**NO. 22-1927**

In The
# United States Court Of Appeals
## For The Fourth Circuit

**CHRISTOPHER FAIN; SHAUNTAE ANDERSON, individually and on behalf of all others similarly situated,**
*Plaintiffs - Appellees,*

**v.**

**WILLIAM CROUCH, in his official capacity as Cabinet Secretary of the West Virginia Department of Health and Human Resources; CYNTHIA BEANE, in her official capacity as Commissioner for the West Virginia Bureau for Medical Services; WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, Bureau for Medical Services,**
*Defendants – Appellants.*

**ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA AT HUNTINGTON**

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**(Pages 1533 – 2128)**

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*CHRISTOPHER FAIN, ET AL vs.*

*WILLIAM CROUCH, ET AL*

*LOREN S. SCHECHTER, MD*

*03/28/2022*

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4 VIDEO CONFERENCE DEPOSITION
OF
5 LOREN S. SCHECHTER, M.D.
March 28, 2022
6
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8 Videoconference deposition of DR.
9 LOREN S. SCHECHTER taken by the Defendants
10 under the West Virginia Rules of Civil
11 Procedure in the above-entitled action,
12 pursuant to notice, before Teresa S. Evans, a
13 Registered Merit Reporter, all parties located
14 remotely, on the 28th day of March, 2022.
15
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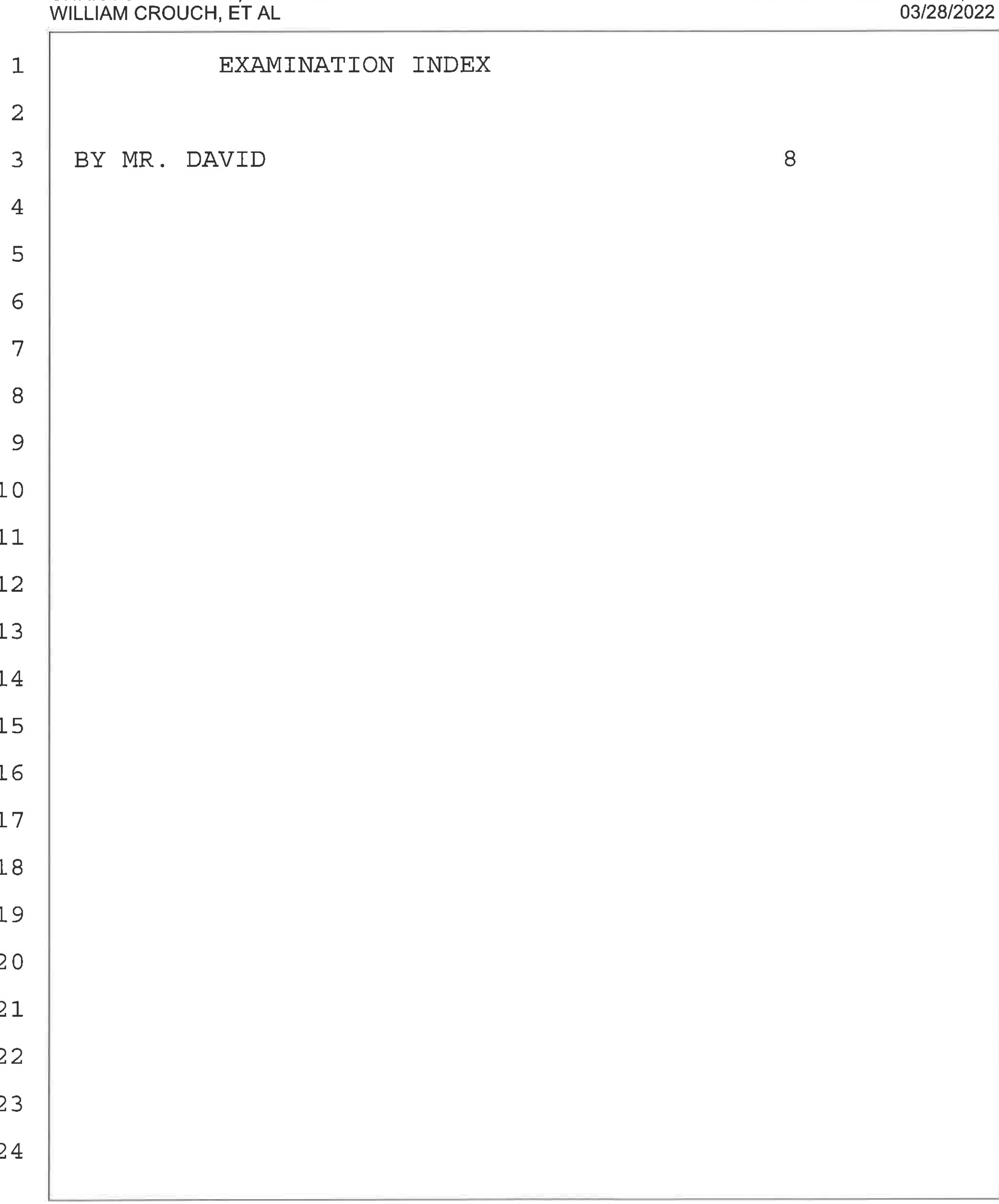

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1 P R O C E E D I N G S
2 COURT REPORTER: Good morning. My
3 name is Teresa Evans. I am a Registered Merit
4 Reporter.
5 Today's date is March 28, 2022
6 and the time is approximately 9:58 a.m.
7 This is the deposition of
8 Dr. Loren Schechter in the matter of Fain, et
9 al. versus Crouch, et al. This case is venued
10 in the United States District Court for the
11 Southern District of West Virginia at
12 Huntington. The case number is 3:20-cv-00740.
13 At this time, I will ask counsel
14 to identify yourselves and whom you represent
15 and agree on the record that there is no
16 objection to this officer of the court
17 administering a binding oath to the witness
18 via Zoom.
19 Please state your agreement on
20 the record, starting with the noticing
21 attorney.
22 MR. DAVID: Caleb David and Lou
23 Ann Cyrus on behalf of the Defendants, the
24 West Virginia Department of Health and Human

1 Resources, Secretary Crouch and Commissioner
2 Beane, and we have no objection to the witness
3 being sworn via Zoom or the deposition taking
4 place via Zoom.
5 MS. HUPPERT: This is Nora
6 Huppert from Lambda Legal for the plaintiffs.
7 Also no objection to being sworn by Zoom.
8 MR. AUVIL: Walt Auvil for the
9 plaintiffs. No objection.
10 MS. BORELLi: Tara Borelli for
11 the Plaintiffs. No objection.
12 MS. SMITH: Avatara Smith-
13 Carrington for the plaintiffs. No objection.
14 (The witness was sworn.)
15 L O R E N S C H E C H T E R , M. D.
16 was called as a witness by the Defendants, and
17 having been first duly sworn, testified as
18 follows:
19 EXAMINATION
20 BY MR. DAVID:
21 Q. Doctor, my name's Caleb David, and as
22 you just heard, I represent the defendants in
23 this lawsuit that's been filed by Christopher
24 Fain and Shauntae Anderson, and we're here to

1 take your deposition today, and I see from
2 your expert disclosure report that you've had
3 your deposition taken a few times before. Is
4 that right?
5 A. That's correct.
6 Q. Okay. Then I'll spare you all the
7 details and rules. If you do misunderstand
8 something or if you can't hear me or Zoom cuts
9 out or something, please let me know. That's
10 always a difficulty. And if you want to take
11 a break at any time, we can do that. That's
12 not a problem.
13 So are you ready to get started?
14 A. Yes.
15 Q. Okay. All right. Can you please
16 state your full name for the record?
17 MR. DAVID:, I'm sorry, Nora, did
18 you want to --
19 MS. HUPPERT: Apologies. Not to
20 interrupt. We just wanted to propose really
21 quickly to agree that an objection to form
22 would preserve all form objections without
23 needing specified for the sake of efficiency.
24 Would you agree to that?

1 MR. DAVID: Absolutely.
2 MS. HUPPERT: Thank you very
3 much.
4 BY MR. DAVID:
5 Q. Doctor, can you please state your full
6 name for the record?
7 A. Loren, L-O-R-E-N, Slone, S-L-O-N-E,
8 Schechter, S-C-H-E-C-H-T-E-R.
9 Q. Doctor, how are you currently
10 employed?
11 A. I'm currently employed by Weiss
12 Hospital.
13 Q. And what is your position with Weiss
14 Hospital?
15 A. Physician.
16 Q. And what type of physician?
17 A. Plastic surgeon.
18 Q. And are you -- do you also have a
19 teaching position as a plastic surgeon at
20 Weiss Hospital?
21 A. I didn't hear that. That cut out.
22 Q. I'm sorry. Do you have a teaching
23 role as a physician at Weiss Hospital?
24 A. I have a teaching role at Rush

1 University. We do teach -- we do have
2 rotating residents from the University of
3 Chicago and from Rush University.
4 However, my employment will be
5 switching on April 5th to Rush University.
6 Q. And at Rush University, will you be a
7 physician as well as a professor?
8 A. That's correct. And Mr. David, I'm
9 sorry, you just cut out a little bit every so
10 often.
11 Q. Let me -- I'm trying to get rid of
12 e-mail notifications. I think that's the
13 problem. They keep popping up. Okay.
14 Let's try that again. At Rush
15 University, will you be an attending physician
16 as well as a professor?
17 A. I currently have a hospital
18 appointment now as an attending physician at
19 Rush, and then I will assume the role of
20 director of their program in gender
21 affirmation surgery as well as a professor of
22 surgery which is pending academic review.
23 Q. And that program in gender affirmation
24 surgery, how long has that program existed?

1 A. I joined the staff at Rush -- I
2 believe it was in August of '20, I believe be
3 -- just before the pandemic.
4 Q. So in August of 2019 then?
5 A. I think you're correct. It would be
6 August of '19, yes.
7 Q. And is that when the program started,
8 when your arrival coincided with the program's
9 beginning?
10 A. My arrival coincided -- or I guess my
11 arrival began their program in predominantly
12 genital surgery. I believe they had been
13 performing top surgery, meaning mostly
14 mastectomy, prior to my joining.
15 Q. And when -- and I -- maybe -- I might
16 be misunderstanding you. When you say
17 "program in gender affirmation surgery," are
18 you talking about just the fact that those
19 procedures are being performed, or is there a
20 residency or internship program?
21 A. The program is housed within the
22 department of surgery under the auspices of
23 plastic surgery. We have rotating residents
24 from plastic surgery. We also have a

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1 fellowship in gender affirming surgery.
2 That fellowship started in 2017
3 initially through Weiss, and I believe we
4 switched the administrative authority in '19
5 to Rush University.
6 Q. Okay. So how many residents -- and
7 again, I guess they would be physicians --
8 full-fledged physicians by the time they got
9 to the fellowship, but how many people have
10 gone through that fellowship program?
11 A. Four people have completed, and the
12 fifth will start in July of this year.
13 Q. And the four that have completed, are
14 they now practicing plastic surgery and
15 performing gender confirmation or gender
16 affirmation surgeries?
17 A. Yes, I believe all have that as part
18 of their practice.
19 Q. Do you have any idea where those folks
20 are now?
21 A. One in San Francisco; one in Toronto;
22 one in Philadelphia, and I believe one in New
23 York.
24 Q. And do you know those individuals'

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1 names?
2 A. Alexander Facque, F-A-C-Q-U-E.
3 Rayisa, R-A-Y-I-S-A, Hontscharuk,
4 H-O-N-T-S-C-H-A-R-U-K. Alireza Hamidian,
5 A-L-I-R-E-Z-A, Hamidian, H-A-M-I-D-I-A-N. And
6 David Whitehead, W-H-I-T-E-H-E-A-D.
7 Q. That was impressive, Doctor, for you
8 to be able to spell all of that. Thank you.
9 So this program has been in existence since
10 2019. Have you only been accepting one fellow
11 each year?
12 A. It's been in existence since '17.
13 Q. Okay.
14 A. It administratively moved to Rush in
15 '19. We accept one per year. This year,
16 Doctor Hamidian, who is our most recent
17 graduate, had planned to stay through December
18 but was offered a position at Temple
19 University, so we allowed him to leave a bit
20 early.
21 So we had no fellow from about
22 August of '21 through June of '22. And the
23 fifth person will start July of '22.
24 Q. And can you just, in general terms,

1 tell me what the fellowship actually entails?
2 First, is it a one- or two-year fellowship?
3 And then what it actually entails in terms of
4 procedures that are performed, if there's any
5 research component, anything like that?
6 MS. HUPPERT: Objection to form.
7 A. It's designed to be a one-year
8 fellowship. There are both -- there are
9 several components: Clinical components,
10 which involve office-based education;
11 didactics, meaning lectures; operative
12 experience, both pre- and post-operative care
13 in the office as well as in the hospital;
14 clinical research; teaching rotating medical
15 students and plastic surgery residents.
16 Q. And I know it's a small sample size,
17 but for the four who have completed that
18 fellowship, on average how many procedures,
19 gender affirmation procedures, are they
20 performing during that one-year period?
21 A. We do about 150 to 200 procedures per
22 year. That may have been lower during the
23 COVID situation, though.
24 Q. Sure.

1 A. And with our Canadian fellow who had
2 some difficulties with border closures related
3 to COVID.
4 Q. Okay. So in the small sample size of
5 nonCOVID years where people can freely travel
6 without quarantine, it's 150 to 200 procedures
7 in that one fellowship year.
8 A. That is correct.
9 Q. Okay. Now, obviously -- you are board
10 certified in plastic surgery, correct?
11 A. I am.
12 Q. Okay. And is there a subspecialty
13 board certification in gender affirmation
14 surgeries?
15 A. Not through the American Board of
16 Medical Specialties.
17 Q. Okay. Is there one that's -- that's
18 separate from the American Board of Medical
19 Specialties?
20 A. Not a certification.
21 Q. Okay. Is there some other type of
22 certificate or -- I don't know what else, but
23 is there some other type of certificate in
24 gender affirmation surgery?

1 MS. HUPPERT: Object to form.
2 A. Each of the fellows receives a
3 certificate from the institution indicating
4 successful completion of the program.
5 Q. Okay. Are you aware of whether or not
6 the American Board of Medical Specialties is
7 developing a board certification in gender
8 affirmation surgeries?
9 MS. HUPPERT: Object to the form.
10 A. To my knowledge, they are not.
11 Q. Ask you some of the generic doctor
12 questions that you've probably been asked
13 before. But you're licensed to practice
14 medicine, correct?
15 A. I am.
16 Q. And in the State of Illinois?
17 A. Yes.
18 Q. And you have -- do you have any
19 restrictions on your license?
20 A. No.
21 Q. Have you ever -- has your license ever
22 been subject to disciplinary -- to discipline
23 in any way from any board of -- any licensure
24 board? Sorry.

1 A. No.
2 Q. Okay. Have you ever had a malpractice
3 suit filed against you?
4 A. Yes.
5 Q. Okay. And did that -- well, first,
6 when was that suit filed?
7 A. I've had one probably in -- a case
8 from '03. I don't remember when it was filed.
9 It was dismissed.
10 I have an ongoing case from 2015.
11 The case may have been filed in '16 or '17.
12 I'm not sure.
13 Q. The case in 2003, did that involve a
14 patient undergoing gender affirmation surgery?
15 A. No.
16 Q. And the case in 2015, did that involve
17 a patient undergoing gender affirmation
18 surgery?
19 A. No.
20 Q. Now, looking at your report where
21 you're talking about your background, you
22 state that there -- that you've performed over
23 1500 gender affirmation surgeries. Is that
24 correct?

1 A. Yes.
2 Q. Okay. And you also state that for at
3 least the past five years, you've been
4 performing approximately 150 gender
5 confirmation procedures every year. Is that
6 right?
7 A. Yes.
8 Q. Okay. So just doing quick math, it
9 seems to me that over the last five years,
10 there's been an uptick in the amount of gender
11 confirmation surgeries that you're performing.
12 Is that true?
13 MS. HUPPERT: Object to form.
14 A. I would say the numbers over the last
15 five years have been fairly consistent.
16 Q. Okay. So if you're looking at the
17 last 5 years compared to the prior 22 years of
18 practice -- because you've been practicing for
19 27 years; is that right?
20 A. I completed my residency in '99. I
21 did my fellow -- started my fellowship in '99,
22 also with getting attending privileges. And I
23 began training in '94.
24 So I've been involved - whether

1 as an attending, a fellow, a resident - for
2 over -- and prior to that, as a student. But
3 as a physician, going on 28 or 29 years.
4 Q. Okay. And I'm referencing Paragraph 7
5 of your initial report, and it says, "I have
6 been performing gender confirming surgeries
7 for more than 27 years." Is that an accurate
8 statement?
9 A. That is.
10 Q. Okay. And just looking at the math,
11 if you've done now -- you say over 1500, but
12 I'm using 1500 as a benchmark just so that I'm
13 being clear with you.
14 1500. But if you've done 150
15 procedures each year for the past five years,
16 that's half of the 1500 procedures. So what
17 I'm asking, in the last five years, has there
18 been a significant amount of gender
19 confirmation surgeries that you've performed
20 compared to earlier in your career?
21 A. No. The 1500 is a very conservative
22 number.
23 Q. Okay. So in 2000, the year 2000, were
24 you performing more or less gender

1 confirmation surgeries than you did in 2018?
2 MS. HUPPERT: Object to form.
3 Q. Less than 2000?
4 A. I was performing less.
5 Q. Okay. And what about 2010 versus
6 2018? Which did you perform more gender
7 confirmation surgeries?
8 A. I would estimate around 2010, that
9 number is closer to the number referenced in
10 my report.
11 Q. Okay. So in 2010, were you also
12 performing approximately 150 gender
13 confirmation surgeries per year?
14 A. I don't recall the exact number, but
15 close -- likely closer to the 150.
16 Q. Okay. So during your career, from the
17 time that you finished your training until
18 2010, there was an increase in the number of
19 procedures that you performed and it's sort of
20 been stable since that time.
21 MS. HUPPERT: Object to form.
22 A. I'm sorry, can you -- can you ask that
23 again?
24 Q. Sure. So from the point that you

1 finished your training to 2010, there was an
2 increase in the number of procedures that you
3 were performing annually, but since 2010, it's
4 somewhat stable.
5 MS. HUPPERT: Object to form.
6 A. I can't say that it was specifically
7 2010 that that number increased.
8 Q. Okay. At what point did that number
9 increase?
10 A. Well, there was an increase from 2000
11 -- there's been an increase since 2000 --
12 Q. So --
13 A. -- most likely every year.
14 Q. I'm sorry. I didn't mean to interrupt
15 you. So has it been a gradual increase?
16 A. There was a gradual increase. I would
17 estimate 2008 to 2010, the rate of increase
18 increased.
19 Q. Okay. I think I understand. Okay.
20 So your -- and Paragraph 7 of your report also
21 says currently 90 percent of the patients in
22 your practice are transgender individuals
23 seeking gender confirmation surgeries.
24 Is that an accurate statement?

1 A. Yes.
2 Q. In the year 2000, what percentage of
3 your patients were transgender individuals
4 seeking gender confirmation surgeries?
5 MS. HUPPERT: Object to form.
6 A. I would estimate probably on the order
7 of about 10 percent.
8 Q. And what do you attribute to either
9 the increased number of procedures that you're
10 performing or that people are coming to you
11 specifically? What do you attribute to that
12 change in your practice?
13 MS. HUPPERT: Object to form.
14 A. I'm sorry, can you rephrase?
15 Q. Sure. Absolutely. So do you -- what
16 do you believe is the reason for the change in
17 your practice from 10 percent of your patients
18 being transgender individuals seeking gender
19 confirmation surgeries in the year 2000 to 90
20 percent of your patients being transgender
21 individuals seeking gender confirmation
22 surgeries in the year 2022?
23 MS. HUPPERT: Object to form.
24 A. Well, it's been a specific area of my

1 practice and expertise.
2 Q. So over the last 20 years, you have
3 developed a specific area of practice to the
4 point that you're now teaching in that area of
5 practice. Correct?
6 A. That is correct.
7 Q. Okay.
8 A. And I was teaching in that area and
9 have been teaching in that area since 2000.
10 Q. Okay. So in the year 2000, you were
11 also teaching in the area of gender
12 affirmation or gender confirmation surgeries?
13 A. Yes. I've had rotating plastic
14 surgery residents with me for virtually my
15 entire professional career, whether from
16 University of Chicago, University of Illinois,
17 Loyola, Rush, general surgery residents from
18 the University of Illinois, medical students
19 from a variety of medical schools throughout
20 Chicago, as well as visiting students and
21 residents from across the country and visiting
22 surgeons from all over the world.
23 Q. And at that time, prior to beginning
24 the program that you talked about starting in

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1 2017 at Weiss and moving over to Rush in 2019,
2 were -- in that period of 2000 to 2016, were
3 you providing instruction when patients came
4 in and you were performing those surgeries, or
5 was there a specific program that you were
6 providing education for gender affirmation
7 surgeries?
8 MS. HUPPERT: Object to form.
9 A. It's been a part of my practice as an
10 attending since '99. So it's been a part of
11 the instruction I provide in plastic surgery.
12 Q. Okay. So it was a part of the general
13 education that you were providing to residents
14 when they rotated through your program, but
15 there wasn't a specific program dedicated to
16 it.
17 A. My practice -- gender affirmation
18 surgery has been a component of my practice
19 since '99.
20 Q. You did not have a fellowship program
21 devoted to gender affirmation surgeries until
22 2017. Is that a true statement?
23 A. The fellowship which began in 2017 was
24 dedicated to post-residency graduates in

1 plastic surgery. Prior to that, residents in
2 not only plastic surgery, but also urology,
3 general surgery, gynecology, family medicine
4 all rotated with me to gain exposure and
5 education in the field of gender confirming
6 surgery.
7 Q. And all of those specialties that you
8 just mentioned - plastic surgery, urology,
9 etc. - those all have dedicated residency
10 programs. Correct?
11 A. Those were individuals who are in
12 dedicated residency programs in the
13 affirmation specialties who then rotated with
14 me.
15 Q. Was there a residency program in
16 gender affirmation surgeries prior to 2017?
17 MS. HUPPERT: Objection to form.
18 A. Gender affirmation surgery under a
19 variety of different names has been part of
20 plastic surgery training as it was for me, not
21 only plastic surgery, but part of my under --
22 my medical education, my doctor of medicine
23 degree, in the '90s.
24 So it's been an accepted part of

1 residency training certainly since I was a
2 resident.
3 Q. Could you do a residency solely in
4 your affirmation surgery prior to 2017?
5 MS. HUPPERT: Objection to form.
6 A. Gender affirmation surgery - depending
7 on the procedure - is performed by different
8 specialties: Urology, plastic surgery,
9 gynecology, ear, nose and throat,
10 otolaryngology. It's been a part of plastic
11 surgery -- plastic surgery training and
12 education, based on my personal experience,
13 since the '90s.
14 Q. Again, my question was simply: Could
15 you do a residency, specifically a residency
16 program saying -- a residency program in
17 gender affirmation surgery only? Is that
18 something you could do in 2017 -- before 2017?
19 MS. HUPPERT: Objection to form.
20 Asked and answered.
21 A. We typically don't do residency
22 programs in particular procedures. So for
23 example, I can't do a residency only in breast
24 reconstruction, although that's part and

1 parcel of a plastic surgery residency.
2 So similar to procedures like
3 breast reconstruction or cleft lip, gender
4 affirming surgeries were part of the standard
5 training program in plastic surgery.
6 Q. Okay. Recognizing that it was part of
7 your -- or part of the standard rotation and
8 it's something that they learned, it's not a
9 -- its own specific specialty. Is that
10 correct?
11 A. Similar --
12 MS. HUPPERT: Objection to form.
13 A. Similar to other procedures: Cleft
14 lip, breast reconstruction, breast
15 augmentation, mastectomy. Gender affirming
16 surgery is part and parcel of plastic surgery
17 training.
18 Q. So was the answer yes, it doesn't have
19 its own specific residency, but it is --
20 similar to other procedures, it is a part of
21 the training that individuals receive in a
22 plastic surgery residency?
23 MS. HUPPERT: Objection to form.
24 A. The answer is: It is consistent with

1 other procedures performed within plastic
2 surgery.
3 Q. I mean, I can keep going all day.
4 It's just a simple question. Is there a
5 specific residency program that focuses only
6 on gender affirming surgeries?
7 MS. HUPPERT: Objection to form.
8 A. As with other procedures such as cleft
9 lip, cleft palate, breast reconstruction,
10 mastectomy, lower extremity reconstruction,
11 it's part and parcel of the plastic surgery
12 training program included in the core
13 curriculum, tested on the written boards and
14 tested on the oral board.
15 Q. So can you just -- you're not going to
16 answer that question?
17 MS. HUPPERT: Objection.
18 A. I believe I did.
19 Q. It's -- I'm fine with you providing an
20 explanation. I just want an answer to the
21 question. Is there a specific residency
22 program for gender affirming surgeries?
23 MS. HUPPERT: Objection.
24 Counsel, Doctor Schechter's answered your

1 question.
2 MR. DAVID: He hasn't.
3 MS. HUPPERT: He has.
4 A. It is consistent with other procedures
5 I just discussed.
6 Q. Okay. All right. Well, we'll talk to
7 the judge about that.
8 Okay. So anyway, you have stated
9 that you have a practice that includes 90
10 percent of patients who are transgender
11 individuals seeking gender confirmation
12 surgeries, correct?
13 A. Approximately 90 percent of my
14 practice involves gender affirming or gender
15 confirming surgery, yes.
16 Q. Okay. And what percentage of your
17 patient population resides in the State of
18 Illinois?
19 A. I would estimate 50 percent. That may
20 be plus or minus a bit.
21 Q. And what percentage of your patient
22 population is Medicaid beneficiaries?
23 A. That, I can't answer. The bill is --
24 I don't have specific knowledge to each

1 patient's third party coverage.
2 Q. Do you accept Medicaid for your
3 procedures?
4 A. Yes.
5 Q. When did you begin accepting Medicaid?
6 A. Illinois -- the State of Illinois
7 began covering it perhaps within the last two
8 to three years. And prior to that, our office
9 would often work out single case agreements,
10 whether between Illinois or neighboring
11 states.
12 Q. And tell me what you mean when you say
13 "single case agreements."
14 A. So if an insured's company doesn't
15 necessarily have a provider who's able to
16 perform them but the procedure is covered,
17 they may have a con -- an individual contract
18 - in this case with me or my office or my
19 employer - to cover the procedure.
20 Q. In the case of Illinois Medicaid prior
21 to 2020 - which at least by my research is
22 when they started covering these procedures -
23 did you ever perform a procedure on an
24 Illinois Medicaid beneficiary for gender

1 confirming surgery and they ended up paying
2 for it?
3 A. It is possible, but I'd have to -- I'd
4 have to check records to give a definitive
5 answer.
6 Q. And again, understanding that you're
7 not certain about the answer, if that
8 happened, would that have been done under a
9 single case agreement?
10 MS. HUPPERT: Objection to form.
11 A. Possible, but again, I'd have to check
12 with the records to get a definitive answer.
13 Q. Are you aware that the Illinois
14 licensure website for the Board of Medicine
15 states that you do not accept Medicaid
16 patients?
17 A. No.
18 Q. Okay. And it also states that you do
19 not accept patients through the All Kids
20 program? Is that accurate?
21 A. That, I don't know. But I do know we
22 accept Medicaid.
23 Q. Okay. So let's talk a little bit more
24 about your practice. In addition to the 90

1 percent of patients that you're seeing for
2 gender affirming surgeries, you're also seeing
3 patients for Botox, correct?
4 A. I do, although less so for Botox.
5 Injectables isn't a major part of my practice.
6 Q. Okay. And you have patients who
7 receive JUVEDERM?
8 A. Again, that's an injectable, which
9 isn't a major part of my practice. But on
10 occasion, I do inject.
11 Q. Okay. Chemical peels?
12 A. Similar. Not a significant portion of
13 my practice any longer.
14 Q. Liposuction?
15 A. Yes.
16 Q. Fat injections?
17 A. Yes.
18 Q. Dermabrasion?
19 A. Similar to the injectables and
20 chemical peel. And those procedures - for
21 example, liposuction, lipofilling which is
22 also known as fat grafting - are also
23 performed for transgender individuals.
24 Q. Now, do -- I understand it's not a

1 large portion of your practice, but do you
2 perform Botox injections for facial wrinkles?
3 A. Yes.
4 Q. Okay. And what percentage of your
5 patients being treated with Botox injections
6 for facial wrinkles are Medicaid
7 beneficiaries?
8 A. I wouldn't -- I wouldn't know that
9 answer.
10 Q. If that -- is Botox injections for
11 facial wrinkles something that is reimbursable
12 under Medicaid?
13 A. I would say it would likely depend
14 upon the reason that was being conducted. If
15 someone had a medical condition for which
16 Botox would be a treatment, then it could be
17 covered.
18 I can't speak specific to the
19 coverage - for example, of Illinois Medicaid -
20 but to third party coverage in general.
21 Q. And my question was specific to facial
22 wrinkles, Botox injections for facial
23 wrinkles. Is that covered by any insurance?
24 A. Facial wrinkles -- Botox may be used

1 for facial wrinkles or medical conditions.
2 For example, in a case of hemifacial
3 paralysis, one side of the face may wrinkle;
4 the other may not.
5 Q. But in that instance, you're trying to
6 treat the hemi paralysis, correct, not just
7 the wrinkles?
8 A. No, we're not treating the paralysis;
9 we're treating the appearance. Paralysis can
10 be treated by nerve grafts, muscle transfers,
11 etc.
12 Q. Okay. And you do perform Botox
13 injections for medical conditions like chronic
14 migraines, overactive bladder. Correct?
15 A. It is performed for that. I typically
16 don't use it for migraines or overactive
17 bladder.
18 Q. Okay. Are you aware that your website
19 specifically states that you do that?
20 A. Migraines or overactive bladder?
21 Q. Yes.
22 A. If you'd show me that, I'd like to see
23 that.
24 Q. Okay. Are chemical peels covered by

1 Illinois Medicaid?
2 A. Chemical peels, again, can be used for
3 reconstructive or aesthetic reasons, and once
4 again, similar, for example, to procedures we
5 perform in gender affirming surgery and when
6 performed on the basis of a medical condition,
7 can be covered and often are covered by third
8 party payers.
9 Q. Under what circumstances are chemical
10 peels covered by third party payers?
11 A. There can be situations such as
12 scarring, post-traumatic scarring, for
13 example.
14 Q. And what about laser resurfacing, is
15 that something that is covered by Illinois
16 Medicaid?
17 A. A similar answer to the previous
18 questions. It's not the procedure itself that
19 dictates necessarily what's covered; it's the
20 basis upon which the procedure is performed.
21 We often have, as plastic surgeons, a variety
22 of tools in our parliamentarium, so to speak,
23 and we apply those tools to a variety of
24 clinical conditions.

1 Q. Okay. What clinical conditions have
2 you treated with chemical peels?
3 A. Facial scarring. So there may be
4 scarring related to prior traumatic events.
5 Q. And that facial scarring is cosmetic,
6 correct?
7 MS. HUPPERT: Objection to form.
8 A. No, once again, scarring can be the
9 result of trauma, so when performed, again,
10 based on -- for the reason -- it depends on
11 the reason for which it's performed.
12 If it's performed, for example,
13 to treat a traumatic condition, then face --
14 then chemical peel, laser resurfacing, may be
15 reimbursable by third parties.
16 Q. Okay. What percentage of your
17 patients receiving Botox injections for facial
18 wrinkles have their expenses for those
19 procedures reimbursed by a third party payer?
20 A. I'm sorry, for Botox?
21 Q. For Botox injections for facial
22 wrinkles.
23 A. Less than 10 to 15 percent.
24 Q. Would that be a similar statistic for

1 the use of JUVEDERM?
2 A. Yes, probably less than 10 percent.
3 Q. And what about the percentage for
4 chemical peels?
5 A. I would say probably less than 30 --
6 probably about a third or so.
7 Q. Okay. Same question for laser
8 resurfacing.
9 A. I no longer do laser resurfacing
10 myself.
11 Q. Okay. Dermabrasion?
12 A. Again, probably about a third. And
13 dermabrasion may be conditions like rinophyma,
14 traumatic scarring, ice pick scarring from
15 acne, for example.
16 Q. So the -- so dermabrasion for acne
17 scarring is something that is reimbursable?
18 A. It would depend on the insurer.
19 Q. And does that -- and this is going to
20 end up jumping ahead a little bit. But does
21 that mean that some of those insurers are
22 deeming the dermabrasion for acne scarring to
23 be medically necessary and some aren't?
24 MS. HUPPERT: Objection to form.

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1 A. The -- we have had dermabrasion for
2 acne scarring - we call ice pick scarring -
3 covered by third party payers.
4 Q. And did you make a determination at
5 that time that the dermabrasion for ice pick
6 scarring was a medically necessary procedure?
7 A. If it was covered by a third party
8 payer, I would have likely written both.
9 Whether or not it was covered by the third
10 party payer, I may have -- I may have written
11 a letter to the insurer indicating or
12 discussing the medical necessity.
13 Q. And do you believe that dermabrasion
14 for ice pick scarring for acne is a medically
15 necessary procedure?
16 A. It would depend on the individual
17 circumstances.
18 Q. And under what circumstance would that
19 be medically necessary?
20 MS. HUPPERT: Objection to form.
21 A. I would have to have an individual
22 case, but it could affect both form and
23 function for the individual.
24 Q. So when you're talking about this ice

1 pick scarring, you're talking about facial
2 scarring?
3 A. I'm talking about scarring -- well, it
4 could occur elsewhere in the body, not
5 necessarily -- and not only the face.
6 Q. Okay. Is it most prominent on the
7 face?
8 A. As far as I've treated it, it would be
9 most likely on the face, although it can be
10 used in other body -- in other anatomic
11 locations.
12 Q. Okay. And you have seen ice pick
13 scarring from acne that was severe enough to
14 affect the form and function of the
15 individual?
16 A. Yes.
17 Q. Okay. And in what way did it affect
18 the form and functioning of the individual?
19 A. It could distort facial features. It
20 could lead to disfigurement. Part of the
21 function of the face is to look like a face.
22 So if it causes distress, then it's possible
23 it may -- may be considered medically
24 necessary.

1 Q. Okay. So you're -- I'm trying to make
2 sure that I understand this entirely. If the
3 facial scarring is severe enough that it
4 distorts facial features or can be considered
5 a disfigurement or causes distress, then
6 dermabrasion could be medically necessary to
7 correct that.
8 MS. HUPPERT: Objection to form.
9 A. Dermabrasion can be considered
10 medically necessary. As to individual
11 circumstances, I'd have to see and evaluate
12 the case.
13 Q. And I'm trying to understand whether
14 it's the -- is it the distress that is caused
15 to the individual that would make the
16 procedure medically necessary?
17 A. Again, it would depend upon the
18 particular case, the extent of the scarring,
19 where it was located, the impact on the
20 individual.
21 Q. All right. Can you describe for me a
22 circumstance where that would be significant
23 enough to be medically necessary?
24 MS. HUPPERT: Objection to form.

