, the researchers hypothesized that members of this cohort would experience improvement on eight measures, including ones that are just about universally recognized by youth gender researchers as important outcomes, such as

gender dysphoria, suicidality, and self-harm. Then, in the published *NEJM* paper, the researchers changed their hypothesis and six of those variables were nowhere to be found. The two remaining—anxiety and depression—moved in a positive direction for trans boys (natal females) but not trans girls (natal males). The researchers reported on three other variables, too, without explaining how they picked them (two improved for trans girls and boys, and one just for trans boys). (Singal 2023.)

200. This appears to represent “cherry-picking” of the findings being reported, rather than a comprehensive reporting on the complete set of evidence. Further, Chen et al. failed to balance the concrete and strikingly high rate of *completed* suicide among their sample against the very incremental mental health changes they claim, even though the ethical and clinical importance of those suicides is obvious.

XIV. Known and potential harms associated with administration of puberty blockers and cross-sex hormones to children and adolescents.

201. As I have explained, any conclusion about safety requires knowledge about and balancing of both risks and benefits.

202. In concluding that safety has not been established (see Section V above), national health authorities, authors of systematic reviews, and researchers have identified a number of harms which are either known to result from administration of puberty blockers and cross-sex hormones to children and adolescents, or can be reasonably anticipated but have not been sufficiently studied to reach any conclusion as to the likelihood or severity of harm.

203. When applying research regarding harms to clinical policy, several considerations need to be included: (1) The harms of medicalized transition of gender does or may differ between male-to-female and female-to-male cases, differ between ages of transition, and differ according to age-of-onset of the gender dysphoria. Evidence and conclusions about harms (and safety) cannot be generalized or extrapolated across such cases. (2) The evidence has strongly shown that after social transition of gender, minors are much more likely than otherwise to undergo medicalized transition of gender. Thus, the appropriate assessment of the risk:benefit ratio for social transition must include the increased risks posed by the medicalized path to which it is likely to lead. (3) The evidence has shown strongly that youth who undergo puberty blocking are highly likely to undergo cross-sex hormone treatment. Thus, the appropriate risk:benefit evaluation must also consider its potential implications over the full lifespan.

204. Systematic reviews of the evidence have identified fewer than 10 studies investigating potential harms of medicalized transition of minors at all, (NICE 2020a at 6) and most of these have been limited to bone and skeletal health. As concluded by the NICE systematic review, “A key limitation to identifying the effectiveness and safety of GnRH

analogues for children and adolescents with gender dysphoria is the lack of reliable comparative studies.” (NICE 2020a at 40.) With that said, numerous harms are either known, or reasonably anticipated by respected health authorities but thus far unmeasured.

A. Sterilization without proven fertility preservation options.

205. Clinical guidelines for the medical transition of gender among children include the need to caution and counsel patients and parents about what are euphemistically called “options for fertility preservation.” (e.g., Endocrine Society Guidelines, Hembree 2017 at 3872.) For children who are placed on puberty blockers at Tanner Stage 2, however, because most continue onto cross-sex hormones once they begin a medicalized approach to their dysphoria, no viable fertility preservation options exist. The decision to undergo medicalized transition also represents the decision never to have biological children of one’s own.

206. For the large new population of young people who are first being put on puberty blockers and/or cross-sex hormones at a somewhat later stage of puberty, no studies at all have been done of when, whether, or with what probability either males or females can achieve healthy fertility if they later regret their transition decision and cease taking puberty blockers and/or cross-sex hormones. Much less has this been studied as a function of the stage of development at which they began puberty blockers and/or cross-sex hormones, and how long their gonads were subjected to cross-sex hormones.

B. Permanent loss of capacity for breast-feeding in adulthood.

207. While the removal of the breasts of a biological female adolescent or young adult may be cosmetically revised, it is functionally irreversible; even if the person later regrets and detransitions before or during adulthood, breast-feeding a child will never be possible. To the adolescent determined to transition, this may seem no cost at all. To the future adult mother, it

may be a very severe harm indeed.

C. Lifetime lack of orgasm and sexual function.

208. There has not been systematic investigation of the effects on adult sexuality among people medically transitioned at an early stage of puberty. Notably, Dr. Marci Bowers, current President of WPATH, and surgeon with substantial experience conducting penis-to-vagina operations, opined, “If you’ve never had an orgasm pre-surgery, and then your puberty’s blocked, it’s very difficult to achieve that afterwards....I consider that a big problem, actually. It’s kind of an overlooked problem that in our ‘informed consent’ of children undergoing puberty blockers, we’ve in some respects overlooked that a little bit.” (Shrier 2021.) In my opinion as a psychologist and sex and couple’s therapist, this represents a large potential harm to future relationships and mental health to “overlook,” and must be taken into consideration in any serious risk:benefit analysis of “safety.”

D. Hormonal treatments during puberty interfere with neurodevelopment and cognitive development.

209. It is well known that pubertal hormone levels drive important stages of neural development and resulting capabilities, although the mechanisms are not yet well understood. Dr. John Strang (Research Director of the Gender Development Program at Children’s National Hospital in Washington, D.C.) (Terhune 2022), the Cass Report from the U.K., and the systematic review from Finland all reiterated the central importance and unknown effects of GnRH-agonists on windows, or “sensitive periods,” in brain development, notably including adolescence. As Dr. Cass put it:

A further concern is that adolescent sex hormone surges may trigger the opening of a critical period for experience-dependent rewiring of neural circuits underlying executive function (i.e. maturation of the part of the brain concerned with planning, decision making and judgement). If this is the case, brain maturation may be temporarily or permanently disrupted by puberty blockers, which could have

significant impact on the ability to make complex risk-laden decisions, as well as possible longer-term neuropsychological consequences. To date, there has been very limited research on the short-, medium- or longer-term impact of puberty blockers on neurocognitive development. (Cass Review Letter 2022 at 6.)

210. In a meta-analysis (a highly rigorous type of systematic review) of studies of neuropsychological performance, non-transsexual males undergoing puberty earlier show a different cognitive profile than those undergoing puberty later. The association of brain development with age of pubertal onset exists in humans as well as non-human animals. (Shirazi 2022.)

211. Even in adults, neuroscience studies employing MRI and other methods have shown that the blockade of normal levels of hormones associated with puberty and adulthood degrade brain performance. Thus, when GnRH-agonists are administered to adult biological women, several brain networks decrease in activity, and cognitive performance, such as working memory, declines. (Craig 2007; Grigorova 2006.)

212. In light of this science, multiple voices have expressed concern that blocking the process of puberty during its natural time could have a negative and potentially permanent impact on brain development (Cass 2022 at 38–39; Chen 2020; Hembree 2017 at 3874.) As Chen *et al.* (2020) observed:

[I]t is possible these effects are temporary, with youth ‘catching up’...However, pubertal suppression may prevent key aspects of development during a sensitive period of brain organization. Neurodevelopmental impacts might emerge over time, akin to the ‘late effects’ cognitive findings associated with certain [other] oncology treatments. (Chen 2020 at 249.)

Chen *et al.* (2020) noted that no substantial studies have been conducted to identify such impacts outside “two small studies” (at 248) with conflicting results. I have not identified any systematic review of neurodevelopment or cognitive capacity.

213. A related concern is that by slowing or preventing stages of neural development,

puberty blockers may impair precisely the mature cognitive capabilities that would be necessary to evaluation of, and meaningful informed consent to, the type of life-changing impacts that accompany cross-sex hormones. (See Section XV.)

E. Substantially delayed puberty is associated with medical harms.

214. The research cited by the WPATH Standards of Care includes the evidence that children whose natural puberty started very late (top 2.3% in age) have elevated risks of multiple health issues in adulthood. (Zhu & Chan 2017.) These include elevations in metabolic and cardiovascular disease, lower height, and decreased bone mineral density. It has not been studied whether these correlations also occur in children whose puberty is chemically delayed. Undergoing puberty much later than one's peers is also associated with poorer psychosocial functioning and lesser educational achievement. (Koerselman & Pekkarinen 2018.)

F. Elevated risk of Parkinsonism in adult females.

215. Epidemiological research has shown adult women without gender dysphoria, undergoing surgical removal of both ovaries for other reasons, to have substantially elevated odds of developing parkinsonism, including Parkinson's Disease, relative to age-matched women randomly selected from the local population in an on-going epidemiological study. (Rocca 2022.) The effect was greater among younger women, showing 7–8 times greater odds among women under 43. The observed delay between removal of ovaries and the onset of parkinsonism was 26.5 years. Whether chemically suppressing the ovaries of a biological female via puberty blockers during adolescence followed by cross-sex hormones will cause a similar increase in parkinsonism, or when, remains unknown.

G. Reduced bone density.

216. The systematic reviews by Sweden, Finland, and England all included bone health as

an outcome. *The New York Times* also recently commissioned its own independent review of the available studies. (Twohey & Jewett 2022.) These reviews all identified subsets of the same group of eight studies of bone health. (Carmichael 2021; Joseph 2019; Klink 2015; Navabi 2021; Schagen 2020; Stoffers 2019; van der Loos 2021; Vlot 2017.) These studies repeatedly arrived at the same conclusion. As described by *The New York Times* review:

[I]t's increasingly clear that the drugs are associated with deficits in bone development. During the teen years, bone density typically surges by about 8 to 12 percent a year. The analysis commissioned by *The Times* examined seven studies from the Netherlands, Canada and England involving about 500 transgender teens from 1998 through 2021. Researchers observed that while on blockers, the teens did not gain any bone density, on average—and lost significant ground compared to their peers.⁷ (Twohey & Jewett 2022.)

217. There is some evidence that some of these losses of bone health are regained in some of these youth when cross-sex hormones are later administered. The rebounding appears to be limited to female-to-male cases, while bone development remains deficient among male-to-female cases.

218. The long-term effects of the deficient bone growth of people who undergo hormonal interventions at puberty remain unstudied. The trajectory of bone quality over the human lifetime includes decreases during aging in later adulthood. Because these individuals may enter their senior years with already deficient bone health, greater risks of fracture and other issues are expectable in the long term. As the *New York Times*' analysts summarized, "That could lead to heightened risk of debilitating fractures earlier than would be expected from normal aging—in their 50s instead of 60s." Such harms, should they occur, would not be manifest during the youth and younger adulthood of these individuals. This distinction also represents one of the differences between adult transitioners and childhood transitioners and why their experiences

⁷ The eighth study was Lee, *et al.*, 2020, which reported the same deficient bone development.

cannot be extrapolated between them.

219. There does not exist an evidence-based method demonstrated to prevent these outcomes. The recommendations offered by groups endorsing puberty blockers are quite limited.

As summarized by *The Times*:

A full accounting of blockers' risk to bones is not possible. While the Endocrine Society recommends baseline bone scans and then repeat scans every one to two years for trans youths, WPATH and the American Academy of Pediatrics provide little guidance about whether to do so. Some doctors require regular scans and recommend calcium and exercise to help to protect bones; others do not. Because most treatment is provided outside of research studies, there's little public documentation of outcomes. (Twohey & Jewett 2022.)

H. Short-term/Immediate side-effects of puberty blockers include sterile abscesses, leg pain, headache, mood swings, and weight gain.

220. The Cass Report summarized that "In the short-term, puberty blockers may have a range of side effects such as headaches, hot flushes, weight gain, tiredness, low mood and anxiety, all of which may make day-to-day functioning more difficult for a child or young person who is already experiencing distress." (Cass 2022 at 38.)

221. In 2016, the U.S. FDA began requiring drug manufacturers to add a warning about the psychiatric side effects, after reports of suicidal ideation and a suicide attempt began to emerge among children prescribed GnRH-agonists (for precocious puberty).⁸ The warning label on Lupron reads that "Psychiatric events have been reported in patients...such as crying, irritability, impatience, anger and aggression."

222. Other than the suicide attempt, such adverse effects may seem minor relative to the major health and developmental risks I have reviewed above, and they may be dismissed by children and by parents confronted by fears of suicidality and an urgent hope that transition will

⁸ Reuters Special Report; 2022, Oct. 6. Retrieved from <https://www.reuters.com/investigates/special-report/usa-transyouth-care/>

resolve the child's unhappiness and mental health issues. However, when assessing risk:benefit ratio for "safety" against the undemonstrated benefits claimed for hormonal interventions, these observed harms should not be ignored.

I. Long-term use of cross-sex hormones in adults with gender dysphoria is associated with unfavorable lipid profiles (cholesterol and triglycerides) and other issues.

223. As the Cass Report correctly and succinctly indicated, "Sex hormones have been prescribed for transgender adults for several decades, and the long-term risks and side effects are well understood. These include increased cardiovascular risk, osteoporosis, and hormone-dependent cancers." (Cass 2022 at 36.)

224. Minors who begin puberty blockers and proceed to cross-sex hormones—as almost all do—will require continuing treatment with cross-sex hormones for life, unless they go through the very difficult process of detransition. Because a lifetime dependence on cross-sex hormones is the expected course, the known adverse effects of cross-sex hormones on adults must also be part of the risk:benefit analysis of the "safety" of putting a minor on cross-sex hormones (and indeed, of the initial decision to put a child on puberty blockers).

225. Systematic review identified 29 studies of the effects of cross-sex hormone treatment on cardiovascular health in adults. (Maraka 2017.) By the two-year follow-up mark among female-to-male transitioners, hormone administration was associated with increased serum triglycerides (indicating poorer health), increased low-density-lipid (LDL) cholesterol (indicating poorer health), and decreased high-density-lipid (HDL) cholesterol (indicating poorer health). Among male-to-female transitioners at the two-year mark, cross-sex hormone treatment was associated with increased serum triglycerides (indicating poorer health).

XV. Assertions that puberty blockers act only as a “fully reversible” “pause button” are not supported by scientific evidence.

226. Plaintiffs’ experts, along with many advocates and organizations, have boldly asserted that the administration of puberty blockers to adolescents is “fully reversible.” The assertion is not consistent with or supported by any objective assessment of the existing science. Although withdrawal of the medication will allow the pubertal process to resume, that is very far from establishing that the impact of that interruption of natural development is “fully reversible.” The evidence is not that the person’s life will proceed as if the medical intervention never happened, as the popularized phrase suggests. Rather, the evidence repeatedly indicates that stopping a healthy child’s natural onset of puberty imposes multiple substantial harms, risks, or opportunity costs.

227. First, as I have previously mentioned (Section IV.D), it is scientifically invalid to extrapolate results from using puberty blockers to prevent precocious puberty by delaying the pubertal process to its normal age range, to using them to *prevent* normally occurring healthy puberty, merely assuming the effects and side-effects will be the same. The two are very different populations and very different uses.

228. Second, not all the effects of GnRHa’s in otherwise healthy children are known: It is therefore not possible to assess whether all effects are reversed or to what extent. Indeed, within the scientific method, it is never possible to demonstrate that any intervention is “fully reversible.” In science, it always remains possible for future evidence to identify an effect that does not reverse. To assert that all the effects of GnRHa’s are fully reversible is to assert that all its effects have been investigated and checked for reversibility, which is false.

229. Third, and more concretely, I have reviewed above a large number of medical and developmental risks which multiple responsible voices have associated with administration of

puberty blockers to adolescents, and which are either established by studies or have not been shown not to exist. In the face of this knowledge and lack of knowledge, it is scientifically unsupported and irresponsible to assert that this use of puberty blockers is “fully reversible” and “just a pause.”

230. Here, I identify additional psycho-social developmental impacts of delaying healthy, naturally-occurring puberty which are likely to be irreversible, but have not been meaningfully studied.

A. Stopping puberty does not stop time: Patients’ peers continue to develop and mature, with patients falling increasingly behind.

231. Initiating puberty blockers at Tanner Stage 2 (at the very first signs of puberty, typically ages 9 or 10) holds the child in a prepubescent state, while their peer group and classmates continue to grow. By the time many patients begin cross-sex hormone treatment, their peers will have completed puberty and progressed far into adolescence. Puberty may become unblocked, but these children have irreversibly lost the opportunity and experience of developing with their peers and must instead do so alone.

232. Being a “late bloomer,” indeed among the latest possible bloomers, has psychological consequences of its own. Having the body and mind of a prepubescent child while one’s friends have grown into physically mature sixteen-year-olds is extreme. Despite being a teenager chronologically, remaining prepubescent both physically and mentally while the lives of one’s peers have advanced to teenagers’ interests only increases the isolation of children already reporting social distress. There does not exist a means of distinguishing how much of any improvement in mental health that might be observed across these years in a particular study is simply the result of finally undergoing at least some pubertal development and finally catching up with one’s peers in at least some parameters.

233. Concretely, undergoing puberty much later than one's peers (as a result of naturally occurring rather than medically induced conditions) has been associated with poorer psychosocial functioning and lesser educational achievement. (Koerselman & Pekkarinen 2018.) Whether this holds true when the late puberty is the result of puberty blockers has not been studied.

B. Blocking puberty blocks the awareness of sexuality and sexual orientation that can play an important role in the individual's understanding of gender identity.