1 A. Yes.
2 Q. Please do.
3 A. If the scarring caused pain,
4 distortion of the eyelid, for example, or
5 other functional implications -- other
6 functional reasons, it could be considered
7 medically necessary.
8 Q. So when you talk about distortion of
9 the eyelid, you're meaning if it is something
10 that actually affects the eyelid from
11 functioning the way that it was designed to
12 do.
13 A. It may be either form or function.
14 Q. So when you say "form or function,"
15 you mean formed -- is that in reference to
16 appearance?
17 A. Yes.
18 Q. Okay. And appearance alone, without
19 the effect on function, that would be
20 sufficient to make it medically necessary?
21 A. It would depend, again, on the
22 particular case.
23 Q. Okay. And in that particular case,
24 would it be required that the patient have

1 significant mental or emotional distress for
2 it to be medically necessary?
3 MS. HUPPERT: Objection to form.
4 A. I'm sorry, can you repeat that?
5 Q. Sure. So in the case of an individual
6 that has distortion of the eyelid that is in
7 appearance only and not in function, would it
8 require the patient to experience significant
9 mental or emotional distress for dermabrasion
10 to be medically necessary?
11 MS. HUPPERT: Objection to form.
12 A. It would depend upon not only the
13 particulars of the case, but the ability of
14 that person, for example, to interact within
15 society not feeling stigmatized or ostracized.
16 So for example, in a burn case
17 where there's substantial scarring and the
18 individual is inhibited from interacting
19 normally in society, whether chemical peel,
20 dermabrasion or scar revision, all of which
21 could be considered medically necessary.
22 Q. So in the case of someone who has ice
23 pick scarring to the eyelid as a result of
24 acne and it is in appearance only - does not

1 affect the function of the eyelid - it can
2 still be medically necessary for that patient
3 to undergo microderm -- excuse me,
4 dermabrasion, if the ability of the person to
5 operate within society is affected.
6 MS. HUPPERT: Objection.
7 A. One would not --
8 THE DEPONENT: I'm sorry.
9 A. One would not typically have ice pick
10 scarring to the eyelid; it would be -- or
11 could be a case into the eyelid.
12 Q. So in the case of someone who has ice
13 pick scarring adjacent to the eyelid that does
14 not affect the function of the eyelid, that
15 person could be medically -- it could be
16 medically necessary for that person to undergo
17 dermabrasion if it affects their ability to
18 operate within society.
19 MS. HUPPERT: Objection to form.
20 A. So part of the function of a face is
21 to look like a face. And conditions that
22 interfere with that and then require medical
23 and -- surgical interventions or medical
24 interventions, can be considered medically

1 necessary.
2 Q. Okay. At what point is a facial scar
3 so significant that it requires medical
4 intervention?
5 A. I would have to see a specific case.
6 Q. What about if someone has a
7 nonmalignant mole that they believe causes a
8 stigma? Would that be medically necessary to
9 remove that mole?
10 A. I wouldn't know that it was
11 necessarily nonmalignant if it wasn't
12 biopsied.
13 Q. I'm saying, as a hypothetical, is a
14 nonmalignant mole - but it causes someone
15 distress because they have a stigma in
16 society; they get made fun of because they
17 have that mole and it causes them distress -
18 is it medically necessary to remove that mole?
19 MS. HUPPERT: Objection.
20 A. I can't accept that hypothetical,
21 because I wouldn't be able to know if it was
22 nonmalignant if it wasn't biopsied.
23 Q. Okay. If you biopsy it and it's
24 determined to be nonmalignant, is it medically

1 necessary to remove that mole?
2 MS. HUPPERT: Objection to form.
3 A. Again, it would depend on the specific
4 circumstances.
5 Q. Under what specific circumstances
6 would it be medically necessary to remove that
7 mole?
8 MS. HUPPERT: Objection to form.
9 A. A potential for malignant
10 degeneration.
11 Q. Any other circumstances?
12 MS. HUPPERT: Objection to form.
13 A. Potential for progression: For
14 example, increase in size, bleeding, itching,
15 ulceration. Those would be some, probably not
16 an exhaustive list.
17 Q. Okay. Does an exhaustive list include
18 for the alleviation of stigma from society?
19 MS. HUPPERT: Objection to form.
20 A. Yes, it can. So there may be people
21 born with Port-wine stains who undergo --
22 which are facial lesions, blotches on the
23 face, that may undergo laser intervention.
24 Those lesions may be benign, but

1 also may receive coverage for medical
2 intervention.
3 Q. So specific to a facial mole, is
4 alleviating distress caused by the stigma from
5 society a reason for medical necessity for
6 removal of the mole?
7 A. Again, it would depend on the
8 characteristics of that mole.
9 Q. And as we discussed, you biopsied it
10 -- and I -- let's -- I'll try to rephrase
11 this.
12 Is the alleviation of distress
13 caused by the stigma of society alone - that
14 alone - a reason for medical necessity for
15 removal?
16 A. I would have to know more than where
17 it's located - the size and so forth - to be
18 able to answer that question. The biopsy
19 result.
20 Q. Okay. And again, my question is:
21 This specific circumstance is a nonmalignant
22 mole that is not progressing, that is not
23 bleeding, that there is no other reason except
24 for the alleviation of distress to remove this

1 mole. Is that sufficient for medical
2 necessity?
3 MS. HUPPERT: Object to form.
4 A. Again, you're asking a medical
5 condition that isn't necessarily a complete
6 hypothetical. I don't know the biopsy
7 results. I don't know that it won't progress.
8 So I can't answer it without more specific
9 information.
10 Q. Can you point me to any piece of
11 medical literature that will tell me that
12 removal of a mole is medically necessary if it
13 is done solely for the purpose of alleviating
14 stress from society's stigma against that
15 mole?
16 MS. HUPPERT: Object to form.
17 A. Moles may be removed for a variety of
18 reasons, and the reason you stated may be one
19 of those reasons.
20 Q. And my question was: Can you point me
21 to any medical literature that would support
22 that you -- it is medically necessary to
23 remove a mole for the sole purpose of
24 alleviating distress caused by the stigma of

1 that mole?
2 MS. HUPPERT: Object to form.
3 A. That may be considered medically
4 necessary by the physician, depending on the
5 characteristics of the mole.
6 Q. And my question again was: Can you
7 point me to any medical literature?
8 MS. HUPPERT: Object to form.
9 A. Most medical literature doesn't
10 discuss third party coverage of lesions. We
11 perform procedures based on the medical
12 conditions. There's always -- there is an
13 indication for any procedure that we perform.
14 Medical literature typically
15 doesn't list which procedures are medically
16 necessary -- or I should say medical
17 literature, the focus of medical literature,
18 may not be under the medical necessity for the
19 procedure but on the indications for the
20 procedure.
21 Q. And again, can you point me to any
22 medical literature that would state that if
23 the sole indication for the procedure is to
24 alleviate distress from stigma, that it is

1 medically necessary to remove a mole?
2 MS. HUPPERT: Objection to form,
3 asked and answered.
4 A. Again, as with many procedures, the
5 medical necessity of a particular procedure
6 will depend upon the specifics of the case.
7 Q. So please go ahead and point me to the
8 medical literature that would support that.
9 MS. HUPPERT: Objection to form,
10 asked and answered.
11 A. Again, consistent with many medical
12 procedures, the medical necessity would depend
13 upon the specifics of the case.
14 Q. Okay. What is the universe of
15 literature that you're aware of that discusses
16 the medical necessity of mole removal?
17 MS. HUPPERT: Objection to form.
18 A. Medical textbooks, surgical textbooks,
19 in terms of literature. Journals,
20 communications with colleagues, conferences,
21 teaching seminars.
22 Q. And can you name any that are specific
23 to the removal of moles to alleviate distress
24 caused by the stigma of the mole?

1 MS. HUPPERT: Objection to form.
2 Asked and answered.
3 A. Again, the typical discussion
4 regarding moles does not relate to whether or
5 not it's medically necessary, but rather the
6 indication, the medical indication.
7 Q. Okay. So the answer is you are not
8 able to name a single source of any medical
9 literature that would support the removal of a
10 mole to alleviate the distress caused by
11 stigma of that mole.
12 MS. HUPPERT: Objection to form.
13 Asked and answered. Mischaracterizing the
14 testimony.
15 A. The answer is that medical literature
16 typically focuses on the medical indications.
17 The medical necessity would depend upon the
18 particulars of the case.
19 Q. Okay. Please list all the medical
20 literature that you are aware of that states
21 that it is medically necessary to remove a
22 mole to alleviate distress caused by stigma of
23 that mole.
24 MS. HUPPERT: Objection to form.

1 Asked and answered.
2 A. Once again, similar to other
3 procedures, the focus is on typically
4 indications for removal of the procedure. The
5 medical necessity of any case depends upon the
6 judgment of the physician in their interaction
7 with the individuals seeking treatment.
8 Q. And how many pieces of medical
9 literature -- how many articles did you just
10 list?
11 MS. HUPPERT: Object to form.
12 A. In reference to?
13 Q. How many -- in response to my last
14 question, how many articles did you list?
15 MS. HUPPERT: Object to form.
16 A. And your last question was what?
17 Q. To -- I asked you to please list all
18 of the medical literature that would support
19 the removal of a mole for the sole purpose of
20 alleviating distress caused by stigma.
21 MS. HUPPERT: Object to the form.
22 Asked and answered.
23 A. Once again, medical literature
24 discusses typically indications. The focus --

1 the decision of medical necessity depends upon
2 the individual circumstances of a case.
3 Q. Okay. And so in response to my
4 question that asked you to list articles, how
5 many articles did you list?
6 A. Once again, medical necessity depends
7 upon the specifics of the case and it is a
8 determination between the physician and the
9 individual seeking care.
10 Q. Okay. So my question is: How many
11 articles did you list?
12 MS. HUPPERT: Object to form.
13 Asked and answered.
14 A. Once again, the determination of
15 medical necessity depends upon the specifics
16 of a case. And without much more specifics, I
17 can't answer that hypothetical.
18 Q. Okay. Well, that wasn't a
19 hypothetical. It was "How many." So how
20 many, is the question - the number - how many
21 did you list?
22 MS. HUPPERT: Object to form.
23 Asked and answered.
24 A. You're referencing a case, or a

1 clinical situation, without providing complete
2 information.
3 Q. I did provide -- what additional do
4 you need when I say the sole purpose, the only
5 purpose, the singular purpose, is to alleviate
6 distress caused by stigma related to that
7 mole. What additional information do you
8 need?
9 MS. HUPPERT: Sorry for
10 interrupting. Object to form.
11 A. I would need to see the biopsy result;
12 I'd need to see the location, the size and the
13 specific characteristics, as well as the
14 impact on the individual.
15 Q. Okay. Knowing that you're not going
16 to answer that question, we'll move on. Do
17 you diagnose gender dysphoria?
18 A. I do not.
19 Q. Okay. And you are not a mental health
20 professional; is that correct?
21 A. I'm a plastic surgeon.
22 Q. And you are not a mental health
23 professional; is that correct?
24 MS. HUPPERT: Objection. Asked

1 and answered.
2 A. I am a licensed physician and surgeon
3 with board certification in plastic surgery.
4 Q. Are you a psychiatrist?
5 MS. HUPPERT: Objection.
6 A. No.
7 Q. Are you a psychologist?
8 A. No.
9 Q. Did you complete a residency in
10 psychology?
11 A. No.
12 Q. Did you complete a residency in
13 psychiatry?
14 A. No.
15 Q. Do you have fellowship training in
16 psychiatry?
17 A. No.
18 Q. Do you have training in child and
19 adolescent development psychology?
20 A. My area of specialty is in plastic
21 surgery. I do work with colleagues who have
22 specialty training and who are child and
23 adolescent psychologists.
24 Q. Do you yourself have that training?

1 A. I'm sorry, which training?
2 Q. The training in child and adolescent
3 development psychology.
4 A. Well, as part of medical school, child
5 and adolescent development is part of medical
6 school curriculum. I am not boarded in child
7 and adolescent psychiatry.
8 Q. My question was: Do you have training
9 in child and adolescent developmental
10 psychology?
11 A. Well, child and adolescent
12 development, including psychology, is part of
13 a medical school curriculum.
14 Q. Okay. So other than your courses in
15 medical school, you have no additional
16 training in child and adolescent developmental
17 psychology. Is that a true statement?
18 A. While I am not a child and adolescent
19 psychologist, I do work with and attend
20 lectures, seminars, educational events
21 involving children and adolescent psychology
22 and psychiatry.
23 Q. Do you consider yourself to be trained
24 and professionally competent in using the

1 American Psychiatric Association's DSM-V to
2 make child and adolescent mental illness
3 diagnoses?
4 MS. HUPPERT: Object to form.
5 A. That is not part of my clinical
6 practice.
7 Q. And same question for adults. Do you
8 consider yourself to be professionally
9 competent and trained at using the DSM-V for
10 adult psychological or psychiatric diagnoses?
11 MS. HUPPERT: Object to form.
12 A. That is not part of my clinical area.
13 Q. Okay. And when you say it is not part
14 of your clinical area, you mean you are not
15 professionally competent to make those
16 diagnoses. Correct?
17 A. It means that, once again, that while
18 I'm not a -- either a child or adult
19 psychologist or psychiatrist, I do work with
20 professionals in that field; I do attend and
21 participate in educational seminars with those
22 individuals; I write literature with those
23 individuals.
24 I do not practice either child

1 and adolescent psychology or psychiatry or adult
2 psychology or psychiatry.
3 Q. And you don't make diagnoses in adult or
4 child psychology.
5 MS. HUPPERT: Objection to form.
6 A. I do not make diagnoses in those areas.
7 Q. Do you have any training in development of
8 health insurance guidelines?
9 A. I have training in guideline development,
10 which are used by insurance companies. And I've
11 worked with various insurance companies to help
12 develop guidelines.
13 Q. Have you performed any research relating to
14 what must and must not be covered by health
15 insurers?
16 A. I typically -- my involvement is typically
17 along the lines of helping them to develop coverage
18 policies, not research -- I would say my
19 involvement is helping develop coverage -- coverage
20 policies.
21 And there is research involved with
22 that.
23 Q. What insurance companies have you worked
24 with to develop coverage policies?

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1 A. So I'm under an NDA for some of those.
2 Q. Are there some that you're not under an NDA
3 for?
4 A. I believe the specific insurance companies,
5 I'm under an NDA, all the specific insurance
6 companies. In a more general sense, through my
7 work through the Global Education Institute at
8 WPATH, we've been involved with educational events
9 through the State of -- through the State of
10 California and a number of insurance providers.
11 Q. So are you able to testify without
12 violating an NDA as to any specific insurance
13 company that you are assisting with developing
14 coverage guidelines?
15 A. I don't believe so outside of the general
16 statement that through my work at WPATH and the
17 Global Education Institute, we're working with
18 between 30 to 40 insurance carriers within the
19 State of California.
20 Q. Are you working with any insurance carriers
21 in the State of West Virginia?
22 A. Not to my knowledge. But I would say I
23 can't necessarily speak to all the various
24 arrangements an insurance company would have or

1 practice in which state.
2 Q. Do you hold yourself out to be an expert in
3 the requirement of what must be covered under the
4 Affordable Care Act?
5 A. As a practicing physician on a day-to-day
6 basis, I address issues related to insurance
7 coverage, whether approvals of coverage, denials of
8 coverage, appeals, peer reviews, etc.
9 Whether they're specific or not to the
10 Affordable Care Act would depend on the carrier.
11 Q. And I'm simply trying to find out if you
12 are going to testify in this case that you have
13 reviewed the specific provisions of the Affordable
14 Care Act that you believe are applicable and you're
15 going to say that West Virginia law violates the
16 Affordable Care Act.
17 Is that something that you're going to
18 testify to in this case?
19 MS. HUPPERT: Objection to form.
20 A. So my testimony is related to the
21 categorical exclusion in the various cases. I do
22 have knowledge, as a practicing physician - both in
23 my clinical work as well as administrative work -
24 in issues pertaining to insurance coverage, denials

1 and appeals.
2 Q. So for this case, have you specifically
3 looked at provisions of the Affordable Care Act to
4 determine whether West Virginia's -- West Virginia
5 Medicaid's policy violates those provisions?
6 MS. HUPPERT: Objection to form.
7 A. I have not looked at the Affordable Care
8 Act specific to this case. I have looked at the
9 Affordable Care Act and have written about the
10 Affordable Care Act and gender affirming surgery.
11 Q. Okay. And what publications do you have
12 regarding the Affordable Care Act and gender
13 affirming surgery?
14 A. There is a publication that -- I believe
15 it's been out already in the Journal of Plastic and
16 Reconstructive Surgery. It should be on my CV, so
17 if you had it, I can direct you to it.
18 It's possible it's in print, but I
19 believe it's been published.
20 Q. We'll come back to that later.
21 MR. DAVID: We've been going for a
22 little over an hour. Does anyone want to take a
23 five-minute break?
24 MS. HUPPERT: I'm happy to go with

1 whatever Doctor Schechter prefers.
2 THE DEPONENT: Sure. Let me just make
3 a quick rest stop and then come back.
4 (A recess was taken after which the
5 proceedings continued as follows:)
6 BY MR. DAVID:
7 Q. Doctor, before we took a break, we were
8 talking specifically about insurance, and you used
9 the term "categorical exclusion." And I wanted to
10 first ask you what that means by you.
11 A. The denial - in my case - of the gender
12 affirming services, the across-the-board denial of
13 services.
14 Q. And do you believe that West Virginia
15 Medicaid has a categorical exclusion for treatment
16 for gender dysphoria?
17 A. I'm looking at it from the perspective of
18 gender affirming surgery, and I believe that there
19 is a exclusion for - although I don't believe the
20 term "gender affirming surgery" is used; a
21 different term is used - for gender affirming
22 surgical services.
23 Q. Do you know whether West Virginia Medicaid
24 covers mental health care for gender dysphoria?

1 MS. HUPPERT: Objection to form.
2 A. I do not.
3 Q. Okay. Do you know whether West Virginia
4 Medicaid covers hormone therapy for individuals who
5 are transgender?
6 MS. HUPPERT: Objection to form.
7 Object to form, excuse me.
8 A. I do not.
9 Q. And have you reviewed the specific what
10 you're calling a categorical exclusion within West
11 Virginia Medicaid's policy?
12 A. I have seen, I believe, what's the West
13 Virginia Medicaid policy.
14 Q. Okay. And you believe that that is a
15 categorical exclusion as to gender affirming
16 surgeries.
17 A. I believe the term used is something such
18 as "sex transformation" or something along those
19 lines.
20 Q. And again, your understanding is that the
21 West Virginia Medicaid's policy has a categorical
22 exclusion on the category of gender affirming
23 surgery.
24 A. In my review -- and again, I'll use the

1 term "gender affirming" and I believe what was
2 used, "sex transformation," to -- I'll use them as
3 a synonym in this case.
4 But it is my understanding that gender
5 affirming surgeries are not covered under the West
6 Virginia Medicaid.
7 Q. And how did you obtain that understanding?
8 A. I reviewed -- I reviewed, I believe, three
9 West Virginia Medicaid policies.
10 Q. Okay. Did you review the managed care
11 organization's specific health plans?
12 A. I believe these were three Medicaid
13 policies that may have been in conjunction with
14 other carriers -- for example, Aetna, and two
15 others.
16 Q. So you reviewed -- was it Aetna, the health
17 plan -- I'm forgetting the other one right now.
18 But you had reviewed them and they appeared to be
19 -- and we'll talk about the Aetna one specifically.
20 But there appeared to be a document
21 that was jointly prepared by Medicaid and Aetna, or
22 a document that was prepared by Aetna following
23 Medicaid guidelines?
24 MS. HUPPERT: Objection to form.

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1 A. I can't speak to how it was prepared. It
2 came to me simply as, I believe, Medicaid/Aetna.
3 So I don't know who is responsible for the
4 preparation.
5 Q. And do you recall what the language was in
6 the Aetna/Medicaid document that you reviewed?
7 A. I recall a term "sex transformation."
8 Again, I believe that was the term. It may have
9 been a different or similar term. And I believe
10 that there was an exclusion or that those
11 procedures were not covered by -- by that plan.
12 Q. And when you read that, what specific
13 procedures did you believe that meant were not
14 covered?
15 MS. HUPPERT: Objection to form.
16 A. I believe, as I said, the term was "sex
17 transformation." I'll use a more appropriate term
18 of "gender affirming" or "gender confirming"
19 surgeries.
20 Those are typically a constellation of
21 procedures that include top surgery, so typically
22 chest or breast, genital surgeries, in addition to,
23 for example, a hysterectomy, oophorectomy,
24 orchiectomy.

1 Q. And when you reviewed that policy, did you
2 believe that those procedures were entirely
3 excluded or -- excuse me, or not covered for
4 transgender patients or for people with gender
5 dysphoria?
6 MS. HUPPERT: Objection to form?
7 A. So it would typically only be transgender
8 individuals who would seek to access those
9 interventions.
10 Q. Well, for instance, in your report, you
11 frequently mention that individuals with breast
12 cancer receive double mastectomy. That's a common
13 occurrence for an individual with cancer, correct?
14 A. That can be, yes, one of the options, as --
15 there may be others.
16 Q. Did you see anything in any of the
17 insurance policies that you reviewed that said if a
18 individual has breast cancer and a double
19 mastectomy is the procedure that is recommended,
20 that the transgendered individual cannot undergo
21 that procedure, it's not covered?
22 MS. HUPPERT: Objection to form.
23 A. So again, I'm -- sex transformation
24 procedures would only be done for transgender

1 individuals.
2 Q. Okay. What if a cisgender individual
3 wanted one of those procedures?
4 A. Which procedure?
5 Q. A -- we'll do a top surgery. What if a
6 cisgender individual requested a top surgery from
7 -- requested prior approval for coverage for a top
8 surgery from West Virginia Medicaid?
9 MS. HUPPERT: Object to form.
10 A. And again, I would need to know more about
11 the situation. "Top surgery" meaning --
12 Q. A -- we'll say a double mastectomy.
13 MS. HUPPERT: Object to form.
14 A. Cisgender individuals may undergo double
15 mastectomies for a variety of indications: A
16 predisposition, for example, to breast cancer. So
17 an individual, cisgender woman - or for that
18 matter, a cisgender man - may have a genetic
19 predisposition, a strong family history.
20 Mastectomy may be one of the treatment
21 options open to them.
22 Q. And is there anything that you reviewed
23 that would suggest to you that in those same
24 situations for transgender individuals, that those

1 coverages are not available to them?
2 MS. HUPPERT: Object to form.
3 A. So again, the sex transformation -- again,
4 I apologize. I don't like that particular term,
5 but we'll use, I believe, what's in it. Sex
6 transformation would only be performed for a
7 transgender individual.
8 A cisgender individual -- at least I
9 haven't had that experience in my practice, to seek
10 a, quote, sex transformation procedure.
11 Q. Are you aware of West Virginia Medicaid
12 denying coverage for a double mastectomy for
13 someone with cancer because they are transgender?
14 MS. HUPPERT: Objection to form.
15 A. Again, my issue is the exclusion or the
16 lack of coverage for sex transformation procedures,
17 which again, are only performed on transgender
18 individuals.
19 Q. So I can ask the question again. Are you
20 aware of West Virginia Medicaid denying coverage to
21 an individual with cancer, noncoverage for a double
22 mastectomy, for an individual with cancer because
23 they are transgender?
24 MS. HUPPERT: Object to form.

1 A. So I wasn't asked to review the document
2 for cancer coverage or oncologic services. I'm
3 looking at the exclusion for sex transformation,
4 which again is only performed on transgender
5 individuals.
6 Q. So the answer is no, you are not aware of
7 that situation occurring.
8 MS. HUPPERT: Objection to form.
9 A. No, the answer is: I didn't review the
10 documents specific to oncologic services.
11 Q. Okay. Please list all individuals you are
12 aware of who were denied coverage for a double
13 mastectomy when they had a diagnosis of cancer
14 because they are transgender.
15 MS. HUPPERT: Objection to form.
16 Asked and answered.
17 A. Again, my focus was on the exclusion of sex
18 transformation procedures which are only performed
19 upon individuals who are transgender.
20 Q. And so therefore you did not review or
21 determine whether transgender individuals have been
22 denied coverage for double mastectomy for cancer
23 diagnosis.
24 MS. HUPPERT: Object to form.

1 A. My review was for the exclusion of sex
2 transformation, which is only performed on
3 transgender individuals.
4 Q. Why is it only performed on transgender
5 individuals?
6 MS. HUPPERT: Objection to form.
7 A. Cisgender individuals do not typically seek
8 a procedure, a sex transformation - or I'll call it
9 gender affirming - procedure.
10 Q. The cisgender people do not typically seek.
11 Is it possible for a cisgender person to seek such
12 a surgery?
13 MS. HUPPERT: Objection to form.
14 A. I have not encountered that in my clinical
15 practice.
16 Q. And if a cisgender person did seek that
17 surgery, is there anything that would suggest to
18 you that they would have a different outcome
19 applying to West Virginia Medicaid for coverage?
20 MS. HUPPERT: Objection to form.
21 A. Well, again, cisgender individuals may
22 undergo mastectomy, as we've said, oophorectomy,
23 and so forth. But those aren't considered to be
24 sex transformation procedures in cisgender

1 individuals. Only for transgender individuals
2 would a sex transformation procedure be performed.
3 Q. So are you aware of any language anywhere
4 in the Medicaid policies which you reviewed that
5 says that coverage is denied to someone on the
6 basis of them being transgendered?
7 A. Again, sex transformation is only -- I
8 apologize, it's just not a comfortable term for me.
9 But a sex transformation is not performed -- or is
10 only performed, excuse me, on a transgender person.
11 Q. So can you point me to language in the West
12 Virginia Medicaid policy that says transgender
13 people are not entitled to coverage?
14 MS. HUPPERT: Objection to form.
15 A. Sex -- again, sex transformation is only
16 performed in transgender individuals.
17 Q. Okay. So where in the Medicaid policy does
18 it say that transgender individuals are not
19 entitled to Medicaid coverage?
20 MS. HUPPERT: Objection to form.
21 A. Sex transformation is only performed in
22 transgender individuals.
23 Q. So if I pull up the Medicaid policies, are
24 you going to be able to show me where it says that

1 transgender individuals are not entitled to
2 Medicaid coverage?
3 MS. HUPPERT: Objection to form.
4 A. If it's one of the policies I reviewed, I
5 can show you where sex transformation - again, I
6 believe that was the language - is excluded. And
7 that applies only to transgender individuals.
8 Q. Are there any other portions of the policy
9 that you believe provide exclusions or noncoverage
10 for transgender individuals?
11 A. I'm sorry, can you repeat that?
12 Q. Are there any other portions of the
13 Medicaid policies that you believe exclude or do
14 not cover services for transgender individuals?
15 MS. HUPPERT: Objection.
16 A. I focus on the exclusion for sex
17 transformation services.
18 Q. So when you're saying that there is a
19 categorical exclusion, you're talking about the
20 category is gender affirming surgeries or sex
21 transformation surgeries.
22 MS. HUPPERT: Object to form.
23 A. I'm referring -- and again, I'm using the
24 term "gender affirming" to mean sex transformation.

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1 I'm referring to the exclusion of gender affirming
2 surgery.
3 Q. All right. And beyond gender affirming
4 surgery, are you aware of any other exclusions?
5 MS. HUPPERT: Object to form.
6 A. I did not review the policy specific to
7 other clinical conditions.
8 Q. Okay. So to hopefully put a pin in this,
9 the only exclusion that you are concerned with is
10 that you believe that the West Virginia Medicaid
11 policy excludes gender affirming surgeries.
12 MS. HUPPERT: Object to form.
13 A. No. The only exclusion that I was -- that
14 I reviewed and am speaking to is the exclusion of
15 sex transformation surgery. It's possible that
16 there would be other concerns, but I reviewed this
17 specific to the issue of sex transformation
18 surgeries.
19 Q. Are you going to testify about any other
20 exclusions that you believe exist for transgender
21 individuals in the West Virginia Medicaid policy?
22 MS. HUPPERT: Object to form.
23 A. My area is -- focuses on the gender
24 affirming -- the exclusion pertaining to gender

1 affirming surgical services.
2 Q. Okay. So again, there's nothing outside of
3 what you're talking about, the exclusion that you
4 believe applies to gender affirming surgeries, that
5 what you're saying -- that sex transformation
6 surgery language is the universe of language that
7 you were asked to look at.
8 MS. HUPPERT: Object to form.
9 A. I was asked to look at the exclusion of
10 surgical services for transgender individuals, and
11 the exclusion of sex transformation surgery applies
12 only to transgender individuals.
13 I didn't look - as we discussed
14 earlier - for coverage related to oncologic
15 considerations.
16 Q. And Doctor, all I'm trying to do is find
17 out if you're going to testify to any other portion
18 of the West Virginia Medicaid plan. Is it -- are
19 you only going to testify as to coverage related to
20 gender affirming surgeries?
21 MS. HUPPERT: Object to form.
22 A. So I'm speaking to the exclusion for gender
23 affirming surgeries. But to the extent that those
24 are procedures that may be performed for other

1 clinical conditions, I may speak to that issue, as
2 we did mastectomy for oncologic conditions, for
3 example.
4 Q. Okay. And you used the term "categorical
5 exclusion," and I'm trying to understand what the
6 category is that is being excluded.
7 MS. HUPPERT: Object to form.
8 A. The transgender individuals being excluded
9 from surgical intervention, sex transformation
10 services.
11 Q. And again, I want to be specific here. You
12 are not implying that a transgender person can
13 never get a mastectomy; you're saying that a
14 transgender person is excluded from getting a
15 mastectomy for gender dysphoria.
16 MS. HUPPERT: Object to form.
17 A. The language as I read didn't specify the
18 condition on which it would be performed. Again,
19 trans -- sex transformation surgery would only be
20 performed on an individual who's transgender.
21 Q. Okay. Is it your testimony that
22 transgender individuals, for any purpose, are
23 excluded from getting a mastectomy?
24 MS. HUPPERT: Object to form.

1 A. I am reviewing it within the context of
2 being performed as a sex transformation surgery.
3 Q. Okay. You also just testified that you've
4 looked at other portions as they relate to similar
5 types of procedures like mastectomies that we just
6 talked about, and you specifically pointed out.
7 Are you saying that transgender individuals are
8 excluded from getting a mastectomy for any
9 diagnosis?
10 A. No, I said --
11 MS. HUPPERT: Objection.
12 A. -- I said I did not review it for oncologic
13 -- for coverage, for example, for oncologic
14 services, regardless of one's gender identity.
15 Q. Okay.
16 A. The fact that sex transformation is
17 excluded would apply only to a transgender person.
18 Whether a cisgender woman can have a -- would have
19 access to oncologic breast services, I did not
20 review the policy within that framework.
21 Q. Did you review the policy in the framework
22 of a transgender person receiving oncologic care?
23 A. I refer to -- I refer --
24 MS. HUPPERT: Sorry to interrupt.

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1 Objection to form.
2 You can answer.
3 THE DEPONENT: Thank you.
4 A. I referred it -- I reviewed it within the
5 context of sex transformation surgery, again
6 performed on a transgender individual.
7 Q. Are you aware of any exclusions beyond the
8 exclusion for sex transformation surgery?
9 A. There were other exclusions in the list
10 with sex transformation surgery. I don't recall
11 them by memory.
12 Q. Okay. Are you aware of any individual
13 attempting to get a single case agreement from West
14 Virginia Medicaid for a gender affirming surgery?
15 MS. HUPPERT: Object to form.
16 A. Not to my knowledge.
17 Q. Have you reviewed Christopher Fain's
18 medical records?
19 A. No.
20 Q. Have you spoken to Christopher Fain?
21 A. No.
22 Q. Have you examined Christopher Fain?
23 A. No.
24 Q. Same questions for Shauntae Anderson. Have

1 you reviewed Shauntae Anderson's medical records?
2 A. No.
3 Q. Have you spoken to Shauntae Anderson?
4 A. No.
5 Q. Have you examined Shauntae Anderson?
6 A. No.
7 Q. Have you read Doctor Karasic's report that
8 includes interviews with Mr. Fain and Ms. Anderson?
9 A. No, only to the extent of what I've always
10 included in Doctor Levine's report pertaining to
11 what he referred to in Doctor Karasic's report.
12 Q. Okay. So you have not reviewed either the
13 original report or the rebuttal report from Dan
14 Karasic.
15 A. I have not reviewed anything from Doctor
16 Karasic.
17 Q. Do you consider yourself to be an expert in
18 the evaluation of evidence?
19 MS. HUPPERT: Objection to form.
20 A. What type of evidence?
21 Q. Well, there are principles of evidence-
22 based decision making in medicine, correct?
23 A. Yes.
24 Q. Okay. And what are those principles?

1 A. Are you referring to levels of evidence?
2 Q. Sure. And we can talk about levels of
3 evidence. But I'm referring to the principles that
4 a physician use the best available evidence, that
5 the physician use a framework to judge the
6 trustworthiness of that evidence, and that if the
7 evidence isn't sufficient, that the physician
8 consider the patient's needs and preferences in
9 determining treatment.
10 Is that something that you're familiar
11 with?
12 MS. HUPPERT: Objection to form.
13 A. I'm not quite clear on what context you're
14 -- to which you're referring.
15 Q. Sure. I'm referring to the evaluation of
16 evidence as defined by the American Medical
17 Association. Is that something that you're
18 familiar with?
19 A. I'm familiar with levels of evidence
20 pertaining to study design, yes.
21 Q. Okay. So when you're talking about levels
22 of evidence, you're talking about Level I being
23 high-quality multi centered or single-centered
24 randomized controlled trials with adequate power or

1 systematic reviews of those studies.
2 A. That would be a typical definition. There
3 may be others. But that would be one.
4 Q. Okay. What are the other definitions?
5 A. Well, I -- if you're referring to a
6 specific study, you know, I can review that study
7 and look at your wording. There may be other
8 definitions where the wording is slightly --
9 slightly different.
10 Q. Sure. Well, and this, I don't believe, is
11 specific to gender affirming care, but I pulled
12 those levels of evidence specifically from a
13 document that you co-authored, and I'll go ahead
14 and show that now.
15 MS. HUPPERT: I just wanted to sort of
16 raise, you know, the logistics of how you're
17 intending to handle documents. Just curious, you
18 know, is the witness going to have control over
19 what he's seeing, that sort of thing?
20 MR. DAVID: I was simply going to
21 share my screen and I was going to show him the
22 specific table, scale for grading recommendations
23 that's included in an article that he published.
24 If he would like me to scroll up,

1 scroll down, I'm happy to do it. I don't know if
2 that's a capability that he will have.
3 MS. HUPPERT: Okay.
4 Q. Doctor, can you see what's on the screen?
5 A. I can.
6 Q. And I'll scroll up to the top so that you
7 can see that. This is a -- an article titled
8 "Evidence-based Patient Safety Advisory" - and I'm
9 not even going to pretend that I understand how to
10 pronounce that word - "Blood Dyscrasia?"
11 A. Dyscrasia.
12 Q. Okay. And you are one of the co-authors of
13 this article, correct?
14 A. I am.
15 Q. Okay. And there is a table, Table 1. Can
16 you see that on the screen?
17 A. Table -- yeah. Not crystal -- could be my
18 eyes. But not crystal clear, but I can see it.
19 Q. I can see if I can zoom in a little bit,
20 maybe I can even go a little bit further. And that
21 should -- can you see it a little bit better now?
22 A. I can, yeah.
23 Q. Okay. And that Evidence Rating Scale has
24 Levels of Evidence I through V, correct?

1 A. It does.
2 Q. Okay. And Level I is "High-quality, multi
3 centered or single-centered randomized controlled
4 trial with adequate power, or systematic review of
5 these studies." Is that correct?
6 A. That's what it says, but if you could
7 enlarge, I'd like to see because it's possible we
8 used -- I want to see what evidence scale we used,
9 so there should be a reference to that. So if you
10 can perhaps --
11 Q. Where would I go?
12 A. Perhaps -- I want to see in the text where
13 that source was from, because that wasn't -- okay,
14 wait. Okay, depending on study's own quality --
15 yes, okay, that was through the ASPS Evidence
16 Rating Scale, which is why I asked.
17 And there may be other rating scales,
18 but for the purpose of this purpose -- for this
19 manuscript, that was used.
20 Q. Okay. And is the ASPS rating scale a
21 generally-accepted rating scale?
22 A. Can you go up? I want to see what year --
23 Q. Sure. This was 2009, I believe.
24 A. Yes, so it's conceivable that that scale

1 has been updated since 2009.
2 Q. Okay. Can we agree that randomized
3 controlled trials are the gold standard?
4 A. Well, it depends on how they're performed.
5 Simply because something is a randomized controlled
6 trial doesn't mean that it was performed in a
7 scientifically-correct manner.
8 Q. Sure. And assuming that the trials are
9 conducted in an appropriate manner, would they be
10 the gold standard?
11 MS. HUPPERT: Object to form.
12 A. So --
13 MS. HUPPERT: Apologies. Object to
14 form.
15 You can answer.
16 A. Again, so it would depend on the study
17 design. Simply a randomized controlled trial, an
18 individual randomized controlled trial, doesn't
19 mean it's, as you said, a gold -- a gold standard.
20 Randomized controlled trials, when
21 studied appropriately, would carry a level -- a
22 Level I, typically -- the Level I level of
23 evidence.
24 Q. Okay. Would you agree --

1 A. And you can -- well, you can see the
2 caveats in the table: "With adequate power," for
3 example, being one of those caveats.
4 Q. So would you agree that prospective
5 randomized double-blind placebo-controlled studies
6 are the gold standard?
7 A. I would say that would be a framework for
8 what would be Level I evidence. Again, as to a
9 particular study, it would depend on the study,
10 adequacy of that particular study.
11 Q. Doctor, are you aware that I just quoted
12 from your rebuttal report that says, "While
13 prospective randomized double-blind placebo
14 -controlled studies are the gold standard, they
15 cannot be used to evaluate many clinical
16 procedures"?
17 A. I agree with that statement, the fact that
18 they cannot be used to evaluate many clinical
19 procedures.
20 Q. Do you agree with the statement that they
21 are the gold standard?
22 A. When performed, as I said, appropriately,
23 yes.
24 Q. Okay. And in this instance, I believe that

1 your written testimony, at least, is that for
2 gender affirming care - specifically gender
3 affirming surgeries - you cannot do these types of
4 studies. Is that correct?
5 MS. HUPPERT: Object to form.
6 A. Which type of study?
7 Q. A random -- a prospective randomized
8 double-blind placebo-controlled study.
9 A. So as with many areas of surgery and
10 medicine, you cannot perform that type of study.
11 For example, it may be unethical to deny people
12 medically-necessary care. Also, surgery doesn't
13 lend itself to either a placebo or a double-blind
14 framework.
15 Obviously if you had surgery, you're
16 going to know that you've had surgery.
17 So as with other clinical areas of
18 medicine -- for example, a cleft lip. We don't
19 randomize children to repair or not repair their
20 cleft -- their cleft lip. Similar to other areas
21 of medicine, randomized controlled trials or
22 placebo or double-blind studies may not be ethical
23 or feasible.
24 Q. So are you aware any Level I evidence in

1 support of gender confirming or gender affirming
2 surgeries?
3 MS. HUPPERT: Object to form.
4 A. As with many areas of plastic surgery, the
5 levels that I have (Zoom audio glitch) in gender
6 affirming surgery are very much consistent with
7 that due to the considerations we just discussed.
8 Q. Okay. So can you list all of the studies
9 that you are aware of that have produced Level I --
10 Level I evidence in support of gender confirming
11 surgeries?
12 MS. HUPPERT: Object to form.
13 A. As we've said with -- both in my report and
14 now, in areas of plastic surgery, we can't -- they
15 don't lend themselves - either because of medical
16 ethics or practical considerations, like a placebo
17 - to that type of study framework.
18 So the levels of evidence within
19 gender affirming surgery are consistent with other
20 areas of plastic surgery.
21 Q. So how many articles in your bibliography
22 contain Level I evidence for -- in support of
23 gender affirming surgery?
24 MS. HUPPERT: Object to form.

1 A. I'd have to review that bibliography.
2 Q. Well, I just asked you to list all of the
3 ones that you're aware of, and you didn't list any.
4 So are any in your bibliography?
5 MS. HUPPERT: Object to form.
6 A. I'd have to, again, refuse -- specific to
7 -- I'm sorry, I'm getting an echo -- all the
8 sudden, I'm getting an echo.
9 Okay. I'd have to specifically review
10 the bibliography. But again, as other studies
11 cited in my bibliography, the levels of evidence in
12 gender affirming surgery are consistent with that
13 of other areas of plastic surgery which are readily
14 accepted as medically necessary.
15 Q. So can you name a single piece of medical
16 literature that contains Level I evidence in
17 support of gender affirming surgery?
18 MS. HUPPERT: Object to form.
19 A. As we said, the -- denying people medically
20 necessary care would be unethical. So it would be
21 medically inappropriate to deny people medically
22 necessary care, and simply not be feasible to, for
23 example, perform a placebo control within the area
24 of surgery.

1 So that's not something that's
2 medically feasible to do.
3 Q. So you are unable to name any medical
4 literature that includes Level I evidence in
5 support of gender affirming surgery.
6 MS. HUPPERT: Object to form. Asked
7 and answered.
8 A. Again, it is not possible to have a placebo
9 designed with surgery. So it's not medically
10 feasible to do that.
11 Q. Okay. All right. So Level II evidence is
12 lesser quality, randomized controlled trial,
13 prospective cohort study, or systematic review of
14 these studies. Is that correct?
15 A. Well, you're using a 2009 scale.
16 So based on the 2009 scale -- I see
17 what you're reading. Again, it's conceivable that
18 that ASPS evidence scale has been updated.
19 Q. Are you aware of the scale being updated?
20 A. It's possible. I can't say for certain.
21 Q. Are you aware of any lesser quality,
22 randomized controlled trials, prospective cohort
23 studies or systematic review of those studies that
24 analyze the efficacy of gender affirming surgery?