234. As demonstrated unanimously by the cohort studies of prepubescent children with gender dysphoria, the great majority cease to feel gender dysphoric during the course of puberty. (Section IX.B.) Studies also find that many such children subsequently identify as gay or lesbian, providing a potential alternative source and understanding of their atypical childhood gender interests. But for all children, blocking puberty necessarily blocks the onset of adult sexual interest, sexual arousal, and sexual response which are part of "the usual process of sexual orientation and gender identity development." (Cass 2022 at 38.) That is, blocking the experience of sexual feelings and development blocks normal phenomena that enable the young person to understand sexuality and sexual orientation, as distinct from gender identity. As Dr. Cass summarized:

We do not fully understand the role of adolescent sex hormones in driving the development of both sexuality and gender identity through the early teen years, so by extension we cannot be sure about the impact of stopping these hormone surges on psychosexual and gender maturation. We therefore have no way of knowing whether, rather than buying time to make a decision, puberty blockers may disrupt that decision-making process. (Cass Review Letter 2022 at 5.)

Thus, contrary to the hypothesis that providing time might permit more considered understanding and decision-making, the prevention of puberty blocks the awareness of a central factor that may well influence that understanding.

235. Because puberty blockers prevent prepubescent children from developing any understanding of sexual arousal and sexual relationships they would otherwise gain with maturation, such children are necessarily incapable of providing informed consent. There does not exist—indeed, there cannot exist—an age-appropriate way to equip a child who has not gone through puberty to make an informed decision about age-inappropriate issues, such as their future sex life, choices of sexual partners, sex-bonded relationships including marriage, and sacrificing ever experiencing orgasm.

C. Blocking puberty may block development of adult decision-making capacity.

236. As I have explained above, there are reasons to fear that use of puberty blockers may have permanent negative effects on brain development. That long-term risk aside, blocking puberty nevertheless threatens to prevent the child from growing towards adult decision-making capability during precisely the years in which he or she is being asked to make life-altering decisions about gender identity, gender presentation and cross-sex hormones. Pubertal brain development includes pervasive change in structural and functional connectivity (Chen 2020), re-balancing its capabilities between the acquisition of skills and knowledge and their application. Foremost among these are acquiring the abilities to control impulsivity and engage in rational and long-term decision-making (Crone & Steinbeis 2017), in association with development of a brain region called the “prefrontal cortex,” and similarly acquiring the capacity to process adult social interaction, in association with the development of a network of brain areas (Kilford 2016), collectively called the “social brain.” To understand medicalized transition of gender and its known and unknown consequences is one of the most complicated questions that a young person today could face, and a prepubescent brain is not equipped to process that information rationally, objectively, and with a whole lifetime rather than immediate desires and

social pressures in mind.

D. Time spent on puberty blockers poses significant opportunity costs.

237. One of the primary, if not the foremost, justifications for medically transitioning children and adolescents is to reduce the psychological distress they report. That hypothesis interprets these children's psychological concerns (e.g., anxiety and depression) to gender dysphoria and/or external sources (e.g., transphobia). As I have noted here previously, however, many gender dysphoric children and adolescents suffer from multiple other mental health issues. In several studies of minors on puberty blockers, a substantial portion of the subjects do not report ongoing psychological care. If years spent on puberty blockers in the hopes that that will relieve distress distract from systematic efforts to directly address comorbidities through psychotherapy, then it diverts the minors from treatment which exhibits substantial evidence of effectiveness for improving mental health and lacks the multiple and significant side-effects of puberty blockers.

XVI. Assessments of clinical guidelines, standards, and position statements.

238. Several sets of recommendations have been offered regarding the clinical treatment of people with gender dysphoria. In this section, I comment on these protocols or recommendations individually.

A. The Dutch Protocol (aka Dutch Approach).

239. The Netherlands' child gender identity clinic in Amsterdam associated with the Vrije University (VU) was one of the international leaders in the use of hormonal interventions to treat gender dysphoria in minors. Researchers associated with that clinic have generated a large portion of the seminal research literature in the field. Key early publications from that group spelled out criteria and procedures that are collectively referred to as the "Dutch Protocol," and this approach has been widely influential internationally.

240. The purpose of the protocol was to compromise conflicting desires and considerations including: clients' initial wishes upon assessment; the long-established and repeated observation that those wishes will change in the majority of (but not in all) childhood cases; and that cosmetic aspects of medical transition are perceived to be better when they occur earlier rather than later in pubertal development.

241. The VU team summarized and explicated their approach in their paper, *Clinical management of gender dysphoria in children and adolescents: The Dutch Approach*. (de Vries & Cohen-Kettenis 2012.) Key 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.

242. For youth under age 12, "the general recommendation is watchful waiting and

carefully observing how gender dysphoria develops in the first stages of puberty.” (de Vries & Cohen-Kettenis 2012 at 301.)

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

244. 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.

245. 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. Rather, such children and families typically present with substantial distress involving both gender and non-gender issues, and 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 seen by one of the clinic’s psychologists or psychiatrists.” (de Vries 2011 at 2281.) One is actively treating the person, while carefully “watching” the dysphoria.

246. The use of hormonal interventions described in the Dutch Protocol, while markedly

more conservative than today's practice in many U.S. clinics, has recently been criticized in detail in a peer-reviewed article as unjustified by reliable evidence (Biggs 2022; Levine 2023; Levine 2022). Certainly, the published research evidence base concerning safety and efficacy available to the VU clinicians is and was no greater than the global evidence base that the NICE review recently labelled as uniformly of "very low quality."

247. Because clinical practices are often justified by alluding to the Dutch Protocol, however, it is important to be aware of the limitations on the use of hormones and puberty blockers specified by the Dutch Protocol and listed above (and thus the limits of the clinical evidence published out of the VU clinic) which are regularly ignored by clinicians in the U.S.

B. World Professional Association for Transgender Health (WPATH).

248. The WPATH standards of care have been lauded as long-established and high quality procedures. This does not reflect any objective assessment, however. The previous WPATH standards (version 7) were subjected to standardized evaluation, the Appraisal of Guidelines for Research and Evaluation ("AGREE II") method. (Dahlen 2021.) That assessment concluded "[t]ransition-related [clinical practice guidelines] tended to lack methodological rigour and rely on patchier, lower-quality primary research." (Dahlen 2021 at 6.) The WPATH guidelines were not merely given low scores, but received unanimous ratings of "Do not recommend." (Dahlen 2021 at 7.)

249. Immediately after the release of the current (2023) version of WPATH's standards (version 8), WPATH fundamentally altered it by removing from it minimum ages previously required for undergoing social or medical transition of gender. (WPATH Correction 2022.) This is despite the fact that age is the central component to young people's emerging understanding of their sexual identities through social identity formation, pubertal development, and the onset of

sexual interest. The removal of age restrictions was not based on any research evidence at all—WPATH provided no reference to any study as justification, and the WPATH leadership have been explicit in indicating that the change was intended to prevent clinical care providers from legal liability for physicians rejecting those minimums. The implementation of such fundamental and dramatic changes, in the complete absence of any supporting science whatsoever, negates entirely any claim that WPATH represents evidence-based or empirically-supported treatment. As explicated herein, on Table 1, the systematic review on which WPATH based its standards for minors included exactly one study on puberty blockers and three studies on cross-sex hormones. All other references represent cherry-picked citations of studies rejected by its own systematic process. Moreover, even among the four studies in WPATH’s review, three were rejected by the Swedish review, due to the low quality of the science they contained.

C. Endocrine Society (ES).

250. As I have noted, in preparing its guidelines the Endocrine Society did not conduct systematic reviews of evidence relating to efficacy of any hormonal intervention in children or adolescents, and instead conducted reviews on only two safety-related endpoints.

251. Although outside the professional expertise of endocrinologists, 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.” (Hembree 2017 at 3877.) This ordering—to address mental health issues before embarking on transition—avoids relying on the unproven belief that transition will solve such issues.

252. 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.” (Hembree 2017 at 3870.)

253. 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.” (Hembree 2017 at 3877.)

254. The 2017 update of the Endocrine Society’s guidelines added a disclaimer not previously appearing:

The guidelines cannot guarantee any specific outcome, nor do they establish a standard of care....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, special, incidental, or consequential damages related to the use of the information contained herein. (Hembree 2017 at 3895-3896.)

255. The Endocrine Society guidelines do not rely on any systematic review of evidence of *efficacy* of any form of treatment for gender dysphoria. The Dahlen et al. team also subjected these guidelines to review according to the AGREE II criteria, and two out of three independent reviewers concluded that they should *not* be used clinically. (Dahlen 2021 at 7.)

D. American Academy of Pediatrics (AAP).

256. A “Policy Statement” issued by the American Academy of Pediatrics (AAP) in 2018—which on its face declared to represent exclusively the work of one author who alone is “accountable for all aspects of the work”—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. (Rafferty 2018.) Although changes in recommendations can obviously be appropriate in response to new research evidence, the AAP identified no such new evidence to justify a radical departure from the “therapy first” approach of the Dutch Protocol. 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. (Cantor 2019.) Moreover, of all the outcomes research published, the AAP policy cited *one*, and that without mentioning the outcome data it contained. (Cantor 2019.)

257. 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.”

XVII. Assessment of expert declaration of Dr. Christine Brady.

258. In the body of my report above, I summarized the nature and strength of the published scientific evidence regarding the central issues pertaining to the medicalized transition of gender in minors. The present section provides additional remarks directed to specific evidentiary or logical defects in the opinions offered in the declaration of Dr. Christine Brady, which I have also reviewed.

259. Dr. Brady's declaration included that "100 percent of my clinical practice are transgender youth" (Brady decl ¶7), which represents a significant conflict of interest: The income she derives from providing services to these children stands to be directly affected by the outcome of this case. Individuals whose incomes would be impacted on the basis of research findings cannot be objective in their assessment of those findings. (See Section I.B. on *Clinical vs. Scientific Expertise* and Section I.C. on the *Professional Standard on Conflict of Interest*.)

A. Dr. Brady's opinions are not the product of the principles and methods accepted as reliable by the fields of medical science or behavioral science.

260. As outlined in the body of the present report (section III.A. *Pyramid of Evidence*), the standard in these fields is to apply systematic reviews of the research evidence, which minimizes opportunities for bias, including the cherry-picking of studies from only one side of an issue or holding studies to higher or lower standards according to whether they favor one's own view (see Section III.B. *Systematic Reviews*). Despite Dr. Brady's referring to her sources as "widely adopted" (e.g., ¶26, ¶27), her declaration (1) excludes the systematic reviews of the safety and effectiveness of the medicalized transition of minors, instead engaging in the very biases which the systematic review process was designed to remove from evidence-based medicine, (2) excludes the international consensus reached by every public health care system that conducted such systematic reviews, and (3) excludes any analysis of the risk-to-benefit ratio of the

alternatives available to minors who express gender dysphoria, instead describing only the medical option, from which she receives income.

261. As explicated in the present report, the strongest level of evidence currently available regarding the safety and effectiveness of medicalized transition of minors are cohort studies. (See Section XIII.) Of the 14 such studies, Dr. Brady included only four (de Vries et al., 2011; de Vries et al., 2014; Costa et al., 2015; and Chen et al., 2023). Dr. Brady left out all studies showing a lack of improvement after medicalized transition (as well as several others). Of the studies she did cite, none was able to distinguish whether mental health improvement was caused by medicalization or by the psychotherapy received at the same time. That is, rather than include all relevant outcomes studies, which would document the unreliability of claims of improvement, Dr. Brady selected to cite only a small minority of studies and included only select portions from within those studies, seeming to suggest improvement, and simply ignored all else.

262. Dr. Brady's opinions rely largely on survey studies, which do not yield reliable facts about the risks or benefits of clinical outcomes. Indeed, her survey citations all represent *the same* survey: Green et al. (2022), Turban et al. (2019), Turban et al. (2020), and Turban et al. (2021). As outlined in the present report, surveys recording the replies of anyone who wants to respond do not appear at all on the standard pyramid of evidence in science. (See section III.A *Pyramid of Evidence*.)

263. Entirely missing from Dr. Brady's report is any discussion, consideration, or comment on the international consensus, unanimous across every public health care system conducting systematic reviews of the evidence. Every national health care system in the world that has conducted such reviews of the safety and efficacy of medicalized transition has come to the same conclusion: For minors, the harms outweigh the benefits. No U.S. professional

association has conducted such a review of the evidence, and the associations' views correspond to their economic interests: Acknowledging transition of minors to be experimental disqualifies the procedures from medical insurance coverage, and permitting governments to ban these medical procedures opens the door to the government regulation of others.

264. Dr. Brady repeatedly based her opinions on personal recollections of providing services to this population, in what science calls *anecdotal evidence*. The advantages of accumulated personal experience is its low cost and potential utility when there do not exist systematic studies of the unique combination of variables represented by some cases. The disadvantages include that it is the most subject to human biases, such as recall bias, confirmation bias, survivorship bias, as well as to sampling biases including both self-selection biases (who decides to come into the clinic in the first place) and any variables which led to dropping out of the clinic, leaving clinicians no capacity for knowing why.

265. If there did not already exist multiple studies systematically studying cohorts of minors undergoing puberty-blocking or cross-sex hormone treatment, then expert opinion based on anecdotal evidence might represent the only option available. That is not the current situation, however: Rather than engage in the scientifically valid research method of accepting higher order evidence over lower order evidence, Dr. Brady accepted and rejected evidence according to their results, that is, *cherry-picking* only the seemingly supportive studies.

266. Dr. Brady's very definition of gender identity, as an "internal sense" (Brady decl ¶13), represents a fundamental violation of the scientific method: Nothing in science can be defined as an internal sense. To be scientifically valid, a claim must be objective, testable, and falsifiable. (See Section VII.B *Subjective feelings*.) Gender identity is unlike emotions, which are associated with objectively measurable physiological changes, such as respiration and brain

activity. (Davidson, 2003; Seeley 2015). Gender identity is unlike sexual orientation, which can be objectively measured by genital and other physiological responses to sexual stimuli. (Freund, 1967; Hess, 1965; Rieger, 2005). Gender identity is unlike disorders of sexual development (DSD's, also called "intersex conditions"), which are objectively detectable with physical measures such as chromosomal analysis. (Vilain, 2006). Definitions based on vague metaphors, such as "a person's core" and "an essential part of one's being" (Brady decl. ¶¶ 13–14) do not possess the fundamental features required of the scientific method.

B. Clinically evaluating rather than assuming literal accuracy of self-report represents competent mental health care, not conversion therapy.

267. To argue that medicalized transition is the only appropriate clinical response, Dr. Brady declared that gender identity cannot be "*voluntarily* changed" (Brady decl ¶15, italics added). That statement would seem to concede that there exist at least some cases of changing gender identities. As already detailed in the present report, gender dysphoria indeed does change in the large majority of youth with prepubescent onset (see section IX.B.1). Accepting that gender identity can change, even if only *involuntarily*, calls for the very policy Dr. Brady rejects: Hold off medicalization until adulthood.

268. Activists and social media increasingly, but erroneously, apply the term "conversion therapy" moving farther and farther from what the research has actually reported. "Conversion therapy" (or "reparative therapy" and other names) was the attempt to change a person's *sexual orientation*, not *gender identity*. With the lay public more frequently accustomed to "LGB" being expanded to "LGBTQ+", however, the claims relevant only to sexual orientation are being misapplied to gender identity. As the field grows increasingly polarized, any therapy failing to provide affirmation-on-demand is mislabeled "conversion therapy" (D'Angelo, *et al.*, 2021). Indeed, even actions of non-therapists, unrelated to any therapy, have been (mis-)labelled

conversion therapy, including the prohibition of biological males competing on female teams (e.g., Turban, 2021, March 16.)

269. The research has repeatedly demonstrated that once one explicitly acknowledges being gay or lesbian, one is only very rarely mistaken. That is entirely unlike gender identity: As already noted herein (section IX.B.1), in all 11 of the 11 follow-up studies of children not permitted social transition prepubertally, the great majority of children declaring a cross-gender identity ceased to so identify. Moreover, because highly discrepant rates of persistence and desistence were almost entirely reversed when children were transitioned socially, we have very powerful evidence that the social environment was at the root of the children's gender identities rather than any innate feature.

270. Dr. Brady's reference to actively attempting to *change* gender identity avoids the pertinent issue: As demonstrated in the following, the evidence is much more parsimoniously interpreted to indicate, after the advent of social media, the far more typical situation to be youth who are *mistaken* about their gender identity. That is, socially vulnerable youth are misinterpreting their experiences to indicate they are transgender or are exaggerating their descriptions of their experiences in service of psychological needs, such as attention-seeking or externalizing sources of internal distress.

C. DSM-5 criteria pre-date nearly all outcomes research on adolescents.

271. In ¶¶16–19, Dr. Brady listed the DSM-5 criteria for the formal diagnosis of Gender Dysphoria, noting that “The diagnosis and its criteria have changed over time to reflect the most current research regarding the presentation of this diagnosis” (Brady decl ¶16). Dr. Brady correctly included the current diagnostic criteria to be those from the DSM-5, released in 2013.⁹

⁹ The 2022 update from the DSM-5 to the DSM-5-TR represented “text revision” (abbreviated “-TR”) and did not include change to the diagnostic criteria in the manual.

Dr. Brady did not include, however, that the DSM-5 criteria for Gender Dysphoria are outdated: They do *not* in fact reflect the current research. In 2013, only two presentation types of gender dysphoria were known: the early- or childhood-onset type and the late- or adulthood-onset type. (See sections IX.A and IX.B.) The third type of presentation, the adolescent- or rapid-onset type, had not yet been observed and reported in the research literature. As illustrated by the timeline below, of the now 14 cohort studies reporting on the outcomes of minors undergoing medicalized transition, only one was available in 2013, and the youth participating in that study are psychologically and epidemiologically unlike the youth currently seeking medicalized interventions. (See section IX.C.)