1 MS. HUPPERT: Object to form.
2 A. I'm aware of systematic reviews. I'm aware
3 of prospective studies. Again, I'm not aware of a
4 randomized controlled study as it would not be
5 ethical to deny people medically necessary care.
6 Q. Okay. What systematic reviews are you
7 aware of?
8 A. I believe some of those are listed in my
9 rebuttal report, or in the bibliography.
10 Q. What prospective cohort studies are you
11 aware of in efficacy of gender affirming surgeries?
12 A. I'm aware of -- I don't recall whether they
13 were cohort studies, so I can't specifically say
14 they were cohort studies.
15 Q. Can you explain to me what a prospective
16 study is?
17 A. It is - within the context of surgery -
18 performing, for example, a procedure and then
19 following that individual on a go-forward basis as
20 opposed, for example, to looking backwards in a
21 retrospective nature at a procedure that was
22 performed at a time in the past and then evaluating
23 the outcome.
24 Q. Have you participated in any prospective

1 studies?
2 A. Yes.
3 Q. In what prospective studies have you
4 participated?
5 A. I have participated in studies that explore
6 patient expectations regarding gender affirming
7 surgery. I have participated in prospective
8 studies that look at expectations -- or I should
9 say "am participating in," currently.
10 -- studies that explore expectations
11 around sexual function following gender affirming
12 surgery. And there was one other that I can't
13 recall. I believe it was contained within the
14 expectations around gender affirming surgery.
15 Q. All right. Have you participated in any
16 prospective studies that analyze mental health
17 outcomes of individuals undergoing gender affirming
18 surgery?
19 A. I'm sorry, did you say -- can you repeat
20 that?
21 Q. Sure. Have you participated in any
22 prospective studies that analyze and focus on the
23 mental health outcomes of patients undergoing
24 gender affirming surgeries?

1 A. I have participated in studies that look at
2 outcomes. It's conceivable that there were mental
3 health parameters, but I believe the focus was on
4 complications relating to gender affirming surgery.
5 Q. Are any of the prospective studies that you
6 have participated in, have they been published?
7 A. They have been presented. Whether they
8 have been published in a -- in a proceedings
9 manner, I am not entirely sure. It's conceivable.
10 But they've been presented.
11 Q. Okay. So they may have been presented at a
12 conference -- or they have been presented at
13 conferences, but you're not aware of a place that I
14 could go on the Internet and find a print version
15 or an online version of the study.
16 MS. HUPPERT: Object to form.
17 A. It's conceivable they may have been
18 published as part of the abstracts in the
19 proceeding, but I'd have to look at my CV. I don't
20 recall that 100 percent.
21 Q. Okay. And for these prospective studies,
22 who actually conducted the studies?
23 A. Myself as well as a team of researchers.
24 Q. And how -- what was your method -- what is

1 your methodology -- if there are some that are
2 still going on -- but what was or what is your
3 methodology for these prospective studies?
4 MS. HUPPERT: Object to form.
5 A. Those were survey studies.
6 Q. Okay. And did you develop the survey
7 questions?
8 A. I did in conjunction with other members of
9 the team.
10 Q. And how many of these survey studies have
11 you completed?
12 A. So the two prospective studies -- I'm
13 thinking of one that was a pilot study regarding
14 expectations around gender affirming surgery.
15 The other is currently ongoing looking
16 at expectations regarding sexual function before
17 and after gender affirming surgery.
18 Q. Okay. And how often are the patients
19 surveyed?
20 MS. HUPPERT: Object to form.
21 A. So for the current, pre-operatively, and
22 then at, I believe, six-month follow-up and
23 one-year follow-up.
24 Q. Do you have any intention to extend that

1 follow-up period?
2 A. We are always, you know, considering new --
3 new clinical research questions and possibilities,
4 so it's certainly possible.
5 Q. Why did you choose a one-year follow-up
6 period?
7 A. To obtain the data. People may be less apt
8 to complete survey questions as time goes on.
9 Q. And in your pilot study on patient
10 expectations, how many of the patients within the
11 study population actually participated in the
12 survey?
13 A. An estimate is somewhere around 30. Again,
14 I'd have to look specifically at the study to give
15 -- to give the exact number. It could be a bit
16 more or it could be a bit less.
17 Q. And we'll say it's an approximation. So
18 does that mean that approximately -- well, let me
19 ask you this first: Was the pilot study set up the
20 same way? There was a pre-operative, a six-month
21 and a one-year survey?
22 A. It was. We stopped -- or we had limited
23 information -- or I should say we didn't have full
24 post-op survey because the IRB changed, and that

1 was in the switch to Rush University.
2 So we -- rather than write a new IRB,
3 we stopped with the pre-operative survey and then
4 we collect data now through what's called the
5 REDcap system which is a method of maintaining or
6 obtaining data.
7 Q. Okay. You just used what I assume is an
8 acronym, an IRB. Can you tell me what that is?
9 A. Sure. Institutional Review Board.
10 Q. Okay. And so the Institutional Review
11 Board changed as you changed locations from Weiss
12 to Rush?
13 A. No. The hospital -- my employer changed in
14 2019 when my employer sold the hospital, and with
15 that, the IRB changed.
16 So rather than recomplete -- or
17 rework the IRB, we decided to pursue a different
18 methodology.
19 Q. Okay. And so the pilot started -- and I'm
20 just trying to understand the timing. Was the
21 pilot study interrupted as a result of the change
22 in the IRB?
23 A. We completed the pre-operative surveys. We
24 were not able to complete the post-operative

1 surveys.
2 Q. Okay. And so there -- let me ask: Were
3 you offering or requesting that all of your
4 patients participate in this program?
5 A. I believe we had -- I believe it focused on
6 mastectomy and genital surgery. I don't recall
7 that we -- I think we excluded face. I believe
8 individuals had to be the age of majority. There
9 may have been some other exclusion criteria that
10 I'm also thinking -- that I just can't remember.
11 So the answer is: It was not open to
12 all individuals. There were some inclusion and
13 exclusion criteria.
14 Q. Okay. And for the pre-operative surveys,
15 what was the time frame? Was it over the course of
16 a year? And what I mean is, the patients who were
17 included in the study, were they patients who had
18 the -- a procedure over the course of a single
19 year?
20 A. No, this -- these were pre-operative, so
21 their procedure could have been 6 months, 12
22 months, 18 months later. It was specific to that
23 point prior to surgery. Whether surgery, you know,
24 occurred within that calendar year depended on the

1 person.
2 Q. Sure. So now with that understanding, to
3 refine my question a little bit, did you say,
4 "Okay, we're going to survey people pre-operatively
5 from July 1st of 2017 to June 30th of 2018," for
6 example?
7 A. I don't remember. I think we may have --
8 again, this is an approximation. We may have set
9 the target as a specific number, not necessarily by
10 date at which they were seen.
11 Q. So if I'm understanding correctly -- and I
12 don't know what the number was. But let's say that
13 you were hoping for 100 participants. You, over
14 the course of time, requested that people
15 participate in the survey if they didn't have an
16 exclusion criteria until you reached that number of
17 100.
18 A. It wasn't 100. It was designed as a pilot
19 study, so then further we refined survey questions.
20 So it was less than 100 individuals, again, with
21 the purpose to review and then further refine
22 survey questions.
23 Q. Okay. Do you believe that your pilot study
24 is a reliable study with Level II evidence?

1 MS. HUPPERT: Object to form.
2 A. It's not a -- I would not -- again, based
3 on this 2009 classification -- once again, I don't
4 know if this is the most recent ASPS rating scale.
5 So this would be from 13 -- 13 years ago. It's
6 possible, but I can't speak to that same scale
7 being used.
8 Q. Would you classify your pilot study as a
9 prospective cohort study?
10 A. I would classify it as a prospective case
11 series.
12 Q. Okay. And under the table, again the 2009
13 ASPS rating scale, would that be Level IV?
14 A. Again, I can't accept this scale from 2009
15 as being representative of 2022.
16 Q. Okay. So in 2022, which is a better or a
17 higher level of evidence, a prospective cohort
18 study or a case series?
19 MS. HUPPERT: Object to form.
20 A. Again, as for a particular study, it would
21 depend upon the study design of that -- of that
22 particular study. In other words, a prospective
23 cohort study, poorly done, would not necessarily be
24 a higher quality but may -- could be considered a

1 higher level of evidence.
2 Q. What were the results of your pilot study?
3 A. It was a survey designed to look at
4 expectations regarding gender affirming surgery,
5 and we had a variety of questions as well as the
6 opportunity to free text as to reasons why or
7 motivations for individuals to choose a surgical
8 intervention such as aligning their body or
9 alleviating or relieving their gender dysphoria.
10 Q. Were there individuals who were seeking
11 that surgery in your study to align their body but
12 not to alleviate gender dysphoria?
13 MS. HUPPERT: Object to form.
14 A. I'd have to look. I'd have to go back and
15 look at the individual -- individual data.
16 Q. Okay. Is that something that you see in
17 your practice, that there are people who would like
18 to align their body with their gender identity but
19 they don't have gender dysphoria?
20 MS. HUPPERT: Object.
21 A. So my typical indication for surgery is
22 gender dysphoria.
23 Q. Okay. So are there patients that you have
24 that would like to align their body with their

1 gender identity but who do not suffer from gender
2 dysphoria?
3 MS. HUPPERT: Object.
4 A. It's possible that I've seen patients as
5 you describe.
6 Q. Okay. Have you yourself conducted any
7 systematic reviews on the efficacy of gender
8 affirming surgeries?
9 A. I have been involved as an author,
10 participated in studies that have performed
11 reviews. Some may be scoping reviews, and some may
12 have been systematic. I'd have to look
13 specifically at my CV.
14 Q. What is a scoping review?
15 A. A literature search would have been done
16 but not necessarily in a systematic fashion where
17 one would include or exclude articles based on
18 certain criteria.
19 This would incorporate -- or could
20 incorporate the universe of articles.
21 Q. Has your pilot study been involved or
22 included in any systematic reviews to your
23 knowledge?
24 A. Not to my knowledge.

1 Q. Are you familiar with the Grade framework
2 for evaluating the trustworthiness of evidence?
3 A. I have heard of it, yes.
4 Q. Okay. And I'll go ahead -- I'm done asking
5 about that Evidence Rating Scale, so I'll go ahead
6 and go back to you getting to see my face.
7 Is the Grade Rating Scale something
8 that you use in your practice?
9 A. You mean clinically?
10 Q. I mean in terms of your -- the academic or
11 research side of your practice.
12 A. Well, the Grade system, I believe, is used
13 to look at clinical practice guidelines.
14 Q. Okay. And you're correct that that is one
15 of the uses of the Grade system, and it's for
16 treatment recommendations, and they rate the
17 strength of those treatment recommendations. Is
18 that the part that you're familiar with?
19 MS. HUPPERT: Object to form.
20 A. I'd have to look at the specific, again,
21 uses of Grade, but I believe they are used to
22 evaluate clinical practice guidelines.
23 Q. And do you know what the grading scale is
24 within Grade?

1 A. I don't recall the specific scale.
2 Q. Okay. Are you familiar with the Grade
3 system providing a strong treatment recommendation?
4 MS. HUPPERT: Object to form.
5 A. I'd have to see the specific scale. I
6 can't speak contemporaneously to the specifics of
7 how they do it, how they -- how Grade grades.
8 Q. Okay. Now, Doctor, in your original report
9 - and I believe that it's in Paragraph 18 - you
10 state "The term transgender is used to describe a
11 diverse group of individuals whose gender identity
12 or internal sense of gender differs from the sex
13 they were assigned at birth."
14 Is that an accurate statement?
15 A. It is.
16 Q. Okay. And there are a couple of different
17 terms in there that I'd like you to define. And
18 the first one is sex.
19 A. Sure. So sex is comprised of several
20 factors, which may include one's anatomy, typically
21 external and/or internal genitalia, chromosomes and
22 their gender identity, their internal sense of who
23 they know themselves to be.
24 Q. So an individual -- let me ask: Do you

1 differentiate between the terms "gender" and "sex?"
2 A. So gender -- well, gender itself may
3 include a variety of things, such as expression,
4 behaviors and so forth. Sex, as we've said -- so
5 gender may be incorporated within the context of
6 sex in the sense of one's identity being a part of
7 -- of their sex.
8 Q. Now, one of the things that you mentioned
9 that comprises sex is chromosomes, and that's
10 something that cannot be changed. Is that correct?
11 MS. HUPPERT: Object to form.
12 A. Well, radiation -- there are things that
13 can alter DNA. That's typically not what we do in
14 surgery.
15 Q. Okay. I'll limit it to surgery. Are you
16 able to surgically alter DNA?
17 A. I don't know if in the universe of what's
18 going on in the world, but not in my practice.
19 Q. Okay.
20 A. I guess unless we take it to a -- you know,
21 I suppose could radiation for cancer alter DNA?
22 You know, it's possible. I assume that's possible
23 and does, but --
24 Q. Okay. And the other part of this, you also

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1 say that the gender identity is an internal sense
2 of gender. And my first question is: Do you
3 believe that gender is fluid?
4 MS. HUPPERT: Object to form.
5 A. I believe it depends on the individual
6 person.
7 Q. And can an individual person's gender
8 identity change over time?
9 A. Depending on the individual, it's -- it is
10 possible.
11 Q. Have you witnessed that in practice,
12 someone's gender identity changing over time?
13 MS. HUPPERT: Object to form.
14 A. So I have seen and cared for individuals
15 who would describe themselves as gender fluid.
16 Q. Okay. And have any of those individuals
17 described to you that they have had a shift in
18 their gender identity throughout their lives?
19 MS. HUPPERT: Object to form.
20 A. I have had one patient who I performed a
21 breast augmentation on who probably 10ish - give or
22 take - years later requested removal of the breast
23 implants.
24 Q. Okay. I'm going to ask you if you agree

1 with a statement: While some people develop a
2 gender identity early in childhood, others may
3 identify with one gender at one time and then
4 another gender later on. Do you agree with that?
5 MS. HUPPERT: Object to form.
6 A. I would have to see the context in the
7 document to which you refer.
8 Q. Okay. I'm asking a question. Do you agree
9 that while some people develop a gender identity
10 early in childhood, others may identify with one
11 gender at one time and then another gender later
12 on?
13 MS. HUPPERT: Object to form.
14 A. So I don't treat children, so that is not a
15 statement that, you know, would be within my
16 clinical area.
17 Q. Okay. Have you seen adults who have had a
18 shift or a change in their gender identity over
19 their life span?
20 MS. HUPPERT: Object to form.
21 A. So as I said, I have one patient who I
22 performed a breast augmentation on who was assigned
23 male at birth, was a transgender woman upon whom I
24 performed a breast augmentation, and then, as I

1 said, approximately 10 years - it may be a bit --
2 somewhere between 8 to 10 years - requested removal
3 of the implant and was identifying with their male
4 sex assigned at birth.
5 Q. When you say "sex assigned at birth," what
6 do you mean by that?
7 A. The sex designated or recorded typically
8 based on one's external genitalia.
9 Q. And typically is the external genitalia
10 determined by that individual's chromosomes?
11 MS. HUPPERT: Object to form.
12 A. For most individuals, chromosomes will
13 determine -- will -- well, various factors.
14 Chromosomes, hormones, receptivity to those
15 hormones, all will impact the development of the
16 external genitalia.
17 Q. And just because someone is born with the
18 genitalia of a male does not mean that that
19 person's gender identity will align with a male.
20 Is that correct?
21 MS. HUPPERT: Object to form.
22 A. So you're referring to "male" meaning a
23 penis, the fact that someone is born with a penis,
24 assigned male at birth, does not necessarily

1 indicate -- or does not comply as we wouldn't know
2 at birth what the identity of that individual is.
3 Q. Okay. And would you agree with me there is
4 a social construct?
5 A. I'm sorry, you cut out.
6 Q. Yeah. Would you agree with me that gender
7 is a social construct?
8 MS. HUPPERT: Object to form.
9 A. I believe that gender is innate for an
10 individual.
11 Q. And what do you mean, that gender is innate
12 for an individual?
13 A. People are born as who they -- who they
14 are.
15 Q. And I'm not disagreeing with that. I'm
16 talking specifically -- you're saying that there
17 are gender identities that may be different from
18 the sexual organs that someone is born with, and
19 how do we assign an identity to someone based upon
20 their external genitalia?
21 MS. HUPPERT: Object to form.
22 A. Historically, it's been based upon the
23 external -- the appearance of the external
24 genitalia.

1 Q. Okay. And we do that through the
2 stereotype of people who have a certain external
3 genitalia, correct?
4 MS. HUPPERT: Object to form.
5 A. We do that typically based upon the
6 appearance of the external genitalia. I wouldn't
7 say necessarily "stereotype."
8 Q. Okay. Well, what do you -- what is your
9 definition of "stereotype?"
10 A. Stereotype are characteristics that are
11 applied to a group of individuals based off of some
12 characteristics that individuals may have in a
13 certain category. They may be accurate; they may
14 be inaccurate.
15 Q. And for example, there is a stereotype that
16 men like football. Correct? That's a stereotype
17 that you've heard?
18 MS. HUPPERT: Object to form.
19 A. Well, my wife likes football too, so I
20 can't -- can't say that I would agree with that
21 stereotype.
22 Q. And I'm not asking if you agree with it.
23 I'm just asking if you've heard of that stereotype.
24 MS. HUPPERT: Object to form.

1 A. Men like football. I can't say that I
2 specifically have heard it or not heard it. I
3 don't deny that men like football, but I don't deny
4 that men, women or transgender individuals may like
5 football. I don't think liking football depends on
6 one's anatomy or gender identity.
7 Q. Sure. And so tell me what -- give me an
8 example of a stereotype that you have encountered
9 as a male.
10 MS. HUPPERT: Object to form.
11 A. Stereotype. Well, I can certainly say that
12 I've been misgendered for most of my life based on
13 my first -- first name. That's happened ever since
14 I was a child and continues to happen.
15 I can't say that I've been stereotyped
16 in a particular way for being male.
17 Q. Okay. Well, let's go with your name. And
18 you have been misgendered because typically the
19 name Loren is associated with someone who is born
20 with a vagina, correct?
21 MS. HUPPERT: Object to form.
22 A. No, actually, I don't agree with it.
23 Spellings are different. Historically, Loren was
24 also characteristically a name for cisgender -- I

1 can't say "cisgender" -- I don't know everyone's
2 identity. But also associated with male-assigned
3 -- assigned at birth. So I won't -- can't agree
4 with that.
5 Q. Then why do you believe that you've been
6 misgendered?
7 A. Individuals have taken the name Loren to
8 assume that I was female.
9 Q. All right. And do you not believe that
10 that's because society expects that the name Loren
11 is associated with a female?
12 MS. HUPPERT: Object to form.
13 A. I -- I mean, I can't answer what everyone's
14 particular reason was, especially given the
15 spelling.
16 I think perhaps if it was spelled
17 differently, I might agree with that.
18 Q. Do you agree with me that gender roles have
19 changed over time?
20 MS. HUPPERT: Object to form.
21 A. You'll have to be more specific. I'm not
22 sure.
23 Q. Sure. Do you believe that the gender roles
24 of people who are -- who identify as women today

1 are the same as they were a hundred years ago?
2 MS. HUPPERT: Object to form.
3 A. Again, if you -- I need you to be more
4 specific as to -- and these are individual
5 discussions based on the person. I can't apply a
6 sweeping generality to something.
7 Q. Okay. How does someone develop a gender
8 identity if there is no societal pressures about
9 gender?
10 MS. HUPPERT: Object to form.
11 A. So my area of expertise is not in the
12 development of gender identities or the development
13 of those identities.
14 Q. And so you can offer no testimony about why
15 someone has a specific gender identity.
16 MS. HUPPERT: Object to form.
17 A. I would defer to my colleagues who diagnose
18 and treat children and adolescents.
19 Q. And it's your testimony that you do not
20 have the -- a common understanding of how
21 stereotypes are developed.
22 MS. HUPPERT: Object to form.
23 A. I'm sorry, you cut out.
24 Q. Is it your testimony that you do not have a

1 common understanding of how stereotypes are
2 developed?
3 MS. HUPPERT: Object to form.
4 A. It's my -- I believe I provided a
5 definition of a stereotype.
6 Q. Okay. Give me an example of a stereotype
7 of a male.
8 MS. HUPPERT: Object to form.
9 A. Of a cisgender male?
10 Q. A cisgender male.
11 A. I can't think of a stereotype that I would
12 apply to cisgender men.
13 Q. Can you think of a stereotype that you
14 would apply to cisgender women?
15 A. No.
16 Q. Have you ever heard of any stereotypes of
17 cisgender women?
18 MS. HUPPERT: Object to form.
19 A. I can't say I would classify things of --
20 as a stereotype. I judge people individually, not
21 collectively.
22 Q. And do you believe that society does that
23 the same way as you?
24 MS. HUPPERT: Object to form.

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1 A. Again, I would need to have more context to
2 answer that question.
3 Q. Do you believe that society does not apply
4 gender stereotypes?
5 MS. HUPPERT: Object to form.
6 A. Well, if the question is individuals who
7 are members of marginalized groups are subject to
8 stigmatization and prejudice, I would agree with
9 that.
10 Q. Okay. So you believe that there is a
11 stigma around people who are in marginalized
12 groups.
13 MS. HUPPERT: Object to form.
14 A. Yes, there can be.
15 Q. Okay. And what do you believe that that
16 stigma is based upon?
17 MS. HUPPERT: Object to form.
18 A. It would depend upon, again, what -- the --
19 what we're talking about, you know, the specific
20 situation.
21 Q. So let's talk about race then. Have you
22 heard of any stigmas or stereotypes regarding race
23 in America?
24 MS. HUPPERT: Object to form.

1 A. Stigma or stereotype associated with race.
2 Well, I believe that humans are of one
3 race.
4 Q. Okay. Have you ever listened to a certain
5 former president refer to groups of people as
6 rapists and criminals?
7 MS. HUPPERT: Object to form.
8 A. Can you be more specific to whom you're
9 referring and to a specific instance?
10 Q. Have you ever -- do you recall Donald Trump
11 stating that people coming across our southern
12 border - referring to Hispanic individuals - were
13 rapists and criminals?
14 MS. HUPPERT: Object to form. Object
15 to scope.
16 A. I remember certainly Donald Trump. I can't
17 remember the -- or don't have the specific
18 quotations he used to refer to individuals, whether
19 they're crossing the southern border or not.
20 Q. And would you agree with me if Donald Trump
21 said that, that he is applying a stigma or a
22 stereotype to a certain group of people?
23 MS. HUPPERT: Same objection.
24 A. I'm sorry, if someone -- well, if someone

1 were applying a generalization to an individual
2 person without knowledge of who that person is, I
3 would say they're wrong, without knowing the
4 qualities or characteristics of that individual.
5 Q. And I don't disagree with you. I think
6 it's also wrong. But I believe -- and I believe
7 that you can testify that that is something that
8 happens in America every single day, that a
9 generalization is applied to an individual based on
10 physical characteristics.
11 Is that true?
12 MS. HUPPERT: Same objection.
13 A. Again, if you can give me a specific
14 instance, I can try my best to speak to it. But I
15 can't speak for how all of America applies.
16 Q. So is it your testimony that your patients
17 who are transgender do not experience any sort of
18 stigmatization or stereotyping?
19 MS. HUPPERT: Object to form.
20 A. So I treat my patients on an individual
21 basis. I provide care on an individual basis,
22 after obtaining the requisite information, and make
23 determinations and recommendations based upon that.
24 Q. Okay. And what are you treating? What

1 medical condition are you treating?
2 MS. HUPPERT: Object to form.
3 A. In appropriately-selected individuals, my
4 typical indication for surgery, for gender
5 affirming surgery, is the condition of gender
6 dysphoria.
7 Q. Does the condition of gender dysphoria
8 require there to be distress caused by someone
9 having a gender identity that is not aligned with
10 their physical sex characteristics?
11 MS. HUPPERT: Object to form.
12 A. So gender dysphoria is -- is a
13 manifestation of gender incongruence, one's
14 identity not being consistent or congruent with
15 their physical anatomy, typically external --
16 typically with their anatomy.
17 Q. And if everyone is an individual, then what
18 is the cause of the distress? What is it that is
19 making someone believe that their gender identity
20 does not match with their external characteristics
21 of their genitals?
22 MS. HUPPERT: Object to form.
23 A. I don't make the diagnosis of gender
24 dysphoria.

1 Q. So do you not understand the diagnosis well
2 enough?
3 A. I work with colleagues who provide
4 assessments regarding the diagnosis, just as I work
5 with -- used to working more frequently with
6 oncologists who made diagnoses of cancer.
7 There are experts in those particular
8 areas.
9 Q. Okay. So do you understand what you're
10 actually treating when you are performing these
11 gender affirming surgeries?
12 A. I'm treating the medical --
13 MS. HUPPERT: Pardon me, object to
14 form.
15 You can go ahead.
16 A. I'm treating the medical condition of
17 gender dysphoria.
18 Q. And what symptom are you attempting to
19 alleviate?
20 A. We are making one's body congruent with
21 their mind, with their identity.
22 Q. Is incongruence alone sufficient for
23 someone to undergo gender affirming surgery?
24 MS. HUPPERT: Object to form.

1 A. So as I said, my indication is typically
2 gender dysphoria. Is it conceivable that someone
3 with gender incongruence may not have dysphoria?
4 Yes.
5 Is it conceivable that someone with
6 gender incongruence would request a surgical
7 intervention? Yes.
8 As I said, I would have to look back,
9 but my typical indication is gender dysphoria.
10 Q. How is someone's -- how does someone
11 experience gender incongruence if there aren't
12 societal pressures about what gender actually is?
13 MS. HUPPERT: Object to form.
14 A. So again, I don't make those diagnoses, but
15 there are also the -- while society may play a
16 role, the individual's internal sense of identity
17 may be disparate or incongruous with their physical
18 anatomy.
19 Q. And again, what makes someone's identity
20 tied to or supposed to be tied to or supposed to
21 not be tied to -- who is saying that it should be
22 tied to their anatomy?
23 MS. HUPPERT: Object to form.
24 A. I'm sorry, you're -- again, you're cutting

1 a little in and out.
2 Q. I'm sorry. So the -- you said that there
3 is an incongruence between their sense of gender
4 and their anatomy. Is that correct?
5 A. There's an incongruence between their
6 gender identity, their internal sense of who they
7 are, and their physical morphology, their anatomy.
8 Q. Okay. Why are those two things
9 interrelated at all?
10 MS. HUPPERT: Object to form.
11 A. As I said earlier, I don't make that
12 diagnosis. My role is making the body congruent
13 with their identity.
14 Q. And if you make someone's body congruent
15 with their identity, does that cure something or
16 alleviate something?
17 MS. HUPPERT: Object to form.
18 A. In the case of gender affirming surgery for
19 gender dysphoria - so again, in appropriately-
20 sought individuals - surgery is typically part of a
21 multi-faceted treatment plan and can alleviate or
22 cure gender dysphoria.
23 Q. So is gender dysphoria a psychological
24 condition or a medical condition?

1 MS. HUPPERT: Object to form.
2 A. Gender dysphoria is a medical condition.
3 Fortunately, treatable.
4 Q. And is there any diagnostic manual other
5 than the DSM-V that identifies gender dysphoria as
6 a medical condition?
7 MS. HUPPERT: Object to form.
8 A. Again, I don't make the diagnosis of gender
9 dysphoria.
10 Q. What other DSM-V diagnoses do you perform
11 surgery to treat?
12 A. I don't make DSM-V diagnoses. We perform
13 surgery for medical conditions --
14 Q. I understand --
15 A. -- of which gender dysphoria is one.
16 Q. I understand. Are you saying that it is
17 not a DSM-V -- gender dysphoria is not a DSM-V
18 diagnosis?
19 A. Gender dysphoria is in DSM-V. That does
20 not mean it's not a medical condition and we
21 perform -- I perform surgery for the medical
22 condition of gender dysphoria.
23 Q. Are there any other DSM-V diagnoses that
24 you perform surgery to treat?

1 A. Again, I don't make DSM-V diagnoses. The
2 fact that there may be mental health manifestations
3 of a medical condition does not mean that that --
4 that the condition is not a medical condition.
5 Q. Physicians refer patients to you for
6 treatment with surgery of DSM-V diagnoses other
7 than gender dysphoria.
8 MS. HUPPERT: Object to form.
9 A. Again, my medical indication -- a surgical
10 indication is the medical diagnosis of gender
11 dysphoria. The fact that a medical condition may
12 have mental health manifestation is not unique to
13 gender incongruence.
14 Q. Please list all DSM-V diagnoses for which
15 you provide surgical treatment.
16 MS. HUPPERT: Object to form.
17 A. I have a number of individuals - regardless
18 of their underlying medical condition - who may
19 have DSM-V diagnoses that doesn't prohibit them
20 from undergoing surgical interventions for their
21 medical indications.
22 Q. Do you treat generalized anxiety disorder
23 with surgical intervention?
24 A. No.

1 Q. Do you treat clinical depression with
2 surgical intervention?
3 A. No. That's not to say that mental health
4 conditions may not improve. But that's not a
5 primary indication for a particular procedure.
6 Q. Do you treat obsessive compulsive disorder
7 with surgical intervention?
8 A. I treat medical conditions with surgical
9 interventions. The fact that people may have
10 mental health conditions and the fact that some of
11 those mental health conditions may improve after
12 surgery is a potential benefit of the surgical
13 procedure.
14 Q. Have you ever performed a surgery with the
15 sole indication being obsessive compulsive
16 disorder?
17 A. No.
18 Q. Do you perform surgery for individuals with
19 body dismorphea?
20 MS. HUPPERT: Object to form.
21 A. With body dysmorphyic disorder?
22 Q. Correct.
23 A. Typically not.
24 Q. Okay. Would you agree that an individual

1 with body dysmorphyic disorder may suffer with
2 distress caused by their physical appearance?
3 MS. HUPPERT: Object to form.
4 A. Again, I don't diagnose or treat body
5 dysmorphyic disorder.
6 Q. Are you aware of any guidelines, medical
7 literature anywhere that says that surgery is an
8 appropriate treatment for body dysmorphyic
9 disorder?
10 MS. HUPPERT: Object to form.
11 A. I have not performed surgery for body
12 dysmorphyic disorder. It is generally considered
13 not effective for the condition of body dysmorphyic
14 disorder.
15 Q. Have you reviewed literature on the
16 efficacy of surgery for body dysmorphyic disorder?
17 A. Probably over the course of my career.
18 Q. Do you have colleagues that perform surgery
19 with the indication being body dysmorphyic
20 disorder?
21 A. I can't speak to all my colleagues'
22 indications for surgery.
23 Q. Have you ever discussed that issue of
24 treating patients with the indication being body

1 dysmorphyic disorder with surgical intervention
2 with your colleagues? Have you ever discussed
3 that?
4 A. Not as a -- I have probably attended
5 educational conferences and so forth and it would
6 be typically understood that surgery would not be a
7 treatment for body dysmorphyic disorder.
8 Q. And do you know why surgery is not a
9 treatment for body dysmorphyic disorder?
10 MS. HUPPERT: Object to form.
11 A. It's my understanding it tends to be
12 ineffective or not effective for that.
13 Q. And when you say "ineffective," you mean
14 that it does not alleviate the distress that that
15 individual is experiencing? What is the measure of
16 effectiveness?
17 MS. HUPPERT: Object to form.
18 A. Again, I don't diagnose or treat that, so
19 that's not my clinic -- area of clinical focus.
20 Q. Okay. So when you say that it -- your
21 understanding that it's not ineffective -- or it's
22 not effective as a treatment -- surgery is not
23 effective as a treatment for body dysmorphyic
24 disorder, can you elaborate at all on what you mean

1 by "not effective"?
2 MS. HUPPERT: Object to form.
3 A. That it does not treat body dysmorphyic
4 disorder.
5 Q. And are you aware of what the measures of
6 whether it's effective are?
7 MS. HUPPERT: Object to form.
8 A. I don't make that diagnosis, so -- nor do I
9 treat that.
10 MS. HUPPERT: Caleb, we're approaching
11 noon here central time. I'm just curious what you
12 feel about a break.
13 MR. DAVID: I'm good with a break.
14 MS. HUPPERT: How do you feel about
15 that, Doctor Schechter?
16 THE DEPONENT: I'm good for a break,
17 take care of a few things.
18 (A recess was taken after which the
19 proceedings continued as follows:)
20 BY MR. DAVID:
21 Q. Doctor, we're back on the record, and I
22 want to start by asking you if you are familiar
23 with the 2017 Endocrine Society guidelines as they
24 relate to the treatment of transgender individuals.

1 A. I am familiar, yes.
2 Q. Okay. And have you reviewed those
3 guidelines in their entirety?
4 A. Probably not in the sense that I don't dose
5 hormones and things like that.
6 Q. Are you familiar with the statements made
7 by the Endocrine Society as it relates to childhood
8 desistance from gender dysphoria?
9 MS. HUPPERT: Object to form.
10 A. I don't recall those statements offhand.
11 Q. Could you tell me what desistance from
12 gender dysphoria means?
13 MS. HUPPERT: Object to form.
14 A. Well, again, I don't treat children. My
15 understanding is that the term "desistance" is for
16 individuals - children, for example - who identify
17 as transgender, whether that is sustained through
18 adolescence or -- if not sustained through
19 adolescence or adulthood, may be classified as
20 desistance.
21 Q. And are you aware that the Endocrine
22 Society states that 85 percent of prepubertal
23 children with a childhood diagnosis of gender
24 dysphoria do not remain gender incongruent in

1 adolescence?
2 MS. HUPPERT: Object to form. Object
3 to scope.
4 A. Again, I probably read that. But as I
5 don't specifically treat children, that wouldn't be
6 an area of focus for me.
7 Q. All right. Now, what ages of patients do
8 you treat?
9 A. The oldest is 75; the youngest, on two -- I
10 believe on two occasions, maybe three occasions,
11 was 14.
12 Q. And what procedures have you performed on
13 14-year-olds?
14 A. A bilateral mastectomy.
15 Q. Is that the only procedure that you've
16 performed on a 14-year-old?
17 A. Yes. For gender affirming surgery. I
18 might have --
19 Q. Right, of course. I -- to clarify, all of
20 these questions are going to be about gender
21 affirming surgery. And have you performed
22 procedures other than bilateral mastectomy on
23 patients who are under the age of 18?
24 MS. HUPPERT: Object to form.

1 A. Yes.
2 MS. HUPPERT: Pardon me. Object to
3 form.
4 You can answer.
5 A. Yes.
6 Q. And what other procedures have you
7 performed on patients under the age of 18 other
8 than bilateral mastectomy for the treatment of
9 gender dysphoria?
10 MS. HUPPERT: Object to form.
11 A. I have performed a vaginoplasty on
12 17-year-old -- 17-year-olds. And I believe
13 metoidoplasty.
14 Q. Can you explain what is involved in a
15 vaginoplasty?
16 A. Yes. The typical procedure involves
17 formation of a vulva and associated structures,
18 meaning clitoris and labia, removal of the penis
19 and testicles, most often construction of a vaginal
20 canal.
21 Q. Is a vaginoplasty an irreversible surgery?
22 MS. HUPPERT: Object to form.
23 A. Well, in the sense that could the surgical
24 maneuvers be undone, the answer is yes. However,

1 that is a complex -- complex procedure -- would be
2 a complex procedure to do.
3 Q. If the surgical maneuvers were undone,
4 would that patient be able to produce sperm to
5 create children?
6 A. No. The --
7 MS. HUPPERT: I'm sorry. Object to
8 form.
9 You can answer.
10 A. No. The orchiectomy would be permanent and
11 irreversible.
12 Although prior to undergoing,
13 individuals are offered the option for sperm
14 preservation.
15 Q. And so in the case of a vaginoplasty, you
16 stated that the penis and the testicles would be
17 removed from the body. Is that correct?
18 A. Well, the -- technically, the corporeal
19 bodies and a portion of the glands is removed and
20 the testicles with spermatic cord. The penis is
21 disassembled, so there are remnants used to form
22 the clitoris, the labial structures and the vaginal
23 canal.
24 Q. So tissue from the penis is used to

1 construct the vaginal canal, labia and clitoris.
2 A. Correct.
3 Q. Okay. In that case, where the penis and
4 testicles are removed for the purposes of gender
5 dysphoria, is that healthy tissue that is being
6 removed?
7 MS. HUPPERT: Object to form.
8 A. The tissue that is -- the tissue
9 contributes -- presence of the tissue contributes
10 to the diagnosis of the medical condition. So very
11 much like in other procedures, mastectomy or
12 oophorectomy or cisgender women who may be at an
13 increased risk of cancer but don't have cancer,
14 tissue would be removed here for the purpose of
15 treating the dysphoria and preventing -- for
16 treating the dysphoria.
17 Q. So the penis is removed -- the tissue
18 that's removed from the penis, does it have to have
19 a -- any type of disease to be removed?
20 MS. HUPPERT: Object to form.
21 A. Well, it's the anatomy or the presence of
22 that -- of the organ, the penis, that may lead to
23 the diagnosis of gender dysphoria in the context of
24 the identity not being congruous with the mind.

1 Q. Okay. Does it have to have necrotic tissue
2 to be removed?
3 MS. HUPPERT: Objection to form.
4 A. No, it does not have to have necrotic
5 tissue to be removed.
6 Q. Does it have to have gangrenous tissue to
7 be removed?
8 A. It does not have to have gangrenous tissue
9 to be removed. Similar to what we do, as we said,
10 in a oophorectomy for a cisgender woman with a risk
11 or predisposition to ovarian cancer or a mastectomy
12 in a cisgender woman with -- or a cisgender man
13 with a predisposition to breast cancer.
14 Q. And in this case, does there have to be a
15 predisposition to cancer for the tissue to be
16 removed?
17 A. I'm sorry, Mr. David. I think it's -- it
18 comes in and out.
19 Q. I'm hearing something as well. I'm not
20 sure what's going on there.
21 MS. HUPPERT: There may be someone
22 with their -- who's off of mute.
23 MR. DAVID: Walt, I think you might be
24 off your mute.

1 THE DEPONENT: If you'll give me one
2 second, I'm going to raise my blinds. There's this
3 terrible bright light and it's driving me crazy.
4 MR. AUVIL: Sorry about that. I don't
5 know how that happened. Must have -- I don't know.
6 Not used to being quiet for that long, I guess.
7 BY MR. DAVID:
8 Q. All right. Doctor, we're back on the
9 record. And in the instance of a vaginoplasty,
10 does the tissue of the penis have to be predisposed
11 to cancer for it to be removed?
12 MS. HUPPERT: Object to form.
13 A. It does not have to be predisposed to
14 cancer in order -- in order to be removed. There
15 are often involutional changes associated with the
16 testes and the penis found on pathology.
17 Q. When you say -- I think the word you used
18 was "involutional" -- is that correct?
19 A. That's correct.
20 Q. Can you explain what that means?
21 A. Atrophy.
22 Q. All right. So is atrophy generally an
23 indication for surgical removal of tissue?
24 A. The indication is typical for vaginaplasty

1 is gender dysphoria, typically gender dysphoria.
2 The pathologic findings in the tissue samples often
3 indicate atrophy or involutional changes of the
4 structures we discussed.
5 Q. Are you aware of any other surgery other
6 than gender affirming surgery that is performed due
7 to atrophy?
8 MS. HUPPERT: Object to form.
9 A. Wow. Procedures can be performed for
10 atrophy, depending on the specific circumstances.
11 Q. Do you remove body parts that are
12 atrophied?
13 A. So, for example, if a cisgendered woman had
14 unilateral breast cancer, underwent mastectomy, as
15 with age, she had involutional changes of the
16 opposite breast, the contralateral breast, surgery
17 could then be performed on the contralateral breast
18 to provide symmetry.
19 Q. So --
20 A. And that would -- go ahead.
21 Q. No, I didn't mean to cut you off.
22 A. It's all right.
23 Q. Other than for individuals with cancer, are
24 you able to describe any other situation where

1 atrophied tissue is surgically removed, other than
2 gender affirming surgeries?
3 MS. HUPPERT: Sorry, I did not mean to
4 interrupt. My bad. Objection to form.
5 A. So there are conditions such as hemifacial
6 atrophy, hemifacial microstomia -- hemifacial
7 atrophy, fat atrophy, which may occur, and are
8 treated -- surgically treated with the addition of
9 fat, for example, lipofilling or for facial
10 surgery.
11 Q. And is lipofilling a medically-necessary
12 procedure?
13 A. Can be, depending on the indication.
14 Q. In the instance of someone who has atrophy
15 to their calves, would lipofilling be a
16 medically-indicated or a medically-necessary
17 procedure?
18 MS. HUPPERT: Object to form.
19 A. It would be possible depending on the
20 indication for that. Someone could be in a
21 traumatic situation, have a congenital situation
22 that resulted in atrophy for which they might seek
23 reconstructive surgery.
24 Q. And reconstructive surgery can be different

1 than lipofilling, correct?
2 A. Well, as I said, there's no procedures that
3 are specifically cosmetically constructed. It's
4 the basis upon which the procedure is performed.
5 Q. And I'm specifically asking you about
6 lipofilling for calves. That's the specific
7 procedure. Is that a medically-necessary
8 procedure?
9 MS. HUPPERT: Object to form.
10 A. So it would depend on the clinical
11 circumstances. If someone had a birth-related
12 condition from that, post-traumatic condition,
13 lipofilling may be indicated and considered
14 medically necessary.
15 Q. Have you ever performed a lipofilling of a
16 calf that you -- that was medically indicated and
17 therefore medically necessary?
18 A. I have performed medically necessary
19 lipofilling procedures, meaning procedures
20 performed for reconstructive purposes, on the face,
21 the breast, genitalia, arms, forearms, thighs.
22 I can't say -- I can't say
23 specifically calf.
24 Q. And were any of those procedures that you

1 just described done outside of the context of
2 gender affirming surgery?
3 A. Yes.
4 Q. Okay. And what were the indications for
5 those procedures that were outside the context of
6 gender affirming surgery?
7 A. They can be post-traumatic, post-oncologic,
8 birth-related, effect of infection, radiation,
9 previous surgeries. That may not be completely
10 enumerative, but I think that that is a reasonable
11 range.
12 Q. And in each of those instances that you
13 just described - trauma or infection - you're
14 talking about physical injuries to the tissue,
15 correct?
16 MS. HUPPERT: Object to form.
17 A. I have, I believe -- well, no, not
18 necessarily all have physical injuries. Birth-
19 related conditions may not be a physical injury
20 consistent with how we're discussing trauma or
21 cancer here.
22 Q. And those birth-related issues, were they
23 affecting the patient's functionality?
24 MS. HUPPERT: Object to form.

1 A. Again, so for conditions like hemifacial
2 atrophy, hemifacial microsomia resulting in an
3 obvious and overt discrepancy in appearance between
4 the two sides of the face, those can and often are
5 considered re -- well, they're considered
6 reconstructive, and would not be uncommon to be
7 reimbursed by a third party payer.
8 Q. When you say "wouldn't be uncommon to be
9 reimbursed," does that mean that there are times
10 where it's not reimbursed by a third party payer?
11 A. I can't conceive of every situation in
12 which I've treated and whether a third party payer
13 has agreed to pay, but a decision for medical
14 necessity -- or if the physician, based upon their
15 examination and opinion of the patient, that would
16 determine medical necessity.
17 Whether insurers ultimately pay is a
18 different question. I mean, it wasn't until 1998
19 that breast reconstruction was covered.
20 Q. So other than in the situation of a
21 predispositioned cancer or when only one breast is
22 affected by cancer and both breasts are removed in
23 a double mastectomy, are you aware of any other
24 procedures outside of gender affirming care where

1 healthy tissue is removed from the body?
2 MS. HUPPERT: Object to form.
3 A. Well, I don't describe it as necessarily
4 "healthy tissue" in the sense that it's the
5 etiology of the medical condition.
6 Q. And a little bit ago, you told me that you
7 do not actually diagnose this, and you refused to
8 answer some questions. So what is it about the
9 medical condition now that you're in tune with
10 exactly what the diagnostic criteria are?
11 MS. HUPPERT: Object to form. Object
12 to characterization of the prior testimony.
13 A. I'm sorry, "diagnose this" meaning -- you
14 said "diagnose this."
15 Q. Diagnoses or the diag -- so now, let's talk
16 about the diagnostic criteria for gender dysphoria.
17 What are they?
18 MS. HUPPERT: Object to form.
19 A. As I said, I don't diagnose gender
20 dysphoria.
21 Q. Okay. So what is it about -- in a
22 transgender man, what is it about the breast tissue
23 that requires it to be removed in a double
24 mastectomy?

1 MS. HUPPERT: Object to form.
2 A. So not all transgender men request removal
3 of breast tissue. That's typically done in a --
4 it's done in appropriately-selected individuals,
5 typically for the diagnosis of gender dysphoria and
6 with the goal of aligning one's body with their
7 identity.
8 Q. And why is it only required or medically
9 necessary for certain individuals?
10 MS. HUPPERT: Object to form.
11 A. Well, not all transgender individuals want
12 surgery, want all types of surgery. That depends
13 upon the decision to proceed with the surgery, the
14 decision between the physician and the individual
15 seeking treatment, and it's based on the individual
16 facts of the case.
17 Q. And what is -- what are those individual
18 facts that are necessary for surgery to be
19 indicated?
20 A. Typically gender dysphoria is the
21 indication, and then - as with any medical
22 intervention - the individual will consider the
23 treatment options and, in conjunction with their
24 physician, make a determination of how to proceed.

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1 Q. And are you aware of any lab tests that
2 would be useful in determining whether a patient
3 requires a double mastectomy for gender dysphoria?
4 MS. HUPPERT: Object to form.
5 A. I -- there's a variety of lab tests that
6 people may have to undergo prior to surgery.
7 Q. Okay. Are you aware of any that would be
8 necessary and would indicate that a patient
9 requires a double mastectomy for gender dysphoria?
10 MS. HUPPERT: Object to form.
11 A. So regardless of the diagnosis, lab tests
12 don't require an individual to seek an intervention
13 or not seek an intervention. They may or may not
14 be one part of the ultimate decision-making
15 process.
16 But the ultimate decision as to
17 whether or not to proceed with the surgical
18 intervention is a decision between the physician
19 and the individual seeking treatment.
20 Q. Do you require lab tests from patients
21 prior to performing gender affirming surgeries?
22 A. We typically do get labs prior to surgery.
23 Rather, independent of gender identity.
24 Q. Right. Okay. So are there any that are

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1 specific to gender identity that you require for --
2 prior to gender affirming surgery?
3 MS. HUPPERT: Object to form.
4 A. The lab tests that we require are typically
5 labs such as blood count, electrolytes, urinalyses,
6 and then there may be other labs - x-rays,
7 diagnostic tests - that are performed prior to
8 surgery based on an individual's medical condition.
9 Q. Is there anything on a CBC that is
10 diagnostic for gender dysphoria?
11 MS. HUPPERT: Object to form.
12 A. Again, I don't make the diagnosis of gender
13 dysphoria.
14 Q. Okay. Are you able to answer that
15 question?
16 MS. HUPPERT: Object to form.
17 A. We require a CBC for -- pre-operatively in
18 most individuals undergoing surgery.
19 Q. And why do you require a CBC?
20 A. We want to check their hemoglobin level,
21 their platelet level, their white blood count to
22 assess for anything that may be of concern.
23 Q. Is someone's white blood count affected by
24 their gender identity?

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1 MS. HUPPERT: Object to form.
2 A. Again, I'm not -- I don't make the
3 diagnosis of gender dysphoria, nor am I a primary
4 care professional, so might there be lab issues
5 that I am unaware of? It's possible.
6 I'm obtaining the labs to perform the
7 surgery in a safe, safe manner.
8 Q. Okay. Are you aware of medical literature
9 that would suggest that lab values have any link to
10 a person's gender identity?
11 MS. HUPPERT: Object to form.
12 A. There may be lab values that are pertinent
13 based on the individual's medical condition and
14 previous medical treatments which may be related to
15 their medical diagnosis of gender dysphoria that
16 may impact lab values and may need to be addressed
17 prior to surgery.
18 Q. Are you aware of any medical literature
19 that links a CBC to someone's gender identity?
20 MS. HUPPERT: Object to form. Asked
21 and answered.
22 A. Again, I'm performing the CBC for the
23 purpose of evaluating them for surgery, not to
24 diagnose them with gender dysphoria.

1 Q. And are you aware of any values on a
2 complete metabolic panel that would be linked to
3 someone's gender identity?
4 MS. HUPPERT: Object to form.
5 A. Again, while I -- we typically -- we don't
6 always get a complete metabolic panel. It's
7 typically less than that, a basic metabolic
8 profile.
9 Again, I don't make the diagnosis. We
10 often obtain that information for the purpose of
11 looking at kidney function, electrolytes, and
12 performing surgery in a safe, safe manner.
13 Q. Are there any lab values you use post-
14 surgery to determine whether your surgery was
15 successful for treating gender dysphoria?
16 MS. HUPPERT: Object to form.
17 A. We obtain lab values post-surgically, but
18 again, it's within the context of the surgical
19 care, not within the context of the medical
20 condition gender dysphoria. Unless treatments for
21 that dysphoria was -- caused them to be on other
22 medications that may influence lab values.
23 Q. But there's nothing that you pull up after
24 you do surgery, you get lab work and you pull it up

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1 and say, "Wow, this shows that you're doing a lot
2 better after this surgery for your gender
3 dysphoria."
4 There's nothing on a lab value that
5 would actually show you that. Correct?
6 MS. HUPPERT: Object to form.
7 A. As with many medical conditions, lab values
8 may or may not be helpful in terms of the overall
9 diagnosis. I don't have a lab value that I would
10 order to -- that I order to assess their level of
11 gender dysphoria.
12 Q. Are there vital signs that you take to
13 assess someone's level of gender dysphoria?
14 MS. HUPPERT: Object to form.
15 A. Well, in the sense that there are medical
16 -- that medical conditions -- that -- can have
17 somatic manifestation, we monitor everything:
18 Vital signs, medication, lab values.
19 Q. And do you monitor vital signs specifically
20 to determine whether or not someone has an
21 increased or decreased level of gender dysphoria?
22 MS. HUPPERT: Object to form.
23 A. We monitor the vital signs in relation to
24 their recent surgery, and that helps us make

1 determinations. Many things go into vital signs,
2 especially in the peri-operative period: Pain,
3 stress, anxiety, blood loss, fluids. All of those
4 may have an impact on vital signs.
5 Q. Let's say six months after surgery, do you
6 take a patient's vitals to see if their heart rate
7 has increased or decreased as a result of an
8 increase or decrease in the effects of gender
9 dysphoria?
10 MS. HUPPERT: Object to form.
11 A. So our medical assistant typically takes
12 vital signs with both pre- and post-operative
13 visits.
14 Q. And do you take those vital signs and use
15 those as a tool to measure the effects of gender
16 dysphoria on a person?
17 MS. HUPPERT: Object to form.
18 A. I incorporate all medical information in
19 terms of the overall person, and if there are
20 abnormalities in vital signs, then we want to
21 address them.
22 Q. So how does gender dysphoria affect heart
23 rate?
24 A. Again, I'm not a primary care physician,

1 but if someone had an elevated heart rate, I would
2 speak with their primary care professional to
3 ascertain as to why.
4 Q. How does gender dysphoria affect blood
5 pressure?
6 A. Again, in a similar way that -- my primary
7 clinical area is not the investigation of blood
8 pressure. But should someone have low blood
9 pressure, problematically low blood pressure,
10 hypertension, we would want that -- conversely to
11 hypotension, we would want that communicated with
12 their primary care professional.
13 In conjunction with them, they would
14 make a determination as to what factors may impact
15 that.
16 Q. Are you aware of any medical literature
17 that links tachycardia, bradycardia, hypotension or
18 hypertension to gender dysphoria?
19 MS. HUPPERT: Object to form.
20 A. Physical manifestations of medical
21 conditions can occur and do occur.
22 Q. And are you aware of any medical literature
23 that links tachycardia, bradycardia, hypotension or
24 hypertension to gender dysphoria?

1 MS. HUPPERT: Object to form.
2 A. Again, I don't treat tachycardia,
3 bradycardia, hypotension or hypertension, but
4 medical conditions can impact those parameters.
5 Q. Okay. Can you please list all medical
6 literature that you're aware of that links
7 tachycardia, bradycardia, hypotension or
8 hypertension, to gender dysphoria.
9 MS. HUPPERT: Object to form.
10 A. Again, I don't make a diagnosis of gender
11 dysphoria; nor do I treat tachycardia. In the
12 peri-operative period, I do have to be very aware
13 of vital signs. Tachycardia, bradycardia,
14 hypotension, hypertension, can be a manifestation
15 of multiple issues.
16 Six months following surgery, I would
17 typically refer them to their primary care
18 professional to make that determination.
19 Q. Okay. When you are assessing whether your
20 surgery, your gender affirming surgery, was
21 successful, what objective findings do you look at?
22 A. So patient goals and expectations as we
23 would with most or many plastic surgeries. Whether
24 those goals and expectations have been met. How

1 they're healing in terms of the incisions, the
2 integrity of the incision, other parameters:
3 Sensation, pain.
4 And then patient overall reports of
5 how they're doing.
6 Q. Are patient goals an objective finding?
7 MS. HUPPERT: Object to form.
8 A. Those are what we refer to as patient
9 recorded outcome measures. So patient goals are
10 what the patient, obviously, would like to achieve
11 from surgery.
12 Whether those are achievable or
13 realistic is part of the surgical -- the pre-
14 operative discussion with the person seeking the
15 intervention.
16 The ability to measure that is an
17 increasing area of interest, both in plastic
18 surgery -- in plastic surgery, as well as within
19 gender affirming surgery.
20 Q. Are patient goals an objective or
21 subjective finding?
22 MS. HUPPERT: Object to form.
23 A. Again, translating goals into what we call
24 patient reported outcome measures, are the goals --

1 is that one of the goals is to be able to
2 objectively assess whether goals are met by a
3 procedure.
4 Q. Can patients lie?
5 MS. HUPPERT: Object to form.
6 A. Anybody can lie.
7 Q. All right. And so the patient could tell
8 you that they have a bad outcome when they had a
9 good outcome; or they could tell you that they had
10 a good outcome when they had a bad outcome,
11 correct?
12 MS. HUPPERT: Objection to form.
13 A. That doesn't imply lying.
14 Q. Okay. So a patient can report to you
15 different goals than they actually have, correct?
16 MS. HUPPERT: Object to form.
17 A. That's part of the importance of the pre-
18 operative assessment, so that it's not only the
19 surgeon identifying -- working with the patient,
20 but also other professionals.
21 Q. There is no lab value that tells you a
22 patient goal, correct?
23 MS. HUPPERT: Object to form.
24 A. Well, I can't -- there are -- again, not

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1 within necessarily the area of plastic surgery, but
2 patients may have goals on hormone levels, maybe a
3 goal as to a blood count, if someone has anemia.
4 So it would depend a bit more on what you mean by
5 "goals."
6 Q. Has any patient told you that they would
7 like gender affirming surgery to affect their iron
8 levels for anemia?
9 A. So individuals may be anemic - not uncommon
10 - prior -- trans women, prior to undergoing
11 surgery. And in fact, we often use iron prior to
12 surgery to elevate their hemoglobin.
13 Q. But the surgery itself is not going to cure
14 that, right?
15 A. Surgery -- gender affirming surgery is not
16 to be performed for the indication of any
17 (inaudible).
18 Q. And you can't do an MRI and determine a
19 patient's goals, correct?
20 A. Again, it would be more specific for what
21 you want. People try to estimate goals regarding
22 breast size, post-operative appearance, using
23 various facial morphing strategies and so forth.
24 So in the context of, for example,

1 imaging software, pre-operative photographs, you
2 can sit with a patient; they can identify what
3 their particular concerns are and what their goals
4 are, and you can make a mutual decision as to
5 whether those goals are achievable and/or
6 realistic.
7 Q. My question was: Can you do an MRI and
8 determine a patient's goals by looking inside their
9 body?
10 MS. HUPPERT: Object to form.
11 A. Again, you can do imaging tests to look,
12 for example, at breast volume; you can do imaging
13 tests to look at volume in other areas of the body,
14 to assess whether if you transfer tissue from one
15 area of the body to another, whether you will
16 achieve their goal.
17 So not trying to be glib. It's a bit
18 of a broad question that you're asking in terms of,
19 you know, "Can you use an imaging study, i.e.,
20 MRI"?
21 Studies have been used with people to
22 understand what are achievable in their goals or
23 what is not achievable.
24 Q. And I'm asking if you can do an MRI study

1 to determine what someone's goals are -- not to
2 look at parts of their body that they have already
3 looked into to goals for. Can I look in someone's
4 forearm and say, "Oh, well, that's where they keep
5 their goals."
6 It's not there, right? You're not
7 going to see that on an MRI.
8 MS. HUPPERT: Object to form.
9 A. I mean, we use imaging of the forearm
10 routinely in plastic surgery, you know, to look at
11 anatomy, to look at the tissue in terms of
12 performing various flaps, so it's commonly used,
13 and if there's a concern with that, we would say we
14 can't use that forearm; we have to look at another
15 -- another body part.
16 So in the context of someone wants
17 their forearm but it's not suitable, I guess that
18 helps them determine their goals.
19 Q. How are patient goals communicated to you?
20 A. Typically, people articulate their goals,
21 verbalize their goals. We discuss them; we review
22 the assessment of the -- the pre-operative
23 assessment, and that would be the typical manner by
24 which we hope to come to a mutual understanding as

1 to what goals are.
2 Q. Without that communication, is there any
3 other way for you to determine a patient's goals?
4 MS. HUPPERT: Object to form.
5 A. Communication would be an important part of
6 determining those.
7 Q. Without that communication, are you able to
8 do a lab test and determine a patient's goals?
9 MS. HUPPERT: Object to form.
10 A. Communication would be the primary or
11 principal methods of determining goals. We would
12 then use adjunct studies, labs, imaging studies, as
13 necessary to help arrive at a mutually-decided-upon
14 course of treatment.
15 So while one person may have goals,
16 those goals may shift after a discussion of the
17 various procedures.
18 Individuals may or may not have an
19 understanding of the realm or range of
20 possibilities that are or are not available to
21 them.
22 Q. I'll try this one more time. If I go and
23 get lab work and just send my lab work to you, can
24 you tell me what my goals are?

1 MS. HUPPERT: Object to form.
2 A. As I said before, the principal methods of
3 articulating goals would be communication with the
4 patient. That's not to say, though, that other
5 studies don't play a role into that shared
6 decision-making process.
7 Q. And if I just send you a CT scan or an MRI
8 and nothing else, can you tell me what my goals
9 are?
10 MS. HUPPERT: Object to form.
11 A. I can't tell anybody -- you know, I can't
12 make a recommendation as to treatment without
13 seeing anybody. So regardless of one's gender
14 identity, I need to sit and speak with the person
15 regardless -- and examine the person, regardless of
16 the medical condition for which they're seeking an
17 intervention.
18 Q. And if I send you lab work and nothing
19 else, can you tell me what my gender identity is?
20 MS. HUPPERT: Object to form.
21 A. I -- again, I don't make medical decisions
22 based on an isolated lab value without examining
23 and speaking with the patient or their caregiver or
24 -- caregiver or power of health attorney depending

1 upon the medical position.
2 Q. Is pain an objective or a subjective
3 finding?
4 A. Pain is typically communicated by the
5 patient based on - most often in the hospital - on
6 a scale of 1 to 10. How individuals may perceive
7 pain may differ between individuals.
8 Q. Is there a similar scale for patient
9 expectations?
10 A. Again, the expectations are typically a
11 mutual discussion, a mutual understanding between
12 the patient and the individual.
13 Q. So when you are determining whether your
14 surgery has reduced the level of someone's gender
15 dysphoria, what do you assess to determine that?
16 A. That's typically a discussion and
17 communication with the patient, as it is for many
18 areas of plastic surgery, outside the realm of
19 gender affirming treatment.
20 Q. Now, today and in your written report, you
21 talk a lot about the similarities between the
22 procedures, double mastectomy for a transgender man
23 and for someone who is experiencing cancer, whether
24 they're cisgender or not, but someone experiencing

1 cancer and having a double mastectomy.
2 So can you explain to me why those
3 procedures are the same to you?
4 A. Again, individuals don't need to have
5 cancer to have a double -- to have a bilateral
6 mastectomy or what we call risk reduction
7 mastectomy. Those may be individuals who are at an
8 increased risk of breast cancer.
9 That doesn't mean that they will
10 ultimately go on to have breast cancer, and
11 similarly, they can opt not to undergo mastectomy,
12 and they can choose other intervention or no
13 interventions.
14 So the technical act of a mastectomy,
15 in one indication, may be performed for cancer, to
16 reduce a risk of cancer, or to reduce or alleviate
17 gender dysphoria.
18 Q. And your testimony is that the procedure is
19 the same regardless of the indication; is that
20 right?
21 MS. HUPPERT: Object to form.
22 A. There is a wide range of indications or
23 techniques used to perform mastectomy, whether for
24 gender affirming mastectomy or for a mastectomy

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1 pertaining to oncologic reasons or for risk
2 reduction mastectomies, meaning removing a breast
3 that is not cancerous but may have an increased
4 predilection or risk of breast.
5 There are different ways to perform
6 that mastectomy, so as to how it would be performed
7 compared to a gender affirming mastectomy, again,
8 would depend upon the specific situation.
9 Q. Now, you've said over and over again in
10 your written testimony that these procedures are
11 safe. And one of the reasons that you say that
12 they're safe is they're the same surgical
13 technique. Is that a true statement or not?
14 A. Yes, the surgical techniques are the same
15 or similar, but you're asking me to compare two
16 unknowns. A nipple-sparing mastectomy for cancer
17 is different than a nonnipple-sparing mastectomy
18 for cancer. A skin-sparing mastectomy for cancer
19 is different than a nonskin-sparing mastectomy for
20 cancer.
21 So there are a range of different
22 techniques, but asking me to compare two specific
23 situations, I would need to understand the two
24 specific situations.

1 Q. And I'm -- you do not make that sort of a
2 designation within your written report that says
3 that, "Well, there are certain types of surgical
4 techniques that I would use for cancer compared to
5 surgical techniques that I would use for gender
6 dysphoria." You don't make that a distinction in
7 your report, do you?
8 MS. HUPPERT: Object to form.
9 A. There are a range of mastectomies that are
10 performed based on the clinical conditions.
11 Q. I'm going to quote from page 32 of your
12 original report: "The fact that the medical
13 community deems these analogous procedures
14 sufficiently safe to treat conditions other than
15 gender dysphoria is, by itself, more than
16 sufficient to support the safety of those surgeries
17 to treat gender dysphoria."
18 Is that a true statement?
19 A. Yes.
20 Q. Okay. Do you state in here that there are
21 different surgical techniques for mastectomy
22 procedures for cancer patients than there are for
23 gender dysphoric patients?
24 MS. HUPPERT: Object to form.

1 A. I didn't say they're necessarily different.
2 I said there's a range of mastectomy procedures
3 that may be performed for treating cancer or for
4 reducing risk of cancer. The decision as to which
5 type of mastectomy to be performed is a decision
6 between the doctor and the patient.
7 There are a range of mastectomies that
8 may be used to -- within the realm of gender
9 affirming surgery, and they are all similar --
10 they're all similar techniques.
11 Q. Is there any techniques that are techniques
12 for removing cancer that are not used for a gender
13 affirming surgery?
14 A. A modified mastectomy with lymph node
15 removal would unlikely be used for gender affirming
16 mastectomy in the absence of cancer.
17 Q. Are there any other types of techniques
18 that would be used for cancer but not for gender
19 dysphoria?
20 MS. HUPPERT: Object to form.
21 A. Again, mastectomies for cancer - either
22 cancer or predilection or risk of cancer - run the
23 gamut of procedures. Typically for gender
24 affirming surgery, we would not sample lymph nodes.

1 Most often for risk reduction mastectomies,
2 individuals also do not sample lymph nodes.
3 For cancer surgeries which may be more
4 invasive, they may sample lymph nodes.
5 Q. What are the morbidity rates of cancer
6 versus gender dysphoria?
7 A. Well, depends what you -- cancer is a broad
8 -- broad term.
9 Q. I agree, and your report just says
10 "cancer." So that's why I'm asking you about
11 cancer. What are the morbidity rates for cancer
12 versus gender dysphoria?
13 MS. HUPPERT: Object to form.
14 A. I don't treat cancer. I may treat --
15 perform a mastectomy for risk reduction of cancer.
16 But I'm not the oncologist who would treat cancer
17 and would be able to answer a question regarding --
18 I forget what you said.
19 Q. Morbidity.
20 A. The viable -- morbidity of cancer. I would
21 need to know more about the specifics and whether
22 or not I treat that specific cancer.
23 Q. Do you know what the rates of morbidity are
24 in people pre- and post-operative for reduction

1 mammoplas -- or mastectomies, reduction
2 mastectomies?
3 A. Again, that's a broad category, and it
4 would depend upon the reason upon which a
5 mastectomy was being performed.
6 In the area of risk reduction
7 mastectomy, those are performed on individuals who
8 have an increased risk, for example, of breast
9 cancer and may -- and significantly reduce the risk
10 - but don't eliminate the risk - of subsequently
11 developing breast cancer.
12 Q. And that's -- do you know what the
13 reduction in risk is from a risk reduction
14 mastectomy?
15 A. You know, again to answer a specific
16 question, I would need specific -- specific facts.
17 It tends to be the -- it tends to be the
18 intervention that provides the most significant
19 risk reduction in terms of reducing the risk of
20 cancer.
21 Not complete -- we used to call them
22 prophylactic mastectomies, but we recognize that
23 not everyone who undergoes a mastectomy with the
24 hope of preventing cancer is successful.

1 Q. What is the morbidity rate of gender
2 dysphoria?
3 A. Again, it needs -- you need to be more
4 specific. I treat -- I perform surgery for gender
5 dysphoria.
6 Q. What is the rate of gender dysphoria for
7 individuals who do not undergo surgery?
8 MS. HUPPERT: Object to form.
9 A. Again, I -- most of the individuals that I
10 see do undergo surgical intervention for gender
11 dysphoria.
12 Q. How are you able to measure the
13 effectiveness of your treatments if you don't know
14 what the effects are pre-operatively?
15 MS. HUPPERT: Object to form.
16 A. I don't -- I'm sorry, I don't know what --
17 "What the effects are pre-operatively" means.
18 Everyone is assessed not only by me, but undergoes
19 a multi-disciplinary assessment as well.
20 Q. What's the suicidality rate of individuals
21 with gender dysphoria who do not undergo surgery?
22 MS. HUPPERT: Object to form.
23 A. That is, again, a very broad question,
24 because not all individuals who have gender

1 incongruence or gender dysphoria either seek or
2 have access to medical and surgical interventions,
3 and not all individuals request or require surgical
4 interventions.
5 So to say, you know, for someone who
6 may not want to request a procedure or may not be a
7 candidate for a procedure, I don't think is an
8 accurate comparison.
9 Q. What does the medical literature say is the
10 reduction in suicidality after a patient undergoes
11 gender affirming surgery?
12 MS. HUPPERT: Object to form.
13 A. So again, the indication for surgery is
14 reduction -- is the alignment of body and gender
15 identity, meaning gender dysphoria. While
16 suicidality may also be lower for individuals
17 following gender affirming surgery, the principal
18 reason for treatment is gender dysphoria.
19 Q. So are you able to tell me what specific
20 markers that you use to determine whether your
21 treatment of gender dysphoria is effective?
22 A. So that is, again, primarily discussion and
23 communications with the individual, as it is with
24 many areas of plastic surgery.

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1 Q. Okay. Do you perform nonbinary surgeries?
2 A. I'm sorry, you cut out.
3 Q. Do you perform nonbinary surgeries?
4 A. I operate on individuals who identify as
5 nonbinary.
6 Q. And when I'm referring to nonbinary
7 surgeries, I'm referring to ones that do not -- the
8 end result is not someone having a penis or a
9 vagina, such as a nullification surgery.
10 Do you perform nullification
11 surgeries?
12 MS. HUPPERT: Object to form.
13 A. I have not.
14 Q. Okay. Have you performed phallus-
15 preserving vaginoplasty?
16 A. I have not.
17 Q. Do you know the standard for informed
18 consent in West Virginia?
19 MS. HUPPERT: Object to form.
20 A. In reference to?
21 Q. To any medical procedure in West Virginia.
22 Do you know what the standard of -- what the
23 informed consent standard is?
24 MS. HUPPERT: Object to form.

1 A. For an adult?
2 Q. Sure. For an adult.
3 A. I know what the medical community means by
4 "informed consent." Whether there's a different
5 definition of consent in West Virginia or whether
6 the State has something aside from the usual
7 medical definition of informed consent, I don't
8 specifically know.
9 Q. Okay. And what is your definition of
10 informed consent?
11 MS. HUPPERT: Object to form.
12 A. An individual -- it must be voluntary, so
13 noncoerced. Individual should be informed of the
14 risks, benefits and alternatives of procedures.
15 And typically there is a legal -- there's an age
16 that may or may not be associated which may vary
17 depending -- for health care depending upon the
18 particular state, and the individual has to be
19 competent to make a decision.
20 Q. How do you determine whether a patient is
21 competent to make a decision?
22 A. As I have for 28 years of medical practice,
23 their absence of delusion or psychoses, again as
24 we've said. There may be -- age may be --

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1 typically the legal age is 18, although there may
2 be variations in particular states for health care
3 consent or emancipated minors and so forth.
4 So that person is oriented,
5 nondelusional, no psychoses, their judgment's not
6 altered by -- or under the influence of a
7 particular substance. Those would be: They're
8 alert; they're aware of time, place, location.
9 Those would be the usual
10 considerations.
11 Q. Are there specific considerations for
12 competency that you undergo prior to gender
13 affirming surgery?
14 A. So while the surgeon will ultimately decide
15 whether or not to operate on an individual, the
16 pre-operative process requires an assessment
17 process so that there are additional individuals
18 involved in the decision-making and assessment of
19 the person seeking treatment.
20 Q. Okay. Who is involved in that process?
21 A. There are other individuals, maybe mental
22 health professionals, behavioral health
23 professionals, primary care professionals, who
24 perform assessments - depending on the nature of

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1 the procedure - prior to undergoing -- prior to
2 recommending surgery and prior to the patient
3 undergoing surgery.
4 Q. Prior to a gender affirming surgery, do you
5 require a mental health assessment?
6 A. Yes.
7 Q. Do you require a mental health assessment
8 for nongender confirming surgeries, for anything
9 other than gender confirming surgeries?
10 A. It can, depending on the type of surgery,
11 so individuals may have mental health conditions --
12 and I'm speaking outside -- now, this is for
13 individuals who do not have the medical condition
14 of gender dysphoria but may want other nongender
15 affirming treatments.
16 If there are questions, concerns,
17 history of mental health conditions, they very well
18 may seek additional assessment. That might be a
19 mental health professional, a behavioral health
20 professional, might be other medical -- medical
21 consultants or surgical consultants.
22 It's really based on the need of the
23 patient. But psychosocial assessments are
24 performed routinely in other fields of surgery -

1 transplant surgery, bariatric surgery - and in
2 fact, there's an evolving area of prehabilitation
3 to specifically assess individuals undergoing a
4 variety of procedures for psychosocial risk
5 factors.
6 Q. Do you require a mental health assessment
7 prior to performing a mastectomy for cancer?
8 A. Again, it would depend upon the particular
9 situation. So for individuals who are undergoing
10 mastectomy for risk reduction mastectomy, there are
11 times where they will be referred to or seek
12 pre-operative psychosocial assessments.
13 That may be a mental health
14 professional, behavioral professional, a therapist,
15 because the implications of surgery may affect --
16 may affect a variety of factors in their life.
17 Q. So in terms of a mastectomy for cancer,
18 it's on a case-by-case basis. For a mastectomy in
19 a gender affirming procedure, it is a requirement.
20 A. That is correct.
21 Q. Okay. And why is that?
22 A. Well, I think the importance of having a
23 multi-discipline -- or the multi-disciplinary
24 assessment is very important, and in fact, I would

1 argue that it should be extended to other areas of
2 surgery. As we said, routinely in transplants and
3 bariatric surgery.
4 So I think looking for potential
5 issues that may affect or impact one's surgical
6 outcome is important. I think it's important for
7 patients to hear not only from the surgeon, but
8 from other professionals who may help shape or
9 guide their decision-making processes.
10 And again, not all individuals will
11 ultimately opt for a surgical intervention or the
12 entire range or spectrum of procedures that are
13 available.
14 Q. Are you familiar with patient needs
15 standard of informed consent?
16 A. I'm sorry, you said "patient" --
17 Q. Are you familiar with the patient need
18 standard for informed consent?
19 A. Need, N-E-E-D?
20 Q. Yes.
21 A. I'm familiar -- as I said, I'm familiar
22 with the definition that I described previously.
23 I'm not familiar with the addition of the term
24 "N-E-E-D, need."

1 Q. What do you tell a patient are the risks of
2 a procedure -- we've talked about vaginoplasty
3 already, so let's just stick with that. What do
4 you tell a patient are the risks of a vaginoplasty
5 for -- with the indication of gender dysphoria?
6 A. So there are risks of any procedure:
7 Bleeding; infection; fluid accumulations or seroma;
8 wound disruptions or delayed healing; tissue loss,
9 tissue necrosis; injury to adjacent or other
10 structures. In the case of a vaginoplasty, that
11 may be injury to the rectum, urethra, bladder.
12 The procedure -- there may be systemic
13 risks such as venous thromboembolism. Patients may
14 be unhappy with the procedure.
15 The procedure is sterilizing, so they
16 will not be able following -- unless they have
17 undergone, for example, sperm preservation, they
18 will not be able to produce sperm after the
19 procedure.
20 That there will be after-care
21 requirements. They'll need to care for,
22 potentially, drains, urinary catheters. There may
23 be pain, redness, drainage from the incision.
24 They'll need -- assuming they're

1 undergoing construction of a full vaginal canal,
2 they'll need to dilate following surgery. So when
3 patients see me in the office, I'll also meet
4 pre-operatively with our pelvic floor physical
5 therapist.
6 We'll go over many of these issues,
7 including dilation, issues related to personal
8 hygiene, bowel and bladder assistance, should they
9 need that.
10 I'll meet with our social worker to
11 discuss the pre-operative -- after-care plans for
12 surgery. If patients are traveling, it will depend
13 on who is able to accompany them, whether or not
14 they'll need a skilled nursing facility following
15 surgery.
16 How much time due to the nature of
17 their work, do they have to take off work. They
18 may be unhappy with the results of surgery.
19 I may be missing a few, but those are
20 largely the pre- and post-operative discussions
21 that I have, our physical therapist has, our social
22 worker has.
23 I'll typically meet as well with our
24 -- one of our APP's, Advanced Practice

1 Practitioners, or for example, a physician
2 assistant, who may also go over additional logistic
3 information with them and then, of course,
4 insurance-related issues, the need for assessments,
5 pre-operative assessments, as we've just discussed,
6 whether or not there are other lab tests, x-rays,
7 mammograms, things of that nature, that need to be
8 undertaken.
9 Smoking cessation, risks of smoking.
10 We don't perform certain procedures on individuals
11 who are actively smoking, and we test for nicotine
12 in the urine. That would be a -- kind of a typical
13 consultation.
14 Q. Do you tell patients that you cannot
15 guarantee that they will -- that the procedure will
16 alleviate the distress that they're feeling?
17 MS. HUPPERT: Objection.
18 A. I --
19 MS. HUPPERT: Pardon me. Object to
20 form.
21 You can answer.
22 A. We tell people that they may be unhappy
23 with the results of surgery, that there are other
24 forms of treatment for gender dysphoria, some of

1 which may or may not be helpful for them, so that
2 they are aware.
3 That while surgery is useful for many
4 people, other people may decline surgery or choose
5 not to undergo surgery.
6 Q. Do you tell patients that some people will
7 still not consider them to be the gender that
8 they're seeking to appear as?
9 MS. HUPPERT: Object to form.
10 A. Well, we do discuss -- and that's
11 important, I think, as part of the
12 multi-disciplinary assessment, is again what the
13 expectation of surgery is. Surgery is to align
14 one's body with their identity, but there may be
15 family relationships, personal relationships,
16 professional relationships that may be impacted by
17 surgery, and surgery is not a cure or a fix-all for
18 those.
19 The specific goal of surgery is to
20 align one's body, you know, with -- with their
21 mind.
22 Q. What benefits do you tell patients that
23 they might obtain?
24 A. Again, the goal is congruence of their body

1 and their identity. There may be other -- for a
2 transgender man seeking mastectomy who may have
3 back pain, neck pain, a variety of other issues
4 that may be related to binding or large pendulous
5 breasts, there may be other benefits from that in
6 terms of pain, posture, neck pain, back pain and so
7 forth.
8 Q. Are you familiar with the Branstrom and
9 Pachankis study?
10 A. I am.
11 Q. Okay. Do you disclose the results of that
12 study to your patients?
13 A. I don't discuss typically individual
14 studies with patients. If patients ask about a
15 particular study, if I'm aware of it, I'll discuss
16 it. If I'm not aware of it, I'll look it up.
17 Q. And that particular study was
18 retrospective, right?
19 A. I don't recall. If you have it and want to
20 put it up, I can --
21 Q. I can pull it up for you. And I'll see if
22 I can't make it a little bit larger. I think it
23 gets bigger after the --
24 A. I don't know. Maybe you can hit that --

1 you know, that box. That might help -- you know,
2 the box up in the -- no, the -- by the X up on the
3 upper --
4 Q. Oh.
5 A. Yeah.
6 Q. Oh, I didn't realize it was doing that.
7 I'm sorry.
8 A. That's okay.
9 Q. All right. So you're familiar with this
10 "Reduction in Mental Health Treatment Utilization
11 Among Transgender Individuals After Gender-
12 Affirming Surgeries: A Total Population Study."
13 A. I am.
14 Q. And you can see in the Methods section that
15 they used the Swedish Total Population Register
16 which is linked to the National Patient Register
17 and the Prescribed Drug Register and they looked at
18 individuals who received a diagnosis of gender
19 incongruence between 2005 and 2015.
20 Mental health treatment in 2015 was
21 examined as a function of length of time since
22 gender affirming hormone, surgical treatment.
23 Outcome measures were mood and anxiety disorder
24 health care visits, anti-depressant and anxiolytic

1 prescriptions and hospitalization after a suicide
2 attempt.
3 A. I mean, I agree. Yeah, that's what you
4 described. And that's what it says, yes.
5 Q. So mood and anxiety health care visits are
6 something that we could count, right?
7 A. I mean, I don't -- you know, I can't speak
8 to exactly how they do that in Sweden. It's not
9 part of my clinical practice. But I believe they
10 are able in this study to count them.
11 Q. And antidepressant and anxiolytic
12 prescriptions, you can count those too, right?
13 A. Again, I can't speak in generalities as far
14 as how people -- I can speak to what they said in
15 the study, but I can't speak to the veracity of how
16 they did the quantification of these methods. They
17 appeared -- they appeared to quantitate them or
18 attempt to quantitate them.
19 Whether it's accurate or not, you
20 know, that I can't specifically speak to or how
21 Sweden monitors prescription and so forth.
22 Q. Sure. And then hospitalization after a
23 suicide attempt is also something that you can
24 count, correct?