Year	Professional Association	DSM	Research Studies
2000		DSM-IV-TR	
2006	WPATH v6		
...			
2008			
2009	E.S. v1		
2010			
2011			de Vries
2012	WPATH v7		
2013		DSM-5	
2014			de Vries
2015	APA		Costa
2016			
2017	E.S. v2		
2018	AAP		
2019			Allen
2020	WPATH v8		Achille; Cantu; Kaltiala; Kuper; van der Miesen
2021			Becker-Hebly; Carmichael; Hisle-Gorman
2022		DSM-5TR	Tordoff
2023			Chen

272. Similarly, Dr. Brady repeatedly cited statements from the Endocrine Society (E.S.), WPATH, and the American Psychological Association (APA) as the justification of her claim that strong evidence exists to support medicalized transition of minors (Brady decl ¶¶25–29). As

she wrote:

They have analyzed all available scientific research, and are widely referenced and endorsed by all major U.S. medical and mental health associations. (Brady decl ¶29.)

In direct contrast with her unsourced claim: (1) None of these groups has conducted a systematic review of the safety and effectiveness of medicalized transition of minors did have the several public health case systems in Europe. (2) As the timeline above makes explicit, at the time of the writing of their statements, most of the outcomes data did not yet exist. Phrases such as Dr. Brady's "all available scientific research" are hollow. The APA statement that Dr. Brady cited: (1) expired in 2022, and (2) pertained to gender dysphoric adults, not minors, with the exception of Guideline No. 8:

Psychologists working with gender-questioning and TGNC youth understand the different developmental needs of children and adolescents, and that not all youth will persist in a TGNC identity into adulthood. (APA, 2015, p. 841.)

That is, despite Dr. Brady citation of it, that document supports my conclusion, not Dr. Brady's.

273. Dr. Brady referred to the WPATH Standards of Care as (SoC) widely accepted, citing no evidence in support of that belief. In direct contrast with that belief, the WPATH SoC have not only been long seen as providing *insufficient* protection from harm, but also the subsequent revisions have further *decreased* the protections it did include: One early survey of clinics providing medical transition of gender found 74% of those clinics did not adhere to the WPATH standards of that time, instead applying *more conservative* standards (Petersen & Dickey, 1995). Systematic evaluation of subsequent WPATH standards received unanimous ratings of "Do not recommend." (Dahlen 2021 at 7.) After the current set of standards (version 8) were released, all age minimums were removed, all outside the review process used in developing them. (See Section XVI.B. *WPATH*.) Dr. Brady's deposition failed to acknowledge the conclusions, or even the existence, of the systematic reviews of research conducted by the international medical

community that entirely rejected the conclusions asserted in the WPATH standards. (See Section V. *Systematic Reviews*.)

274. For reference, WPATH released version 6 of its “Standards of Care” in 2001, version 7 in 2012, and version 8 in 2022. The criteria of WPATH version 6 included: a DSM diagnosis, indications that hormones will be used responsibly, three months of either psychotherapy or a “real life test” of living as the new sex, increasing consolidation of gender identity during that period, progress in solving life problems, and (for genital surgery) two clinical approval letters, one of which must be a comprehensive psychosocial assessment.

275. These criteria of version 6 were the subject of a systematic assessment, comparing them against the research evidence, in preparation for the development of version 7 of WPATH’s standards (De Cuypere & Vercrusse, 2009). The review included an exhaustive search of the research evidence:

For follow-up studies between 1991 and the present we searched Medline and Embase using the following keywords: “transsexual, gender identity disorder, sex reassignment surgery, follow-up study, regret, standards of care, eligibility criteria.” We made a selection of these follow-up studies, retaining only those papers that contained information “on whom and under what circumstances SRS is effective.” (De Cuypere & Vercrusse, 2009, p. 195)

276. The results were peer-reviewed, published in the *International Journal of Transgenderism*, included the conclusion that “inadequate diagnosis and major psychiatric co-morbidity are the major indicators for regret” (De Cuypere & Vercrusse, 2009, p. 197), and reiterated the consensus that “Most authors agree that a careful differential diagnosis and screening for co-morbidity is imperative for good clinical practice” (De Cuypere & Vercrusse, 2009, p. 200).

277. In contrast with that assessment, WPATH version 7 did the opposite. Rather than follow the evidence base in the research literature, version 7 *lowered* the criteria that had been

preventing regretful cases and instead adopted the “informed consent model.” Comprehensive psychosocial assessment was reduced to an assessment needing only to demonstrate only a capacity to provide informed consent. The requirement for psychotherapy or real life test time was reduced to the requirement that any significant mental health concerns (left undefined) be reasonably well-controlled (left undefined).

278. Importantly, whereas version 6 included:

The SOC are intended to provide flexible direction for the treatment of persons with gender identity disorders. When eligibility requirements are stated they are meant to be *minimum requirements*. (WPATH, 2002, pp. 1–2, italics added)

version 7 instead included:

As for all previous versions of the SOC, the criteria put forth in this document for hormone therapy and surgical treatments for gender dysphoria are clinical guidelines; individual health professionals and programs may modify them. (Coleman, 2012, p. 2.)

279. This contrast is remarkable for two reasons. First, whereas version 6 permitted clinicians only to move criteria up, version 7 removed the words “minimum requirements,” thus permitting clinicians to move criteria up *or down*. Second, version 7 added the words “As for all previous versions,” which is a demonstrable falsehood. The change to this single passage, embedded in introductory text, allowing clinicians to change any criterion, removes any claim the document might have to being called “standards” at all.

280. A systematic assessment of version 7 was conducted in the lead-up to WPATH’s release of version 8 (Dahlen et al., 2021). The evaluation followed a standardized assessment method, the internationally employed *Appraisal of Guidelines for Research and Evaluation* procedure (“AGREE II”). 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” (Dahlen et al., 2021, p. 6). The WPATH guidelines received unanimous ratings of “*Do not recommend*” (Dahlen et al., 2021, p. 7).

281. WPATH’s version 8 also included the language again allowing clinicians to change any criterion up or down:

The SOC-8 guidelines are intended to be flexible to meet the diverse health care needs of TGD people globally....As in all previous versions of the SOC, the criteria put forth in this document for gender-affirming interventions are clinical guidelines; individual health care professionals and programs may modify them in consultation with the TGD person. (Coleman, 2022, p. S6)

D. Dr. Brady’s analysis fails to distinguish between the distinct phenomena that can lead to gender dysphoria.

282. In ¶20, Dr. Brady further confuses (or misrepresents) the distinct types of gender dysphoria: Specifically, the Brady declaration erroneously claimed that “For adolescents and adults whose gender identity differs from their sex assigned at birth, it is very unlikely that they will later come to identify with the birth-assigned sex.” The present report already listed the results of all 11 cohort studies of childhood-onset gender dysphoria, all showing that feelings of gender dysphoria desist in the large majority of cases, persisting in only some (Table 2, in section IX.B.1). Despite that these cases of persistence were found in—and only in—childhood-onset cases, Dr. Brady (mis)applies it as universally true, expanding it to include adolescent-onset and adult-onset cases, despite their differing on all objective variables. Dr. Brady cites no research studies supporting her claim. No such systematic research has been conducted for these other types of gender dysphoria.

283. Dr. Brady next rejected the conclusion of all 11 of these outcomes studies, writing “There is some research on pre-pubertal children that has been described as showing high rates of ‘desistance’ of transgender identity among pre-pubertal children” (Brady decl ¶21). First, Dr. Brady is incorrect to say “some” research: As explicated here already, that conclusion has been

unanimous across all studies examining it. The single research study that Dr. Brady claimed to supplant the other 11 was Olson et al. (2022). Second, as already noted in the present report (see section IX.B.2), the Olson study differed from the other 11 in having permitted the children to undergo social transition while the other 11 did not. That is, the Olson study appears to demonstrate that social transition encourages the persistence of gender dysphoria that would otherwise desist. Finally, Dr. Brady's rejection of the demonstration that most childhood-onset cases desist contradicts the Endocrine Society guidelines, which Dr. Brady otherwise repeatedly cited as authoritative. According that document, "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" (Hembree 2017 at 3876, italics added).

E. Anecdotal claims based on one's personal experiences do not constitute reliable clinical evidence.

284. Instead of the principles and methods accepted as reliable in evidence-based medicine, Dr. Brady repeatedly based her opinions only on her non-systematic recollections of her own personal experiences providing services to this population (e.g., Brady decl ¶¶20, 38, 39, 40, 44), in what science calls *anecdotal evidence*. "Clinical experience" is not capable of demonstrating whether treatments are causing improvements. As illustrated by the standard *Pyramid of Evidence*, it represents the lowest rung, due to being the most subject to bias. (See Section III.A.) In research on clinical experience itself, as shown by a recent systematic review of the topic: "We found no clear evidence of an association between measures of physicians' clinical experience and overall healthcare quality." (Ajmi 2021.) A review of the research on the clinical experience of psychotherapists reported that: "Years of clinical experience were found to be positively associated with increased confidence [but] does not suggest that it is associated with improved ability to increase its quality." (Dawson 2018 at 89.) As Dr. Roger Bertholf,

Editor-in-Chief of the peer-reviewed journal, *Laboratory Medicine*, wrote in its 50th anniversary edition: “Anecdotalism is the antithesis of medical science” (Bertholf, 2020, p. 555).

285. The advantages of accumulated personal experience is its low cost and potential utility when there do not exist systematic studies of the unique combination of variables presented by some cases. The disadvantages include that it is the most subject to human biases, such as recall bias and confirmation bias, as well as to sampling biases including both self-selection biases (who decides to come into the clinic in the first place) and any variables which lead to dropping out of the clinic, leaving clinicians with little opportunity for knowing the outcome at all.

286. If there did not already exist multiple studies systematically studying cohorts of minors undergoing puberty-blocking or cross-sex hormone treatment, then expert opinion based on anecdotal evidence might represent the only option available. That is not the current situation, however: Yet, rather than engage in the scientifically valid research method of accepting higher order evidence over lower order evidence, Dr. Brady cited and ignored reported the reported research evidence according to the favorability of their results, *cherry-picking* only the (seemingly) supportive subset.

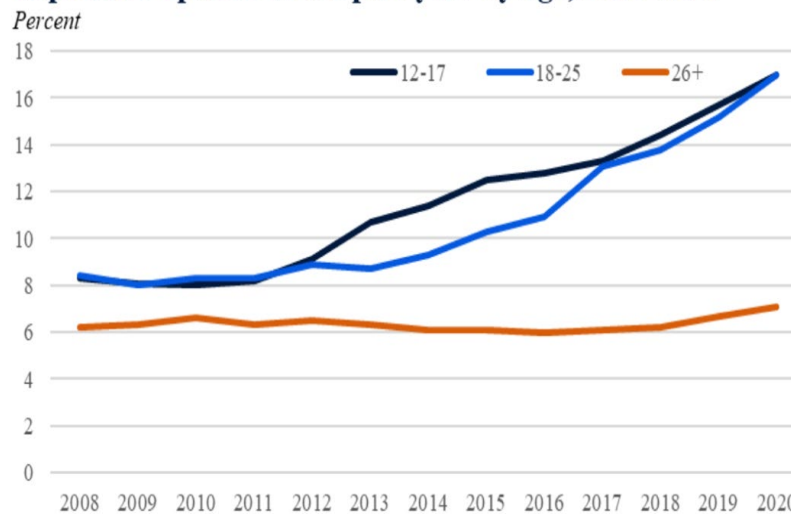
F. The mental health issues reported by gender dysphoric adolescents correspond entirely to the mental health issues widely reported by youth of the social media generation.

287. Dr. Brady referred to indications of high levels of emotional distress and poor levels of mental health among youth with gender dysphoria (Brady decl¶ 24–25). Her declaration repeatedly inferred the causal conclusion that the mental health issues are caused by transphobia and failures to support transition. Missing entirely from Dr. Brady’s interpretation of the correlations is that high rates of mental distress are not unique to gender dysphoric minors.

Signs of distress are increasing throughout the current generation of youth, especially adolescent females, and these indicators all began their exponential increases at the same time—upon the introduction of social media. The great increases in each of gender dysphoria, mental illness, and suicide and suicidality, are all primarily affecting the same demographic most vulnerable to negative social influence on body image and self-perception: adolescent females.

288. Data from the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) show the rapid rise in depressive episodes, more than doubling, accompanying the social media age, and mostly affecting youth under 25:

Figure 1. Percent of the population with a major depressive episode in the past year by age, 2008-2020



Source: Substance Abuse and Mental Health Services Administration

Available from <https://www.whitehouse.gov/cea/written-materials/2022/05/31/reducing-the-economic-burden-of-unmet-mental-health-needs/>

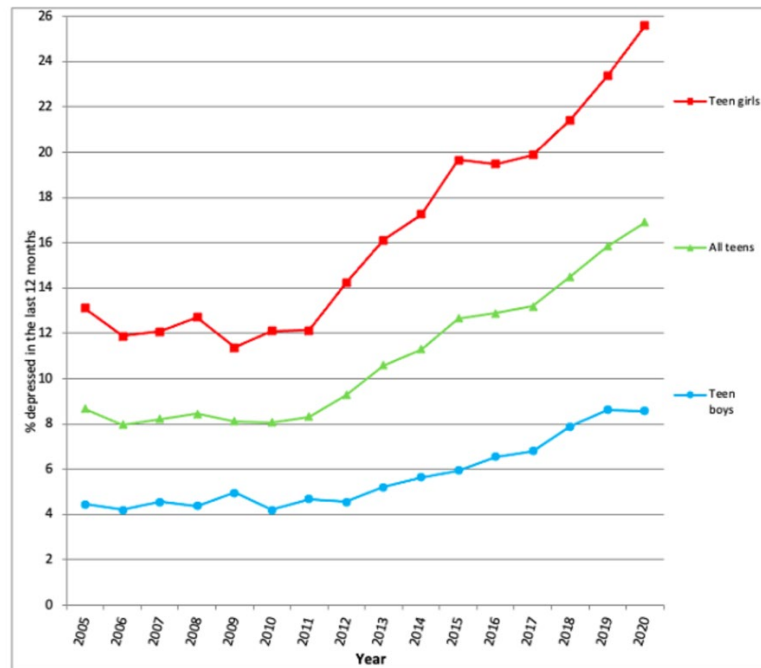
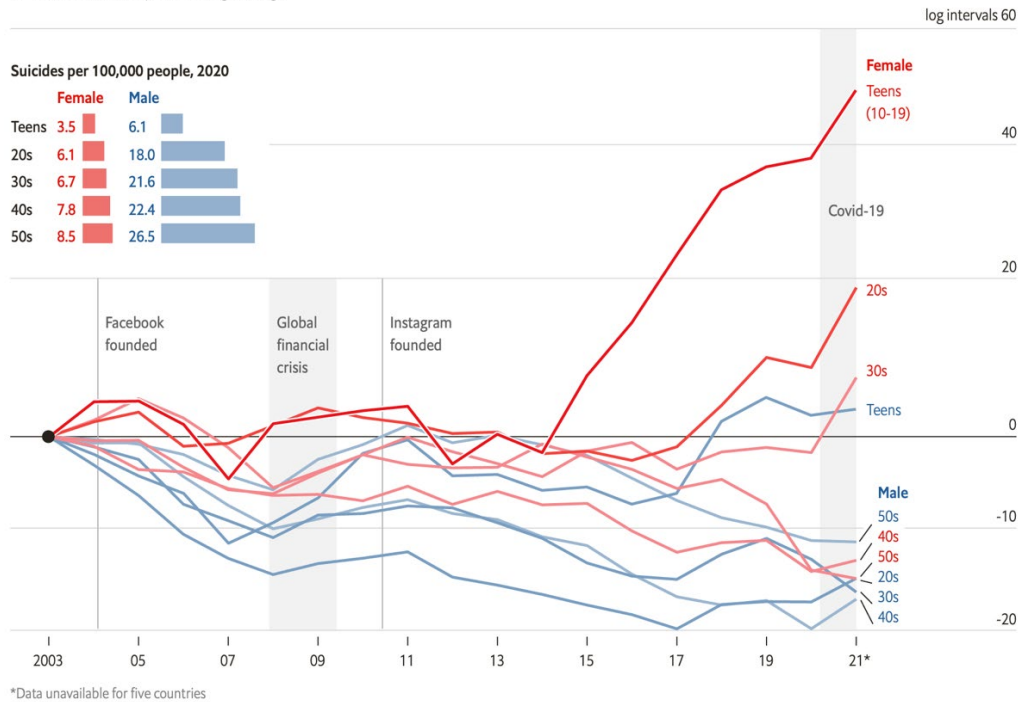


Figure 2: Percent of U.S. 12- to 17-year-olds with major depression in the last year, 2005-2020
Source: National Study of Drug Use and Health. NOTE: Depression assessed using DSM criteria.

Twenge, J. Institute for Family Studies. Available from <https://ifstudies.org/blog/how-much-is-social-media-to-blame-for-teens-declining-mental-health>

The indicators of increasing distress include suicide and suicidality: In 2020, the U.S. Centers for Disease Control (CDC) reported “[A]pproximately 18.8 percent of high school students reported suicidal ideation in the past year, and 8.9 percent of high school students reported a suicide attempt in the past year” (Ivey-Stephenson et al., 2020). The greatest increases in rates of suicide and suicidality were among adolescent females.