1 MS. HUPPERT: Object to form.
2 A. Again, that's what their methodologies --
3 you know, I can't speak to the integrity of their
4 methodology, but yes, that's what they are
5 reporting in the Methods section of this study.
6 Q. Thanks. And I'm just saying that that's
7 something that you, if you were examining this
8 within your own patient population, you could count
9 the number of hospitalizations after a suicide
10 attempt, right?
11 MS. HUPPERT: Object to form.
12 A. Presumably. But it would be more difficult
13 as we don't have a total population register in the
14 United States, so --
15 Q. Well --
16 A. -- there are going to be some differences
17 in how things are going to be done.
18 Q. Okay. And the Conclusion of the study -
19 I'll just read it - "In this first total population
20 study of transgender individuals with a gender
21 incongruence diagnosis, the longitudinal
22 association between gender affirming surgery and
23 reduced likelihood of mental health treatment lends
24 support to the decision to provide gender affirming

1 surgeries to transgender individuals who seek
2 them."
3 Did I read that correctly?
4 MS. HUPPERT: Object to form.
5 A. I would say you read it correctly.
6 Q. Okay. And are you aware that two months
7 after this was published, Branstrom and Pachankis
8 issued a correction to this?
9 A. Yes. I believe the Journal issued -- I
10 don't know if it was the authors, but I am aware
11 that there was a correction. I don't know who
12 authored the correction.
13 Q. Okay. And I don't know if this -- I just
14 pulled up -- I don't know where it's from exactly.
15 MS. HUPPERT: Counsel, for clarity of
16 the transcript, do you intend to mark this as an
17 exhibit?
18 MR. DAVID: I wasn't planning on it,
19 no.
20 Q. I don't know what my screen is showing
21 right now. So right now, is it showing the
22 original article?
23 A. It's showing the first page of the
24 original.

1 Q. Okay. And now is it showing something that
2 says, "Correction to Branstrom and Pachankis?"
3 A. It does.
4 Q. Okay. And about halfway down where it's
5 highlighted, this specific -- where I've
6 highlighted the word "Given," they state: "Given
7 that the study used neither a prospective cohort
8 design nor a randomized controlled trial design,
9 the conclusion that 'The longitudinal association
10 between gender affirming surgery and lower use of
11 mental health treatment lends support to the
12 decision to provide gender affirming surgeries to
13 transgender individuals who seek them' is too
14 strong."
15 Did I read that correctly?
16 A. It is read --
17 Q. Okay.
18 A. It was read correctly, yeah.
19 Q. And the sentence right before that says,
20 "While this comparison was performed
21 retrospectively and was not part of the original
22 research question given that several other factors
23 may differ between the groups, the results
24 demonstrated no advantage of surgery in relation to

1 subsequent mood or anxiety disorder-related health
2 care visits or prescriptions or hospitalizations
3 following suicide attempts in that comparison."
4 MS. HUPPERT: Pardon the interruption.
5 Objection to form.
6 Counsel, we would also ask that you
7 introduce both of these as exhibits for clarity of
8 the transcripts.
9 MR. DAVID: That's fine. Mark the
10 original as Exhibit 1 and the correction as Exhibit
11 MS. HUPPERT: Thank you.
12 SCHECHTER DEPOSITION EXHIBIT NOS. 1 and 2
13 (Article entitled "Reduction in Mental
14 Health Treatment Utilization
15 Among Transgender Individuals After
16 Gender-Affirming Surgeries: A Total
17 Population Study" by Richard
18 Bränström, Ph.D. and John E.
19 Pachankis, Ph.D. and the correction to
20 said article were marked for
21 identification purposes as Schechter
22 Deposition Exhibit Nos. 1 and 2.)
23 Q. Now, Doctor, do you disclose to your
24 patients that there is a study that says -- that

1 found that there is no advantage of surgery in
2 relation to subsequent mood or anxiety disorder-
3 related health care visits or prescriptions or
4 hospitalizations following suicide attempts in
5 their study?
6 MS. HUPPERT: Object to form.
7 A. Yeah, so my indication for surgery is
8 gender dysphoria, not mood or anxiety
9 prescriptions. So the indication for surgery is
10 gender dysphoria, and this study did not look at
11 gender dysphoria. That's one -- one consideration
12 with this particular study.
13 And the fact that individuals need
14 ongoing care or support is not unique to the
15 individual in gender affirming intervention.
16 Since we've been talking about cancer
17 all day, someone may undergo a mastectomy and
18 there's expectations that they'll continue to
19 follow with their oncologist or -- medical
20 oncologist, radiation oncologist, surgical
21 oncologist, plastic surgeon.
22 So that people may continue to seek
23 treatment, whether medical or mental health, is
24 really of -- of no surprise.

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1 But can you go back to the original
2 article? Okay. Can you scroll down for me more?
3 Q. Yep.
4 A. And keep -- just keep -- okay, next page.
5 Let's see. Can you keep going? Keep going. Keep
6 going. And keep going. And keep going. I'm
7 sorry, keep -- I apologize.
8 Q. No, you're fine.
9 A. Okay. Keep going. Okay, let's see. Thank
10 you. Keep going. Okay, yeah.
11 So this: What's interesting is that
12 in anyone after three years following surgery,
13 there were no suicide attempts in these
14 individuals.
15 So again, gender affirming surgery is
16 not a treatment specific for suicide, but what I
17 did find interesting was that there were no suicide
18 attempts in individuals who were out three years
19 from surgery, and I believe the authors comment on
20 this.
21 So you know, the fact that individuals
22 may seek additional mental health care, I would
23 encourage people who need mental health care to
24 seek that. And the problem is if we deny or

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1 stigmatize mental health care, and again, try to
2 prevent the important ongoing access to medically-
3 necessary care.
4 So I don't specifically - to answer
5 your question - disclose this study, because it
6 doesn't answer the question of gender dysphoria,
7 and the fact that people may need ongoing care is
8 not unique to gender affirming surgery.
9 Q. And so my question is: Do you disclose
10 this to your patients?
11 MS. HUPPERT: Object to form.
12 A. As I just said, I don't find anything in
13 this article that is inconsistent, or A, that
14 speaks to treatment of gender dysphoria
15 specifically; or B, would indicate that the need
16 for ongoing care is somehow, you know,
17 representative of the efficacy of surgery.
18 Q. And so in patients who -- you mentioned
19 cancer again. Patients who have cancer and undergo
20 a mastectomy, you were able to determine afterwards
21 whether you were able to remove a cancerous mass,
22 correct?
23 MS. HUPPERT: Object to form.
24 A. We hope so. Not always. It depends on the

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1 nature of the cancer, whether it's spread in the
2 lymph nodes. People who, again, have risk
3 reduction mastectomies who don't have cancer,
4 sometimes you do find cancer in those specimen.
5 But those individuals still require
6 ongoing follow-up in that area --
7 Q. And that's what --
8 A. -- both personal and professional -- both
9 self breast exams, for example, and physician-
10 guided exams.
11 Q. And the follow-up for patients with cancer
12 include PET scans to determine if there were any
13 more potentially malignant areas, correct?
14 A. Again, that would depend on the type of
15 cancer that was involved. Whether additional
16 studies are needed or not needed would depend on
17 the specifics at the time.
18 Q. And for patients with gender dysphoria,
19 were you able to do a scan after a surgery to
20 determine the level of gender dysphoria?
21 A. Again, the resolution or reduction of
22 dysphoria is typically communicated by the
23 individual, and the fact that an individual may
24 request or require ongoing mental health is really

1 not particularly relevant as to the need for
2 surgery.
3 I would encourage anyone - whether
4 they have gender dysphoria or not - who feels they
5 need mental health care to seek it.
6 Q. Are you familiar with -- and I'm -- I
7 apologize. I'm going to absolutely butcher this.
8 -- the Dhejne study?
9 A. Yes.
10 Q. How do you pronounce that?
11 A. I say -- I may not be much better. I
12 prefer to call it Cecilia, so that's --
13 Q. If I say "the Cecilia study," you
14 understand what I'm talking about.
15 A. I do.
16 Q. Okay, good. Okay. And the Cecilia study
17 tracks all patients who had undergone gender
18 affirming surgery over a 30-year interval and
19 compared those to 6,480 matched controls, correct?
20 A. Again, if you have -- if you can put it up.
21 I don't remember it by memory.
22 Q. I'm not sure that I can find it.
23 Well, while I look for that, under
24 what circumstances did you review the Cecilia

1 study?
2 A. I mean, I've read it many, many times,
3 whether for conferences, presentations, training,
4 education, previous legal work. So I've read it a
5 number of times. I can't tell you how many or --
6 Q. And what have you been able to take away
7 from that study to use as a physician?
8 A. So if you have it, I'd appreciate it if you
9 could --
10 Q. And I can find it now, so --
11 A. Okay.
12 MS. HUPPERT: And we would just make
13 the same request about marking.
14 MR. DAVID: Sure. We will make the
15 Cecilia study be Exhibit 3.
16 SCHECHTER DEPOSITION EXHIBIT NO. 3
17 (Article entitled "Long-Term Follow-Up
18 of Transsexual Persons Undergoing Sex
19 Reassignment Surgery: Cohort Study in
20 Sweden" by Cecilia Dhejne and others
21 was marked for identification purposes
22 as Schechter Deposition Exhibit No.
23 3.)
24 Q. You're now looking at what has been marked

1 as Exhibit 3. Is that the Cecilia that you were
2 referring to?
3 A. I believe this is the same one we're both
4 referencing, yes.
5 Q. Okay, good. Okay. And where do you need
6 me to scroll to?
7 A. If you can just scroll down a bit. Yeah,
8 let me just refresh on it.
9 Q. Sure.
10 A. Okay. And if you can scroll down again.
11 I'm sorry, yeah, keep going to next page. Okay,
12 next. Next page.
13 Okay, we can keep going. Oh, wait,
14 I'm sorry. Go -- I apologize. Can you go back up
15 one?
16 Q. Sure.
17 A. I'm sorry. Can you keep going?
18 Q. Keep going up?
19 A. I'm sorry, down. Next page, yeah.
20 Q. And we can keep going. Okay, let's keep
21 going. Okay, let's see.
22 And yeah, if you can put the top of
23 the -- the head of that table -- right. That's
24 right. As I remember, they divided into two by

1 time, 1973 to 1988, and then 1989 to 2003. And
2 there were distinctions between those early groups,
3 groups that underwent surgery prior to, for
4 example, the development of Standards of Care in
5 '79 and then subsequent to that in 1989 and 2003.
6 Q. Okay. Are you -- are your concerns with
7 this study that they may have selected the wrong
8 patients for surgery or that the surgical
9 techniques were not appropriate or something else?
10 MS. HUPPERT: Object to form.
11 A. Well, I think several concerns. Surgical
12 techniques have arguably improved over the years.
13 Indications and appreciations for selection of
14 individuals undergoing surgery has improved.
15 Again, general guidelines as for not only pre-op
16 care, but post-operative care, have improved.
17 And I think the difference between the
18 two time periods reflects that. Not -- probably
19 reflects that.
20 Q. So is there any utility that you've gained
21 from this study?
22 A. I'm sorry, that first word --
23 Q. Is there any utility that you've gained
24 from this study?

1 A. I think that it's important to -- that the
2 multi-disciplinary nature of the care is important
3 within the realm of gender affirming care.
4 I think the fact that individuals may
5 need ongoing support, help, treatment, access to
6 mental health services, behavioral health services,
7 medical services, is also important, and I think
8 what is positive and interesting about the study is
9 the reduction, for example, in the suicide attempts
10 between the two groups, that 1973 to '88 as
11 compared to '89 to 2003.
12 Q. And what do you attribute the reduction in
13 suicide attempts to in the -- those two time
14 frames?
15 A. Again, our indication, as we've discussed
16 -- for surgery is gender dysphoria, so the fact
17 that there may be other benefits - perhaps reduced
18 suicidality - may be a result of multiple factors:
19 Refinements in selecting individuals for care;
20 recognizing the importance of multi-disciplinary
21 care; and recognizing what, for some people, may be
22 the need for ongoing support by whatever -- you
23 know, whatever that means, whether it's mental
24 health, medical, behavioral health.

1 Q. The rate of suicide attempts in the control
2 group was lower than that in the group that
3 underwent surgery, correct?
4 MS. HUPPERT: Object to form.
5 A. Yes, although I don't believe it reached
6 statistical significance in the '89 to '03 group.
7 Q. Okay. How does your informed consent
8 process work for adolescents?
9 A. So as we said, most of the adolescents
10 would be individuals -- the majority of individuals
11 seeking mastectomy. So again, most individuals are
12 referred either from their pediatrician, their
13 adolescent physician, their mental health
14 professional.
15 We'd meet with the patient, the person
16 as well as their family caregiver, guardian,
17 whatever the particular circumstances may be.
18 We'll have a discussion much like we
19 talked about for vaginoplasty, but applied more
20 specifically to mastectomy.
21 I'll speak with the individual,
22 typically both with their parents or guardians or
23 caregivers in the room and also independent, should
24 there be anything they want to tell in confidence.

1 We will then encourage the patient and
2 their family to go home, consider the information,
3 read over the information and to contact me with
4 questions or concerns.
5 And in what may be a parallel process,
6 we may be obtaining the various assessments for
7 those individuals. Until that information is
8 obtained and reviewed, we would not schedule
9 surgery.
10 Q. Do you require parental consent for
11 adolescents to undergo gender affirming surgery?
12 A. It would require, I guess, consent of the
13 guardian -- whoever would have -- would be the
14 guardian. So it may have been -- you know, I can't
15 remember every case, if there was a custodial
16 parent or a guardian, but typically, it would be a
17 parent/guardian or -- who would, in addition to the
18 individual, consent.
19 Q. In terms of the surgeries that you have
20 performed - let's say for a transgender plan - have
21 you experienced patients who have requested either
22 top surgery or bottom surgery but not both?
23 MS. HUPPERT: Object to form.
24 A. I have had -- cared for individuals,

1 transgender men, who have -- I can't say that
2 someone who's undergone genital surgery has not had
3 previous top surgery or we're not speaking and
4 laying out a plan over the course of time.
5 So I would have to say I can't recall
6 an individual transgender man who sought bottom
7 surgery who has not had top surgery.
8 Q. Okay. And do you recall specific patients
9 that have had top surgery -- transgender men who
10 have had top surgery but not bottom surgery?
11 A. Yes.
12 Q. And in those cases, do those patients
13 intend to later get bottom surgery?
14 MS. HUPPERT: Object to form.
15 A. Again, it would depend on the individual
16 patient. And I'm using, you know, "bottom surgery"
17 with the catcher-wide net, so some patients may
18 have had, for example, hysterectomy and
19 oophorectomy but not phalloplasty or metoidoplasty
20 so some of those -- none of those procedures.
21 And the decision whether or not to
22 proceed, again, would depend on the individual
23 person.
24 Q. If a person undergoes a -- a transgender

1 man undergoes a top surgery but does not desire a
2 bottom surgery, can -- are you still able to put
3 that patient in congruence with their sex and their
4 gender identity?
5 MS. HUPPERT: Object to form.
6 A. So as to any -- how any one patient
7 proceeds with medical and surgical intervention
8 depends upon the specific cases, the situation of
9 the patient. As we talked, in many areas of
10 plastic surgery - most areas of medicine - there
11 are a range of treatment options that are available
12 to people.
13 Some may choose no surgical
14 intervention; some may choose every surgical
15 intervention that's possible; some people may
16 choose something in the middle.
17 So again, it would depend upon the
18 specific situation at hand.
19 Q. And for any transgender patient that you've
20 had that's seeking a gender affirming surgery, how
21 do you determine whether it is medically necessary
22 for that individual patient to undergo surgery?
23 A. And I'm sorry, you said gender -- with
24 gender dysphoria or with gender incongruence? I

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1 didn't hear the --
2 Q. Let's start with gender incongruence. How
3 do you determine whether it's medically necessary
4 for that patient to undergo surgery?
5 A. So, you know, as we've said, it's most
6 often the indication is gender dysphoria. Is it
7 possible that I've operated on individuals who
8 experience gender incongruence who don't have
9 gender dysphoria? Is it possible -- whether or not
10 those procedures receive third-party coverage, I
11 can't recall specifically.
12 But far and away, with the diagnosis
13 of gender dysphoria, that would help determine the
14 basis of medical necessity.
15 Q. Are you saying that gender incongruence
16 without gender dysphoria is not an appropriate
17 indication for gender affirming surgery?
18 MS. HUPPERT: Object to form.
19 A. No, I'm not saying that. It may have a
20 basis as to whether a particular insurance company
21 may ultimately reimburse for a procedure. My
22 clinical experience, I have to say, gender
23 dysphoria is the typical diagnosis, so I would have
24 to say it would be unusual for someone not to be

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1 experiencing or diagnosed with the medical
2 condition of gender dysphoria that then undergoes
3 surgery.
4 That would probably be a far less
5 common -- is a far less common situation, and I
6 can't recall off the top of my head a specific
7 circumstance.
8 Q. And regardless of the frequency of the
9 situation, my question is: If someone has gender
10 incongruence in the absence of gender dysphoria, is
11 that an appropriate indication for gender affirming
12 surgery?
13 MS. HUPPERT: Object to form.
14 A. Again, I'd have to know more about the
15 specific clinical situation.
16 Q. What more would you need to know?
17 A. Well, as with any individual, I'd have to
18 have a history, physical exam, review their
19 assessments, the basis for their request for
20 surgery, again review their goals, their
21 expectations, perhaps a discussion with either a
22 primary care physician and/or a mental health
23 professional.
24 Q. Okay. If a patient has gender incongruence

1 but does not experience distress as a result of it,
2 is that patient an appropriate candidate for gender
3 affirming surgery?
4 MS. HUPPERT: Object to form.
5 A. By "distress," are you referring to the
6 diagnosis of the medical condition gender
7 dysphoria?
8 Q. I'm talking about someone whose gender
9 incongruence -- which -- I'll start here. Under
10 the ICD-11 codes, gender incongruence is now a
11 separate diagnostic code, correct?
12 A. Yes.
13 Q. And that's something that's going to be
14 recognized by WPATH in the eighth version of the
15 Standards of Care, correct?
16 A. Presumably, yes. Although the Standards of
17 Care specifically relate -- while a global
18 document, recognize the need for, you know,
19 additional diagnoses in order to access medical
20 care in certain countries.
21 Q. True. So the -- at least a draft of the
22 eighth version of the Standards of Care which is
23 obviously not supposed to be for broad
24 dissemination, of course, was broadly disseminated,

1 right?
2 A. Yeah. I don't -- I don't agree that it's
3 not for broad dissemination. I think the more --
4 you know, the more input and more feedback we
5 receive is a good thing.
6 Q. Sure. And I'm not -- I'm not suggesting
7 that it was -- that you were trying to -- that
8 WPATH was trying to hide it. There's just
9 something on the bottom of it that says that this
10 is not for -- I think it says "Not for
11 Distribution" or something along those lines.
12 But the draft is out there and
13 accessible to people on the Internet, correct?
14 A. Well, it was expressly for public comment,
15 so I'm not sure what the disclaimer -- you know, it
16 was designed for public comment, yeah. The fact
17 the public is commenting on it, I think is the
18 intention.
19 Q. Okay. And let me pull this up and figure
20 out where I was going to ask you a question about,
21 because it's --
22 MS. HUPPERT: Caleb, if you'd like --
23 we've been going almost two hours at this point,
24 and so could we --

1 MR. DAVID: That's a good idea. I
2 will figure out where I am, but I can promise you
3 we're almost done, Doctor.
4 THE DEPONENT: All right, wonderful.
5 (A recess was taken after which the
6 proceedings continued as follows:)
7 SCHECHTER DEPOSITION EXHIBIT NOS. 4 - 7
8 (Article entitled "Evidence-Based
9 Patient Safety Advisory: Blood
10 Dyscrasias" by Haeck and others, the
11 WPATH DRAFT Version on the Standards
12 of Care Version 8, the initial
13 Schechter report, rebuttal Schecter
14 report were marked for identification
15 purposes as Schechter Deposition
16 Exhibit Nos. 4, 5, 6 and 7.)
17 BY MR. DAVID:
18 Q. Doctor, we are back on the record, and I
19 was about to show you the WPATH Standards of Care
20 eighth version draft that was draft -- and just so
21 that we're all on the same page here, here is the
22 WPATH property confidential draft for public
23 comment, not for distribution.
24 So that's what I was referring to

1 earlier. But there are no page numbers on this
2 particular document, and let me screen share so
3 everyone is seeing what I'm seeing. There are no
4 page numbers on this particular document, but it is
5 page 72 of 359 that I'm specifically referring to.
6 And Doctor, in this particular section
7 of the draft Standards of Care, it's talking about
8 the two diagnostic terms that we discussed already,
9 gender incongruence and gender dysphoria, right?
10 A. Okay. I can look.
11 Okay.
12 Q. All right. And in this paragraph that
13 we're focused on, I'll highlight a sentence. It
14 says, "One important reconceptualization in
15 comparison to the DSM-V Gender Dysphoria
16 classification is that distress is not a required
17 indicator of the ICD-11 Gender Incongruence
18 classification," and it's citing the World Health
19 Organization, 2019.
20 First, did I read that correctly?
21 A. It is read correct.
22 Q. Okay. Is that consistent with your
23 understanding of the differences between gender
24 incongruence and gender dysphoria?

1 A. So let me again say that I don't make that
2 diagnosis of gender dysphoria, so that's one. And
3 that two, to note, this is a draft -- a draft
4 document. So this may not represent the final --
5 obviously the final report.
6 Q. Sure. And noting that and understanding
7 that, is that - this sentence that I have
8 highlighted on Exhibit 5 - consistent with your
9 understanding of the differences of those
10 diagnostic classifications?
11 A. Again, I don't make those diagnoses, so I
12 don't want to -- that would be outside my typical
13 clinical area of expertise.
14 Q. Okay. You treat these diagnoses, correct?
15 MS. HUPPERT: Object to form.
16 A. I treat gender dysphoria, correct.
17 Q. Okay. Do you treat gender incongruence?
18 A. Yes.
19 Q. Okay. And do you treat gender incongruence
20 surgically?
21 A. As I said previously, one must be
22 transgender - meaning to have gender incongruence -
23 to experience gender dysphoria. So my indications
24 for surgery are gender dysphoria.

1 Q. All right. So I'm going to scroll down
2 here, and I think you'll be able to see both of
3 these paragraphs, and I wanted to specifically ask
4 you about -- and I'll scroll up some more. I think
5 the is consistent with your testimony. It says
6 that -- at least part of it.
7 First I'll read it. "As noted before,
8 not all transgender and gender diverse people
9 experience gender dysphoria and this should not
10 preclude them from accessing medical affirming
11 care."
12 First, did I read that correctly?
13 A. Can I -- can you scroll -- I'd like to see
14 what chapter this is contained in?
15 Q. Oh, sure.
16 A. Yeah.
17 Q. Let me see if I can find that. Under
18 Statement 12A.
19 A. No, keep -- right. It will give a chapter
20 head.
21 Oh, okay, this is in the Adolescent
22 chapter, which is still undergoing revision.
23 Q. Okay. Okay, back to this section, I'll
24 read the highlighted part again. "As noted before,

1 not all transgender and gender diverse people
2 experience gender dysphoria and this should not
3 preclude them from accessing medical affirming
4 care."
5 Did I read that correctly?
6 A. You did read that correctly.
7 Q. Do you personally agree with that
8 statement?
9 MS. HUPPERT: Object to form.
10 A. So again, this is from a draft document,
11 and this specific chapter, the Adolescent chapter,
12 is still undergoing revision and discussion. So I
13 can't provide a final comment until the final
14 document is released.
15 Q. Okay. So you can't tell me whether you
16 agree with that statement?
17 MS. HUPPERT: Object to form.
18 A. So I am under, again, a nondisclosure
19 pertaining -- until the release of the document, so
20 I don't want to comment until -- as to the
21 specifics of the document until it's finally
22 released.
23 Q. All right. So you can't tell me whether or
24 not people who do not experience gender dysphoria

1 can appropriately undergo surgical therapy.
2 MS. HUPPERT: Object to form.
3 A. So as I said, my indication for surgery is
4 gender dysphoria. How diagnoses or treatments may
5 evolve in the future, I can't necessarily predict.
6 Q. Okay. Sitting where you are today, do you
7 believe that it is medically necessary to perform
8 surgery on a patient with medical -- with gender
9 incongruence without gender dysphoria?
10 MS. HUPPERT: Object to form.
11 A. I'm sorry, that was a -- can you just read
12 that back a minute?
13 Q. Sure. Sitting where you are today, if a
14 patient presents to you with gender incongruence
15 without gender dysphoria, is it medically necessary
16 to perform a gender affirming surgery on that
17 person?
18 MS. HUPPERT: Object to form.
19 A. So I would have to know the -- more
20 specifics of the case. Where I -- sitting here
21 today, the typical indication is gender dysphoria.
22 If an individual who is requesting surgical
23 services does not experience gender dysphoria, I
24 would have to speak with additional people -

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1 whether primary care professionals, mental health
2 professionals - to understand more about the
3 request.
4 Q. All right. That's all I have for this one.
5 Let me stop --
6 Okay. A couple of things that I want
7 to go back to, and then we'll be done. I promise,
8 we're getting very, very close now. You mentioned
9 earlier that you had one patient who I believe you
10 said you had performed a mastectomy on, and that
11 patient came back years later and informed you that
12 that patient regretted their decision -- or I might
13 be forgetting the procedure.
14 But do you remember what -- do you
15 know what I'm talking about?
16 MS. HUPPERT: Object to form.
17 A. So it was a -- an individual had breast
18 augmentation, but did not express regret; rather --
19 or requested removal of the implant.
20 Q. Okay. So was that a patient who was a
21 transgender woman who received a breast
22 augmentation?
23 A. That is correct.
24 Q. Okay. And then following a period of

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1 years, it sounded like - but you can narrow it if
2 you need to, but a period of years - the patient
3 returned to you and requested a removal of the
4 implants.
5 MS. HUPPERT: Object to form.
6 A. That is correct.
7 Q. Okay. Did you talk to the patient about
8 the reasons for the removal?
9 A. Yes.
10 Q. Okay. And what do you recall the patient
11 telling you was the reason for the removal?
12 A. As I recall, they were -- it was a -- she
13 was a transgender woman at the time of the
14 augmentation. I believe it was eight or ten years
15 later, was seen requesting removal of the implants.
16 And as I recall, she indicated that
17 she was returning to her male identification, so
18 the sex she had -- was assigned at birth being
19 male.
20 Q. And have you experienced any other patients
21 going through that similar process of transition
22 and then requesting a reversal of the transitional
23 gender affirming surgery?
24 MS. HUPPERT: Object to form.

1 A. I believe that is the only person that I
2 have seen in consul -- that I have seen in
3 consultation for that.
4 Q. Outside of the pilot study and your ongoing
5 study, do you do patient satisfaction surveys for
6 all of your patients?
7 A. The hospital might. I'm not -- I'm not
8 sure. It's done as part of the study, so I think
9 it's captured within the context of the study.
10 Q. What percentage of your patients continue
11 to have after-care with you after one year
12 following surgery?
13 MS. HUPPERT: Object to form.
14 A. I would estimate perhaps 20 percent,
15 perhaps 25 percent.
16 Q. So are the 70 to -- or 75 to 80 percent of
17 patients who do not continue to receive after-care,
18 are those patients that it's no longer necessary
19 for them to be receiving after-care, or they're
20 lost to follow up?
21 MS. HUPPERT: Objection to form.
22 A. I wouldn't describe it as "lost to
23 follow-up," because although someone may not see
24 me, we always leave the door open to contact the

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1 office.
2 Q. Okay. So are you able to accurately
3 testify about the outcomes for your specific
4 patients past a year?
5 A. Yes. Because that's consistent with many
6 other areas of plastic surgery. Individuals would
7 typically return - depending on the specific case -
8 on an as-needed basis after that time.
9 So breast reconstrution patients --
10 sorry, breast augmentation patients, we may see
11 them at five or ten year follow-up to do implant
12 surveys. Not all patients follow up. Other
13 individuals would contact us on an as-needed basis.
14 Q. And how likely is it that a patient who is
15 dissatisfied with your services will follow up with
16 you?
17 MS. HUPPERT: Object to form.
18 A. I would anticipate we would hear about it.
19 Q. And how would you hear about it?
20 MS. HUPPERT: Object to form.
21 A. They would typically contact the office.
22 Q. And so a year after surgery, are you able
23 to identify or locate 100 percent of your patients?
24 A. As with any medical practice, I'm not sure

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1 I could locate 100 percent of our patients. We do,
2 of course, have their contact information and
3 emergency contact information.
4 Q. And are you following up with them at that
5 point to ask them whether they are still satisfied
6 with the services that you provided?
7 A. Well, I know that we've recently - because
8 of my practice transition - just sent a letter to
9 our last two or three years of patients, notifying
10 them of the -- of my change in practice location.
11 So --
12 Q. And did that notification provide them with
13 a survey to fill out to tell you what their
14 satisfaction level was at that time?
15 A. No. It asked them to -- or apprised them
16 of my new contact information.
17 Q. Are you familiar with the body of
18 literature regarding detransitioning?
19 MS. HUPPERT: Object to form.
20 A. I am familiar with the term "detransition."
21 I'm not sure exactly what you mean by "the body of
22 literature," if you can be more specific.
23 Q. Sure. I believe that the author of the
24 study, the most recent one that I've seen, is

1 Littman, did a study of 100 individuals who
2 detransitioned. Are you familiar with that?
3 MS. HUPPERT: Object to form. Object
4 to scope.
5 A. I don't believe I've seen the recent
6 article by Littman. If you have it, I can take a
7 look.
8 Q. Sure. Okay. Can you see what is on my
9 screen?
10 A. Yes.
11 Q. Okay. And this is titled "Individuals
12 Treated For Gender Dysphoria With Medical and/or
13 Surgical Transition Who Subsequently
14 Detransitioned: A Survey of 100 Detransitioners."
15 Are you familiar with this study?
16 A. I have not seen that.
17 Q. Okay. Then I will stop sharing.
18 MS. HUPPERT: Counsel, I would just --
19 I would ask that you mark that as an exhibit also.
20 And just a question: Is that the version of the
21 article with the correction appended?
22 MR. DAVID: I don't know.
23 MS. HUPPERT: We'd just like to note
24 from the record - at least from what I can tell -

1 that it appeared to be the version that did not
2 have the correction appended.
3 MR. DAVID: And I will note for the
4 record that I didn't ask any questions about it.
5 But I don't know that I have another version of
6 this.
7 MS. HUPPERT: Okay.
8 MR. DAVID: I have no problem with
9 making this an exhibit, but I didn't ask any
10 questions about that. So we can do that if you'd
11 like.
12 SCHECHTER DEPOSITION EXHIBIT NO. 7
13 (Article entitled "Individuals Treated
14 for Gender Dysphoria with Medical
15 and/or Surgical Transition Who
16 Subsequently Detransitioned: A Survey
17 of 100 Detransitioners" was marked for
18 identification purposes as Schechter
19 Deposition Exhibit No. 8.)
20 Q. Are you aware of any other medical
21 literature regarding detransition, Doctor?
22 MS. HUPPERT: Object to form. Object
23 to scope.
24 A. I am aware of literature that discusses

1 individuals who have undergone gender affirming
2 interventions and who subsequently request surgical
3 reversal of their procedures.
4 Q. And have you performed -- other than the
5 one patient that we've talked about, have you
6 performed any surgical reversals of gender
7 affirming surgeries?
8 MS. HUPPERT: Object to form.
9 A. I have not.
10 Q. Are you aware of whether or not Christopher
11 Fain has requested prior authorization for gender
12 affirming surgery?
13 A. I am not aware. I did read the Complaint
14 and Amended Complaint, but I don't recall whether
15 or not there was a request for prior authorization.
16 Q. Are you aware of any treating medical
17 provider of Christopher Fain who has recommended
18 gender affirming surgery?
19 MS. HUPPERT: Object to form.
20 A. I have not -- neither seen nor spoken with
21 -- or seen any -- seen his medical records or
22 spoken with anyone involved in the clinical care.
23 Q. And same questions for Shauntae Anderson:
24 Have you seen or are you aware of whether or not

1 Shauntae Anderson has requested prior authorization
2 for gender affirming surgery?
3 MS. HUPPERT: Object to form.
4 Sorry. Object to form.
5 A. Same answer as previous: I read the
6 Complaints, but I don't recall whether there was a
7 specific request for prior authorization.
8 Q. And are you aware of any treating medical
9 provider who has recommended gender affirming
10 surgery for Shauntae Anderson?
11 MS. HUPPERT: Object to form.
12 A. I have seen no medical records, nor have I
13 spoken with anyone involved in clinical care.
14 Q. And I think that I poorly asked this
15 earlier. In the case of an individual who desires
16 top surgery but not bottom surgery, without both
17 surgeries, are you able to bring someone's gender
18 identity into congruence with their sexual
19 characteristics?
20 MS. HUPPERT: Object to form.
21 A. Well, the purpose of the -- of surgery as a
22 treatment for gender dysphoria is to align one's
23 identity with their body. The decision to undergo
24 a particular medical or surgical intervention is

1 based on the specific circumstances, the individual
2 -- and a discussion that I have with the patient, a
3 risk/benefit analysis on the part of an individual.
4 So whether or not one particular
5 individual chooses to undergo a particular
6 treatment option, as with the range of other
7 interventions in plastic surgery for other
8 conditions, really depends upon the specifics of
9 the case, that person's risk/benefit analysis and,
10 as we've said before, not all individuals will
11 elect to undergo all potential surgical options
12 that are available.
13 Q. Have you had patients who are transgender
14 men who have undergone double mastectomy but have
15 not undergone a -- why am I -- I'm blanking.
16 Transgender men who have undergone a double
17 mastectomy but not a phalloplasty?
18 Are -- have you had patients who have
19 done that?
20 MS. HUPPERT: Object to form.
21 A. I've had patients who are transgender men
22 who have undergone top surgery, meaning mastectomy,
23 but not a phalloplasty.
24 Q. And have those patients reported to you

1 that they felt congruent with their gender
2 identity?
3 A. Again, that depends on the individual
4 specifics. So what individuals may express, that
5 in an ideal situation, they would undergo
6 phalloplasty, but for a myriad of reasons - as
7 people do in making medical decisions in other
8 areas - they may or may not opt for a particular
9 intervention.
10 Q. And so if I'm understanding you correctly,
11 I think you said for almost all medical procedures
12 - maybe you said for all - it's dependent upon the
13 patient's history, physical examination, lab work
14 that you obtained, imaging that you obtained, and
15 also patient goals, expectations, wants and
16 desires. Correct?
17 A. And their understanding of the risks, the
18 benefits, the alternatives. And depending on the
19 person, it may include other people who are
20 relevant in their decision-making process: Spouse,
21 partner, parent, child.
22 Q. And those determinations and those findings
23 are all individualized, correct?
24 A. That is correct.

1 Q. Okay. I wanted to ask you a couple
2 questions about some of the literature that you
3 cited in your rebuttal report. Specifically, you
4 cite to an article titled "What does the scholarly
5 research say about the effect of gender transition
6 on transgender well-being? What We Know," and you
7 state that that is from the Center For Study of
8 Inequality at Cornell University.
9 Are you familiar with that?
10 A. I am, but if you put it up, I can speak
11 more specifically to it.
12 Q. Okay. I'll see if I can find that real
13 quick. Okay. Let me share this thing. All right.
14 Can you see what's on my screen now?
15 A. I can.
16 Q. Okay. And do you recognize this as one of
17 the articles that you cited to in your rebuttal
18 report?
19 A. Can you just go up to the top?
20 Q. Sure.
21 A. I don't know if this is the web study or
22 the article.
23 Q. Your citation which is Footnote 16 of your
24 report specifically has this website as the

1 citation.
2 A. And can you read that to me? That citation
3 in my report?
4 Q. "What does the scholarly research say about
5 the effect of gender transition on transgender
6 well-being?" "What We Know," 2021, https:// --
7 A. Okay, I've got it.
8 Q. So do you recognize this article?
9 A. Well, I recognize this -- that's what I was
10 saying. I think it's a web -- a web page.
11 Q. Okay. Who wrote this?
12 MS. HUPPERT: Object to form.
13 A. Can you scroll down?
14 Q. Sure.
15 A. Yeah. Okay. Well, the cite refers to
16 articles written by the various authors here. If
17 you can scroll back up, I think there were eight --
18 yeah, I believe they reference the eight findings
19 of the review.
20 And if you can go to Home.
21 So it appears to be the Center for the
22 Study of Inequality at Cornell University.
23 Q. So do you know -- and I'll go back to the
24 page. Do you know who the researchers were on

1 this?
2 MS. HUPPERT: Object to form.
3 A. I -- again, I -- this page refers to other
4 articles. I don't know who wrote the web page.
5 Q. Okay. Is this web page peer-reviewed?
6 MS. HUPPERT: Object to form.
7 A. Can you scroll -- actually, I'm sorry. Can
8 you go back to Home? Okay. Let me see. So this
9 is a -- and you can go back to the other page.
10 Yeah, this is basically a web page
11 that directs to peer-reviewed literature.
12 A. Okay.
13 MS. HUPPERT: The same question, if
14 you don't mind marking just that -- a printout of
15 that web page that had the --
16 MR. DAVID: I'll see if I can make
17 that happen. I don't see any reason I can't.
18 SCHECHTER DEPOSITION EXHIBIT NO. 9
19 (Cornell University web page entitled
20 "What does the scholarly research say
21 about the effect of gender transition
22 on transgender well-being" was marked
23 for identification purposes as
24 Schechter Deposition Exhibit No. 9.)

1 MS. HUPPERT: Appreciate it.
2 Q. There is an article that was written by
3 Doctor Karasic that was titled "Age is Just a
4 Number," and it was a -- I guess a review process
5 where they spoke with WPATH surgeons about care
6 that they provided. Did you participate in that?
7 MS. HUPPERT: Object to form.
8 A. Do you have -- can you show me the
9 citation?
10 Q. I should be able to. Okay. So can you see
11 this up on the screen?
12 A. I can, yes.
13 Q. Okay. And I just want to know if you
14 participated in this survey.
15 A. I believe I did.
16 Q. Okay. Do you remember -- if we went
17 through this, would you be able to say, "This is me
18 talking"?
19 A. I think this was a while -- can you -- if
20 you scroll down. This was a while ago. Yeah, so
21 it was published in '17, so, you know, submitted
22 certainly before that, so I'm -- I'm not sure that
23 I could identify my comments or whether any of my
24 comments are even included.

1 Q. All of the surgeons were anonymous, so I
2 didn't know if -- I assumed that would be your
3 answer, but --
4 Okay. Then I'm not going to ask you
5 any questions about this.
6 MR. DAVID: And I think that those are
7 all the questions I have for you, Doctor. Thank
8 you.
9 THE DEPONENT: Thank you.
10 MS. HUPPERT: We do not have any
11 questions for the witness, but we would like to
12 review and sign.
13 (Having indicated he would like to
14 read his deposition before filing,
15 further this deponent saith not.)
16
17 --oOo--
18
19
20
21
22
23
24

1 STATE OF WEST VIRGINIA,
2 COUNTY OF JACKSON, to wit;
3
4 I, Teresa S. Evans, a Notary Public within and for the County and State aforesaid, duly
5 commissioned and qualified, do hereby certify that the foregoing deposition of DR. LOREN SCHECHTER was
6 duly taken by me and before me at the time and place and for the purpose specified in the caption
7 hereof, the said witness having been by me first duly sworn.
8
I do further certify that the said
9 deposition was correctly taken by me in shorthand notes, and that the same were accurately written
10 out in full and reduced to typewriting and that the witness did request to read his transcript.
11
I further certify that I am neither
12 attorney or counsel for, nor related to or employed by, any of the parties to the action in which this
13 deposition is taken, and further that I am not a relative or employee of any attorney or counsel
14 employed by the parties or financially interested in the action and that the attached transcript
15 meets the requirements set forth within article twenty-seven, chapter forty-seven of the West
16 Virginia Code.
17 My commission expires October 15, 2030.
Given under my hand this 31st day of March, 2021.
18

OFFICIAL SEAL
COMMISSIONER FOR
WEST VIRGINIA
TERESA SUE EVANS
Ripley, WV 25271
My Commission Expires October 15, 2030

19 ____________________
Teresa S. Evans
20 RMR, CRR, RPR, WV-CCR
21
22
23
24

1 ERRATA SHEET

2

3 I, DR. LOREN SCHECHTER, do hereby certify that the foregoing is a true and correct transcript of my deposition with the
4 exception of the following corrections:

5

| PAGE | LINE | CORRECTION |
|---|---|---|
| 44 | 10 | Change "a case" to "adjacent to" |
| 78 | 9 | Change "what I've always" to "what's been" |
| 118 | 20 | Change "sought" to "selected" |
| 121 | 21 | Change "dysmorphyic" to "dysmorphic" |
| 122 | 1, 5, 8, 12, 13, 16, 19 | Change "dysmorphyic" to "dysmorphic" |
| 123 | 1, 9, 23 | Change "dysmorphyic" to "dysmorphic" |
| 124 | 3 | Change "dysmorphyic" to "dysmorphic" |
| 128 | 18 | Change "corporeal" to "corporal" |
| 132 | 9 | Change "wow" to "well" |
| 132 | 13 | Change "cisgendered" to "cisgender" |
| 206 | 9 | Change "reconstrution" to "reconstruction" |

17 loren schechter

18 DEPONENT'S SIGNATURE

19 STATE OF VIRGINIA,
COUNTY OF FAIRFAX,

20

21 Sworn to before me,
VY NGOC THANH NGUYEN, Notary Public, this
22 14 day of APRIL, 2021.

23 SEAL VY NGOC THANH NGUYEN ELECTRONIC NOTARY PUBLIC • REG # [illegible] Commonwealth of Virginia My Commission Expires 06/30/2024

24 NOTARY PUBLIC

EXHIBIT
1 - Schechter, MD
exhibitsticker.com



# Reduction in Mental Health Treatment Utilization Among Transgender Individuals After Gender-Affirming Surgeries: A Total Population Study

Richard Bränström, Ph.D., John E. Pachankis, Ph.D.

**Objective:** Despite professional recommendations to consider gender-affirming hormone and surgical interventions for transgender individuals experiencing gender incongruence, the long-term effect of such interventions on mental health is largely unknown. The aim of this study was to ascertain the prevalence of mood and anxiety disorder health care visits and antidepressant and anxiolytic prescriptions in 2015 as a function of gender incongruence diagnosis and gender-affirming hormone and surgical treatment in the entire Swedish population.

**Methods:** This study used the Swedish Total Population Register (N=9,747,324), linked to the National Patient Register and the Prescribed Drug Register. Among individuals who received a diagnosis of gender incongruence (i.e., transsexualism or gender identity disorder) between 2005 and 2015 (N=2,679), mental health treatment in 2015 was examined as a function of length of time since gender-affirming hormone and surgical treatment. Outcome measures were mood and anxiety disorder health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after a suicide attempt.

**Results:** Compared with the general population, individuals with a gender incongruence diagnosis were about six times as likely to have had a mood and anxiety disorder health care visit, more than three times as likely to have received prescriptions for antidepressants and anxiolytics, and more than six times as likely to have been hospitalized after a suicide attempt. Years since initiating hormone treatment was not significantly related to likelihood of mental health treatment (adjusted odds ratio=1.01, 95% CI=0.98, 1.03). However, increased time since last gender-affirming surgery was associated with reduced mental health treatment (adjusted odds ratio=0.92, 95% CI=0.87, 0.98).

**Conclusions:** In this first total population study of transgender individuals with a gender incongruence diagnosis, the longitudinal association between gender-affirming surgery and reduced likelihood of mental health treatment lends support to the decision to provide gender-affirming surgeries to transgender individuals who seek them.

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Numerous studies indicate that transgender individuals—that is, individuals who experience incongruity between their sex assigned at birth and their current gender identity—are at particular risk of psychological distress and associated impairment (e.g., suicidality) (1–3). This elevated risk is hypothesized to stem at least in part from transgender individuals' elevated exposure to stigma-related stress, also known as minority stress (4, 5), and it can also result from the stress associated with a lack of gender affirmation (i.e., the accurate recognition and validation of one's gender identity) (6). ICD-11 (7) specifies that individuals experiencing persistent discordance between their experienced gender and their assigned sex meet diagnostic criteria for gender incongruence.

To alleviate the stress of persistent discordance between experienced gender and assigned sex, an increasing number of transgender individuals who experience gender incongruence seek gender-affirming medical interventions, including hormone replacement therapy and gender-affirming surgeries (8). The World Professional Association for Transgender Health's *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People* recommends consideration of these interventions for affirming transgender individuals' gender and alleviating gender-related stress (9).

Despite professional recommendations to consider gender-affirming medical interventions for transgender individuals who experience gender incongruence, the effect of such interventions on long-term mental health is largely unknown. Available evidence stems mainly from small samples utilizing cross-sectional designs and self-reported treatment exposures and mental health outcomes (2, 10, 11). A meta-analysis

*See related feature:* **Editorial** *by Dr. Mueller (p. 657)*

that aggregated data across nearly two dozen small-sample studies (10), mostly relying on cross-sectional designs, found positive associations between self-reports of receiving both hormone therapy and gender-affirming surgery and mental health. Several more recent uncontrolled studies of the effects of hormone replacement therapy on transgender individuals' mental health have found that transgender individuals' mental health improved for up to 24 months after initiating hormone therapy (11, 12).

Because of previous studies' limitations, including short assessment periods and the fact that existing probability-based surveys do not routinely assess transgender status or other aspects of gender diversity, insufficient evidence exists regarding associations between length of time since receiving gender-affirming interventions and treatment for psychiatric disorders among the transgender population. In fact, no probability-based evidence exists regarding even the prevalence of mood and anxiety disorder treatment among transgender individuals compared with the general population (1).

The limitations of previous research in terms of non-representative sampling, self-reported measurement, and limited follow-up periods can be overcome with national health registry data sets that include clinician-derived assessment of gender incongruence and complete records of psychiatric and gender-affirming treatment and utilization data in an entire population. In the one known study to use a population-based design to investigate psychiatric morbidity among transgender individuals (N=324), individuals who had legally changed their gender and had a diagnosis of gender incongruence associated with an inpatient hospital visit in Sweden between 1973 and 2003 were at higher risk of suicide attempts, suicide-related mortality, and psychiatric hospitalization compared with age- and reassigned-gender-matched controls (13). The study did not report the prevalence of mood and anxiety disorder treatment among those receiving gender-affirming treatment compared with the total population or as a function of length of time since receiving gender-affirming treatment. Furthermore, the proportion of individuals receiving gender-affirming treatments in Sweden has increased nearly exponentially since 2003 (8, 14). Similar recent increases in referrals for gender-affirming treatments have been reported in other countries around the world (15–18).

In this study, we took advantage of the Swedish Total Population Register (19), linked to the Swedish National Patient Register and the Swedish Prescribed Drug Register, to ascertain the prevalence of mood and anxiety disorder health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after a suicide attempt among the entire Swedish population as a function of gender incongruence diagnosis, gender-affirming hormone and surgery utilization, and length of time since receiving gender-affirming treatments. This data set permitted identification of all individuals in Sweden seeking gender-affirming treatments between January 1, 2005, and December 31, 2015. Although not all transgender individuals seek gender-affirming treatments and not all treatment-seeking transgender individuals meet diagnostic criteria for gender incongruence, findings from this unique data opportunity have timely implications for documenting the mental health of transgender individuals seeking gender-affirmative treatment and ways in which the medical profession can support this increasingly visible population.

## METHODS

This total population prospective study included all individuals living in Sweden on December 31, 2014, as identified in the Swedish Total Population Register. Using de-identified personal identification numbers (a unique number assigned to all Swedish residents), we linked sociodemographic information with National Patient Register information on health care usage between January 1, 2005, and December 31, 2015, and Prescribed Drug Register information on prescribed and purchased medication between July 1, 2005, and December 31, 2015. The study was approved by the Regional Ethics Committee in Stockholm (no. 2017/1736–31).

### Gender Incongruence Diagnosis

Using the Swedish National Patient Register, we classified all individuals in Sweden according to whether they had received a diagnosis of gender incongruence, as defined by the diagnostic system applied in Sweden during the study period (i.e., a diagnosis of either transsexualism [ICD-10 code F64.0] or gender identity disorder [ICD-10 codes F64.8, F64.9]) during an inpatient or specialized outpatient visit between January 1, 2005, and December 31, 2015. The two diagnoses used to define gender incongruence at the time of the study are not fully equivalent but capture largely overlapping populations (20). In Sweden during the study period, a diagnosis of either transsexualism or gender identity disorder was required for accessing gender-affirming treatment (e.g., gender-affirming hormone treatment, hormone-suppressing or -blocking medication treatment, mastectomy with chest contouring, hair removal, vocal cord surgery, speech therapy, genital surgery) and was given after an approximately yearlong evaluation, following a national consensus program (14, 21). Adolescents could receive the same gender-affirming treatments as adults but could not receive genital surgery before age 18 (22).

### Outcome Measures

This study's outcome measures were psychiatric outpatient health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after a suicide attempt between January 1, 2015, and December 31, 2015. Restricting the outcome assessment period to one year, 2015, the most recent available, removes potential confounding by secular trends in treatment utilization and transgender acceptance and visibility. Each psychiatric outpatient visit was coded by the treating physician with a primary diagnosis from ICD-10 (23)

and up to 20 supplementary ICD-10 diagnostic codes. Using these codes, we classified all individuals as having received treatment for any or no mood disorders (codes F30–F39) or anxiety disorders (codes F40–F42). Prescribed medication use was obtained from the Swedish Prescribed Drug Register, which contains information regarding all prescribed and purchased medications nationwide for all individuals. Individuals were categorized into any use or no use of antidepressant and anxiolytic medication according to the Anatomical Therapeutic Chemical (ATC) Classification system (codes N06A and N05B). All inpatient health care visits were similarly coded by the treating physician using ICD-10, indicating a primary cause of hospitalization and up to 30 supplementary causes. Using these codes, we classified all individuals as having been hospitalized after a suicide attempt (versus not) using the ICD-10 codes for intentional self-harm (codes X60–X84).

**TABLE 1. Demographic characteristics of the Swedish population, by gender incongruence diagnosis, December 31, 2014**

| Measure | Individuals Diagnosed With Gender Incongruence (N=2,679) | | General Population[a] (N=9,744,645) | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Age (years) | 31.5 | 14.0 | 40.7 | 23.8 |
| Mean yearly household income (Swedish kronor, 000s) | 298.4 | 301.0 | 464.8 | 800.6 |
| | N | % | N | % |
| Legal gender | | | | |
| Male | 1,284 | 47.9 | 4,870,930 | 50.0 |
| Female | 1,395 | 52.1 | 4,873,715 | 50.0 |
| University education | 809 | 30.2 | 2,643,505 | 27.1 |
| Urbanicity | | | | |
| Larger city | 1,102 | 41.1 | 3,364,003 | 34.5 |
| Smaller city | 867 | 32.4 | 3,238,223 | 33.2 |
| Rural community | 710 | 26.5 | 3,142,419 | 32.2 |
| Country of birth | | | | |
| Sweden | 2,214 | 82.6 | 8,141,590 | 83.5 |
| Other European country | 164 | 6.1 | 801,227 | 8.2 |
| Outside of Europe | 301 | 11.2 | 800,800 | 8.2 |
| No information about country of birth | 0 | 0.0 | 1,028 | 0.01 |

[a] The N for general population excludes those with a diagnosis of gender incongruence.

### Covariates

Sociodemographic information was drawn from the Swedish Total Population Register in December 2014 and included current legal gender, age, country of birth, level of education, urbanicity, and household income.

### Gender-Affirming Treatment Utilization

For individuals with a gender incongruence diagnosis at any visit, we assessed the type and year of gender-affirming treatment, both hormone treatment and surgery. Information about hormone treatment, including androgen-suppressing and -blocking medication, was obtained from the Swedish Prescribed Drug Register between July 1, 2005, and December 31, 2015. All medications prescribed to individuals who had received a gender incongruence diagnosis were coded as gender-affirming if they were feminizing hormone medication (i.e., estrogens [ATC codes G03C, L02AA], progestogen [G03D]), masculinizing hormone medication (i.e., androgens [G03B]), or androgen-suppression or -blocking medication (i.e., testosterone-5-alpha reductase inhibitors [G04CB], antiandrogens [G03H], gonadotropin-releasing hormone analogues [G03GA, L02AE, H01CA], antigonadotropin-releasing hormones [H01CC], and spironolactone [C03DA01]). For each individual with a gender incongruence diagnosis who received prescriptions for any of these medications, we calculated the number of years since initiation.

Gender-affirming surgery was coded using information about all inpatient surgical procedures received by individuals with a gender incongruence diagnosis in the National Patient Register between January 1, 2005, and December 31, 2015. All surgical procedures associated with a gender incongruence diagnosis performed during this period were coded by type of surgery using the Nordic Medico-Statistical Committee Classification of Surgical Procedures (16): breast or dermatological chest surgery (codes H and QB), surgery of the reproductive organs (codes K and L), dermatological surgery (code Q), and laryngeal surgery (code DQ).

### Statistical Analysis

We first examined sociodemographic differences between individuals with a gender incongruence diagnosis and the rest of the population in Sweden. We then compared the prevalence of any mood and anxiety disorder treatments (i.e., psychiatric outpatient health care visits and prescribed psychiatric medication) between individuals receiving gender-affirming treatments and the rest of the population in Sweden during 2015, using logistic regression. Among individuals with a gender incongruence diagnosis, we then investigated the odds of mood and anxiety disorder treatment and hospitalization following a suicide attempt (occurring in 2015) as a function of years since initiation of hormone or hormone-suppressing treatment and since last gender-affirming surgery. We examined years since *last* gender-affirming surgery because gender-affirming surgery is often a lengthy process involving several distinct procedures before gender affirmation is attained.

All analyses were conducted using SPSS, version 24 (IBM, Armonk, N.Y.), and adjusted for current legal gender, age, country of birth, level of education, urbanicity, and household income.

**TABLE 2. Association between gender incongruence diagnosis and mood- and anxiety-related health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after suicide attempt in the total Swedish population, 2015[a]**

| | Individuals Diagnosed With Gender Incongruence (N=2,679) | | General Population[b] (N=9,744,645) | | Unadjusted | | Adjusted | |
|---|---|---|---|---|---|---|---|---|
| Measure | N | % | N | % | Odds Ratio | 95% CI | Odds Ratio | 95% CI |
| Psychiatric outpatient visits, 2015 | | | | | | | | |
| Any mood disorder | 250 | 9.3 | 95,137 | 1.0 | 10.44 | 9.16, 11.89 | 6.07 | 5.32, 6.93 |
| Any anxiety disorder | 197 | 7.4 | 63,200 | 0.6 | 12.16 | 10.52, 14.06 | 5.92 | 5.10, 6.86 |
| Prescribed medication treatment, 2015 | | | | | | | | |
| Any antidepressant use | 771 | 28.8 | 377,043 | 9.4 | 3.90 | 3.58, 4.24 | 3.95 | 3.62, 4.31 |
| Any anxiolytic treatment | 449 | 16.8 | 566,678 | 5.8 | 3.26 | 2.95, 3.61 | 3.43 | 3.09, 3.81 |
| Inpatient visits, 2015 | | | | | | | | |
| Hospitalization after suicide attempt | 22 | 0.8 | 7,104 | 0.1 | 11.35 | 7.46, 17.28 | 6.79 | 4.45, 10.35 |

[a] All analyses were conducted using logistic regression and adjusted for age, gender, education, income, urbanity, and country of birth.
[b] The N for general population excludes those with a diagnosis of gender incongruence.

## RESULTS

Of the total Swedish population on December 31, 2014 (N=9,747,324), 2,679 had received a diagnosis of gender incongruence between January 1, 2005, and December 31, 2015 (Table 1). Those diagnosed with gender incongruence were significantly younger on average than the rest of the population ($t=19.94$, $p<0.001$), and they were more likely to have a current legal female gender than male gender ($\chi^2=4.54$, $p=0.03$). Individuals with a gender incongruence diagnosis were more likely to have a university education ($\chi^2=12.77$, $p<0.001$), to have a lower household income ($t=30.61$, $p<0.001$), to live in a larger city ($\chi^2=61.95$, $p<0.001$), and to have been born outside of Europe ($\chi^2=32.33$, $p<0.001$).

### Mood and Anxiety Disorder Treatment Among Individuals Diagnosed With Gender Incongruence

Table 2 compares the prevalence of health care visits and medication treatment for mood and anxiety disorders between individuals diagnosed with gender incongruence and those not. In analyses adjusted for sociodemographic factors, those diagnosed with gender incongruence were about six times as likely to have had a health care visit due to a mood or anxiety disorder in 2015, more than three times as likely to have received prescriptions for antidepressant and anxiolytic medication in 2015, and more than six times as likely to have been hospitalized after a suicide attempt.

### Gender-Affirming Treatments Among Individuals Diagnosed With Gender Incongruence

Just over 70% of individuals diagnosed with gender incongruence during the follow-up period (2005–2015) had received prescriptions for hormone treatment, including androgen-suppressing and -blocking medication, during this period. Half of those treated with hormones had initiated their hormone treatment within the past 5 years (Table 3).

Nearly 40% of those with a diagnosis of gender incongruence had received gender-affirming surgical treatments during the follow-up period. Table 3 presents the types of surgical treatments and the distribution of individuals by number of years since last gender-affirming surgery. The most common types of surgical procedures were mastectomy with chest contouring, surgery of the reproductive organs, dermatological surgeries, and laryngeal surgery.

Less than a third (29%) of those diagnosed with gender incongruence had received neither hormone treatment nor gender-affirming surgery. Among those who had received gender-affirming surgery, 97% had also been treated with hormones.

### Changes in Likelihood of Mood and Anxiety Disorder Treatment After Gender-Affirming Hormone and Surgical Treatment

We examined the effect of years since hormone treatment initiation and years since last gender-affirming surgery on likelihood of having received mood or anxiety disorder treatment in 2015 among individuals with a diagnosis of gender incongruence. Among those with a gender incongruence diagnosis receiving hormone treatment, years since initiation of hormone treatment was not significantly related to likelihood of mental health treatment (i.e., psychiatric outpatient health care visits and prescribed psychiatric medication; adjusted odds ratio=1.01, 95% CI=0.98, 1.03). However, among those receiving gender-affirming surgical treatment, the risk of mental health treatment was significantly reduced with increased time since last surgical treatment (adjusted odds ratio=0.92, 95% CI=0.87, 0.97). Specifically, the likelihood of being treated for a mood or anxiety disorder was reduced by 8% for each year since last gender-affirming surgery. The number of individuals with a gender incongruence diagnosis who had been hospitalized after a suicide attempt in 2015 was low (N=22) but was also

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reduced as a function of time since last surgical treatment. The association between time since gender-affirming hormone and surgical treatments and hospitalization after a suicide attempt did not reach significance (hormone treatment: adjusted odds ratio=1.12, 95% CI=0.97, 1.30; surgical treatment: adjusted odds ratio=0.87, 95% CI=0.61, 1.24). Figure 1 presents the prevalence of mental health treatment (either health care visits for depression and anxiety, antidepressant and anxiolytic prescriptions, or both) and hospitalization after a suicide attempt in 2015 by years since last gender-affirming surgical treatment.

**TABLE 3.** **Type of, and years since, gender-affirming hormone and surgery treatment in December 31, 2015, among individuals with a gender incongruence diagnosis in Sweden, January 1, 2005, to December 31, 2015**

| Measure | N | % |
|---|---|---|
| Time since first gender-affirming hormone treatment | Individuals with gender incongruence diagnosis (N=2,679) | |
| No hormone treatment | 794 | 29.6 |
| <1 year | 359 | 13.4 |
| 1 year | 226 | 8.4 |
| 2–3 years | 367 | 13.7 |
| 4–5 years | 330 | 12.3 |
| 6–7 years | 176 | 6.6 |
| 8–9 years | 193 | 7.2 |
| ≥10 years | 234 | 8.7 |
| Type of hormone treatment (more than one type is possible) | All individuals receiving gender-affirming hormone treatment (N=1,885) | |
| Estrogen or progesterone | 1,066 | 56.6 |
| Androgen | 916 | 48.6 |
| Androgen-suppressing or -blocking medication | 808 | 42.9 |
| Time since last gender-affirming surgical treatment | All individuals with gender incongruence diagnosis (N=2,679) | |
| No surgical treatment | 1,661 | 62.0 |
| <1 year | 353 | 13.2 |
| 1 year | 221 | 8.2 |
| 2–3 years | 198 | 7.4 |
| 4–5 years | 110 | 4.1 |
| 6–7 years | 68 | 2.5 |
| 8–9 years | 49 | 1.8 |
| ≥10 years | 19 | 0.7 |
| Type of surgical procedures (more than one type is possible) | All individuals receiving gender-affirming surgical treatment (N=1,018) | |
| Breast or dermatological chest surgery | 788 | 77.4 |
| Surgery of the reproductive organs | 540 | 53.0 |
| Dermatological surgery | 315 | 30.9 |
| Laryngeal surgery | 70 | 6.9 |

To assess the potentially interrelated and therefore confounding effect of gender-affirming hormone and surgical treatments on each other, a sensitivity analyses was conducted, entering both years since initiation of hormone treatment and years since last surgical treatment simultaneously into the same model predicting odds of mood and anxiety disorder treatment (i.e., psychiatric outpatient health care visits and prescribed psychiatric medication). The results of this analysis were similar to those presented above, with a nonsignificant effect of time since initiation of hormone treatment (adjusted odds ratio=1.03, 95% CI=0.97, 1.08) and a significant effect of years since last gender-affirming surgical treatment (adjusted odds ratio=0.91, 95% CI=0.86, 0.97).

## DISCUSSION

Taking advantage of total population registers containing diagnoses of gender incongruence, gender-related hormone and surgical treatment codes, and mental health treatment utilization, we examined the potential impact of gender-affirming hormone and surgical treatment on later mental health treatment utilization. The results also present the first known population prevalence of mood and anxiety disorder treatment and suicide attempts among transgender individuals compared with the general population. Overall, our results show that transgender individuals, here defined as those with a diagnosis of gender incongruence, are about six times as likely as the general population to have had a health care visit for any mood or anxiety disorder, between three and four times as likely to have received prescriptions for antidepressant or anxiolytic medication, and more than six times as likely to have been hospitalized after a suicide attempt. Time since initiating gender-affirming hormone treatment was not associated with these mental health treatment outcomes, whereas time since receiving gender-affirming surgery was significantly associated with a decrease in mental health treatment.

These findings begin to answer the call for population-based documentation of transgender health (1) and extend earlier evidence of associations between gender-affirming treatment and improved mental health mostly derived from studies utilizing cross-sectional designs or short follow-up periods, self-reported exposures and outcomes, and small nonprobability samples (2, 10, 11). In addition to showing that transgender individuals are more likely to utilize mental health treatments than the general population, the results suggest that gender-affirming treatments may reduce this risk. Specifically, the odds of receiving mental health treatment in 2015 were reduced by 8% for every year since

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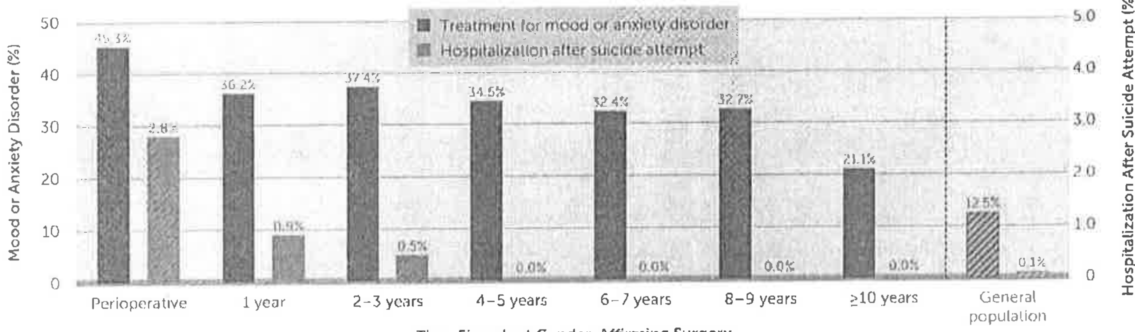


**FIGURE 1.** **Prevalence of treatment for mood or anxiety disorders (health care visit or antidepressant or anxiolytic prescription) and hospitalization after suicide attempt in 2015 among individuals with a gender incongruence diagnosis, by number of years since last gender-affirming surgery**

receiving gender-affirming surgery over the 10-year follow-up period. Despite this linear decrease, even 10 years after receiving such treatments, the prevalence of mental health treatment utilization continued to exceed that of the general Swedish population (24), suggesting the need to address factors in addition to gender-affirming treatment availability that may strengthen transgender individuals' mental health. Such factors may include reductions in structural (e.g., economic inequality), interpersonal (e.g., victimization), and psychosocial (e.g., identity concealment) stressors to which transgender individuals are disproportionately exposed (4, 24). Ensuring access to transgender-affirming mental health care may also further reduce transgender individuals' persistent psychiatric risk (25). Although the prevalence of hospitalization after suicide attempt among those with a gender incongruence diagnosis was too small for statistical testing, the numbers who were treated after a suicide attempt decreased as a function of years since last gender-affirming surgery. Among those who received their last gender-affirming surgery more than 3 years ago, no suicide attempts were registered.

Despite the notable methodological strengths of utilizing data from a total population, the results should be interpreted in light of several limitations. First, the criterion used here to define the transgender population does not capture the full spectrum of those who identify as transgender. We specifically lacked information regarding gender assigned at birth, legal gender change, and gender identity at the time of data collection, preventing subgroup analyses of the transgender population (26). Recent estimates across five countries suggest that between 0.4% and 1.3% of the population may identify as transgender, including gender-nonconforming individuals who do not seek gender-affirming hormone or surgical treatment (18, 27–29). Although the transgender population in the present study is limited to individuals with a diagnosis of gender incongruence, this population is of particular concern to the medical community because of its high likelihood of seeking gender-affirming hormone and surgical treatments. Given the free availability of gender-affirming treatments in Sweden, our approach to ascertaining this particular population is likely highly sensitive. Our approach also did not include a comparison group of individuals who had sought but not yet received gender-affirming treatment. While this population might be able to serve as an important comparison group in future studies, without the ability to distinguish between those who had not received treatment because they are waiting for it and those not seeking it in the first place, the current data structure cannot provide this comparison. Longitudinal designs assessing within-person changes in treatment seeking, treatment receipt, and ultimate mental health outcomes would be essential for tracking mental health before and immediately after treatment. Because our approach could only ascertain suicide attempts among living individuals, longitudinal designs that allow for tracking completed suicide among decedents remains an important future direction.

Second, mental health treatment utilization is an imperfect proxy for mental health itself. Transgender people receiving treatment for gender incongruence are by definition exposed to treatment settings, which may disproportionately expose them to mental health treatment opportunities. Although the Swedish context of universal health care coverage removes financial barriers to treatment seeking, other unmeasured factors, such as general tendency toward treatment seeking or perceived discrimination in treatment settings, may influence the associations examined here. Third, because we derived information about outpatient psychiatric health care visits from national health care databases, we had limited information about the type of mental health treatment patients received, and we could not differentiate among individuals receiving psychotropic medication, psychotherapy, or both. Fourth, this study was conducted in a single high-income national context with legal protections for transgender individuals and universal health coverage, including for gender-affirming treatments. While this context makes the present study possible,

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it also may constrain the generalizability of findings to low- and middle-income countries and to countries that lack transgender protections or universal health care coverage.

Overall, this study provides timely support for policies that ensure coverage of gender-affirming treatments. Although gender-affirming treatments are recommended as a medical necessity for appropriately selected individuals experiencing gender incongruence and are a covered health benefit in most developed countries, uncertainty exists, such as in the United States, regarding federal protections of transgender employees from transgender-related exclusions in employee benefits (30). In the context of such uncertainty, some U.S. states deny use of state funds to cover costs for gender-affirming treatments, and the Veterans Health Administration specifically prohibits gender-affirming surgery within Veterans Affairs (VA) facilities or use of VA funding for gender-affirming treatments (31, 32). To the extent that gender-affirmative medical interventions are interpreted as sterilization, many hospitals can refuse to provide such care, citing religious directives (33). Debates regarding the provision of gender-affirming health care are global, and in much of the world, such care is unavailable or largely unaffordable (29). Therefore, in many contexts around the world, lack of coverage for gender-affirming treatments drives the use of non-medically supervised hormones and surgeries, thereby exacerbating physical health risks (34) and the other epidemics disproportionately borne by the global transgender population, including suicide and HIV infection. The longitudinal association found in the present study between gender-affirming surgery and reduced mental health treatment utilization, combined with the physical and mental health risks of surgery denial, supports policies that provide gender-affirming surgeries to transgender individuals who seek such treatments.

## ADDENDUM

After this article was published online on October 4, 2019, some letters containing questions on the statistical methodology employed led the *Journal* to seek statistical consultations. The results of these consultations were presented to us and we concurred with many of the points raised. The letters (35-41) and our response to them (42) appear in the Letters to the Editor section of the August 2020 issue of the *Journal*.

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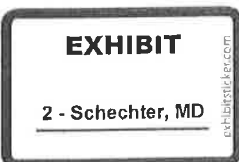


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EXHIBIT
7 - Schechter, MD

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

CHRISTOPHER FAIN, *et al.*,
individually and on behalf of all others
similarly situated,

*Plaintiffs,*

v.

WILLIAM CROUCH, *et al.*,

*Defendants.*

CIVIL ACTION NO. 3:20-cv-00740
HON. ROBERT C. CHAMBERS

**CERTIFICATE OF SERVICE**

I hereby certify that the EXPERT REBUTTAL REPORT OF LOREN S. SCHECHTER, M.D. was served electronically on the 18th day of March, 2022 on the following counsel for Defendants in the above-captioned case:

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EXHIBIT
8 - Schechter, MD
exhibitsticker.com

Archives of Sexual Behavior (2021) 50:3353–3369
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ORIGINAL PAPER

# Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners

Lisa Littman[1]

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**Abstract**

The study's purpose was to describe a population of individuals who experienced gender dysphoria, chose to undergo medical and/or surgical transition and then detransitioned by discontinuing medications, having surgery to reverse the effects of transition, or both. Recruitment information with a link to an anonymous survey was shared on social media, professional listservs, and via snowball sampling. Sixty-nine percent of the 100 participants were natal female and 31.0% were natal male. Reasons for detransitioning were varied and included: experiencing discrimination (23.0%); becoming more comfortable identifying as their natal sex (60.0%); having concerns about potential medical complications from transitioning (49.0%); and coming to the view that their gender dysphoria was caused by something specific such as trauma, abuse, or a mental health condition (38.0%). Homophobia or difficulty accepting themselves as lesbian, gay, or bisexual was expressed by 23.0% as a reason for transition and subsequent detransition. The majority (55.0%) felt that they did not receive an adequate evaluation from a doctor or mental health professional before starting transition and only 24.0% of respondents informed their clinicians that they had detransitioned. There are many different reasons and experiences leading to detransition. More research is needed to understand this population, determine the prevalence of detransition as an outcome of transition, meet the medical and psychological needs of this population, and better inform the process of evaluation and counseling prior to transition.

**Keywords** Gender dysphoria · Detransition · Transgender

## Introduction

Detransition is the act of stopping or reversing a gender transition. The visibility of individuals who have detransitioned is new and may be rapidly growing. As recently as 2014, it was challenging for an individual who detransitioned to find another person who similarly detransitioned (Callahan, 2018). Between 2015 and 2017, a handful of blogs written by individual detransitioners started to appear online, private support groups for detransitioners formed, and interviews with detransitioners began to appear in news articles, magazines, and blogs (Anonymous, 2017; 4thwavenow, 2016; Herzog, 2017; McCann, 2017). Although few YouTube videos about detransition existed prior to 2016, multiple detransitioners started to post videos documenting their experiences in 2016 and the numbers of these videos continues to increase.[1] In late 2017, the subreddit r/detrans (r/detrans, 2020) was revitalized and in four years has grown from 100 members to more than 21,000 members. A member poll of r/detrans conducted in 2019 estimated that approximately one-third of the members responding to the survey were desisters or detransitioners (r/detrans, 2019). The Pique Resilience Project, a group of four detransitioned or desisted young women, was founded in 2018 as a way to share the experiences of detransitioners with the public (Pique Resilience Project, 2019). In late 2019, the Detransition Advocacy Network, a nonprofit organization to "improve the well-being of detransitioned people everywhere" was launched (The

**Supplementary Information** The online version contains supplementary material available at https://doi.org/10.1007/s10508-021-02163-w.

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[1] A search of the word "detransition" in YouTube can be filtered by date of upload. https://www.youtube.com/results?search_query=%22detransition%22&sp=CAI%253D22.

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Detransition Advocacy Network, 2020) and the first formal, in-person conference for detransitioned people was held (Bridge, 2020). In the face of this massive change, clinicians have called for more research into the experiences of detransitioners (Butler & Hutchinson, 2020; Entwistle, 2021; Marchiano, 2020).

Although there were rare published reports about detransitioners prior to 2016, most of the published literature about detransition is recent (Callahan, 2018; D'Angelo, 2018; Djordjevic et al., 2016; Kuiper & Cohen-Kettenis, 1998; Levine, 2018; Marchiano, 2017; Pazos Guerra et al., 2020; Stella, 2016; Turban & Keuroghlian, 2018; Turban et al., 2021; Vandenbussche, 2021). The prevailing cultural narratives about detransition are that most individuals who detransition will retransition and that the reasons for detransition are discrimination, pressures from others, and nonbinary identification (Turban et al., 2021). However, case reports are shedding light on a broader and more complex range of experiences that include trauma, worsened mental health with transition, re-identification with natal sex, and difficulty separating sexual orientation from gender identity (D'Angelo, 2018; Levine, 2018; Pazos Guerra et al., 2020).[2] Detransitioners and desisters, in their own words, have provided additional depth to the discussion, describing that:

(1) Trauma (including sexual trauma) and mental health conditions contributed to their transgender identification and transition (Callahan, 2018; Herzog, 2017; twitter.com/ftmdetransed & twitter.com/radfemjourney, 2019)
(2) Their dysphoria and transition were due to homophobia and difficulty accepting themselves as homosexual (Bridge, 2020; Callahan, 2018; upperhandMARS, 2020)
(3) Peers, social media, and online communities were influential in the development of transgender identification and desire to transition (Pique Resilience Project, 2019; Tracey, 2020; upperhandMARS, 2020)
(4) Their dysphoria was rooted in misogyny (Herzog, 2017)

Two recently published convenience sample reports provide additional context about the topic of detransition. First, Turban et al. (2021) analyzed data from the United States Trans Survey (USTS) (James et al., 2016). The USTS contains data from 27,715 transgender and gender diverse adults from the U.S. who were recruited through lesbian, gay, bisexual, transgender, queer (LGBTQ), and allied organization outreach. The USTS included the question, "Have you ever detransitioned? In other words, have you ever gone back to living as your sex assigned at birth, at least for a while?" with the multiple choice options of "yes," "no," and "I have never transitioned." For the 2,242 participants who answered "yes," Turban et al. analyzed the responses to the multiple choice question, "Why did you detransition? In other words, why did you go back to living as your sex assigned at birth? (Mark all that apply)." Although most of the offered answer options were about external pressures to detransition (pressure from spouse or partner, pressure from family, pressure from friends, pressure from employer, discrimination, etc.), participants could write in additional reasons that were not listed. Turban et al.'s sample included more natal males (55.1%) than natal females (44.9%). Roughly half (50.2%) had taken cross-sex hormones and 16.5% had obtained surgery. The findings revealed that most (82.5%) of the sample expressed at least one external factor for detransitioning and 15.9% expressed at least one internal factor (factors originating from self).