Suicide rate, % change since 2003, by age and sex
17 countries, three-year moving average



Available from <https://www.economist.com/graphic-detail/2023/05/03/suicide-rates-for-girls-are-rising-are-smartphones-to-blame>

SAMHSA reported “[F]rom 1999 through 2018, the suicide death rate doubled for females aged 15 to 19 and 20 to 24. For youth aged 10 to 14, the suicide death rate more than tripled from 2001 to 2018” (SAMHSA, 2020). Peer reviewed research published in the *American Journal of Public Health* reported rates of high school students reporting purposefully hurting themselves without wanting to die over the past 12 months ranged from 6.4 to 14.8 percent for males and 17.7 to 30.8 percent for females in 2015 (Monto et al., 2018).

From Twenge (2020):

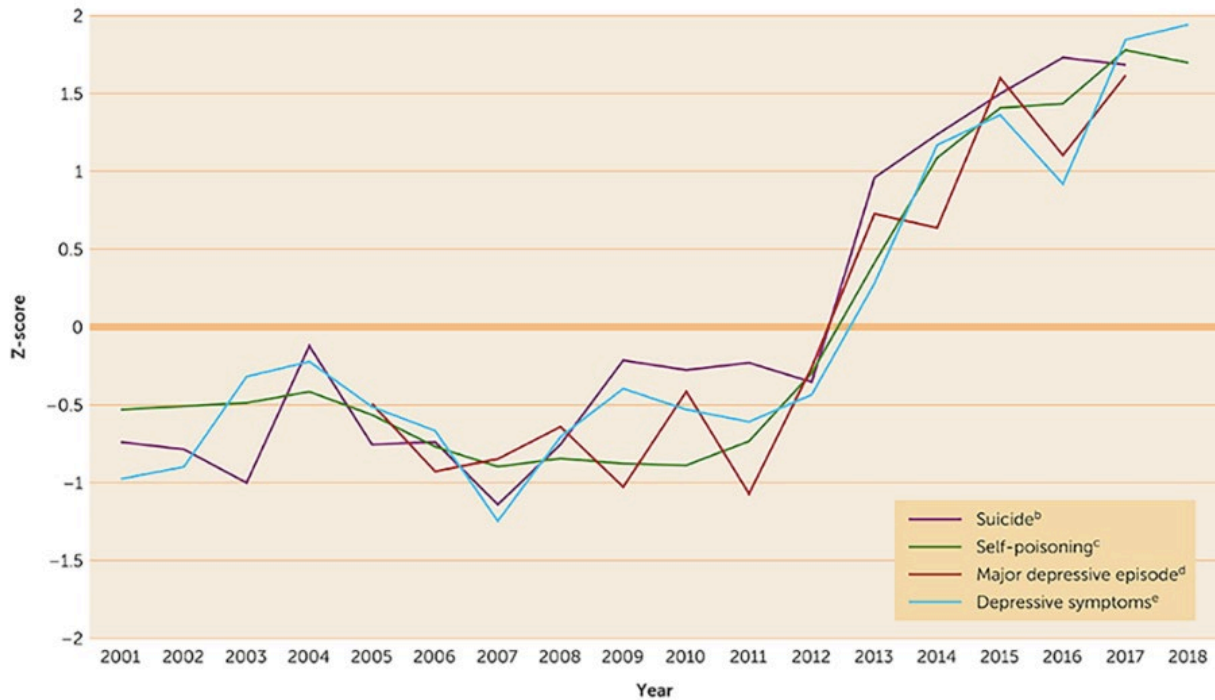
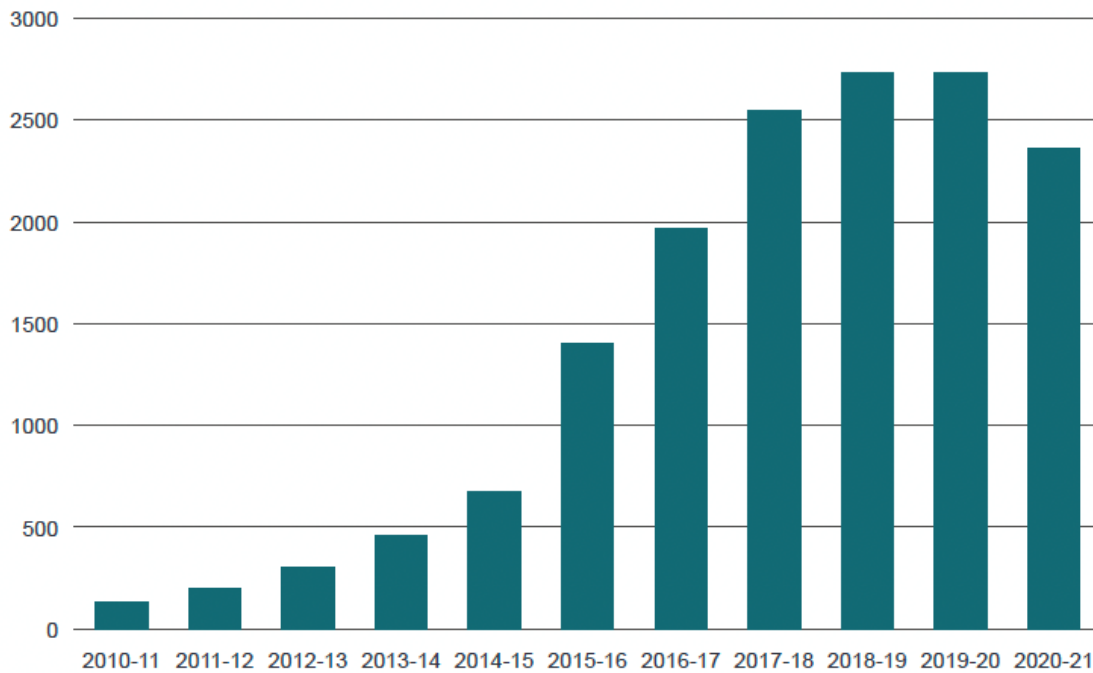


FIGURE 1. Indicators of poor mental health among U.S. girls and young women, 2001–2018^a

The timeline of these large, sudden increases in multiple indicators of psychological distress coincides exactly with the large, sudden increase in cases of youth expressing gender dysphoria, again primarily among adolescent females:

Figure 2: Referrals to GIDS, 2010-11 to 2020-21**From Cass (2022).**

The correlations among mental health, sex, gender dysphoria, and treatment outcomes are all much better explained as individual facets of mental health brought on by social media. The treatments associated with improvement are those that include psychotherapy. Dr. Brady's explanation for these correlations is not an explanation at all: It leaves the conspicuous simultaneity of these phenomena, the consistent demographic repeatedly being the most affected, and the ubiquity of social perception and attachment needs across them all as merely coincidental.

289. Adolescents use social media for social comparison and feedback, and social media use is associated with decreased mental health (Nesi & Prinstein, 2015). Social media exposure to ideals of beauty and appearance reduces body image, especially in adolescent females (Kleeman et al., 2018). Adolescent females are the demographic most vulnerable to social comparison and use social media as the basis of their self-image (Fioravanti et al., 2022),

especially so for those with co-morbid mental illnesses that interfere with social functioning, who are disproportionately influenced negatively by social media (Maheux et al., 2022). The mental illness profiles associated with adolescent-onset gender dysphoria are unlike those shown by the better- and longer-established types of gender dysphoria including in their overrepresentation of issues such as Autism Spectrum Disorder, which reflects problems in social functioning. The mental illness profile associated with sexual minority stress, in contrast, consists of anxiety and depression. Sexual minority stress does not cause Autism Spectrum Disorder, but it can increase vulnerability to social identity development. Although these data are still only correlational, they strongly suggest that to support is to reinforce the belief of these youth that they are not real women or real men because they do fit the exaggerated and perfected social images of femaleness and maleness now flooding their virtual social environments.

G. Dr. Brady is unaware of the status of the science of gender dysphoria.

290. In addition to lacking any mention of the international consensus of the science of adolescent-onset gender dysphoria, Dr. Brady claimed “There are no scientific studies demonstrating that non-medical treatments alone (such as therapy only) are effective in the treatment of gender dysphoria” (Brady decl ¶41). Dr. Brady’s claim is simply false and is easily shown to be false. No only do such studies exist, Dr. Brady cited one herself in her declaration (Brady decl ¶39): Costa et al. (2015). Costa compared a group of gender dysphoric youth receiving therapy only with a group receiving both therapy and puberty blockers. The result and conclusion of Costa was exactly the opposite of what Dr. Brady claimed in her report:

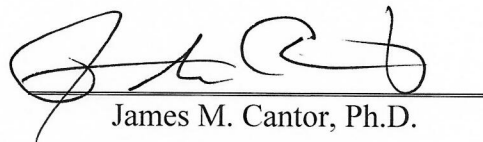
Psychological support and puberty suppression *were both associated* with an improved global psychosocial functioning in GD adolescence. Both these interventions may be considered effective in the clinical management of psychosocial functioning difficulties in GD adolescence (Costa et al., 2015, p. 2206, italics added).

Remarkably, where Dr. Brady did cite that study, it was to support of her claim that “Studies have demonstrated improvements in mental health following gender-affirming *medical* interventions” (Brady decl ¶39, italics added). That is, while Costa was entirely explicit that *both* psychotherapy and puberty suppression were effective in improving mental health, Dr. Brady instead related the half of that the finding for medical intervention, yet outright denied the very same conclusion for psychotherapy from the very same study that provided it in the very same sentence. Additionally, as already detailed within the present report (see Section XIII.B), six of the fourteen follow up studies of adolescent medicalized transition provided *both* psychotherapy *and* medicalized interventions, making it impossible to ascertain which might be responsible for any changes (or in what proportions). This same problem pertains to the other cohort studies Dr. Brady cited in claiming medicalized transition to improve mental health.¹⁰

291. The distinction between psychotherapy and medicalized transition is not merely an equivalent alternative, however: Because psychotherapy poses no objective risk of harm, whereas medicalized transition of gender poses substantial risk to objectively healthy and functioning tissue, the risk-to-benefit ratio imposed by medical ethics rejects medicalized transition until and unless it demonstrates proportionately greater evidence of benefit to outweigh its greater risks.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 2 Sept 2023.


James M. Cantor, Ph.D.

¹⁰ In her footnote 16, Dr. Brady cited de Vries et al. (2011) and de Vries et al. (2014), both of which included both psychotherapy and medical intervention, and she cited Chen et al. (2023), which did not mention or account for concurrent psychotherapy. The remaining two citations in footnote 16—Green et al. (2022) and Turban et al. (2020)—are survey studies. (Indeed, they are the same survey.) As emphasized already in the present report, surveys are not scientifically capable of demonstrating treatment effects.

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List of Appendices

Appendix 1

Curriculum Vita

Appendix 2

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

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO**

PAM POE, by and through her
parents and next friends, et al.

Plaintiffs,

v.

RAÚL LABRADOR, in his official
capacity as Attorney General of the State
of Idaho, et al.

Defendants.

Case No. 1:23-cv-00269-BLW

EXPERT DECLARATION OF WILLIAM J. MALONE, M.D.

Expert Declaration of William J. Malone, M.D.

1. I, William J Malone, M.D. hereby declare as follows:
2. I am over the age of 18 and submit this expert report based on my personal knowledge and experience.
3. I am a board-certified endocrinologist. I received my medical degree from NYU School of Medicine in 2003. I completed my residency in Internal Medicine at the Los Angeles County / University of Southern California Medical Center in 2006 and my fellowship in Endocrinology, Diabetes and Metabolism at the same institution in 2008.
4. I am board certified by the American Board of Internal Medicine in Endocrinology, Diabetes and Metabolism.
5. I am the medical director of the St. Luke's Magic Valley Endocrinology and Diabetes Clinic, in Twin Falls, ID.
6. I have held an appointment as an Assistant Clinical Professor of Endocrinology at the Idaho College of Osteopathic Medicine since 2021.
7. The opinions represented here are my own. I am not representing the opinions of other people or organizations.
8. The information provided regarding my professional background is detailed in my curriculum vitae. A true and correct copy of my curriculum vitae is attached.
9. I have been retained by the above defendant in the above captioned lawsuit to provide an expert opinion on the current state of evidence regarding hormones and surgeries as proposed treatments for gender dysphoria. I am not taking a position either for or against the current legislation in questions.

10. If called to testify in this matter, I would testify truthfully and based on my expert opinion.
11. I am being compensated at an hourly rate of \$400 per hour. My compensation does not depend on the outcome of this litigation, the opinions I express or the testimony I may provide.
12. My opinions contained in this report are based on (1) my clinical experience as an endocrinologist caring for thousands of patients over the last 15 years, specifically my experiences dealing with excesses or deficiencies of hormones, (2) my experiences evaluating patients who have or have had gender dysphoria, including patients who have taken or are taking hormones or who have undergone surgeries in efforts to relieve gender dysphoria, and those who have stopped treatments for gender dysphoria and now occupy the role of their birth sex (detransitioners), and (3) my evaluations of hundreds of studies and scientific reports pertaining to the use of puberty blockers, cross-sex hormones and surgeries as proposed treatments to relieve gender.
13. My academic writings on this topic include the following publications:
 - a. Jorgensen SCJ, Hunter PK, Regenstreif L, Sinai J, Malone WJ. **Puberty blockers for gender dysphoric youth: A lack of sound science.** *J Am Coll Clin Pharm.* 2022;1005-1007(9):3. doi:[10.1002/jac5.1691](https://doi.org/10.1002/jac5.1691)
 - b. Clayton A, Malone WJ, Clarke P, Mason J, D'Angelo R. **Commentary: The Signal and the Noise-questioning the benefits of puberty blockers for youth with gender dysphoria-a commentary on Rew et al. (2021).** *Child Adolesc Ment Health.* 2022 Sep;27(3):259-262. doi: 10.1111/camh.12533. Epub 2021 Dec 22. PMID: 34936180.
 - c. Malone, William, Roberto D'Angelo, Stephen Beck, Julia Mason, and Marcus Evans. 2021. **"Puberty Blockers for Gender Dysphoria: The Science Is Far from Settled."** *The Lancet Child & Adolescent Health* 5 (9): e33–34. [https://doi.org/10.1016/S2352-4642\(21\)00235-2](https://doi.org/10.1016/S2352-4642(21)00235-2).

- d. Malone WJ, Hruz PW, Mason JW, Beck S. **Letter to the Editor from William J. Malone et al: "Proper Care of Transgender and Gender-diverse Persons in the Setting of Proposed Discrimination: A Policy Perspective"**. J Clin Endocrinol Metab. 2021 Jul 13;106(8):e3287-e3288. doi: 10.1210/clinem/dgab205. PMID: 33772300; PMCID: PMC8277208.
 - e. Malone WJ. **Time to Hit Pause on "Pausing" Puberty in Gender-Dysphoric Youth**. Medscape. Sept 2021. <https://www.medscape.com/viewarticle/958742>
 - f. Malone WJ, Roman S. **Calling Into Question Whether Gender-Affirming Surgery Relieves Psychological Distress**. Am J Psychiatry. 2020 Aug 1;177(8):766-767. doi: 10.1176/appi.ajp.2020.19111149. PMID: 32741278.
 - g. Ring A, Malone WJ. **Confounding Effects on Mental Health Observations After Sex Reassignment Surgery**. Am J Psychiatry. 2020 Aug 1;177(8):768-769. doi: 10.1176/appi.ajp.2020.19111169. PMID: 32741279.
 - h. Laidlaw MK, Van Meter QL, Hruz PW, Van Mol A, Malone WJ. **Letter to the Editor: "Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline"**. J Clin Endocrinol Metab. 2019 Mar 1;104(3):686-687. doi: 10.1210/jc.2018-01925. PMID: 30476120.
14. I would like to underscore the particularly significant influence exerted by my letters to the editor (references b. and c. above), alongside those written by others, concerning a landmark Swedish registry study that examined a decade of follow-up data to evaluate the impacts of hormones and surgeries on the mental health of individuals with gender dysphoria. The original study, prior to correction, appeared to provide the first reliable evidence that gender transitions might positively impact mental health. However, upon closer examination, the study's methodology was revealed to be deeply flawed, leading to a misinterpretation of the data upon which the study was based. Our collective feedback prompted the publishing journal to request a re-analysis of the study's conclusions. This resulted in a subsequent correction that has significantly influenced the field's understanding of medical and surgical transitions, and altered the trajectory of youth

gender transitions in Europe (“Correction to Bränström and Pachankis” 2020). This analysis, drawing upon a highly dependable health registry dataset, indicates that medical and surgical transitions, when considered on a population-wide basis, do not appear to lead to clinically significant enhancements in mental health outcomes. The core premise underpinning the practice of youth gender transitions has been the expectation that early interventions would manifest in later mental health improvements. The inability to empirically demonstrate these anticipated improvements has been a contributing factor in the recent shifts within European medical practice, leading to a reversal in their approaches to gender transition, specifically the removal of these interventions from general medical practice and their re-labelling of them as unproven, experimental interventions.

These events highlight the integral role of letters to the editor to scientific discourse and methodological accuracy. Serving as critical tools in the scholarly landscape, letters to the editor enable researchers, scholars, and other readers to engage in an active dialogue with authors and editorial boards. By facilitating this dynamic exchange, they provide an opportunity for the identification, scrutiny, and rectification of errors or omissions in published studies. This not only promotes the integrity and credibility of the scientific record but also nurtures a culture of transparency, collaboration, and continuous learning within the scientific community. For a more comprehensive analysis of the Branstrom events, refer to paragraph 106 below.