The second study by Vandenbussche (2021) recruited detransitioners from online communities of detransitioners and analyzed data for the participants who answered affirmatively to the question, "Did you transition medically and/or socially and then stopped?" The sample of 237 participants was predominantly natal female (92%), and from the U.S. (51%) and Europe (32%). Most (65%) had transitioned both medically and socially. Participants selected from multiple choice options to indicate why they detransitioned with options covering a range of experiences. Respondents also had the option to write in additional reasons. Frequently endorsed reasons for detransition included realizing that their gender dysphoria was related to other issues (70%); health concerns (62%); observing that transition did not help their dysphoria (50%); and that they found alternatives to deal with their dysphoria (45%). In contrast to Turban et al. (2021), external factors such as lack of support, financial concerns, and discrimination were less common (13%, 12%, and 10%, respectively). Many in the sample described that when they detransitioned they lost support or were ostracized from lesbian, gay, bisexual, and transgender (LGBT) communities, suggesting that many of the participants in Vandenbussche (2021) would not have been reached by the recruitment efforts of the USTS (James et al., 2016).

The objective of the current study was to describe a population of individuals who experienced gender dysphoria, chose to undergo medical and/or surgical transition and then detransitioned by discontinuing medications, having surgery to reverse the effects of transition, or both. In contrast to Turban et al. (2021) and Vandenbussche (2021), this study focused only on

[2] The debate about the terminologies used to describe an individual's sex (including "assigned sex at birth," "biological sex," "natal sex," "birth sex," "sex," etc.) is far from settled. Although some professionals have argued for the use of "assigned sex at birth," others argue that this terminology is misleading and not consistent with the events that occur at birth and prior to birth (Bouman et al., 2017; Byng et al., 2018; Dahlen, 2020; Griffin et al., 2020). Supporting the unsettled nature of the discussion, I received conflicting comments from the reviewers of this manuscript about my selection of natal sex terms–one reviewer asked that I justify my preference for natal sex over the other terminologies; another reviewer expressed support for my use of natal sex. I prefer to use "natal sex" and "birth sex" because they are accurate and objective. Further, I propose that "natal sex" and "birth sex" might be seen as reasonable, polite compromise terms between "biological sex" and "assigned sex at birth."

individuals who transitioned and detransitioned medically, surgically, or both. For the purpose of this study, medical transition refers to the use of puberty blockers, cross-sex hormones, or anti-androgens and surgical transition refers to any of a variety of surgical procedures (common surgical procedures include mastectomy, genital surgery, and breast augmentation). This study does not describe the population of individuals who undergo medical or surgical transition without issue nor is it designed to assess the prevalence of detransition as an outcome of transition. Instead, the goal was to identify detransition reasons and narratives in order to inform clinical care and future research.

## Method

### Participants and Procedure

During the recruitment period, 101 individuals who met the study criteria completed online surveys. Inclusion criteria were (1) completion of a survey via Survey Monkey; (2) answering that they had taken or had one or more of the following for the purpose of gender transition: cross-sex hormones, anti-androgens, puberty blockers, breast surgery, genital surgery, other surgery; and (3) answering that they had done any of the following for the purpose of detransitioning: stopped taking cross-sex hormones, stopped taking anti-androgens, stopped taking puberty blockers, had any surgery to reverse transition. One survey was excluded for nonsense answers leaving 100 surveys for analysis. The sample included more natal females (69.0%) than natal males (31.0%) with respondents who were predominantly White (90.0%), non-Hispanic (98.0%), resided in the U.S. (66.0%); had no religious affiliation (63.0%), and support the rights of gay and lesbian couples to marry legally (92.9%) (see Table 1). At the time of survey completion, the mean age of respondents was 29.2 years (SD = 9.1) though natal females were significantly younger ($M = 25.8$; SD = 5.0) than natal males ($M = 36.7$; SD = 11.4), $t(98) = -6.56$, $p < .001$. Prior to transitioning, natal females were more likely to report an exclusively homosexual sexual orientation and natal males were more likely to report an exclusively heterosexual sexual orientation.

A 115-question survey instrument with multiple choice, Likert-type, and open-ended questions was created by the author and two individuals who had personally detransitioned. The author had met both detransitioners by way of introductions from colleagues. The author and both individuals who had detransitioned created questions for the survey, provided feedback, and revised the survey questions collaboratively with a focus on content, clarity, and relevance to a variety of transition and detransition experiences. The survey instrument included two questions that were adapted from an online survey of female detransitioners (Stella, 2016). Once completed, the survey was uploaded onto Survey Monkey (SurveyMonkey, Palo Alto, CA) via an account that was HIPAA-enabled.

Recruitment information with a link to the survey was posted on blogs that covered detransition topics and shared in a private online detransition forum, in a closed detransition Facebook group, and on Tumblr, Twitter, and Reddit. Recruitment information was also shared on the professional listservs for the World Professional Association for Transgender Health, the American Psychological Association Section 44, and the SEXNET listserv (which is a listserv of sex researchers and clinicians) and the professionals on the listservs were asked to share recruitment information with anyone they knew who might be eligible. Efforts were made to reach out to communities with varied views about the use of medical and surgical transition and recruitment information stated that participation was sought from individuals regardless of whether their transition experiences were positive, negative or neutral. Potential participants were invited to share recruitment information with any potentially eligible person or community with potentially eligible people. The survey was active from December 15, 2016 to April 30, 2017 (4.5 months). The median time to complete a survey was 49 min; 50% of the surveys were completed between 32 and 71 min. There were no incentives offered for participating. Data were collected anonymously, without IP addresses, and stored securely with Survey Monkey.

Participation in this study was voluntary. Electronic consent was obtained from all participants in the following manner. The first page of the online survey informed respondents about the research purpose, potential risks and benefits, that participation was voluntary, and provided contact information for the researcher. Survey questions were only displayed if the participant clicked "agree" which indicated that they read the information, voluntarily agreed to participate and were at least 18 years of age.

### Measures

#### Demographic and Baseline Characteristics

Information was collected about participant age, natal sex, race/ethnicity, country of residence, educational attainment, socioeconomic status, religion, attitudes about legal marriage for gay and lesbian couples, and where they first heard about the study. The term sexual orientation in this article is intended to refer to the natal sex of the participant and the natal sex of the individuals with whom they are sexually attracted. Participants were asked to select one or more labels for how they identified their sexual orientation prior to transition with options inclusive of participant sex (e.g., asexual female, bisexual female, heterosexual female, etc.). These responses were coded to be consistent with participant natal sex and were categorized into homosexual, heterosexual, bisexual, pansexual, asexual, and multiple. The multiple category included respondents who

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**Table 1** Demographic and baseline characteristics

| | Natal female N (%) N=69 | Natal male N (%) N=31 |
|---|---|---|
| *Race/ethnicity** | | |
| White | 62 (89.9%) | 28 (90.3%) |
| Multiracial | 6 (8.7%) | 3 (9.7%) |
| Other | 4 (5.8%) | 0 (0%) |
| Asian | 1 (1.4%) | 1 (3.2%) |
| Hispanic | 1 (1.4%) | 1 (3.2%) |
| Black | 0 (0%) | 0 (0%) |
| *Country of residence* | | |
| USA | 46 (66.7%) | 20 (64.5%) |
| UK | 8 (11.6%) | 1 (3.2%) |
| Canada | 5 (7.2%) | 4 (12.9%) |
| Australia | 2 (2.9%) | 2 (6.5%) |
| Other | 8 (11.6%) | 4 (12.9%) |
| *Education* | | |
| Bachelor's or graduate degree | 29 (42.0%) | 18 (58.1%) |
| Associates degree | 3 (4.3%) | 1 (3.2%) |
| Some college but no degree | 28 (40.6%) | 9 (29.0%) |
| High school graduate or GED | 8 (11.6%) | 2 (6.5%) |
| < High school | 1 (1.4%) | 0 (0%) |
| Other | 0 (0%) | 1 (3.2%) |
| *Socioeconomic status compared to others in country of residence* | | |
| Above average (somewhat or very much) | 19 (27.5%) | 12 (38.7%) |
| About average | 20 (29.0%) | 7 (22.6%) |
| Below average (somewhat or very much) | 27 (39.1%) | 12 (38.7%) |
| Prefer not to say | 3 (4.3%) | 0 (0%) |
| *Categorized sexual orientation (by natal sex) prior to transition*[a] | | |
| Homosexual | 18 (26.1%) | 2 (6.5%) |
| Heterosexual | 6 (8.7%) | 12 (38.7%) |
| Bisexual | 15 (21.7%) | 8 (25.8%) |
| Pansexual | 4 (5.8%) | 1 (3.2%) |
| Multiple | 20 (29.0%) | 5 (16.1%) |
| Asexual | 6 (8.7%) | 3 (9.7%) |
| *Religious affiliation* | | |
| No religious affiliation | 41 (59.4%) | 22 (73.3%) |
| Liberal Christian | 5 (7.2%) | 3 (10.0%) |
| Liberal Jewish | 5 (7.2%) | 0 (0%) |
| Conservative Christian | 1 (1.4%) | 2 (6.7%) |
| Liberal Muslim | 1 (1.4%) | 0 (0%) |
| Conservative Jewish | 0 (0%) | 0 (0%) |
| Conservative Muslim | 0 (0%) | 0 (0%) |
| Other | 16 (23.2%) | 3 (10.0%) |
| *Legal marriage for gay and lesbian couples* | | |
| Favor | 65 (97.0%) | 26 (83.9%) |
| Oppose | 1 (1.5%) | 5 (16.1%) |
| Don't know | 1 (1.5%) | 0 (0%) |
| *Source where participant first heard about study* | | |
| Detransition blogs | 26 (37.7%) | 15 (48.4%) |
| Other social media | 37 (53.6%) | 11 (35.5%) |
| A person they know | 3 (4.3%) | 3 (9.7%) |
| Other | 3 (4.3%) | 2 (6.5%) |

*May select more than one answer

[a]Natal females were more likely to express an exclusively homosexual sexual orientation prior to transition ($\chi^2 = 5.15$. The $p$-value is .023). Natal males were more likely to express an exclusively heterosexual sexual

Table 1 (continued)

orientation prior to transition ($\chi^2 = 13.05$. The $p$ value is $< .001$). Natal sex differences were not significant for individuals expressing pre-transition sexual orientations of bisexual, pansexual, multiple, and asexual. For bisexual sexual orientation, $\chi^2 = 0.20$. For pansexual sexual orientation, $\chi^2 = 0.29$. For multiple sexual orientations reported, $\chi^2 = 1.88$. For asexual sexual orientation, $\chi^2 = 0.02$

selected more than one response where responses indicated more than one pattern of sexual attraction (e.g., lesbian female and heterosexual female). Other questions about baseline characteristics included questions about diagnosed psychiatric disorders and neurodevelopmental disabilities, trauma, and non-suicidal self-injury (NSSI) before the onset of gender dysphoria.

### Gender Dysphoria Onset and Typologies

Participants were asked how old they were when they first experienced gender dysphoria and whether this was during childhood, at the onset of puberty, during puberty, or later. Respondents were categorized as having early-onset gender dysphoria if they indicated that their gender dysphoria began "during childhood" and late-onset gender dysphoria if their gender dysphoria began "at the onset of puberty" or later. To evaluate typologies, participants were characterized by Blanchard's (1985, 1989) typology as homosexual (if the sexual orientations listed prior to transition were exclusively homosexual) or non-homosexual which includes heterosexual, asexual, bisexual, pansexual, and multiple responses.

### Transition

Participants were asked for their age and the year that they first sought care to transition, sources that encouraged them to believe that transition would be helpful to them, and whether they felt pressured to transition. The friendship group dynamics that were identified in previous work were assessed by asking respondents whether their friendship group mocked people who were not transgender, whether people in their pre-existing friend group transitioned before the participant decided to transition, and how participant popularity changed after announcing that they would transition (Littman, 2018). Questions were asked about participant experiences with clinicians, the social, medical, and surgical steps they took to transition, and the duration of time spent taking each medication.

### Detransition

Participants were asked for their age and the year that they decided to detransition, how long they were transitioned before deciding to detransition, their reasons for wanting to detransition, what sources encouraged them to believe that detransition would be helpful to them, and whether they felt pressured to detransition. Participants were also asked which social, medical, and surgical steps they took to detransition and whether they contacted the doctor or clinic that they used for their transition to tell them that they detransitioned.

### Transition and Detransition Narratives

In this article, "narratives" denote participant interpretations of their experiences and rationales surrounding their decisions to transition and detransition. To associate each participant survey with a set of relevant narratives, the data were reviewed with horizontal (beginning to end) passes and vertical passes for selected questions (these questions are listed in the supplemental materials). Surveys were coded as belonging to zero or more of the following narrative categories: discrimination, nonbinary, retransition, trauma and mental health, internalized homophobia, social influence, and misogyny. Each narrative and the responses that were associated with them are detailed below. Example quotes were selected with care taken to avoid quoting a participant more than once per narrative. Narratives are ordered and reported with the more commonly accepted narratives first and the newer narratives next.

The *discrimination* narrative was defined as when someone detransitioned due to experiencing discrimination or external social pressures. The *nonbinary* narrative consisted of answering that their current identification was "nonbinary/genderqueer" or providing open-text responses that described aspects of discovering or maintaining a nonbinary identification. Although there were no questions in the survey specifically asking about retransition, the *retransition* narrative was identified if participants expressed that they had retransitioned or resumed transition in any of the open-text responses in the survey. The *gender dysphoria was caused by trauma or a mental health condition* narrative was identified by selection for the answers, "what I thought were feelings of being transgender were actually the result of trauma," "what I thought were feelings of being transgender were actually the result of a mental health condition," "I discovered that my gender dysphoria was caused by something specific (ex. trauma, abuse, mental health condition)" or open-text responses consistent with these reasons. The *internalized homophobia/difficulty accepting oneself as a lesbian female, gay male, or bisexual person* narrative consisted of descriptions that the respondents' discomfort and distress about being lesbian, gay, or bisexual was related to their gender dysphoria, transition, or detransition, or that they assumed they were transgender because they did not yet understand themselves to be lesbian, gay or bisexual. The *social pressure to transition* narrative was identified with an affirmative

answer to whether they felt pressured to transition with an open-text response indicating that the pressure came from a person or group of people. The *misogyny* narrative was identified for natal female respondents with open-text responses using the word "misogyny" or expressing a hatred of femaleness.

### Gender Identification at Start of Transition and at Survey Completion

Participants were asked how they identified their gender when they started their transition and at the time of survey completion. They were given options of female, male, nonbinary/genderqueer, trans man/FTM, trans woman/MTF, none of the above, and other. Responses were coded by natal sex and categorized as transgender, birth sex, nonbinary, and other. Answers that were combinations of the above categories were reported as combinations such as "birth sex and nonbinary."

### Self-Appraisal of Transition and Detransition

One question asked if participants believe they were helped and another if they were harmed by their transition with options of "very much," "a little," or "not at all." These results were categorized into exclusively helped, exclusively harmed, and both helped and harmed. Participants were asked which of the following reflected their feelings about their transition: "I am glad that I transitioned," "I wish I had never transitioned," "Transitioning distracted me from what I should have been doing," "Transition was a necessary part of my journey." Participants were asked to rate their regret about their transition ("no regrets," "mild regrets," "strong regrets," and "very strong regrets") and were asked to indicate their satisfaction with their decisions to transition and detransition ("extremely satisfied," "very satisfied," "somewhat satisfied," "somewhat dissatisfied," "very dissatisfied," and "extremely dissatisfied"). Satisfaction options were collapsed into "satisfied" and "dissatisfied." In addition, participants were asked if they knew then what they know now, would they have chosen to transition.

## Data Analysis

After data were cleaned, statistical analyses were performed using google sheets. Results are presented as frequencies, percentages, medians, means and standard deviations. $t$ tests and chi-square tests were performed for selected variables and were considered significant for $p < .05$. Qualitative data were obtained from the open-text answers to questions that allowed participants to provide additional information. Selected open-text responses were categorized, tallied, and reported numerically. Salient respondent quotes and summaries from the qualitative data were selected to illustrate the quantitative results and to provide relevant examples.

## Results

### Before Transition

Mental health diagnoses and traumatic experiences before the onset of gender dysphoria. Table 2 shows data about psychiatric disorders, neurodevelopmental disabilities, NSSI, and trauma that were reported as occurring prior to the onset of gender dysphoria. Because these conditions and events occurred before participants began to feel gender dysphoric, they cannot be considered to be secondary to gender incongruence or transphobia.

Gender dysphoria onset and typology. Most participants (82.0%) were living with one or both parents when they first experienced gender dysphoria at a mean age of 11.2 years (SD = 5.6). The mean age of gender dysphoria onset was not statistically different between natal females ($M = 11.3$; SD = 5.4) and natal males ($M = 11.0$; SD = 5.9), $t(96) = 0.25$. By Blanchard typologies, 26.1% of natal females were exclusively homosexual and 73.9% non-homosexual while 6.5% of natal males were exclusively homosexual and 93.5% non-homosexual (Blanchard, 1985, 1989). Slightly more than half of the respondents (56.0%) experienced early-onset gender dysphoria and slightly less than half (44.0%) experienced late-onset gender dysphoria. Although late-onset gender dysphoria in natal females was largely absent from the scientific literature prior to 2012 (Steensma et al., 2013; Zucker & Bradley, 1995; Zucker et al., 2012a), 55.1% of the natal female participants reported that their gender dysphoria began with puberty or later. Because the information about the timing of gender dysphoria onset was obtained from participants reporting on their own experiences, it can be assumed that these cases were indeed late-onset rather than early-onset gender dysphoria that was concealed from parents and other people.

Transition reasons. Table 3 shows data about the reasons that individuals wanted to transition and the most frequently endorsed were: wanting to be perceived as the target gender (77.0%); believing that transitioning was their only option to feel better (71.0%); the sensation that their body felt wrong the way it was (71.0%), and not wanting to be associated with their natal sex (70.0%). Most participants believed that transitioning would eliminate (65.0%) or decrease (63.0%) their gender dysphoria and that with transitioning they would become their true selves (64.0%).

Sources of transition encouragement and friend group dynamics. Participants identified sources that encouraged them to believe transitioning would help them. Social media and online communities were the most frequently reported, including YouTube transition videos (48.0%), blogs (46.0%), Tumblr (45.0%), and online communities (43.0%) (see supplemental materials). Also common were people who the respondents knew offline such as therapists (37.0%); someone (28.0%) or a group of friends (27.0%) that they knew in-person. A subset of

**Table 2** Mental health diagnoses and traumatic experiences prior to the onset of gender dysphoria

| | Natal female N (%) N=69 | Natal male N (%) N=31 |
|---|---|---|
| *Diagnosed with a mental illness or neurodevelopmental disability**[a] | | |
| Depression | 27 (39.1%) | 5 (16.1%) |
| Anxiety | 22 (31.9%) | 5 (16.1%) |
| Attention deficit hyperactivity disorder (ADHD) | 10 (14.5%) | 2 (6.5%) |
| Post-traumatic stress disorder (PTSD) | 10 (14.5%) | 1 (3.2%) |
| Eating disorders | 10 (14.5%) | 0 (0%) |
| Autism spectrum disorders | 9 (13.0%) | 1 (3.2%) |
| Bipolar disorder | 9 (13.0%) | 0 (0%) |
| Obsessive compulsive disorder | 6 (8.7%) | 3 (9.7%) |
| Borderline personality disorder | 5 (7.2%) | 0 (0%) |
| Schizophrenia or other psychotic disorders | 1 (1.4%) | 0 (0%) |
| None of the above | 28 (40.6%) | 17 (54.8%) |
| Other | 7 (10.1%) | 2 (6.5%) |
| *Non-suicidal self-injury (NSSI)*[b] | | |
| Engaged in NSSI before the onset of gender dysphoria | 19 (27.5%) | 5 (16.1%) |
| *Trauma*[c] | | |
| Experienced a trauma less than one year before the start of gender dysphoria | 33 (47.8%) | 4 (12.9%) |

*May select more than one answer

[a]Natal sex difference for one or more pre-existing diagnoses (100-none of the above) was not significant [$\chi^2(1, 100) = 1.76$]

[b]Natal sex differences for NSSI before the onset of gender dysphoria was not significant ($\chi^2 = 1.52$)

[c]Experiencing a trauma less than one year before the start of gender dysphoria was statistically different [$\chi^2(1, 100) = 11.19, p < .001$] with natal females > natal males

**Table 3** Transition reasons

| | Natal female N (%) N=69 | Natal male N (%) N=31 |
|---|---|---|
| *Reasons for transition** | | |
| I wanted others to perceive me as the target gender | 53 (76.8%) | 24 (77.4%) |
| I thought transitioning was my only option to feel better | 50 (72.5%) | 21 (67.7%) |
| My body felt wrong to me the way it was | 50 (72.5%) | 21 (67.7%) |
| I didn't want to be associated with my natal sex/natal gender | 51 (73.9%) | 19 (61.3%) |
| It made me uncomfortable to be perceived romantically/sexually as a member of my natal sex/natal gender | 49 (71.0%) | 18 (58.1%) |
| I thought transitioning would eliminate my gender dysphoria | 43 (62.3%) | 22 (71.0%) |
| I felt I would become my true self | 42 (60.9%) | 22 (71.0%) |
| I identified with the target gender | 40 (58.0%) | 24 (77.4%) |
| I thought transitioning would lessen my gender dysphoria | 45 (65.2%) | 18 (58.1%) |
| I felt I would fit in better with the target gender | 36 (56.5%) | 20 (64.5%) |
| I felt I would be more socially acceptable as a member of the target gender | 38 (55.1%) | 11 (35.5%) |
| I felt I would be treated better if I was perceived as the target gender | 35 (50.7%) | 14 (45.2%) |
| I saw myself as a member of the target gender | 31 (44.9%) | 18 (58.1%) |
| I thought transitioning would reduce gender-related harassment or trauma I was experiencing | 35 (50.7%) | 5 (16.1%) |
| I had erotic reasons for wanting to transition | 9 (13.0) | 12 (38.7%) |
| Other | 9 (13.0%) | 3 (9.7%) |

*May select more than one answer

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participants experienced the friendship group dynamics identified in previous work, including belonging to a friendship group that mocked people who were not transgender (22.2%), having one or more friend from the pre-existing friend group transition before the participant decided to transition (36.4%), and experiencing an increase in popularity after announcing plans to transition (19.6%) (Littman, 2018). Most did not have this experience (68.7%, 61.6%, and 62.9%, respectively).

Pressure to transition. More than a third of the participants (37.4%) felt pressured to transition. Natal sex differences in feeling pressured to transition were significant by chi-square test with natal females > natal males $\chi^2(1, 99) = 4.22$, $p = .04$. Twenty-eight participants provided open-text responses of which 24 described sources of pressure (17 described social pressures and 7 described sources that were not associated with other people). Clinicians, partners, friends, and society were named as sources that applied pressure to transition, as seen in the following quotes: "My gender therapist acted like it [transition] was a panacea for everything;" "[My] [d]octor pushed drugs and surgery at every visit;" "I was dating a trans woman and she framed our relationship in a way that was contingent on my being trans;" "A couple of later trans friends kept insisting that I needed to stop delaying things;" "[My] best friend told me repeatedly that it [transition] was best for me;" "The forums and communities and internet friends;" "By the whole of society telling me I was wrong as a lesbian;" and "Everyone says that if you feel like a different gender…then you just are that gender and you should transition." Participants also felt pressure to transition that did not involve other people as illustrated by the following: "I felt pressured by my inability to function with dysphoria" and "Not by people. By my life circumstances."

Experiences with clinicians. When participants first sought care for their gender dysphoria or desire to transition, more than half of the participants (53.0%) saw a psychiatrist or psychologist; about a third saw a primary care doctor (34.0%) or a counselor (including licensed clinician social worker, licensed professional counselor, or marriage and family therapist) (32.0%); and 17.0% saw an endocrinologist. For transition, 45.0% of participants went to a gender clinic (44.4% of those attending a gender clinic specified that the gender clinic used the informed consent model of care); 28.0% went to a private doctor's office; 26.0% went to a group practice; and 13.0% went to a mental health clinic (see supplemental materials).

The majority (56.7%) of participants felt that the evaluation they received by a doctor or mental health professional prior to transition was not adequate and 65.3% reported that their clinicians did not evaluate whether their desire to transition was secondary to trauma or a mental health condition. Although 27.0% believed that the counseling and information they received prior to transition was accurate about benefits and risks, nearly half reported that the counseling was overly positive about the benefits of transition (46.0%) and not negative enough about the risks (26.0%). In contrast, only a small minority found the counseling not positive enough about benefits (5.0%) or too negative about risks (6.0%) suggesting a bias toward encouraging transition.

## Transition

Participants were on average 21.9 years old (SD = 6.1) when they sought medical care to transition with natal females seeking care at younger ages ($M = 20.0$; SD = 4.2) than natal males ($M = 26.0$; SD = 7.5), $t(97) = -5.07$, $p < .001$. Given that the majority of natal males were categorized as Blanchard typology non-homosexual, the finding that natal males sought medical care to transition at older ages than natal females is concordant with previous research (Blanchard et al., 1987). The average year for seeking care was more recent for natal females ($M = 2011$; SD = 3.8) than natal males ($M = 2007$; SD = 6.9), $t(96) = 2.78$, $p = .007$, and thus, there may have been differences in the care they received due to differences in the culture surrounding transition and the prevailing medical approaches to gender dysphoria for the time.

At the start of transitioning, nearly all (98.0%) of the participants identified as either transgender (80.0%), nonbinary (15.0%), or both transgender and nonbinary (3.0%). Participants identified which social, medical, and surgical steps they had taken to transition. Table 4 shows these steps, separated by natal sex where appropriate. Most respondents adopted new pronouns (91.0%) and names (88.0%), and the vast majority (97.1%) of natal females wore a binder. Most participants took cross-sex hormones (96.0%) and most natal males took anti-androgens (87.1%). The most frequent transition surgery was breast or chest surgery for natal females (33.3%). Genital surgery was less common (1.4% of natal females and 16.1% of natal males). Natal females took testosterone for a mean duration of 2.0 years (SD = 1.6). Natal males took estrogen for a mean duration of 5.1 years (SD = 5.9) and anti-androgens for 2.8 years (SD = 2.6). The minority of patients who took puberty blockers took them for a mean duration of less than a year ($M = 0.9$ years; SD = 0.6).

## Detransition

Before deciding to detransition, participants remained transitioned for a mean duration of 3.9 years (SD = 4.1) with natal females remaining transitioned for a shorter period of time ($M = 3.2$ years; SD = 2.7) than natal males ($M = 5.4$ years; SD = 6.1), $t(96) = -2.40$, $p = .018$. When participants decided to detransition they were a mean age of 26.4 years old (SD = 7.4) though natal females were significantly younger ($M = 23.6$; SD = 4.5) than natal males ($M = 32.7$; SD = 8.8), $t(97) = -6.75$, $p < .001$. The mean calendar year when participants decided to detransition was 2014 ($M = 2014$; SD = 3.3), but the difference

Table 4 Steps taken for social, medical, and surgical transition

| | N (%) |
|---|---|
| *Social transition** | |
| Pronouns | 91 (91.0%) |
| Different name | 88 (88.0%) |
| Clothes/hair/makeup | 90 (90.0%) |
| Legal name change | 49 (49.0%) |
| Gender/sex changed on government documents | 36 (36.0%) |
| Voice training | 20 (20.0%) |
| Natal female | |
| Wore a binder | 67 (97.1%) |
| *Medical transition** | |
| Cross-sex hormones | 96 (96.0%) |
| Puberty blockers | 7 (7.0%) |
| Natal male | |
| Anti-androgens | 27 (87.1%) |
| *Surgical transition** | |
| Face/neck surgery | 5 (5.0%) |
| Natal female | |
| Breast/chest surgery | 23 (33.3%) |
| Genital surgery (to create a penis) | 1 (1.4%) |
| Natal male | |
| Breast implants | 5 (16.1%) |
| Genital surgery (to create a vagina) | 5 (16.1%) |

*May select more than one answer

between natal females and natal males was not significant ($M=2014$, $SD=3.3$; $M=2014$, $SD=3.5$), $t(95)=0.52$.

Respondents detransitioned for a variety of reasons and most (87.0%) selected more than one reason. The most frequently endorsed reason for detransitioning was that the respondent's personal definition of male and female changed and they became comfortable identifying with their natal sex (60.0%) (see Table 5). Other commonly endorsed reasons were concerns about potential medical complications (49.0%); transition did not improve their mental health (42.0%); dissatisfaction with the physical results of transition (40.0%); and discovering that something specific like trauma or a mental health condition caused their gender dysphoria (38.0%). External pressures to detransition such as experiencing discrimination (23.0%) or worrying about paying for treatments (17.0%) were less common.

Encouragement and pressure to detransition. Participants were asked to select sources that encouraged them to believe that detransitioning would help them. These included blogs (37.0%), Tumblr (35.0%), and YouTube detransition videos (23.0%) (see supplemental materials). At some point in their process, 23.2% felt pressured to detransition. There was no significant difference between natal females and natal males for feeling pressured to detransition, $\chi^2(1, 99)=1.11$. Of the 21 open-text responses provided, 14 respondents expressed social pressure to detransition; three expressed internal pressure to detransition and four provided responses that were neither

Table 5 Reasons for detransitioning

| | Natal female N (%) N=69 | Natal male N (%) N=31 |
|---|---|---|
| *Reasons for detransitioning** | | |
| My personal definition of female or male changed and I became more comfortable identifying as my natal sex | 45 (65.2%) | 15 (48.4%) |
| I was concerned about potential medical complications from transitioning | 40 (58.0%) | 9 (29.0%) |
| My mental health did not improve while transitioning | 31 (44.9%) | 11 (35.5%) |
| I was dissatisfied by the physical results of the transition/felt the change was too much | 35 (50.7%) | 5 (16.1%) |
| I discovered that my gender dysphoria was caused by something specific (ex, trauma, abuse, mental health condition) | 28 (40.6%) | 10 (32.3%) |
| My mental health was worse while transitioning | 27 (39.1%) | 9 (29.0%) |
| I was dissatisfied by the physical results of the transition/felt the change was not enough | 22 (31.9%) | 11 (35.5%) |
| I found more effective ways to help my gender dysphoria | 25 (36.2%) | 7 (22.6%) |
| My physical health was worse while transitioning | 21 (30.4%) | 11 (35.5%) |
| I felt discriminated against | 12 (17.4%) | 11 (35.5%) |
| I had medical complications from transitioning | 12 (17.4%) | 7 (22.6%) |
| Financial concerns about paying for transition care | 11 (15.9%) | 6 (19.4%) |
| My gender dysphoria resolved | 10 (14.5%) | 5 (16.1%) |
| My physical health did not improve while transitioning | 9 (13.0%) | 2 (6.5%) |
| I resolved the specific issue that was the cause of my gender dysphoria | 6 (8.7%) | 4 (12.9%) |
| I realized that my desire to transition was erotically motivated | 1 (1.4%) | 5(16.1%) |
| Other | 19 (27.5%) | 6 (19.4%) |

*May select more than one answer

or unclear. Regarding social pressure to detransition, seven participants expressed that the pressure came from partners, parents, or other family members as shown in the following example quotes: "I was threatened that if I did not immediately detransition I would NEVER see my […] children again," "My father very much wanted me to desist," and "Parents constantly encouraging me to detransition." Five participants expressed societal pressure to detransition as expressed in the following quotes: "I did not pass, I was mocked in public, I could not get a job. It was not ok to be trans" and "Well, I mean basically the entire world was against me transitioning, so yeah." One participant felt pressured by doctors and another one from a blog.

Detransition steps. Table 6 shows data about the social, medical, and surgical steps participants took to detransition. Nearly all participants medically detransitioned by ceasing cross-sex hormones (95.0%). Social detransition steps were also common and included returning to the use of previously used pronouns (63.0%) and birth names (33.0%) and changing one's clothes and hair presentations (48.0%). Surgical detransition steps were less common (9.0%).

Finding better ways of coping with gender dysphoria. Participants were asked to select responses that that they considered to have been better ways for them to cope with their gender dysphoria. Responses included community (44.0%), mindfulness/meditation (41.0%), exercise (39.0%), therapy (24.0%), trauma work (24.0%), medication to treat a mental health condition (18.0%), and yoga (14.0%).

**Table 6** Social, medical, and surgical detransition steps

| | N (%) |
|---|---|
| *Social detransition** | |
| Previous pronouns | 63 (63.0%) |
| Clothes/hair/makeup | 48 (48.0%) |
| Birth name | 33 (33.0%) |
| New name (not birth name) | 24 (24.0%) |
| None of the above | 2 (2.0%) |
| *Medical detransition** | |
| Stopped cross-sex hormones | 95 (95.0%) |
| Stopped puberty blockers | 4 (4.0%) |
| Started hormones consistent with natal sex | 14 (14.0%) |
| Natal male | |
| Stopped anti-androgens | 17 (54.8%) |
| *Surgical detransition** | |
| Surgery to reverse changes from transition | 9 (9.0%) |

*May select more than one answer

## Transition and Detransition Narratives

Several transition and detransition narratives emerged from the data. A sizable minority of participants (41.0%) expressed more than one narrative in their responses.

The *discrimination and external pressures to detransition* narrative was described by 29.0% of participants. Examples include: "I had to detransition in order to get a job"; "I was afraid of being homeless and unable to support myself"; "I felt much happier with myself but I couldn't go anywhere without being afraid. I passed okay but not perfectly. I was stared down and sneered at in the women's clothes section, I wouldn't dare use a public toilet because I'd find either violent men or women who wished an encounter with a violent man on me."

A *nonbinary* narrative was expressed by 16.0% of participants. Some described that they discovered their nonbinary gender identity during their transition, as in the following quotes: "I still was uncomfortable with my body and figured I should stop and make sure I really wanted to keep going. I didn't and I decided I must be nonbinary, not FTM"; "Transitioning didn't do what I thought I wanted it to. I had transitioned to the wrong gender. I still felt wrong. Then, I realized I was not male, but genderqueer. I detransitioned to suit my true identity." And others described a consistent nonbinary identification, as in the following quote, "I identified the same way that I did before. I had gotten what I wanted out of HRT and was ready to stop taking it." (Cross-sex hormones are sometimes referred to as "hormone replacement therapy" and abbreviated as HRT).

Three participants (3.0%) expressed the *retransition* narrative in open-text answers indicating that they had retransitioned, including the following quotes: "I am now transitioning for a second time"; I retransitioned after 5 years of detransitioning"; and "Anyway, I retransitioned over 10 years after detransitioning."

Most participants (58.0%) expressed the *gender dysphoria was caused by trauma or a mental health condition* narrative which included endorsing the response options indicating that their gender dysphoria was caused by something specific, such as a trauma or a mental health condition. More than half of the participants (51.2%) responded that they believe that the process of transitioning delayed or prevented them from dealing with or being treated for trauma or a mental health condition. The following are example quotes that were in response to why participants chose to detransition: "I slowly began addressing the mental health conditions and traumatic experiences that caused such a severe disconnect between myself and my body…"; "I was starting to become critical of transition because I felt that many people were doing it out of self-hatred and started to realize that applied to me as well"; "I was deeply uncomfortable with my secondary sex characteristics, which I now understand was a result of childhood trauma and associating my secondary sex characteristics with those events."

Despite the absence of any questions about this topic in the survey, nearly a quarter (23.0%) of the participants expressed the *internalized homophobia and difficulty accepting oneself as lesbian, gay, or bisexual* narrative by spontaneously describing that these experiences were instrumental to their gender dysphoria, their desire to transition, and their detransition. All

of the participants in this category indicated that they were either same-sex attracted exclusively or were same-sex attracted in combination with opposite-sex attraction (such as bisexual, pansexual, etc.). The following responses were written in as "other" for the question about why participants transitioned: "Transitioning to male would mean my attraction to girls would be 'normal'"; "being a 'gay trans man' (female dating other females) felt better than being a lesbian, less shameful"; "I felt being the opposite gender would make my repressed same-sex attraction less scary"; "I didn't want to be a gay man." Some participants described that it took time for them to gain an understanding of themselves as lesbian, gay, or bisexual as seen in the following: "At the time I was trying to figure out my identity and felt very male and thought I was transgender. I later discovered that I was a lesbian…"; and "Well, after deep discovery, I realized I was a gay man and realized that a sexual trauma after puberty might [have] confused my thought. I wanted to live as a gay man again." Several natal female respondents expressed that seeing other butch lesbians would have been helpful to them as shown by the following: "What would have helped me is being able to access women's community, specifically lesbian community. I needed access to diverse female role-models and mentors, especially other butch women."

The *social influence* narrative was identified where participants added information to the question about if they had felt pressured to transition and the response described pressure from a person or people. One-fifth (20.0%) of participants expressed that they felt pressured by a person or people to transition. Example quotes for social influence were described in a previous section.

Of the natal females, 7.2% expressed the *misogyny* narrative. Example quotes include: "…I realized how much of it [dysphoria] may have been caused by internalized misogyny and homophobia"; "Finally realizing there's nothing wrong or disgusting or weak about being female"; and "My transition was a desperate attempt to distance myself from womanhood and femaleness due to internalized lesbophobia and misogyny combined with a history of sexual trauma."

## After Detransition

Disposition. At the time of survey completion, most participants had returned to identifying solely as their birth sex (61.0%) with an additional 10.0% identifying as their birth sex plus another identification. Fourteen percent of the participants identified solely as nonbinary with an additional 11.0% identifying as nonbinary plus a second identification. Eight percent of the participants identified solely as transgender with an additional 5.0% identifying as transgender plus another identification. Four percent of the responses did not fit into the above categories and were coded as "other." Figure 1 illustrates the distribution of participants' current gender identification (post-detransition). Only 24.0% of participants had informed

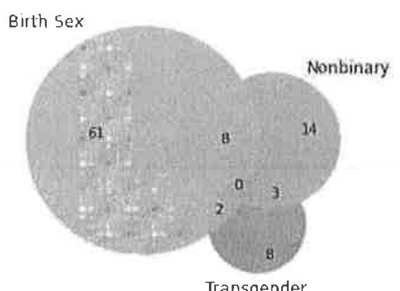


**Fig. 1** Distribution of participants' current gender identification (after detransition) (n = 100). *Notes*: The sum of the numbers appearing in the "Birth Sex" circle indicates the number of participants who returned to identifying with their birth sex (71)—either as birth sex alone (61) or birth sex in addition to a second identification (10) represented in the overlap between two circles. For example, eight participants identify as their birth sex and as nonbinary. The sum of the numbers appearing in the "Nonbinary" circle indicates the number of participants who identify as nonbinary (25)—either as nonbinary alone (14) or nonbinary in addition to a second identification (11). The sum of the numbers appearing in the "Transgender" circle indicates the number of participants who identify as transgender (13)—either as transgender alone (8) or transgender in addition to a second identification (5). Four participants had responses that did not fit the categories above and were coded as "other"

the doctor or clinic that facilitated their transitions that they had detransitioned.