Summary

15. Since approximately 2015, the Western world has seen a surge in the number of young people identifying as transgender and seeking puberty blockers, cross-sex hormones, and sometimes surgeries in an effort to relieve gender dysphoria. It is currently not known exactly how many young people in the U.S. are impacted, as the Centers for Disease Control and Prevention (CDC) only plans to start measuring the rate of transgender identification in youth using a reliable methodology starting in 2023 (CDC 2023). However, in 2017 and 2019 CDC data from select states suggest the rate of youth who either believe they are transgender or are questioning is in excess of 3% (Johns et al. 2019). A recent analysis of U.S. health insurance data showed nearly 5,000 and 13,000 U.S. minors began taking puberty blockers or cross-sex hormones respectively from 2017 to 2021 (*Reuters* 2022). The actual numbers may be significantly higher due to limitations in the data analysis. Most importantly the numbers of youth getting medicalized has been growing each year (Block 2023).

16. In contrast to historical demographic patterns (pre-pubertal boys comprised most cases), the majority of this new cohort are adolescent females with no childhood history of gender dysphoria (Kaltiala-Heino et al. 2015). These adolescents concurrently exhibit a markedly higher propensity than their peers to be afflicted with mental health and neurodiverse conditions, including depression, anxiety, attention deficit disorders, and autism. Typically, these mental health conditions emerge before the onset of gender dysphoria (Becerra-Culqui et al. 2018). It is not known why gender dysphoria develops. NHS England has recently concluded that “gender identity is multifactorial and influenced by both biological and social factors” (NHS England 2023a). Social

contagion has been hypothesized to be an explanatory factor in both the rise of new cases and the demographic shift towards females (Littman 2018; Hutchinson 2020). It is worth noting that Dr. Lisa Littman's 2018 paper, which described a rapid onset of gender dysphoria in teenagers without a history of gender distress as children, faced intense scrutiny upon its publication. Following a review by the publishing journal, some minor alterations were made to the document, but most importantly, the results section of the study remained unchanged. While some have attempted to characterize these events as undermining the credibility of her study, the findings continue to hold their place in the medical literature and they have also been corroborated by clinicians working with gender dysphoric youth (Hutchinson 2020).

17. Social contagion is a well-established psychological concept defined as the spread of behaviors, attitude and affect through crowds and other types of social aggregates from one member to another (Martínez, Jiménez-Molina, and Gerber 2023). Social contagion is a key contributing factor to a range of maladaptive adolescent behaviors in youth, from Tourette's-like tics that spread amongst teens via social media during the COVID lockdown, to eating disorders, to suicide attempts (Allison, Warin, and Bastiampillai 2014; Bridge et al. 2020; Heyman, Liang, and Hedderly 2021).
18. The number of gender dysphoric youth presenting in clinical settings with gender-related distress has surged by several thousand percent within the span of just a few years. In Europe, this increased demand has resulted in progressively longer waitlists for nationally-run gender clinics. Conversely, in the United States, the demand has been met through the proliferation of private gender clinics. The first youth gender clinic in the

U.S. opened in 2006; today, there are more than 100 such clinics (*Reuters* 2022). These figures do not include the individual clinicians or online clinics that provide hormones.

19. Medical and surgical transitions entail substantial risks and known harms, with sterility being of paramount concern for young individuals. The “gender affirming” hormonal and surgical treatment pathway, when administered according to the Endocrine Society’s current guidelines (Hembree et al. 2017), is expected to result in sterility (Dahl et al. 2006). For this reason, The Endocrine Society recommends fertility preservation prior to initiating hormonal interventions for gender dysphoria (Hembree et al. 2017). However, there currently exists no method to preserve the fertility of children who are treated according to the protocol set forth in their guidelines (Bangalore Krishna et al. 2019).
20. Normative medical ethics advocates that interventions that can lead to sterility in younger people should only be implemented with the primary intention of life preservation, or in rare instances of genito-urinary malformations necessitating reconstructive surgeries that result in the removal of the uterus or gonads (Burgart et al. 2017).
21. Despite numerous attempts to provide evidence for the life-preserving effects of “gender-affirming” hormones and surgeries, no credible evidence for such effects has emerged. Although gender transition is often promoted as a suicide-prevention measure (for example, through narratives such as “would you rather have a dead daughter or a live son”), no studies have successfully demonstrated a reduction in completed suicides or serious suicide attempts. Fortunately, suicides among gender dysphoric youth remain exceedingly rare events. The annualized rate has been estimated at 13 per 100,000 per

year, according to data from the largest pediatric gender clinic in the U.K. (Biggs 2022). Importantly, further analysis has shown no difference in suicide rates between those on the waitlist to be seen in the clinic and those already on the “gender-affirming” treatment pathway. In summary, there is no credible evidence to support the claim that “gender-affirming” care constitutes a life-saving intervention.

22. It is well documented that irreversible fertility decisions, made at a young age, carry a high risk of regret (Burgart et al. 2017). Adolescents and young individuals, whose brains have not yet reached full maturity, lack the necessary life experience and emotional maturity to make informed decisions about their future fertility (Vrouenraets et al. 2022; Levine, Abbruzzese, and Mason 2022; O’Rourke 2020; Giovanardi 2017; Casey, Jones, and Hare 2008). This is exemplified by the fact that the vast majority of such adolescents refuse fertility-preservation procedures when offered (Nahata et al. 2017). However, long-term research suggests that reproductive regret among those who underwent gender-reassignment in their youth is significant: 20-40% by the time the individuals are in the early 30s (Abbruzzese, Levine, and Mason 2023).
23. Practice guidelines, endorsed by authoritative medical associations or healthcare bodies, ought to embrace this principle of ethical medical practice: when there is no compelling evidence to suggest a life-saving advantage, procedures that threaten the fertility of minors, or are expected to result in sterility, should be strongly discouraged.
24. While infertility/sterility are known and certain harms of “gender affirming” medical and surgical interventions, there are additional adverse effects that are also expected. They include increased risks of heart disease, stroke, blood clots, breast and uterine cancer, liver dysfunction, hypertension, and osteoporosis (Cheng et al. 2019;

Baram et al. 2019; Nahata et al. 2017; Biggs 2021; Carmichael et al. 2021; Nota et al. 2019; Hembree et al. 2017). It is also an established fact that individuals who undergo gender reassignment have a markedly lower life expectancy (Jackson 2023). In addition, there is growing evidence for the risk of regret, several years later, over the irreversible changes to the body (Jorgensen 2023; Littman 2021; Vandenbussche 2022).

25. While the harms of “gender-affirming” interventions are a biological certainty, the benefits are highly uncertain. It is without question that puberty blockers and cross-sex hormones can significantly alter a person’s appearance. However, the achievement of masculinizing or feminizing effects on adolescent bodies is not the target outcome of hormonal and surgical interventions in a pediatric population. Instead, the primary outcome, asserted by the proponents of these interventions, is improvements in mental health and prevention of suicide. It is for this reason that “gender affirming care” has been billed by the proponents of these interventions as “life-saving” (“AMA Policy” 2023).
26. There are many individual studies that claim to have proven that “gender-affirming” interventions dramatically improve mental health. Such studies however, upon closer examination, are invariably found to suffer from multiple biases and designs making their finding unreliable (Abbruzzese, Levine, and Mason 2023; Clayton 2021; “UK NICE Puberty Blockers” 2020; “UK NICE Cross-Sex Hormones” 2020).
27. This fact underscores the bedrock principle of evidence-based medicine: individual research studies alone are inadequate to determine whether an intervention will achieve its desired outcome (Guyatt 2014). Therefore, medical professionals, and practice guideline creators must utilize *systematic reviews of evidence* whenever possible.

It is only through a comprehensive analysis of the entire body of evidence that the effects of an intervention can be determined.

28. In contrast to individual studies claiming mental health improvement from hormones and surgeries, every systematic review of medical and surgical transitions for minors and young individuals demonstrates a “low” or “very-low” degree of certainty in mental health improvements, and have not ever demonstrated reduced death by suicide (Baker et al. 2021; Ludvigsson et al. 2023; “UK NICE Puberty Blockers” 2020; “UK NICE Cross-Sex Hormones” 2020). Even a recent systematic review commissioned in the Endocrine Society’s own journal had to concede that the certainty of benefits is “limited by high risk of bias in study designs, small sample sizes, and confounding with other interventions,” further noting, “We could not draw any conclusions about death by suicide” (Baker et al. 2021).
29. In the absence of demonstrable mental health and life-saving benefits, and faced with the certainty of substantial harm (including infertility/sterility and irreversible bodily changes) as well as profound uncertainties regarding risks of heart disease, cancer, sexual function and bone health (Laidlaw 2019, Alzahrani 2019, Nota 2019, Carmichael 2021, Biggs 2021, Joint 2018, Shrier 2021), medical practitioners and guideline authors are ethically obligated to discourage such interventions. Several public healthcare authorities in Europe, including Sweden and England, now only allow these interventions in research settings, having reclassified the “gender-affirming” pathway from the category of “medical treatment” to that of “experimental interventions.”
30. The updated Swedish health authority guidelines suggest that both puberty blockers and cross-sex hormones will only be available in experimental settings subject

to much more stringent eligibility criteria, and subject to ethics approval (Socialstyrelsen [National Board of Health and Welfare of Sweden] 2022). England's health authority service has also specified that puberty blockers will only be available in research settings, with much more stringent eligibility criteria, and subject to ethics board approval; the decision on cross-sex hormones is due later this year. Based on the newly shared recommendations from both countries, the vast majority of gender dysphoric youth, i.e., those with adolescent-onset gender dysphoria or those with significant mental health comorbidities will not be eligible for any medical interventions. Instead, such cases will be offered standard psychiatric care for co-occurring mental illness, as well as counseling and psychological support for gender-related distress.

31. England's NHS has also underscored that for youth who are commonly presenting today, i.e., those with adolescent onset gender dysphoria, the uncertainty is even more significant than for early onset gender dysphoria. To address these knowledge gaps, England's NHS plan to establish a Research Oversight Board "to identify the key evidence gaps for children and young people with adolescent-onset gender dysphoria—recognizing that there is 1) even greater uncertainty in terms of the supporting evidence base, 2) less clinical experience with this particular cohort of patients and 3) little known about the natural history of gender dysphoria in this group" (NHS England 2023b).
32. These steps represent a clear reversal of the prior practice of wide availability of gender transitions for youth. This direction is consistent with the fact that historical studies of gender dysphoric youth (who previously presented with pre-pubertal onset of gender dysphoria) show that the majority (approximately 60-98%) of gender dysphoric youth will have resolution of their dysphoria by adulthood, without hormonal or surgical

interventions (Ristori and Steensma 2016; Singh, Bradley, and Zucker 2021). This fact is also acknowledged by the Endocrine Society: “... the large majority (about 85%) of prepubertal children with a childhood diagnosis did not remain gender dysphoric/gender incongruent in adolescence” (Hembree et al. 2017). The Endocrine Society acknowledges that “With current knowledge, we cannot predict the psychosexual outcome for any specific child” (Hembree et al. 2017).

33. Since the publication of the Endocrine Society guidelines in 2017, the presentation of gender dysphoria in minors continued to shift, with patients now much more likely to be female and with an adolescent-onset of distress. It has become evident that clinicians are *unable* to distinguish between youth for whom gender dysphoria constitutes a transient phase of their development, and those for whom it represents a lifelong condition.
34. For instance, at least two recent studies from the UK showed a 10-30% medical detransition rate among youth who underwent gender transitions in recent years, most just within a few years of starting their transition (Boyd, Hackett, and Bewley 2022; Hall, Mitchell, and Sachdeva 2021).
35. US data confirms this: a recent examination of a highly reliable dataset from the US Military healthcare system showed that nearly 30% of youth who commenced medical transition discontinued it within the first four years (Roberts et al. 2022). The same data source also revealed that puberty blockers and cross-sex hormones did not improve the youth’s mental health outcomes. The authors highlighted that this lack of mental health improvement stands in stark contrast to the results from adult and adolescent self-report surveys, which have indicated improvements in mental health

following “gender-affirming care” (Hisle-Gorman et al. 2021). In other words, while numerous individuals may report via surveys that hormones and surgeries have positively impacted their mental health, objective evidence supporting such improvements – such as decreased utilization of mental health care services– remains conspicuously absent.

36. While an increasing number of European health authorities have revised their treatment recommendations—following systematic reviews of evidence—to exclude hormones and surgeries from general medical practice, their counterparts in the United States have seemingly overlooked evidence-based medical practices and guideline-creation protocols.
37. For instance, a recent letter to the editor in *The Wall Street Journal* by Dr. Stephen Hammes, President of The Endocrine Society, defended the society’s endorsement of youth gender transitions. He asserted that the evidence presents a “clear picture,” declaring that “Gender-affirming care improves the well-being of transgender and gender-diverse people and reduces the risk of suicide” (“Endocrine Society Responds” *WSJ* 2023). Apart from serving as the President of The Endocrine Society, Dr. Hammes also co-directs a pediatric gender clinic at the University of Rochester. While he may be convinced from his experience that youth gender transitions enhance mental health, his personal view is not corroborated by the conclusions of systematic reviews of the evidence. Basing treatment recommendations on anecdotal experience is diametrically opposed to the fundamental tenets of evidence-based medicine. In response to this misrepresentation of the medical evidence, I joined 21 international experts in gender dysphoria research and practice to pen a letter of rebuke (*Wall Street Journal* 2023).

38. In a manner akin to this, the American Academy of Pediatrics (AAP) has recently reaffirmed its dedication to the medical and surgical transition of youth with gender dysphoria, while conspicuously neglecting to propose alternative methods to alleviate distress. This reassertion is paradoxical, as the AAP's current position on youth transition (Rafferty 2018) does not derive from a systematic review of existing evidence, and was harshly critiqued for misrepresenting evidence (Cantor 2020). While the organization's recent commitment to pursuing an independent systematic review of evidence in the future could be construed as a positive development, certain statements from its leadership cast significant doubts on this initiative's integrity. For instance, the AAP's chief executive, Mark Del Monte, declared, "The board has confidence that the existing evidence is such that the current policy is appropriate," and further added that "The decision to authorize a systematic review reflects the board's concerns about restriction to access to health care with bans on gender-affirming care in more than 20 states (NYT 2023)." Such pronouncements signal that the AAP's long-overdue systematic review is potentially being undertaken not with an open inquiry but with a pre-ordained conclusion in mind, and moreover, to further specific political ends. This approach stands in direct contravention of the guiding principles of evidence-based medicine (more below, para. 147-148).

39. The decision by the AAP to reaffirm medical and surgical gender transition and their potential lack of commitment to a truly independent evidence review process, along with the assertions by the World Professional Association for Transgender Health (WPATH) and The Endocrine Society that evidence favors gender transition—contrary to the conclusions of already completed systematic reviews—demonstrates a departure from

the principles of evidence-based medicine by US medical societies on this subject. The existing body of evidence does not support medical/surgical transition as a credible method for enhancing the mental well-being of individuals experiencing gender dysphoria. The failure of US medical societies to acknowledge this fact has subjected, and continues to subject, minors and young individuals to considerable harm, most notably the premature loss of fertility before they are able to provide truly informed consent.

What is the Purpose of Medicine?

40. The fundamental objective of medicine is to enhance an individual's health and well-being by providing therapeutic remedies for mental or physical ailments (Brölde 2001). A core principle underpinning this objective is that any medical intervention deployed should exhibit a higher degree of certainty regarding its benefits compared to its risks (Guyatt 2014). This principle becomes particularly significant when considering medical treatments that may result in the sterilization of minors, a process that inherently necessitates a special degree of ethical consideration.
41. Sterilizing interventions pose unique ethical challenges due to the irreversible nature of their consequences and the significant long-term impact they have on a minor's future quality of life. As these individuals are still in their developmental stage, they do not have the full capacity to comprehend the magnitude and permanence of such decisions, making the principle of informed consent especially complex to navigate in these circumstances (Vrouenraets et al. 2022; Levine, Abbruzzese, and Mason 2022; O'Rourke 2020; Giovanardi 2017). Reproductive regret is high in young people who

undergo sterilization procedures (K. M. Curtis, Mohllajee, and Peterson 2006). Youth with gender dysphoria are no exception: while most of these youth say they do not want to have children when asked, and do not partake in fertility preservation prior to beginning transition (Nahata et al. 2017), once they reach mature adulthood, a significant number have reproductive regret (Abbruzzese, Levine, and Mason 2023).

42. In instances where the benefits of a sterilizing medical intervention do not conclusively outweigh its risks, or when there is a balance of ambiguity between the two, the application of less invasive interventions should be prioritized. This approach safeguards patients from unnecessary harm. Specifically, in the context of youth with gender dysphoria, distress should be addressed with less invasive interventions, such as psycho-social support in the form of psychotherapeutic counseling.

43. In stark contrast to this approach, medical and surgical interventions have become commonplace, with less invasive alternatives insufficiently explored, and without any compelling evidence supporting the superiority of these more intrusive interventions over psychotherapeutic treatments. This escalation in youth transitions followed a non-evidence-based assertion by a small group of Dutch clinicians over 2 decades ago. Drawing on anecdotal experience, they hypothesized that certain adolescents would not see a resolution of gender dysphoria and downplayed the effectiveness of psychological interventions in alleviating distress (Cohen-Kettenis and Van Goozen 1997). They also posited that gender transitions would enhance the mental health of their patients. However, medical decision-making should be informed by robust evidence, not by anecdotal experience or beliefs. In this case, their assertions were neither guided by nor

have been subsequently substantiated by compelling evidence (Abbruzzese, Levine, and Mason 2023).

44. Driven by the unproven assertions of these Dutch researchers, many gender clinicians began to prioritize the most invasive medical interventions in efforts to relieve youth gender-related distress. Yet, despite multiple attempts to show lasting, credible evidence of improvement in mental health, current data show just the opposite: young people treated with gender-affirming interventions continue to struggle with significant mental health issues, and even commit suicide at a markedly higher rate than their non-gender-dysphoria peers (Chen et al. 2023; Hisle-Gorman et al. 2021).

45. When medical and surgical interventions failed to demonstrate tangible or enduring effects, a reassessment of this approach should have been advocated — for instance, a more comprehensive examination of the etiology of the condition, natural history (i.e., the course of the condition without any intervention), and response to psychotherapy. This is exactly what the European health authorities have done.

46. The Finnish Health Authority stated, following its systematic review of evidence (Pasternack et al. 2019), “The first-line treatment for gender dysphoria is psychosocial support and, as necessary, psychotherapy and treatment of possible comorbid psychiatric disorders” (Palko [Finnish Health Authority / Council for Choices in Health Care in Finland]. 2020).

47. The Swedish Health Authority stated, “Psychosocial support that helps the adolescent deal with natal puberty without medication needs to be the first option when choosing care measures. For those suffering from mental health problems, measures such as supportive counselling, psychotherapy, child psychiatric treatment and suicide

prevention need to be offered and adapted to the nature and severity of the mental health problem and the young person’s overall situation” (Socialstyrelsen [National Board of Health and Welfare of Sweden] 2022).

48. The English Health Authority stated, “The primary intervention for children and young people who are assessed as suitable for The Service is psychosocial (including) and psychological support and intervention; the psychoeducation main objective is to alleviate distress associated with gender incongruence and promote the individual’s global functioning and wellbeing” (NHS England 2023c).
49. In sharp contrast to these sensible, evidence-based actions by the European health authorities, the American medical establishment that is promoting gender-affirming interventions for minors, has recently begun to conflate psychotherapy for gender dysphoria with conversation therapy for gay youth. Thus, “helping the adolescent deal with natal puberty without medication,” which is now the only standard healthcare intervention offered to most gender-distressed youth in Sweden, Finland, and England, carries a stigma and liability risk associated with practicing “conversation therapy” in the U.S. (AMA 2022).
50. These actions reflect a departure within U.S. organized medicine from the principles of evidence-based medicine, which now resemble political lobby groups more than organizations committed to crafting credible guidelines to safeguard the long-term health of America's youth. Many individual practitioners disagree with the stance of their organization's leadership, but find themselves powerless to alter courses set by small committees. These committees, led by individuals resolute in their pursuit to promote the

medicalization of youth, simultaneously stigmatize and thereby limit access to non-invasive treatment alternatives.

51. In summary, responsible and ethical medical practice should uphold the welfare and future of young individuals, insisting on a rigorous analysis of the benefits versus risks of interventions. This framework cultivates a patient-centered approach that respects the developing and vulnerable mind of a young patient, emphasizes safety, and maintains the principle of *primum non nocere* - first, do no harm. I can assert that there is no other circumstance in medicine where sterilizing interventions are offered to young individuals in the absence of a life-threatening condition. Violating this tenet of medical practice removes an essential patient safeguard.

Best Medical Practice: Explanation of the process by which medical professionals, practice guideline creators, and healthcare authorities should determine best practice for their patients

52. The healthcare field employs a specific methodology, deeply rooted in the scientific method, to determine the efficacy and certainty of medical interventions aimed at improving a patient's health. Defined by the Oxford dictionary, the scientific method is “an approach science uses to gain knowledge based on making observations, formulating laws and theories, and testing theories or hypotheses through experimentation (“Scientific Method” n.d.).”
53. In essence, this involves researchers conducting a myriad of studies to analyze the impacts of various interventions, subsequently disseminating their findings in academic medical journals. However, it is critical to acknowledge that the quality of these studies varies considerably, with the strength and validity of the conclusions inherently

contingent upon the rigor of the study’s design. There is a hierarchy of quality of studies, with certain methodologies and designs affording more robust and credible conclusions than others (Guyatt 2014).

54. Considering any particular medical ailment, one might find hundreds or even thousands of distinctive studies of varying quality levels in the existing medical literature. To accurately ascertain the benefits and potential risks of any given intervention, evidence-based medicine requires that one must consider all the available evidence on the subject (via a systematic review), and then must subsequently assess the evidence for credibility. This approach involves collating and analyzing significant numbers of studies to draw a more comprehensive picture. The subsequent process that synthesizes this analysis into a clinical decision by a medical professional, or a recommendation by a guideline creator, is known as “evidence-based medicine.” The ultimate objective of healthcare—maximizing patient benefits while minimizing potential harm—is best achieved using this model predicated on systematic reviews of evidence (“Cochrane Handbook”, 2023).
55. Systematic reviews of evidence employ specialized analytical techniques to compile and summarize the body of evidence surrounding a specific topic, usually comprising several related but distinct studies. These techniques enable researchers to comprehensively determine how confident we are in the effects of a particular intervention, and perhaps more importantly, what remains *unknown* about the potential benefits and harms of any given healthcare intervention. The findings are then utilized to inform healthcare decisions and recommendations for clinical practice guidelines (“Journal of Clinical Epidemiology Series”).

56. This process of collating and estimating the effects of numerous related studies offers considerable benefits, including critical patient protections. Individual studies are unlikely to represent the complete body of evidence, and are susceptible to biases that can yield misleading predictions about an intervention's outcomes and inadvertently lead clinicians astray ("Journal of Clinical Epidemiology Series").
57. Clinical decision-making and guideline development that neglects to incorporate synthesized information from systematic reviews of evidence can pose a significant risk to patients. Hence, the reliance on the key principles of evidence-based medicine is not just a methodological preference but an essential component in ensuring patient safety, optimizing healthcare outcomes, and upholding ethical standards in medical practice. Very notably, in the case of gender dysphoria, The Endocrine Society guideline writers did not commission, or perform themselves systematic reviews of the evidence pertaining to the mental health outcomes from puberty blockers, cross-sex hormones or surgeries for young people. This is a critical failure of the guidelines, and invalidates any claim that they are evidence based (Block 2023).

Using an Evidence-Based Model to Assess Our Understanding of Best Treatment for Gender Dysphoria

58. Gender dysphoria is a condition in which a person has marked distress over their biological sex, which causes impairment in social, occupational or other important areas of functioning. Individuals with gender dysphoria experience a strong desire to be treated as the opposite sex or neither sex and/or to be rid of their sex characteristics, and/or the strong conviction of having feelings and reactions typical of the other sex (Kaltiala-Heino et al. 2018).

59. In the discourse on human biology and gender dysphoria, a fundamental fact remains: there exists only two biological sexes, and transition from one sex to another is biologically impossible (Bhargava et al., 2021). The biologically determined characteristics of males and females, which include differences in primary and secondary sexual characteristics, reproductive systems, and chromosomal makeup, are immutable. The occurrence of a small number of “intersex” conditions, or disorders of sexual development, does not nullify the binary nature of sex. Absent a disorder of sexual development, all humans will develop categorically as male or female. The disorders that interrupt normal sexual development do not result in additional sex categories.
60. The objective of hormonal and surgical interventions, hence, is not to facilitate a biological transition—an impossibility—but rather to alleviate distress by enabling changes in an individual's outward appearance, to more mirror the opposite sex. The ensuing sections focus on describing the efficacy of these interventions in improving mental health outcomes for individuals with gender dysphoria.

What Do Systematic Reviews Tell Us about The Etiology of Gender Dysphoria?

61. The etiology of gender dysphoria remains an area of significant medical debate and discussion, and to date, no systematic reviews of evidence have been conducted to shed further light on this topic. Two principal models of etiology currently stand in opposition: the psychosocial model and the innate/immutable model.
62. The innate/immutable model suggests that a transgender identification is biologically determined and immutable, meaning it cannot be changed. This model posits that a person's gender identity (sense of which sex they are) is an innate aspect of

their being, much like biological sex or eye color, and can exist independently of one's actual sex.

63. Conversely, the psychosocial model postulates that gender dysphoria arises from psychological events during early developmental stages and is, in general, mutable. This theory contends that a transgender identification is not an inherent trait but rather one that emerges due to various social and psychological factors (Littman 2018; Marchiano 2017; Hutchinson, Midgen, and Spiliadis 2020). Certain biological factors may predispose an individual to the development of gender dysphoria, but those factors are not deterministic.
64. While there is ample evidence that one's sex is usually correlated with one's gender identity, the evidence for a biological basis for a discordant "transgender identity" remains sparse (Saraswat, Weinand, and Safer 2015). The term "gender identity" was originally intended to describe how children develop a recognition of their biological sex, and how social roles can help shape that perception. Many of the studies attempting to establish a biological basis for transgender identification are confounded by factors such as sexual orientation and the use of hormone treatments, muddying the interpretive waters (Cohn 2022). An Endocrine Society Scientific Statement concluded recently, "while associations between gender identity, neuroanatomic, genetic, and hormone levels exist, a clear causative biological underpinning of gender identity remains to be demonstrated" (Bhargava et al. 2021). As such, the biological hypothesis for an innate gender identity and transgender identification continues to be largely theoretical.

What Do Systematic Reviews Tell Us About the Potential Benefits and Harms of Medical Transition, Specifically Puberty Blockers and Cross-Sex Hormones for People Under the Age of 26?

65. At the request of the Florida Agency for Health Care Administration, two researchers who both specialize in evidence synthesis at McMaster University conducted an extensive review of the current medical literature for systematic reviews published within the three-year period preceding May 16th, 2022 (Brignardello-Peterson and Wiercioch 2022, from here on referred to as the “Brignardello-Peterson review”).
66. The criteria for selection of systematic reviews were based on specific parameters. They included studies involving young individuals diagnosed with gender dysphoria who had been administered puberty blockers and/or cross-sex hormones, and/or undergone surgeries in efforts to relieve their distress. Additionally, these reviews had to report data related to the following eight key outcomes: gender dysphoria, depression, anxiety, quality of life, suicidal ideation, suicide, adverse effects, and complications.
67. In total, 61 systematic reviews met the inclusion criteria and were incorporated into the analysis. Of these, only 14 systematic reviews were determined to possess sufficiently high methodological quality to extract usable data, an unfortunate and dire reflection of the overall poor body of work in this field of medicine.
68. To ensure comprehensiveness and up-to-date relevance, the researchers also conducted a search for any additional studies published after the date of the last systematic review included in their study. The goal was to ascertain whether any new studies contained information that might alter the conclusions of the analyzed systematic reviews. Through this process, 10 additional studies were identified; however, none of

them would have resulted in alterations to the conclusions drawn from the included systematic reviews.

69. This robust “umbrella review,” or “review of systematic reviews,” conducted by seasoned and respected experts in evidence synthesis, offers to date the most valuable foundation for subsequent discussions about medical and surgical efforts to relieve gender dysphoria among young individuals.

70. Critiques have been levied against the Brignardello-Peterson review, the most prominent being that the authors are not experts in gender dysphoria. This line of critique would bear weight had the authors undertaken an *original* systematic review, wherein subject matter experts would indeed be necessary to select appropriate outcomes for evaluation. However, this “*umbrella* review” or “review-of-reviews” did not necessitate such an outcome selection process. Rather, the authors employed well-established and universally accepted criteria to discern the methodological rigor of the included systematic reviews (with outcomes already chosen by subject matter experts), then expounded on the findings of the reviews and appraised the certainty of these findings – tasks entirely suitable for methodological experts.

71. Another critique raised against the review is its publication venue – a public website maintained by the Florida Agency for Healthcare Administration rather than a conventional medical journal. This objection, however, is unwarranted. It is a standard practice for healthcare authorities to commission evidence reviews as part of their mandate to ensure the delivery of the highest quality of care to the populations they serve. For example, AHRQ (“Agency for Healthcare Research and Quality”) publishes

hundreds of systematic reviews but does not typically submit them to peer-review journals for publication.

72. This review by researchers from McMaster University, the educational institution known as “the home of evidence-based medicine,” represents one of the most comprehensive and unbiased evaluations of the current state of evidence concerning hormonal and surgical interventions for gender dysphoria. Under typical circumstances, such a review would be well-received across all sectors of the U.S. healthcare system committed to enhancing the health outcomes of patients with gender dysphoria.
73. Lastly, even in the absence of the Brignardello-Peterson review, an independent evaluation of the systematic reviews included in their umbrella report would yield a similar conclusion: there exists only low or very-low certainty of evidence supporting the benefits of hormonal and surgical interventions. For example, a systematic evidence review published in The Endocrine Society’s own journal (Baker et al. 2021), failed to show any convincing evidence of improvements in mental health from hormonal interventions, and a recent systematic review from Sweden looking specifically at adolescents found insufficient evidence to determine the effects of interventions on mental health (Ludvigsson et al. 2023). Systematic reviews by the UK’s National Institute for Health and Care Wellness (NICE) also found no evidence that puberty blockers improved mental health, and only low certainty evidence that cross-sex hormones improve mental health, noting the findings of possible improvements were unreliable, and had to be balanced with the significant risks of these interventions (Hahn et al. 2016; “UK NICE Cross-Sex Hormones” 2020).

74. However one cuts the data, the very-low certainty or insufficient-to-determine result is the same. It is this lack of credible evidence of improvement in mental health, coupled with the certain sterility of completed transition that has prompted numerous European countries to reconsider their approach (more below). They are now advocating for psycho-social support (counseling) as the primary therapeutic intervention, allowing patients to alleviate distress without resorting to hormonal or surgical interventions. Hormonal interventions will be restricted to research settings only, the details of which are yet to be determined.

Effects of Puberty Blockers

75. The Brignardello-Peterson review revealed significant gaps in our understanding of the impact of puberty blockers on individuals with gender dysphoria. Specifically, the analysis of two of the most reliable systematic reviews demonstrated a complete lack of studies comparing outcomes between individuals who used puberty blockers and those who did not. This absence of comparative analysis is a crucial limitation that precludes the formulation of definitive conclusions regarding the effects of puberty blockers.

76. While the review identified studies reporting outcomes following the use of puberty blockers, these studies lacked a comparative group not using these interventions (i.e. non-comparative studies). This absence of control groups and lack of clinically significant treatment effects resulted in conclusions characterized as “low” or “very-low” certainty. In the context of evidence synthesis, low or very-low certainty signifies limited confidence in the predicted outcome, with the recognition that actual results may deviate significantly from the projected estimates.

77. According to the low and very-low certainty evidence gathered, the claims that puberty blockers reduce the severity of gender dysphoria, or depression and anxiety, were not found to be trustworthy. The impact of puberty blockers on suicidality is completely unclear, with no discernible evidence indicating whether these interventions produce positive, negative, or neutral effects.
78. These results mean that there is *no reliable certainty* that positive outcomes will ensue from the use of puberty blockers. Further, without studies with comparative groups receiving non-hormonal interventions, it remains unknown whether such individuals might experience better, the same, or worse outcomes than those who are treated with other measures (counseling).
79. Furthermore, research indicates that the majority of children treated with puberty blockers eventually proceed to cross-sex hormones (Brik et al. 2020; Carmichael et al. 2021; van der Loos et al. 2023), resulting first in chemical sterility and subsequently surgical sterility. This trajectory contrasts starkly with historical data, which showed that a significant majority of children with gender dysphoria experienced natural resolution or diminishing of their distress upon passing through puberty naturally (Ristori and Steensma 2016; Singh, Bradley, and Zucker 2021).
80. The current Endocrine Society guidelines suggest halting a child's development in early puberty, leading to a transition process involving cross-sex hormones and genital surgeries, ultimately resulting in sterilization (Hembree et al. 2017). However, given that sterilizing interventions should be reserved for life-threatening conditions and considering that puberty blockers have not been demonstrably superior to non-hormonal interventions, such a protocol is currently ethically indefensible.

81. To summarize, the existing body of evidence regarding puberty blockers is insufficient to ascertain if they improve mental health outcomes (including suicidality) in individuals with gender dysphoria. Puberty blockers cannot be considered a pause button, as the majority of youth who commence puberty blockade progress to cross-sex hormones. It is unequivocal that medical and surgical transitions threaten the fertility of minors and young people, a severe harm that is ethically unacceptable outside of life-threatening situations.

Effects of Cross-Sex Hormones

82. From the examination of four methodologically reliable systematic reviews, the Brignardello-Peterson review found comparable limitations in existing studies on the use of cross-sex hormones for gender dysphoria treatment. Crucially, none of these studies compared the outcomes (excluding breast cancer) between a group of patients receiving cross-sex hormones and another not receiving them across eight measures (gender dysphoria, depression, anxiety, quality of life, suicidal ideation, suicide, adverse effects, and complications). This lack of comparative data presents a significant impediment to drawing meaningful conclusions about the effectiveness of cross-sex hormones in treating gender dysphoria.
83. The review did identify studies documenting outcomes following the use of cross-sex hormones (non-comparative studies). However, these studies lacked a control group not receiving such treatment, leading to conclusions that can only be deemed of “low” or “very-low” certainty. As detailed above in the context of puberty blockers, low or very-

low certainty implies a limited confidence in the expected outcomes and acknowledges the potential for significant divergence from projected results.

84. According to this low or very-low certainty evidence, it is *unclear* what impact cross-sex hormones may have on the severity of gender dysphoria, depression, necessity for depression treatment, anxiety, need for anxiety treatment, the degree of suicidality, or the requirement for treatment due to suicidality or self-harm. These findings signify a lack of reliable certainty that the use of cross-sex hormones will lead to improvements in mental health.
85. To elaborate further, the authors of the UK NICE reviews expressed concerns that the statistical phenomenon known as “regression to the mean” might complicate the findings of the studies on the effects of cross-sex hormones (“UK NICE Cross-Sex Hormones” 2020). This term refers to the tendency for patients who seek interventions at the peak of their distress to often show improvements in symptoms over time, independent of any specific intervention provided. An improvement could simply be attributable to the passage of time from the acute events that prompted them to seek help. Furthermore, there are concerns that the mere circumstance of having a team of professionals attentive to a distressed young person might itself improve well-being, regardless of any hormonal or surgical interventions that are administered (Clayton 2022).
86. An additional issue with the studies we have on cross-sex hormones is the insufficient attention paid to potential harm from the interventions. The absence of long-term studies on the effects of decades of cross-sex hormone use prompted the authors of the UK’s NICE guidelines to declare that the long-term safety profile in young people

remains unknown. It is ethically indefensible to employ interventions with unknown long-term safety profiles, particularly on minors, except in life-threatening situations.

87. In summary, the current body of evidence regarding cross-sex hormones is insufficient to establish whether their use improves mental health outcomes (including suicidality) in individuals with gender dysphoria. Moreover, it remains unknown how these effects would compare with those from non-hormonal therapies. However, it is certain that medical and surgical transitions involving cross-sex hormones threaten the fertility of minors and young individuals, an outcome that constitutes an unacceptable harm unless in response to a dire or otherwise life-threatening situation.

Effects of Surgeries

88. A total of 15 systematic reviews of surgeries between 2020 and 2022 were evaluated by the Brignardello-Peterson review, all of which were categorized as being of low or critically low methodological quality. Notably, none of these systematic reviews or their included studies compared the outcomes of gender dysphoria, depression, anxiety, or suicidality to a control group who did not undergo surgery. As such, the impacts of surgeries on these outcomes, or the differences in these outcomes between patients who underwent surgery and those who did not, remain indeterminate. This substantial limitation precludes the drawing of meaningful conclusions about the potential efficacy of surgeries for the treatment of gender dysphoria.

89. While these systematic reviews addressed issues of quality of life, depression, and regret, they too lacked a comparison group. As a result, discerning any change in these outcomes compared to individuals who did not have surgery is impossible. Similarly, the

effects of surgeries on measures of gender dysphoria, depression, anxiety, or suicidality remain unknown.

90. The review did identify studies that reported on quality of life and regret in groups of individuals who had undergone surgery. However, these studies lacked a control group and exhibited other methodological flaws, leading to conclusions of “low” or “very-low” certainty. Just as described in the context of puberty blockers and cross-sex hormones, low certainty signifies that confidence in the anticipated outcome is limited and the actual result may differ significantly from the expected outcome.
91. According to this low-certainty evidence, individuals undergoing surgery for gender dysphoria may exhibit low levels of regret. It is critical to underscore that this finding of low regret is based on a single systematic review (Bustos 2021) which has notable methodological limitations (Expósito-Campos and D’Angelo 2021). Specifically, the studies within the review have short follow-up times of only 1-2 years post-transition, whereas regret typically manifests around 8 years post-transition (Dhejne et al. 2011; Chantal M. Wiepjes et al. 2018). Moreover, the study contributing nearly half of the participants in the Bustos review experienced a significant 36% loss to follow-up, which undermines the reliability of the regret estimates.
92. However, even if mature adults have low regret from surgeries and report high levels of satisfaction, this cannot be used to argue that such services are medically necessary for minors. The goal of the treatment is not “low regret” or “high satisfaction” – other plastic surgery procedures, such as blepharoplasty (eyelid surgery) or facelifts characteristically have low regret and high satisfaction rates as well. The specific goal of “gender-affirming” treatments, including surgeries, is the improvement of objective

measures of mental health functioning. NHS England has summarized these goals in an apt way: “Treatment of individuals with gender incongruence/dysphoria ... aims to ameliorate the potentially negative impact of gender incongruence/dysphoria on general developmental processes, to support young people and their families in managing the uncertainties inherent in gender identity development and to provide ongoing opportunities for exploration of gender identity” (NHS 2023a). There is no evidence that irreversible surgery for minors ameliorates the potentially negative impact of gender dysphoria on general development, or that it promotes exploration of a transgender identity. Instead, arguably it forecloses exploration by making a permanent change to one’s body. This is the reason why none of the aforementioned European health authorities recommend gender related surgery to youth under 18.

93. In summary, the current evidence base regarding surgeries is insufficient to determine whether they lead to significant positive effects on mental health outcomes (including suicidality) in individuals with gender dysphoria. Furthermore, it is impossible to determine whether any effects would be more or less beneficial than those from non-hormonal therapies (counseling). However, it is certain that minors and young individuals who undergo medical and surgical transition will become sterilized, an outcome deemed unacceptable except in dire or otherwise life-threatening circumstances.

**Commentary on Additional Relevant Studies Released Since Publication of the
Brignardello-Peterson Review (5/16/2022)**

94. An examination of the medical literature indicates that subsequent to the publication of the Brignardello-Peterson review and up until the completion of my report, no studies have been published which would change the outcomes of the systematic

reviews conducted and analyzed to date. To underscore this point, findings from only one of two potential study designs could prompt a reclassification of the findings of the systematic reviews thus far, in a manner that could support medical and surgical interventions in individuals under the age of 26. These are: (1) a *controlled* trial where hormone therapies and surgeries are compared to an absence of such interventions; or (2) an observational trial demonstrating a *substantial* treatment effect. As it stands, neither of these study types has been published since completion of the Brignardello-Peterson review.

95. Additionally, the UK's National Institute for Health and Care Excellence (NICE) conducted an updated search on July 7, 2023, for any studies that might alter the conclusions of *their* 2020 systematic reviews on puberty blockers. To restate, the reviews found no evidence of improvements in mental health resulting from puberty suppression. The updated literature search and subsequent analysis by NHS England did not reveal any new study findings that modify the conclusions of the original NICE systematic reviews of evidence (NHS England 2023d) .

96. It is worth commenting on one study published in the last year that has garnered much discussion. It is a two-year, NIH-funded observational study that explored the impacts of puberty blockers and cross-sex hormones on patients aged 12 to 20. This investigation revealed changes in depression, anxiety, and life satisfaction that were clinically inconsequential. It is also essential to note that, tragically, two patients completed suicide during the course of this study. Due to the absence of a control group and incidents of loss to follow-up, it is not possible to ascertain whether any changes in mental health resulting from hormonal therapies or surgeries occurred, the potential

causes for such changes, if they did occur, nor how these might compare to a cohort of patients not undergoing hormonal treatments (Chen et al. 2023). Consequently, this type of study did not offer any additional meaningful insights regarding the mental health effects of puberty blockers and cross-sex hormones. Instead, it serves to heighten concerns regarding the absence of clinically significant treatment effects from interventions with known adverse outcomes, especially given the rate of suicide observed in this study is >40 times higher than would be expected in a general population of youth.

How Do Systematic Review Translate into Clinical Practice Guidelines?

97. Guideline creators must translate the degree of confidence in the effects of medical interventions into recommendations for or against these interventions.
98. High or moderate confidence in an intervention's positive effects typically prompts a strong recommendation. This occurs when benefits decidedly outweigh harms, and when nearly all fully informed patients would make the same choice, thus justifying the intervention (Guyatt 2014).
99. Contrarily, when confidence in an intervention's positive effects is low or very-low, and the balance between benefits and harms is ambiguous or contested among fully informed patients, a weak recommendation is typically put forward. In these scenarios, patient values and preferences, along with the intervention's cost, bear significantly on the decision to employ the intervention (Guyatt 2014).
100. In situations marked by uncertain benefit but high confidence in harm, a strong recommendation against the intervention is warranted (Guyatt 2014).
101. This last scenario is pertinent to the medical and surgical transition of young people. As per the current guidelines of the Endocrine Society, complete medical and

surgical transition results in an individual's sterilization—an irreversible harm in a minor barring life-threatening circumstances.

102. Although medical and surgical transitions have been posited as life-saving, I've demonstrated above how comprehensive systematic reviews of the medical literature have not corroborated these claims. Medical and surgical transitions have not been shown to reduce mortality rates. When the potential benefit is uncertain and the risk of harm is high, clinicians, guideline creators, and health authorities are obligated to recommend against such interventions.
103. In the context of clinical interventions, it is important to explain that there can be circumstances where low-quality evidence *can* lead to a strong recommendation for a particular treatment. This typically occurs when an observational study reveals *substantial* treatment effects. For instance, controlled trials comparing outcomes in patients with type 1 diabetes receiving insulin versus those not receiving insulin are not necessary to make a strong recommendation for insulin usage in such patients, and would be unethical. The reason is that observations of patients with type 1 diabetes treated with insulin showed immediate life-saving effects. In contrast, large treatment effects (clinically significant and sustained improvements in mental health, including suicidality) derived from observational trials in minors and young adults—which could potentially justify the use of hormones and surgeries for gender dysphoria—have not been demonstrated.
104. One might then ask, have there been observable and substantial positive effects of hormonal and surgical interventions in *adults* who have undergone long-term treatment? If so, such effects might suggest that initiating similar treatments during

childhood could be reasonably expected to lead to enhancements in mental health outcomes later in life, and could influence adolescent guidelines.

105. The answer to this question is no. There is an absence of evidence indicating clinically significant positive impacts in adults. Notably, the suicide rates among individuals with gender dysphoria who have sought to alleviate their distress with hormonal and surgical interventions remain alarmingly high (Dhejne et al. 2011).

106. The most compelling lack of improvement in mental health in adults comes from an above mentioned (paragraph 14) landmark long-term study analyzing over a decade of follow-up data from the Swedish healthcare registry: there was no discernible evidence of benefits derived from medical or surgical transition (Bränström and Pachankis 2020). The initial publication was marred by multiple methodological inaccuracies, which were subsequently corrected following a reanalysis. This intervention was instigated by a series of letters to the editor from concerned clinicians and researchers, including myself (Malone and Roman 2020; Ring and Malone 2020; Van Mol et al. 2020; D. Curtis 2020; Wold 2020; Landen 2020). The lack of a discernible treatment effect in the corrected study stunned the field of gender medicine and has far-reaching implications for the way we think about gender transition. It is unlikely that a randomized trial comparing hormonal and surgical interventions to non-intervention will ever be conducted as it would be difficult in today's environment to find patients willing to participate in such a trial. Therefore, treatment effects must be discerned from observational studies, such as the one conducted by Bränström and Pachankis. If any treatment effect were to be observed, it would likely be in a country like Sweden, due to its centralized healthcare registry (thus reducing loss to follow-up), and the widespread societal acceptance of

individuals who have undergone transition. The fact that no treatment effect was observed under these optimal conditions suggests that medical and surgical transitions are unlikely to yield any generalizable positive treatment effects on mental health. While medical transition may persist as an on-demand, non-evidence-based body modification procedure, similar to other cosmetic interventions, the current totality of evidence indicates it cannot currently be regarded as a viable strategy for improving the mental health of patients suffering from gender dysphoria.

107. Likewise, a systematic review conducted by the Center for Medicare and Medicaid in 2016 did not show positive impacts of hormonal or surgical interventions in Medicare age adults (Syrek Jensen et al. 2016). Consequently, the Center for Medicare and Medicaid Services recommended against the routine use of hormonal or surgical interventions for Medicare recipients, and that position has not changed. In an extraordinary commentary, the systematic reviewers expressed concern that the high long-term suicide rate among individuals who had undergone gender transitions makes it possible that the surgical procedures themselves were *contributing* to elevated suicide risk.

108. In conclusion, after a thorough evaluation of the existing body of evidence through the systematic review process, guideline authors should assess the certainty of benefits and harms, solicit values and preferences from pertinent stakeholders when appropriate (including patients and healthcare economists), and then formulate a recommendation based on the strength of the evidence.

The Endocrine Society Guidelines Are Fundamentally Flawed

109. Unfortunately, the normative guideline process was not adhered to by the authors of the Endocrine Society guidelines (Hembree et al. 2017). Deviating from this well-established guideline development process has placed patients at risk of harm, especially in the case of minors and young adults.
110. During the course of their 2017 guideline development, The Endocrine Society did not perform themselves nor commission others to perform systematic reviews evaluating the mental health impacts of puberty blockers, cross-sex hormones or surgeries on young people. They therefore had no reliable basis upon which to make any recommendation about treatment. This is a stunning failure of the organization on such a critically important topic. It is important to note that the Endocrine Society guidelines carry the most weight for clinicians, usually endocrinologists, making decisions about whether or not to administer hormones to patients with gender dysphoria.
111. In place of the usual systematic reviews to assess the benefits, the guideline authors relied primarily upon two observational studies (Annelou L.C. de Vries et al. 2011; A. L. C. de Vries et al. 2014) completed more than 9 years ago in the Netherlands (the home of the so-called Dutch protocol). Those studies have been found to suffer from serious methodological shortcomings calling into question the results (Abbruzzese, Levine, and Mason 2023). These studies showed young patients were generally satisfied with the way their bodies looked shortly after completing medical transition, but that these modifications to appearance did not result in any clinically reliable or meaningful improvements in mental health. The studies were marred by selection bias (only the most physically and mentally mature youth who completed the puberty blocker intervention

were included in the final analysis), and the reported disappearance of gender dysphoria has been completely invalidated due to the methods used to assess gender dysphoria. The Dutch researchers themselves, at a WPATH symposium in 2022, noted that while their original patients continued to score low on gender dysphoria, over half reported genital shame, and nearly 25% continued to feel inadequate about their bodies (Abbruzzese, Levine, and Mason 2023).

112. Additional shortcomings include the fact that psychotherapy was provided to each subject making it impossible to establish effects of hormones and surgeries vs counseling, and harms of transition were not adequately studied or reported on. Up to 7% of patients suffered severe morbidity or mortality. All subjects were rendered sterile at the end of the study since their reproductive organs were removed (Abbruzzese, Levine, and Mason 2023). It is also notable that all but one youth were same-sex attracted (one reported “no attraction”). This raises serious concerns that the study protocol in fact sterilized gay youth.

113. To reiterate, the Endocrine Society guidelines did not incorporate any systematic reviews looking at mental health outcomes from puberty blockers, cross-sex hormones or surgeries in young people. One of the systematic reviews that did inform the Endocrine Society guidelines looked at harms from puberty blockers and cross-sex hormones, but it is deeply problematic (Singh-Ospina et al. 2017). Its analysis of the risks to bone health combined studies on bone health of adults who went through uninterrupted puberty, with only a single study of adolescents on puberty blockers, who had bone density accrual significantly stunted. Inexplicably, the Endocrine Society then concluded there is

minimal bone health risk for both adolescents and adults, despite this flawed methodology.

114. Despite lacking any systematic assessment of benefits of medical/surgical transition for adolescents, and despite an insufficient analysis of risks, the Endocrine Society’s guideline authors, quite inexplicably, still recommended transitions. In doing so, they stated that they prioritized cosmetic changes to the body over potential harms:

“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 psychosocial well-being, and a lower value on avoiding potential harm from early pubertal suppression” (Hembree et al. 2017).

115. Not only was the *absence* of a substantive basis for these recommendations problematic, but such prioritization is also indefensible under standard guideline development, considering that the sterilization of a young individual is a significant harm.

116. Should the guideline authors consider the sterilization of a minor to be a negligible harm, their position would diverge sharply from conventional medical ethics and societal norms. In such circumstances, it becomes incumbent upon clinicians, and healthcare organizations, to dismiss these guidelines, thereby protecting minors from unnecessary sterilization.

117. One way the Endocrine Society guideline authors avoided acknowledging the substantial harm of puberty blockers and cross-sex hormones is that they assessed the potential benefits and harms of each component of medical and surgical transition independently (again, despite having no foundation upon which to make such assessments). This misleading approach permitted the treatment of puberty blockers to be viewed as an isolated and somewhat reversible intervention. For instance, a child

undergoing treatment with puberty blockers for two years would be unlikely to face sterility, hence, when assessed in isolation, the low certainty of the benefits of puberty blockers could appear, at first glance, to be more balanced with the potential harms.

118. However, it is crucial to consider that the vast majority of children (>95%) treated with puberty blockers progress to cross-sex hormones (Brik et al. 2020; Carmichael et al. 2021; Van Mol et al. 2020). This progression significantly amplifies the likelihood of sterility, which is a certainty if puberty blockers are initiated in early puberty, as currently recommended by the Endocrine Society guidelines. Thus, puberty blockers cannot be seen as a stand-alone intervention; they are the initial step in a sequential series of treatments that, if fully pursued, result in sterility. Therefore, the potential harms of puberty blockers extend beyond the immediate effects of the drug itself: any potential benefits must be evaluated in the context of the full spectrum of potential harms associated with the entire medical transition pathway, the most severe of which for a minor or young person is sterility.

119. In summary, given that the Endocrine Society guideline authors deviated from standard guideline development processes, seemingly trivialized the significance of sterilizing a minor, and moreover evaluated each stage of transition in isolation versus in aggregate, it is imperative that clinicians, healthcare organizations, and insurance providers do not rely on the assurances implied by these guidelines that the benefits of these interventions outweigh the risks.

The WPATH Guidelines Are Even More Troubled

120. The guidelines of the World Professional Association for Transgender Health (WPATH) also notably deviate from the principles of evidence-based medicine. Instead, they promote access to hormones and surgeries, anchored solely on the concepts of “bodily autonomy and self-determination.” Their objective is to facilitate “lasting personal comfort with their gendered selves,” with the intent to “optimize physical health, psychological well-being, and self-fulfillment” (Coleman et al. 2022). Alarming, the most updated guidelines have expunged the ethics chapter and minimum age requirements for hormonal or surgical interventions. They also introduce eunuch identities (males desiring to remove their genitalia) as a valid gender identity for a minor, and endorse a number of non-binary (neither male nor female) procedures (such as construction of a neo-vagina while retaining a penis, or modification of the appearance of female breasts using nipple repositioning to look as though they were enlarged breast on a male), as medically necessary. Access to hormones and surgeries are labeled as necessary independent of the presence of gender dysphoria.
121. Specifically regarding adolescent treatment, the WPATH guidelines make the erroneous claim that the scarcity of studies on adolescents renders a systematic review impossible. This assertion is fundamentally incorrect. First, as demonstrated by the UK, Swedish, and Finnish systematic reviews of evidence, as well as the review commissioned by WPATH itself (Baker et al. 2021), such systematic reviews demonstrably can be done. Second, even if few relevant studies exist, this paucity is not a valid reason to forgo a review. Even “empty reviews,” characterized by the absence of relevant studies, play a crucial role in evidence-based medicine, as they signal to

decision-makers the gaps in knowledge regarding a particular medical area (Gray 2021). Systematic reviews function not only to highlight what is known about a particular subject but also to identify what remains unexplored.

122. Analogous to the Endocrine Society guidelines, the absence of systematic reviews on mental health outcomes in adolescents inhibits the WPATH guideline authors from performing an adequate risk versus harm analysis, and thereby precluded evidence-based recommendations for adolescents. A systematic review (Baker et al. 2021) examining the effects of hormones on quality of life (QoL), depression, anxiety, and suicide on people of *all* ages is referenced in the WPATH 8 Guidelines. Its findings were consistent with other systematic reviews in this area: low certainty of evidence for QoL, depression, and anxiety, and inconclusive evidence regarding suicide.
123. In conclusion, the WPATH guidelines, erroneously and ambitiously labeled as a “standard of care,” are anything but in the traditional definition of the term. The authors did not adhere to the rigorous evidence review process essential for determining the potential benefits versus harms of interventions. As such, the WPATH guidelines as well cannot serve as a reliable source for clinicians to ensure the safety of their patients, particularly minors and young people.

European Countries Have Disregarded US Guidelines and Move Away from Youth Gender Transitions, Advocating Psycho-social Support (Counseling), as First Line Therapy

124. Several progressive European countries with an extensive history in treating youth with gender dysphoria have significantly adjusted their approach in light of recent developments. Upon reviewing the accumulated data (via systematic reviews), these

nations – guided by the principles of evidence-based medicine – have concluded that the evidence to support such interventions is insufficient to substantiate their use in general medical practice. This development has led to the adoption of a much more cautious approach, wherein such interventions are categorized as medical experiments to be conducted only within rigorously controlled research settings and under tightly restricted eligibility criteria. The effect of this change will be a dramatic reduction in the number of adolescent transitions.

125. In 2020, Finnish clinicians reported that adolescents grappling with co-existing mental health conditions displayed no notable improvement post-hormonal interventions (Kaltiala et al. 2020). A systematic review of evidence (Pasternack et al. 2019) led to a decisive move in July 2020. The Finnish Health Authority (PALKO/COHERE 2020) issued guidelines recommending psychotherapy as the first line treatment for youth experiencing gender dysphoria, while reclassifying hormonal interventions for youth as experimental, and restricting their use to research settings only. This will likewise dramatically reduce the number of adolescent transitions.

126. In a similar vein, the Swedish National Board of Health and Welfare (NBHW) updated its service guidelines for the same demographic in December 2022, following a comprehensive review of available evidence published thereafter (Ludvigsson et al. 2023). The NBHW, based on its assessment of the evidence, concluded that decisions regarding treatment of youth with gender dysphoria are influenced by low-quality evidence. It further noted that the potential risks associated with hormonal interventions outweighed the potential benefits at the population level, resulting in the elevation of psychological and psychiatric care as the first-line therapy.

127. England's National Health Service (NHS), after conducting its systematic reviews (“UK NICE Puberty Blockers” 2020; “UK NICE Cross-Sex Hormones” 2020), is shutting down its leading gender clinic due to concerns over child safeguarding (*BBC News* 2022). The NHS is progressively moving away from the gender-affirmative care model, opting instead for a model grounded in developmental understanding that emphasizes psychoeducation and psychotherapy. The administration of puberty blockers will be restricted to research settings, and the social transition of prepubertal children is now regarded as a psychosocial intervention carrying inherent risks (NHS 2023c). The latest NHS guidance on the use of puberty blockers states:

“NHS England has carefully considered the evidence review conducted by NICE, any subsequent evidence found in the follow up literature surveillance, further evidence suggested during stakeholder testing as well as the interim recommendations of the Cass Review and has concluded that there is not enough evidence to support the safety, clinical effectiveness and cost effectiveness of PSH [puberty suppressing hormones] to make the treatment routinely available at this time” (NHS England 2023c).

128. In March 2023, the Norwegian Healthcare Investigation Board (Ukom) stated that the evidence supporting the use of puberty blockers and cross-sex hormone treatments in adolescents was inadequate, particularly considering the increasing number of teenagers seeking interventions for gender dysphoria. Ukom classified puberty blockers and cross-sex hormone interventions as experimental/investigational, thereby advocating for an overhaul of national guidelines to better safeguard patients and guide clinicians (“Patient Safety for Children and Young People with Gender Incongruence” 2023).

129. The Journal of the Danish Medical Association recently confirmed that Denmark has experienced a significant shift in that country’s approach to youth with gender

dysphoria (Sundhedsfaglige 2022). In 2018, the Denmark's central gender clinic was medically transitioning 65% of youth referred to their center. By contrast, in 2022, only 6% of the referred youth were medically transitioned. The majority of youth experiencing gender distress are now treated with supportive counseling. This dramatic reversal in practice patterns is described by the gender clinicians themselves: they express concerns about the growing numbers of individuals who detransition (indicating that a cross-gender identity is not fixed), a lack of comprehension regarding the rapid increase in referrals (especially among females), a high prevalence of co-morbid mental health diagnoses among referred patients, and apprehension that social influence is driving the swift escalation in referrals.

130. These developments underscore a pivotal shift in four forward-thinking European countries. They collectively acknowledge the transition of youth based on low-quality evidence has great potential to cause patient harm. These reversals in European medical practice underscore the inherent complexities and ethical dilemmas associated with offering profound, life-altering interventions to minors. The context of these decisions is one of limited comprehension of the sudden epidemiological shifts within the population seeking care, increasing instances of detransition, and substantial uncertainty regarding long-term outcomes. In light of these practice reversals in European countries, concerns raised by physicians, healthcare authorities and policymakers about U. S. practice patterns are entirely justified.

Emerging Signs of Harm from Hormones and Surgeries in Minors and Young Adults

131. An increasing number of people are coming forward expressing regret over their transitions (Jorgensen 2023). This is not surprising, as a recent interview study of adolescents who underwent transition found most adolescents could not understand the impact that transition would have on their future fertility and romantic relationships, and as such did not weigh these two factors heavily in their decision to initiate medical transition with puberty blockers (Vrouenraets et al. 2022). One adolescent in the study noted: “Of course, I was very young at the time...it was more like: ‘I have to do it, I have to do it.’ Did I think it through [what the treatment with puberty suppression and its (possible) consequences entailed]? No.”
132. The maturation of human brain function, including executive functioning, is an established element of human development that is not fully achieved until roughly the age of 25. Adolescents, when faced with personal decisions, tend to rely more on emotional responses than cognitive reasoning and are significantly influenced by their peer group (Casey, Jones, and Hare 2008).
133. Historically, at a time when access to hormones and surgeries was more stringently regulated, regret rates were reported as low. However, most studies investigating regret suffer from significant limitations due to high rates of loss to follow-up, which would skew true estimates. For instance, one of the most frequently cited studies on post-transition regret saw a loss to follow-up rate of 36% (C. M. Wiepjes et al. 2020). A loss to follow-up rate exceeding 5-10% can considerably undermine the validity of study results. If the individuals lost to follow-up were disproportionately

unsatisfied with their transition or had succumbed to suicide, this would dramatically bias the study's results (Kristman, Manno, and Côté 2004).

134. With the current ease of access to hormones and surgeries at increasingly younger ages, it would be logical to expect regret rates higher than those previously recorded. However, we lack robust data on regret that includes the newly emerging cohort of predominantly adolescent females with no childhood onset of gender dysphoria. Estimates suggest that up to 30% of individuals discontinue hormone therapy within five years of initiation (Boyd, Hackett, and Bewley 2022; Roberts et al. 2022; Hall, Mitchell, and Sachdeva 2021) a figure which is not synonymous with regret, but nonetheless raises important questions as these interventions are intended to be lifelong.

135. A comprehensive analysis was conducted on a sample group of 100 individuals who chose to discontinue hormone treatments or pursue surgical reversals – a process known as ‘detransitioning’ (Littman 2021). The results indicated that nearly half of the participants expressed profound remorse concerning their initial transition. Notably, the predominant rationale for detransition among this cohort was an evolved understanding and acceptance of the inherent diversity in gender roles. Specifically, they recognized that both males and females can manifest a broad spectrum of personalities and prefer a wide array of professional and social roles. This realization led to a greater comfort level with their original biological sex, triggering the desire for detransition.

136. In summary, there is a conspicuous absence of robust data regarding detransition and regret. The most comprehensive long-term analysis of mental health outcomes post-transition does not indicate any marked improvements, and the average time period leading to regret has been found to be approximately ten years (“Correction to Bränström

and Pachankis” 2020; Chantal M. Wiepjes et al. 2018). Given the sharp increase in the number of adolescents seeking gender transitions beginning in 2014-2015, it can be reasonably projected that there will be a significant uptick in the next five years in the number of individuals who, due to a lack of improvement in their mental health, will experience regret about their transition, regardless of whether they choose to detransition or not.

Has Medicine Been Wrong Before?

137. The history of medicine is replete with instances of practice reversals—cases where established medical interventions were later discredited. In fact, one could posit that such reversals are more the norm than the exception in the annals of medicine.
138. A study published in 2019 scrutinized medical reversals that took place between 2003 and 2017, solely within three major medical journals (Herrera-Perez et al. 2019). These reversals were diverse, spanning a range of medical fields and intervention types. They included altered recommendations for neonatal Vitamin A supplementation, the use of compression stockings in reducing post-stroke blood clot incidents, mammogram screening for women aged between 40 and 50, hormone replacement therapy in post-menopausal women, and reconsideration of gloves and gowns practices used to deter antibiotic-resistant bacteria in hospital environments. Other reversals involved the use of external hip protectors in mitigating fractures, nicotine replacement therapy during pregnancy for smoking cessation, steroids for spinal stenosis surgery and surgery compared to physical therapy for meniscal tears.

139. Perhaps the most notable practice change in recent history involves the prescribing of opioids for pain control. The opioid crisis, a public health crisis that has devastated communities across the United States, was inextricably linked to the role of physicians in overprescribing opioid pain medications. Medical societies were also instrumental in pushing opioid prescribing. Initially, long-acting versions of these potent drugs were perceived as effective, non-addictive solutions to manage chronic and severe pain. This misconception was fueled by aggressive marketing campaigns by pharmaceutical companies, misrepresenting the addictive potential of these new versions of opioids and downplaying their risks.

140. As a result, physicians began prescribing these medications with increased frequency, leading to an exponential rise in opioid use. The widespread misuse of these medications subsequently triggered a wave of addiction, overdose, and death, culminating in a full-blown public health crisis. Studies eventually revealed no superiority in long-term pain control from opioids compared to non-opioid medications, a finding that led to changes in practice patterns. Unfortunately, these changes came far too late. There are striking parallels between the physician-driven crisis of the opioid epidemic and the current widespread use of puberty blockers and cross-sex hormones without adequate evidence.

141. Many of these changes in medical understanding and practice arose in response to the findings of systematic reviews, which indicated that the interventions in question did not yield the anticipated benefits. These procedures and treatments have thus come to be categorized as low-value medical practices, which can lead to physical and emotional

harm, erode public trust in the medical profession, and entail both opportunity costs and financial burdens.

142. It is of paramount importance that such practices are identified and reversed, thereby enhancing the overall quality of medical care delivered to patients. This requires a continuous commitment to scrutinizing and questioning existing practices, accompanied by a readiness to change course when evidence challenges established paradigms. As history demonstrates, this process of revision and improvement is not an anomaly in medicine, but rather an integral part of its evolution and refinement.

143. In this context, European health authorities are responding appropriately by imposing regulatory measures on the use of puberty blockers, cross-sex hormones, and surgeries in young individuals. In contrast, the inability of U.S. medical societies to correct themselves, effectively promoting an unregulated experiment on youth grappling with gender dysphoria, may constitute one of the most severe scandals in modern medical history.

144. To exemplify, as described earlier, the president of the Endocrine Society recently promulgated an erroneous statement in a Wall Street Journal editorial. He suggested that hormones and surgery enhance the well-being and reduce the suicide risk among individuals with gender dysphoria (“Endocrine Society Responds on Gender-Affirming Care - WSJ” 2023). This statement evoked a sharp critique from 21 expert clinicians and researchers spanning nine countries, including myself. We emphasized that a systematic review published in the Endocrine Society's own journal on this subject determined that the benefits derived from hormones and surgery are of low or very-low

certainty and additionally pointed out that the systematic review found: “we could not draw any conclusions about death by suicide” (*Wall Street Journal* 2023).

145. Additionally, the Endocrine Society has misrepresented their practice guidelines as “standards of care” (“Position Statement Transgender Health” 2020). As I have written previously, “Unlike standards of care, which should be authoritative, unbiased consensus positions designed to produce optimal outcomes, *practice guidelines* are suggestions or recommendations to improve care that, depending upon their sponsor, may be biased” (Malone et al. 2021). In erroneously labeling their methodologically flawed practice guidelines as “standards of care,” the Endocrine Society falsely suggests a consensus rooted in evidence-based practices for treating youth with gender dysphoria. The stark reality, however, is that there is no such consensus on the optimal approach to this complex issue. The profound divergence between European and U.S. treatment strategies for gender-distressed youth is testament to the lack of universally accepted treatment guidelines.

146. It should also be noted that there is a significant overlap between the authors of WPATH (World Professional Association for Transgender Health) guidelines version 7, which endorsed the practice of widespread adolescent transitions, and the current Endocrine Society guidelines. These two organizations and their guidelines, each purporting to represent standards of care, do not appear to be operating independently of each other. Instead, they are seemingly represented by a small group of individuals who are collectively committed to the promotion of youth gender transitions.

147. Just earlier this month, the American Academy of Pediatrics voted to reaffirm its support for hormonal and surgical interventions for minors as the primary treatment

modality, choosing to ignore the results of the existing systematic reviews of evidence, and disregarding the changes in the practices of its European counterparts who are acting on these results (American Academy of Pediatrics (AAP) 2023).

148. At the same time, the AAP conceded that a systematic review of evidence is needed and will be commissioned. However, as noted above, in its press release, the AAP paradoxically expressed confidence that the systematic review of evidence it plans to commission will exonerate their decision to continue to promote the hormonal and surgical “gender affirmation” of minors. Not only is it wrong to enter into a research inquiry with a pre-formed conclusion in mind, but such a statement raises concerns that the AAP does not intend to run a trustworthy process. What adds to the concern is the AAP statement that they commissioned the systematic review not to pursue evidence-based medicine, but to influence a political process: “the decision to authorize a systematic review reflects the board’s concerns about restrictions to access to health care with bans on gender-affirming care in more than 20 states.” The AAP is clearly committed to ensuring that hormonal and surgical transition of youth remains the main treatment modality for gender-distressed youth in the US, and shows little regard for evidence-based medicine.

Conclusion

149. In conclusion, The Endocrine Society, the AAP and WPATH have failed to follow normative guideline development processes, which has resulted in the generation of guidance that does not appropriately weigh the low or very-low certainty of mental health improvements against the certain risk of threats to fertility. In contrast to European countries that are restricting youth transition because of a paucity of evidence

of mental health benefits, U.S. medical societies are insisting a consensus exists on best treatment and misrepresenting their guidance as “standards of care.” Evidence exists that harm from their guidance is occurring, and based on recent statements from the Endocrine Society and AAP leadership, a change of course originating from within those medical organizations is unlikely. Clinicians and regulatory bodies are justified in their concerns that minors and young people are not being adequately safeguarded against irreversible medical harm.

A handwritten signature in blue ink, reading "William J. Malone", written over a horizontal line.

William J. Malone, M.D.

Date: 08/31/2023

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