Self-appraisal of past transgender identification. Table 7 presents the data for responses endorsed by participants to reflect how they feel currently about having identified as transgender in the past. The statements most frequently selected included: "I thought gender dysphoria was the best explanation for what I was feeling" (57.0%), "My gender dysphoria was similar to the gender dysphoria of those who remain transitioned" (42.0%), "What I thought were feelings of being transgender actually were the result of trauma" (36.0%), "What I thought were feelings of being transgender actually were the result of a mental health condition" (36.0%).

Self-appraisal of transition and detransition. When asked to select which statement best reflects their feelings about their transition, nearly a third (30.0%) indicated that they wish they had never transitioned while 11.0% indicated they were glad they transitioned. Some (34.0%) selected the statement that transition "was a necessary part of [their] journey" but others (21.0%) indicated that the process of transitioning distracted them from what they should have been doing. Responses about whether transition helped or harmed them were also complicated. While 50.5% selected answers consistent with being both helped and harmed, 32.3% indicated that they were only harmed and 17.2% indicated that they were only helped. The majority of respondents were dissatisfied with their decision to transition (69.7%) and satisfied with their decision to detransition (84.7%). At least some amount of transition regret was

**Table 7** Self-appraisal of past transgender identification

| | Natal female N (%) N=69 | Natal male N (%) N=31 |
|---|---|---|
| *Self-appraisal about identifying as transgender in the past** | | |
| I thought gender dysphoria was the best explanation for what I was feeling | 39 (56.5%) | 18 (58.1%) |
| My gender dysphoria was similar to the gender dysphoria of those who remain transitioned | 32 (46.4%) | 10 (32.3%) |
| What I thought were feelings of being transgender actually were the result of trauma | 31 (44.9%) | 5 (16.1%) |
| What I thought were feelings of being transgender actually were the result of a mental health condition | 28 (40.6%) | 8 (25.8%) |
| Someone else told me that the feelings I was having meant that I was transgender and I believed them | 25 (36.2%) | 10 (32.3%) |
| I still identify as transgender | 20 (29.0%) | 10 (32.3%) |
| I believed I was transgender then, but I was mistaken | 16 (23.2%) | 6 (19.4%) |
| I was transgender then but I am not transgender now | 15 (21.7%) | 7 (22.6%) |
| I formerly identified as transgender and now identify as genderqueer/nonbinary | 12 (17.4%) | 5 (16.1) |
| My gender dysphoria was different from the gender dysphoria of those who remain transitioned | 11 (15.9%) | 4 (12.9%) |
| I was never transgender | 8 (11.6%) | 3 (9.7%) |
| I thought I had gender dysphoria but I was mistaken | 4 (5.8%) | 4 (12.9%) |
| I never had gender dysphoria | 1 (1.4) | 2 (6.5%) |
| N/A as I did not identify as transgender in the past | 0 (0%) | 1 (3.2%) |
| Other | 18 (26.1%) | 5 (16.1%) |

*May select more than one answer

common (79.8%) and nearly half (49.5%) reported strong or very strong regret. Most respondents (64.6%) indicated that if they knew then what they know now, they would not have chosen to transition.

## Discussion

This study was designed to explore the experiences of individuals who obtained medical and surgical treatment for gender dysphoria and then detransitioned by discontinuing the medications or having surgery to reverse the changes from transition. The findings of this study, however, should not be assumed to be representative of all individuals who detransition. Although this study further documents that detransitioners exist, the prevalence of detransition as an outcome of transition is unknown. Only a small percentage of detransitioners (24.0%) informed the clinicians and clinics that facilitated their transitions that they had detransitioned. Therefore, clinic rates of detransition are likely to be underestimated and gender transition specialists may be unaware of how many of their own patients have detransitioned, particularly for patients who are no longer under their care.

This research demonstrates that the experiences of individuals who detransition are varied and the reasons for detransition are complex. Nearly all participants identified as transgender or nonbinary at the start of their transition and most sought transition because they did not want to be associated with their natal sex, their bodies felt wrong the way they were, and they believed that transition was the only option to relieve their distress. Some were helped by transition and only detransitioned because they were pressured to do so by people in their lives, society, or because they had medical complications. Some were harmed by transition and detransitioned because they concluded that their gender dysphoria was caused by trauma, a mental health condition, internalized homophobia, or misogyny—conditions that are not likely to be resolved with transition. These findings highlight the complexity of gender dysphoria and suggest that, in some cases, failure to explore co-morbidities and the context in which the gender dysphoria emerged can lead to misdiagnosis, missed diagnoses, and inappropriate gender transition. Some individuals detransitioned because their gender dysphoria resolved, because they found better ways to address their symptoms, or because their personal definitions of male and female changed and they became comfortable identifying as their natal sex.

The study sample was predominantly young natal females, many of whom experienced late-onset gender dysphoria which mirrors the recent, striking changes in the demographics of gender dysphoric youth seeking care as well as the youth described by their parents in Littman (2018) (see also Aitken et al., 2015; de Graaf et al., 2018; Zucker, 2019). Concerns have been raised that this new cohort of gender dysphoric individuals is unlike previous cohorts. Professionals have started to call for caution before treating this cohort with interventions with permanent effects because the etiologies, desistance and persistence rates,

expected duration of symptoms, and whether this new population is helped or harmed by gender transition is still unknown (D'Angelo et al., 2021; Kaltiala-Heino et al., 2018). The natal females and natal males in this sample differed on several dimensions, including that natal females were younger than natal males when they sought transition, when they decided to detransition, and at the time of survey completion. Natal females were more likely than natal males to have experienced a trauma less than one year before the onset of their gender dysphoria and were more likely to have felt pressured to transition. Compared to natal males, natal females remained transitioned for a shorter duration of time before deciding to detransition. Additionally, natal females transitioned more recently than natal males, so their experiences may vary due to changing trends in the clinical management of gender dysphoria and the cultural settings in which they became gender dysphoric.

The study findings covered a wide range of detransition experiences that are consistent with the diversity of experiences described in previously published clinical case reports and case series. Overlap of findings include: transition regret; absence of transition regret; re-identification with birth sex; continued identification as transgender; improvement or worsening of well-being with transition; retransitioning; detransitioning due to external social pressures; nonbinary identification; and recognizing and accepting oneself as homosexual or bisexual (D'Angelo, 2018; Djordjevic et al., 2016; Levine, 2018; Pazos Guerra et al., 2020; Turban & Keuroghlian, 2018; Turban et al., 2021; Vandenbussche, 2021). The population in this study is similar to the population in Vandenbussche in that both were predominantly natal females in their mid-20s. Because the current study recruited in 2016–2017 and Vandenbussche recruited in 2019, the similar mean age of participants may reflect the age of individuals who can be reached in online detransitioner communities. Several findings in this study were consistent with Vandenbussche's findings, including similar reasons for detransition (realizing that their gender dysphoria was related to other issues, finding alternatives to address gender dysphoria, gender dysphoria resolved, etc.). Although these two studies were recruited in different years, had different eligibility criteria, and included participants from several countries, it is possible that there may be some overlap of study populations.

The current study findings provide additional insight into the complex relationships between internalized homophobia, gender dysphoria, and desire to transition. Contrary to arguments against the potential role of homophobia in gender transitions (Ashley, 2020), participants reported that their own gender dysphoria and desire to transition stemmed from the discomfort they felt about being same-sex attracted, their desire to not be gay, and the difficulties that they had accepting themselves as lesbian, gay or bisexual. For these individuals, exploring their distress and discomfort around sexual orientation issues may have been more helpful to them than medical and surgical transition or at least an important part of exploration before making the decision to transition. This research adds to the existing evidence that gender dysphoria can be temporary (Ristori & Steensma, 2016; Singh et al., 2021; Zucker, 2018). It has been established that the most likely outcome for prepubertal youth with gender dysphoria is to develop into lesbian, gay, bisexual (LGB) (non-transgender) adults (Ristori & Steensma, 2016; Singh et al., 2021; Wallien & Cohen-Kettenis, 2008; Zucker, 2018). And, temporary gender dysphoria may be a common part of LGB identity development (Korte et al., 2008; Patterson, 2018). Therefore, intervening too soon to medicalize gender dysphoric youth risks iatrogenically derailing the development of youth who would otherwise grow up to be LGB non-transgender adults. Participants who detransitioned because they became comfortable identifying as their natal sex and because their gender dysphoria resolved further support that gender dysphoria is not always permanent.

The data in this study strengthen, with first-hand accounts, the rapid-onset gender dysphoria (ROGD) hypotheses which, briefly stated, are that psychosocial factors (such as trauma, mental health conditions, maladaptive coping mechanisms, internalized homophobia, and social influence) can cause or contribute to the development of gender dysphoria in some individuals (Littman, 2018). Littman also postulated that certain beliefs could be spread by peer contagion, including the belief that a wide range of symptoms should be interpreted as gender dysphoria (and proof of being transgender) and the belief that transition is the only solution to relieve distress. The current study supports the potential role of psychosocial factors in the development of gender dysphoria and further suggests, by participant responses that transitioning prevented or delayed them from addressing their underlying conditions, that maladaptive coping mechanisms may be relevant for some individuals. The potential role of social influence is demonstrated as well. First, when respondents were asked to describe how they currently feel about having identified as transgender in the past, more than a third endorsed the option, "Someone told me that the feelings I was having meant that I was transgender, and I believed them." Second, a subset of participants experienced the unique friendship group dynamics reported in Littman where peer groups mocked people who were not transgender and popularity within the friend group increased when respondents announced their plan to transition. Additionally, respondents identified several social sources that encouraged them to believe that transitioning would help them including: YouTube transition videos, blogs, Tumblr, and online communities. And finally, 20.0% of participants felt pressured to transition by social sources that included friends, partners, and society. More research is needed to further explore these hypotheses.

The current study and the Turban et al. (2021) analysis of the USTS data share some similarities and differences. Similarities include the use of convenience samples, targeted recruitment, and anonymous data collection. The findings of Turban et al. (including external pressures to detransition and transgender

identification after detransition) are a subset of the array of experiences described in the current study. The current study differed from James et al. (2016) and Turban et al. in that it enrolled participants based on the criterion of detransition after medical or surgical transition regardless of how they currently identified, recruited from communities with diverse perspectives about transition and detransition, used a precise definition for detransition that specifies the use of medication or surgery, and included answer options that were relevant to many different types of detransition experiences. In contrast, the USTS only enrolled transgender-identifying individuals regardless of whether they medically or surgically transitioned, recruited from communities likely to have similar perspectives about transition and detransition, and provided multiple choice answer options that were relevant to a narrower range of detransition experiences (James et al., 2016). Further, the definition used by the USTS for "detransitioned" (having "gone back to living as [their] sex assigned as birth, at least for a while") is quite vague. Although Turban et al. provide valuable information about the subset of transgender-identifying people who may have detransitioned, the current study provides a more comprehensive view of individuals who detransition after medical or surgical transition.

Over the past 15 years, there have been substantial changes in the clinical approach to gender dysphoric patients notable for a shift from approaches that employ thorough evaluations and judicious use of medical and surgical transition (the watchful waiting or Dutch approach, the developmentally informed approach, and the medical model of care) to approaches with minimized or eliminated evaluation and liberal use of transition interventions (the affirmative approach and the informed consent model of care) (Cavanaugh et al., 2016; de Vries & Cohen-Kettenis, 2012; Meyer et al., 2002; Rafferty et al., 2018; Schulz, 2018; Zucker et al., 2012b). This trend is prominent in the U.S. where the American Academy of Pediatrics endorsed the affirmative approach in 2018 and Planned Parenthood currently uses the informed consent model to provide medical transition in more than 200 clinics in 35 states (Planned Parenthood, 2021; Rafferty et al., 2018). It is plausible that an unintended consequence of these clinical shifts may be an increase in people who detransition. Many participants in this study believe that they did not receive an adequate evaluation by a clinician before transition. The definition of "adequate evaluation" was not provided in the survey and may be open to respondent interpretation. But given the complexities of the gender dysphoria described in the current study, one might consider a low bar of "adequate" to be the exploration of factors that could be misinterpreted as non-temporary gender dysphoria as well as factors that could be underlying causes for gender dysphoria. The most recently emerging approach to gender dysphoria is called the "exploratory approach" which is a neutral psychotherapeutic approach to help individuals gain a deeper understanding of their gender distress and the factors contributing to their dysphoria (Churcher Clarke & Spiliadis, 2019; Spiliadis, 2019). The study's findings suggest that an exploratory type of approach may have been beneficial to some of the respondents. Future research is needed to determine which patients are best treated by which approaches long term.

Patients considering medical and surgical interventions deserve accurate information about the risks, benefits, and alternatives to that treatment. In this sample, nearly half of the participants reported that the counseling they received about transition was overly positive about the benefits of transition and more than a quarter reported that the counseling was not negative enough about the risks. Several participants felt pressured to transition by their doctors and therapists. If these types of clinical interactions are verified, exploration is needed to determine the extent to which this situation occurs and what measures might be taken to ensure that clinicians provide patients with their options accurately and dispassionately.

There are several obstacles to obtaining accurate rates of detransition and desistance, including stigma and the low numbers of detransitioners who inform their clinicians that they detransitioned. One approach to bypass some of these barriers would be to incorporate non-judgmental questions about detransition and desistance into nationally representative surveys that collect health data. For example, the Behavioral Risk Factor Surveillance System contains an optional module about sexual orientation and gender identity that includes two questions to explore gender issues (Downing & Przedworski, 2018). By changing one existing question, "Do you consider yourself to be transgender?" into two questions, "Have you ever, at any point in your life, considered yourself to be transgender?" and "Do you currently consider yourself to be transgender?" and by adding a follow-up question if answers indicate past but not current transgender identification, "Did you ever take puberty blockers, cross-sex hormones, anti-androgens, or have any surgery as part of your transition?", valuable information about desistance, detransition, and current transgender identification could be obtained. These types of questions may also be of use in clinical practice and electronic medical records. The information gained about rates of detransition and desistance would enhance transgender healthcare by aiding informed consent processes at the start of any medical or surgical transition.

One of the strengths of this study is that it is one of the largest samples of detransitioners to date. Other strengths include the use of a precise definition for detransition, enrollment of detransitioners regardless of their post-detransition gender identification, recruitment from communities with likely divergent views about transition and detransition, and collaboration with two individuals who had detransitioned which helped to create a survey instrument with questions relevant to a variety of detransition experiences and enhanced the recruitment efforts.

There are several limitations to this study that should be considered when interpreting the findings. Like Vandenbussche (2021), James et al. (2016), and Turban et al. (2021), this study

used a cross-sectional design, anonymous surveying, and a convenience sample and therefore shares the same limitations that are inherent to these methodologies. These limitations include that conclusions about causation cannot be determined, identities of participants cannot be verified, and the findings of this study may not be generalizable to the entire population of people who detransition or to people outside of the countries where participants were from. Although this study reached out to communities with differing perspectives about transition and detransition, targeted recruitment and convenience samples always introduce the limitations associated with selection biases which should be addressed in future research. Finally, many of the participants in this study had less than ideal outcomes to their medical and surgical transitions, and it is possible that these experiences may have colored some of the responses.

Additional research is needed to determine the prevalence of detransition as an outcome of transition and to identify and meet the psychological and medical needs of the emerging detransitioned population. Because many individuals who detransition re-identify with their birth sex, are no longer connected to LGBT communities, and don't return to gender clinics, future research about detransition needs to expand recruitment efforts beyond gender clinics and transgender communities. The development and testing of non-medical interventions for gender dysphoria could provide valuable options to be used as alternatives or in conjunction with medical and surgical treatments. Because of the potential for some to experience trauma, mental health conditions, internalized homophobia, and misogyny as gender dysphoria, research needs to be conducted on the evaluation process before transition to find approaches that respectfully and collaboratively explore factors that might contribute to gender-related distress. There continues to be an absence of long-term outcomes evidence for youth treated with medical and surgical transition and a lack of information about the trajectories of youth experiencing late-onset gender dysphoria–research is needed to address these gaps. Continued work is needed to reduce rigid gender roles, increase representation of gender stereotype nonconformity, and to address discrimination and social pressures exerted against people who are transgender, lesbian, gay, bisexual, and gender stereotype non-conforming.

## Conclusion

This study described individuals who, after transitioning with medications or surgery, have detransitioned. The prevalence of detransitioning after transition is unknown but is likely underestimated because most of the participants did not inform the doctors who facilitated their transitions that they had detransitioned. There is no single narrative to explain the experiences of all individuals who detransition and we should take care to avoid painting this population with a broad brush. Some detransitioners return to identifying with their birth sex, some assume (or maintain) a nonbinary identification, and some continue to identify as transgender. Some detransitioners regret transitioning and some do not. Some of the detransitioners reported experiences that support the ROGD hypotheses, including that their gender dysphoria began during or after puberty and that mental health issues, trauma, peers, social media, online communities, and difficulty accepting themselves as lesbian, gay, or bisexual were related to their gender dysphoria and desire to transition. Natal female and natal male detransitioners appear to have differences in their baseline characteristics and experiences and these differences should be further delineated. Future research about gender dysphoria and the outcomes of transition should consider the diversity of experiences and trajectories. More research is needed to determine how best to provide support and treatment for the long-term medical and psychological well-being of individuals who detransition. Findings about detransition should be used to improve our understanding of gender dysphoria and to better inform the processes of evaluation, counseling, and informed consent for individuals who are contemplating transition.

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**Declarations**

**Conflict of interest** The author has no relevant financial or non-financial conflicts of interest to disclose.

**Consent to Participate** Electronic consent was obtained from all participants included in the study. On the first page of the online survey, participants were informed of the research purpose and potential risks and benefits of participating, that their participation was voluntary, and were presented with a way to contact the researcher. The research survey questions were displayed only if the participant clicked "agree" which indicated that the participant read the information, voluntarily agreed to participate, and were at least 18 years of age.

**Ethical Approval** The research was determined to be Exempt Human Research by the Program for the Protection of Human Subjects of the Icahn School of Medicine at Mount Sinai in New York, NY. All procedures were performed in accordance with the ethical standards of the Program for the Protection of Human Subjects at the Icahn School of Medicine at Mount Sinai and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

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1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
3 HUNTINGTON DIVISION
4
5 CHRISTOPHER FAIN; ZACHARY )
MARTELL; BRIAN MCNEMAR, SHAWN )
6 ANDERSON a/k/a SHAUNTAE )
ANDERSON and LEANN JAMES, ) Civil Action No.
7 individually and on behalf of )
all others similarly ) 3:20-cv-00740
8 situated, )
)
9 Plaintiffs, )
)
10 vs. )
)
11 WILLIAM CROUCH, in his ) REMOTE VIDEOTAPED DEPOSITION OF
official capacity as Cabinet )
12 Secretary of the West ) JOHANNA OLSON-KENNEDY, M.D.
Virginia Department of Health )
13 and Human Resources; CYNTHIA ) April 25, 2022
BEANE, in her official )
14 capacity as Commissioner for )
the West Virginia Bureau for )
15 Medical Services; WEST )
VIRGINIA DEPARTMENT OF HEALTH )
16 AND HUMAN RESOURCES, BUREAU )
FOR MEDICAL SERVICES; JASON )
17 HAUGHT, in his official )
Capacity as Director of the )
18 West Virginia Public )
Employees Insurance Agency; )
19 and THE HEALTH PLAN OF WEST )
VIRGINIA, INC., )
20 )
Defendants. )
21 ______________________________)
22
23
24
25 Reported By: Amy E. Simmons, CSR, RPR, CRR, CRC

1 REMOTE VIDEOTAPED DEPOSITION OF
2 JOHANNA OLSON-KENNEDY, M.D.
3
4 BE IT REMEMBERED that the remote videotaped
5 deposition of JOHANNA OLSON-KENNEDY, M.D., was taken via
6 videoconference by the Defendants before Veritext Legal
7 Solutions, Amy E. Simmons, Court Reporter and Notary
8 Public in and for the County of Ada, State of Idaho, on
9 Monday, the 25th day of April, 2022, commencing at the
10 hour of 8:39 a.m. Pacific Daylight Time in the
11 above-entitled matter.
12
13
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1 talk about -- well, I'll just mention it in this
2 question.
3 So we've talked about puberty blockers,
4 gender-affirming hormones, some psychological
5 therapy and surgeries.
6 Are there any other treatment modalities
7 that you're aware of for gender dysphorias?
8 MS. BORELLI: Objection; form.
9 THE WITNESS: So I should add in there
10 another thing that I commonly do is prescribe oral
11 contraceptive pills for the purpose of diminishing
12 or induction of amenorrhea so somebody doesn't
13 have a menstrual cycle. That's another one of the
14 potential interventions for somebody with gender
15 dysphoria.
16 Q. (BY MR. DAVID) Okay. With the addition
17 of prescribing oral contraceptives, there's
18 puberty blockers, gender-affirming hormones,
19 surgery, and psychological therapy.
20 Is that the universe of treatment
21 modalities for gender dysphoria?
22 MS. BORELLI: Objection; form.
23 THE WITNESS: Yes.
24 Q. (BY MR. DAVID) Okay. Do you yourself
25 diagnose patients with gender dysphoria?

1 MS. BORELLI: Objection; form.
2 THE WITNESS: I do.
3 Q. (BY MR. DAVID) Okay. At the Center for
4 Transyouth Health and Development at Children's
5 Hospital of Los Angeles, is your practice limited
6 to gender medicine?
7 MS. BORELLI: Objection; form.
8 THE WITNESS: I'm not sure I understand.
9 Within the center itself?
10 Q. (BY MR. DAVID) Yes. Within the center
11 itself.
12 MS. BORELLI: Same objection.
13 THE WITNESS: So just -- I just want to
14 be clear about what you mean by "gender medicine."
15 People who have questions around their gender or
16 are seeking interventions are the people that we
17 see within the housing of the center.
18 Q. (BY MR. DAVID) And I think that that
19 answers it.
20 Simply, do you see patients for well
21 visits at the center?
22 MS. BORELLI: Objection; form.
23 THE WITNESS: No, we don't.
24 Q. (BY MR. DAVID) Okay. Have you ever
25 participated in the drafting of health insurance

1 But I think that it is fair to say that
2 people get a better understanding of their gender
3 identity as they get older.
4 But this particular cohort of children
5 that's being referred to is a really important
6 one, and I think that understanding exactly what
7 was happening in these studies matters to this
8 conversation.
9 Q. (BY MR. DAVID) So back to the statement
10 in your report that since 1966 it's been
11 understood that gender identity cannot be changed,
12 I'm sure that you are familiar with individuals
13 who have come out and said that they transitioned,
14 had surgery, and have since regretted that and
15 have published about it widely on the internet or
16 the Washington Post or the New York Times,
17 correct?
18 MS. BORELLI: Objection; form.
19 THE WITNESS: Do you have a specific
20 example?
21 Q. (BY MR. DAVID) I don't know that I have
22 a specific example of which individual it was, but
23 you've never seen an article published in any
24 source that was published by someone who went
25 through transition and then stated that they

1 regretted it?
2 MS. BORELLI: Objection; form.
3 THE WITNESS: I don't remember the
4 sources. I have seen reports from two such
5 individuals.
6 Q. (BY MR. DAVID) Who are the individuals
7 that you've seen those reports from?
8 MS. BORELLI: Objection; form.
9 THE WITNESS: Walter Heyer and Keira
10 Bell.
11 Q. (BY MR. DAVID) And I'm not familiar with
12 either of those individuals.
13 Just to make sure that we're all on the
14 same page, those were not patients of yours,
15 correct?
16 MS. BORELLI: Objection; form.
17 THE WITNESS: Those were not patients of
18 mine.
19 Q. (BY MR. DAVID) Okay. And are you saying
20 in paragraph 21 of your report that it's
21 incredibly rare for gender identity to change, or
22 that these people that you just mentioned were
23 misdiagnosed or had an incorrect perception of
24 their own identity?
25 MS. BORELLI: Objection; form.

1 THE WITNESS: I don't know either of them
2 personally, but what I'm referring to in that
3 paragraph 21 is about efforts on behalf of
4 professionals trying to change someone's gender
5 identity.
6 Q. (BY MR. DAVID) Okay. So let me back up,
7 then.
8 Are you saying that gender identity
9 cannot be forced to change?
10 MS. BORELLI: Objection; form.
11 THE WITNESS: That's correct.
12 Q. (BY MR. DAVID) Okay. Thank you.
13 Misunderstanding on my part.
14 In the next paragraph, paragraph 22, you
15 referred to Dr. Levine, and you also mention
16 conversion or reparative therapy.
17 And I wanted to ask whether you are
18 saying that Dr. Levine engages in conversion
19 therapy.
20 MS. BORELLI: Objection; form.
21 THE WITNESS: So I'm not saying that.
22 From the reports that he seems to lean on, people
23 should go to therapy to become comfortable with
24 their -- the body that they have, which is a way
25 to sort of talk people out of their experience.

1 So I don't know if it falls under the rubric of
2 conversion therapy or reparative therapy, but that
3 seems to be what he leans on.
4 Q. (BY MR. DAVID) Is your understanding
5 based solely upon the report that he filed in this
6 case?
7 MS. BORELLI: Objection; form.
8 THE WITNESS: Yes.
9 Q. (BY MR. DAVID) Okay. Can a transgender
10 identity emerge in adolescence without childhood
11 distress?
12 MS. BORELLI: Objection; form.
13 THE WITNESS: So can people come to
14 understand their gender more fully in adolescence?
15 Yes.
16 Q. (BY MR. DAVID) And I guess what I'm
17 trying to understand is once the person in their
18 adolescence more fully understands their gender
19 identity, is that the point in time when that
20 individual will begin to experience distress from
21 the incongruence between their gender identity and
22 their sex assigned at birth?
23 MS. BORELLI: Objection; form.
24 THE WITNESS: Well, I think what's really
25 important to understand is that everybody's

1 process is individual. So that could be a
2 possible trajectory for someone.
3 Q. (BY MR. DAVID) And this might be a bad
4 question: Is there a traditional presentation of
5 gender dysphoria?
6 MS. BORELLI: Objection; form.
7 THE WITNESS: Well, gender dysphoria is a
8 list of criteria. And so in that sense, that is
9 sort of the -- I guess if you -- I don't know what
10 the word "traditional" means in this context, but
11 there are people who meet that diagnostic criteria
12 and people who don't. So there's set criteria, I
13 guess, is what I mean.
14 Q. (BY MR. DAVID) And again, that was a bad
15 question on my part. I'll preface this so I'm
16 making myself somewhat clear here, I guess, or at
17 least trying to.
18 I deal with a lot of medical malpractice
19 cases, and there are people who present to the
20 emergency room with appendicitis. And a doctor
21 will say, "That's a classic presentation of
22 appendicitis."
23 And my question is, is there a classic
24 presentation of gender dysphoria?
25 MS. BORELLI: Objection; form.

1 THE WITNESS: So, yeah. The people who
2 meet the criteria is outlined in the DSM-5. That
3 is the definition of gender dysphoria.
4 Q. (BY MR. DAVID) And is there an age or an
5 age range in which the presentation meeting those
6 diagnostic criteria most often emerges?
7 MS. BORELLI: Objection; form.
8 THE WITNESS: Here is an important place
9 to differentiate between the diagnostic criteria
10 in children and the diagnostic criteria in
11 adolescence, because they're different.
12 So in order to have that diagnosis in
13 childhood, the criteria are different than the
14 ones that are outlined for adolescents and adults.
15 Q. (BY MR. DAVID) And my question is, is
16 there an age range where it is more prevalent for
17 someone to first have a diagnosis of gender
18 dysphoria?
19 MS. BORELLI: Objection; form.
20 THE WITNESS: No. People get this
21 diagnosis at all different stages of development
22 and age.
23 Q. (BY MR. DAVID) So is it the same amount
24 of patients or the same percentage of patients
25 diagnosed with gender dysphoria that's a third in

1 childhood, a third in adolescence, and a third in
2 adulthood?
3 MS. BORELLI: Objection; form.
4 THE WITNESS: So are you specifically
5 asking about my practice or just the whole group
6 of people with gender dysphoria?
7 Q. (BY MR. DAVID) My question was broader
8 than your practice, but if you can only speak to
9 your practice, that's perfectly fine.
10 MS. BORELLI: Objection; form.
11 THE WITNESS: So I see patients up to the
12 age of 25, sometimes 26, and people access
13 services all the way from age 3 up to age 26.
14 But I think I said this earlier, that the
15 average age that people come to seek services is
16 around 16. But that's in an adolescent/young
17 adult clinic.
18 Q. (BY MR. DAVID) Sure. So in your clinic
19 seeing patients between the ages of 3 and 25, is
20 it fair to say that your patient population is
21 primarily teenagers?
22 MS. BORELLI: Objection; form.
23 THE WITNESS: Yes.
24 Q. (BY MR. DAVID) Okay. And in the
25 population we discussed earlier that there has

1 been a shift in the ratio with more individuals
2 presenting with -- who were assigned female at
3 birth than previously were presenting --
4 MS. BORELLI: Objection; form.
5 I apologize, Caleb.
6 MR. DAVID: You're okay. I'm being a
7 little clumsy with this, so I'll start over.
8 Q. (BY MR. DAVID) We previously talked at
9 the beginning of your deposition about there is a
10 shift in the ratio of your patient population from
11 primarily those who were assigned male at birth to
12 now a greater number who were assigned female at
13 birth; is that right?
14 MS. BORELLI: Objection; form.
15 THE WITNESS: Well, let me clarify.
16 There was not a time -- we -- there was not a
17 time -- I'm going to go back because the
18 historical context is important.
19 We've been providing services at our
20 division of adolescent medicine since the '90s.
21 But since we started tracking our new referrals,
22 we -- in 2010 to 2015, there was an equal ratio.
23 And then in -- sorry, 2014-2015, we
24 started getting a higher number of people
25 designated female at birth new for consultation.

1 Q. (BY MR. DAVID) Okay. Has that
2 population that you've seen starting to shift from
3 2014-2015, has it continued to today?
4 MS. BORELLI: Objection; form.
5 THE WITNESS: We still have -- it evened
6 out a little bit -- at our center it evened out a
7 little bit over the last year or two years, but we
8 still have -- more than 50 percent of the people
9 seeking services are designated female at birth,
10 but it has evened out a little bit more.
11 Q. (BY MR. DAVID) Okay. Has that cohort of
12 patients that has shifted that ratio been involved
13 in studies regarding the efficacy of the services
14 that you specifically provide, puberty blockers
15 and hormone therapy? And we'll leave out the oral
16 contraceptives.
17 But for puberty blockers and for the
18 hormone therapy, has that cohort of patients been
19 studied?
20 MS. BORELLI: Objection; form.
21 THE WITNESS: In -- are you talking about
22 just broadly speaking, or in our program?
23 Q. (BY MR. DAVID) Well, let's start broadly
24 speaking.
25 MS. BORELLI: Same objection.

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1 THE WITNESS: So I -- I have to look at
2 it to be intimately familiar, but I think that the
3 Dutch did a study that looked at the
4 characteristics of the folks that were relatively
5 new into their program for consultation compared
6 to the folks that they've seen longer ago. But
7 again, I'd have to look at it to know the details.
8 Those are -- within my program and three
9 other large programs across the United States,
10 those young people are enrolled in the study that
11 I'm the principal investigator on. So they are
12 currently being studied.
13 Q. (BY MR. DAVID) Let's shift, then, to
14 talk about your study.
15 First, when did your study begin?
16 MS. BORELLI: Objection; form.
17 THE WITNESS: 2015.
18 Q. (BY MR. DAVID) And is this the study
19 that's mentioned in your report as being an NIH
20 grant-funded study?
21 MS. BORELLI: Objection; form.
22 THE WITNESS: Yes.
23 Q. (BY MR. DAVID) How did you become aware
24 that there was an NIH grant available?
25 MS. BORELLI: Objection; form.

1 First, did I read that correctly?
2 A. Yes.
3 Q. And when you say that gender dysphoria is
4 a serious medical condition, are you
5 differentiating between a medical condition and a
6 psychiatric condition?
7 MS. BORELLI: Objection; form.
8 THE WITNESS: All conditions that happen
9 in all parts of the body are medical conditions.
10 Q. (BY MR. DAVID) Okay. And the reason I'm
11 asking is because my understanding is that the
12 diagnostic criteria to meet gender dysphoria comes
13 from the DSM-5; is that right?
14 MS. BORELLI: Objection; form.
15 THE WITNESS: That's correct.
16 Q. (BY MR. DAVID) And the DSM-5 is a
17 diagnostic manual of psychiatric conditions and
18 their diagnostic criteria; is that right?
19 MS. BORELLI: Objection; form.
20 THE WITNESS: That's correct.
21 Q. (BY MR. DAVID) Okay. Are you aware of
22 any other DSM-5 diagnoses that are treated with
23 surgery?
24 A. There are some brain -- again, not my
25 area of expertise, but there are some surgical

1 THE WITNESS: Yes.
2 Q. (BY MR. DAVID) Okay. So prior to the
3 referral being made to a surgeon, you and the
4 patient have discussed what type of surgery is
5 going to -- is recommended; is that correct?
6 MS. BORELLI: Objection; form.
7 THE WITNESS: Well, there are things that
8 I'm not -- it's not within my wheelhouse to make
9 recommendations around, such as the type of
10 approach or the specific way that the surgery is
11 going to be done. But I can make broad
12 categorizations about, like, masculinizing chest
13 surgery, for example.
14 Q. (BY MR. DAVID) Okay. And so when you
15 are making that referral for surgical
16 consultation, is there -- there's already an idea
17 of what general type of surgery is going to be
18 done such as a chest masculinization surgery; is
19 that right?
20 MS. BORELLI: Objection; form.
21 THE WITNESS: For the most part regarding
22 chest surgery, that's true. Sometimes regarding
23 other surgeries, that's not true. But for this
24 particular surgery, yes.
25 Q. (BY MR. DAVID) Okay. So what other type

1 of surgery is that not true for?
2 MS. BORELLI: Objection; form.
3 THE WITNESS: So for example, with
4 genital surgery for transmasculine people, there
5 are a number of different surgical things that
6 people might be suited best for. And those are
7 conversations that the patient should have with
8 the surgeon so that they can go over all of the
9 different types of interventions that are
10 available.
11 Q. (BY MR. DAVID) So in the event of a
12 genital surgery, you may refer a patient to a
13 surgeon for consultation, but there isn't a full
14 understanding at that point of what the -- what
15 genital surgery is actually going to be performed;
16 is that fair to say?
17 MS. BORELLI: Objection; form.
18 THE WITNESS: So before -- I mean, I
19 definitely tell people about all of the surgeries
20 that are available. And I think that the details
21 of the ins and outs of those surgeries, recovery
22 times, for example, what things will be able to
23 come from those surgeries, what things won't, are
24 gone over in more detail by the surgeon.
25 It's pretty rare that somebody doesn't

1 know what they want, but because a lot of times
2 there isn't, maybe, information available, it's
3 really critical that they get that information
4 from the surgeon.
5 Q. (BY MR. DAVID) Do you recommend patients
6 or refer patients -- excuse me.
7 Do you refer patients for surgical
8 consultations for facial feminization surgeries?
9 MS. BORELLI: Objection; form.
10 THE WITNESS: Yes, I have done that in
11 the past. Not as often as the others.
12 Q. (BY MR. DAVID) Can that involve
13 reshaping -- well, when you have made that
14 referral for surgical consultation for facial
15 feminization in the past, is it making a referral
16 for facial feminization and then the surgeon talks
17 about the particulars of the procedure? Or are
18 you speaking with the patient about specific
19 facial traits that they are desirous of changing?
20 MS. BORELLI: Objection; form.
21 THE WITNESS: It could be either of those
22 things. So again, pulsing back to individual
23 things -- so for example, if somebody wants
24 information on this thing or "This part of my face
25 is creating a lot of difficulty for me and it's

1 creating a safety hazard for me," for example,
2 then I'm not very versed at all in the different
3 procedures around the face and the skull. So that
4 would be something that I would look to my
5 surgical colleagues to run through with the
6 patient themselves.
7 Q. (BY MR. DAVID) When you say that some
8 aspect of the person's face can be creating a
9 safety hazard, what do you mean by that?
10 MS. BORELLI: Objection; form.
11 THE WITNESS: So what I mean by that is
12 that when certain things happen to the face in a
13 puberty that is dominated by testosterone if
14 someone goes through an endogenous male puberty,
15 there are things that develop that get that person
16 potentially perceived as a trans woman, and trans
17 women are targeted for the things that we
18 previously talked about earlier in the day.
19 Q. (BY MR. DAVID) So have you had patients
20 where you have specifically discussed referral to
21 a surgeon for a chin reshaping?
22 MS. BORELLI: Objection; form.
23 THE WITNESS: Again, I -- that referral
24 is much less common for me, so I'd have to, like,
25 go back in and see if there was specifically a

1 patient like that. But that's often a complaint
2 that I hear a lot from people.
3 Q. (BY MR. DAVID) Are there specific
4 aspects of facial feminization that you know that
5 you have referred a patient for surgical
6 consultation for?
7 MS. BORELLI: Objection; form.
8 THE WITNESS: Let me try to go back
9 through my -- I mean, it really has not been a
10 lot, but let me just go back and think about some
11 of the patients.
12 Certainly, I think, brow is a big one.
13 There are these places on the face that are
14 different. So that there's, like, a wider gap
15 between the bottom of the lip and the bottom of
16 the chin in people who went through testosterone
17 surgery.
18 The brow is more forward set in people
19 who -- generally in men or people who have gone
20 through a testosterone puberty that makes the eyes
21 appear to be set back more.
22 Obviously Adam's apple is something that
23 happens from testosterone.
24 Those are some of the things that I've
25 talked about with patients around referrals for

1 surgery.
2 Q. (BY MR. DAVID) And in those cases, how
3 is it determined whether that's -- you mentioned
4 brow, so I'll take that.
5 In those cases, do you make the
6 determination as to whether a surgery to feminize
7 the brow is medically necessary?
8 MS. BORELLI: Objection; form.
9 THE WITNESS: No. That decision is
10 coming from the surgeon.
11 Q. (BY MR. DAVID) So is your referral,
12 then, to allow for the surgeon to make a
13 determination as to whether the surgeon believes
14 it's medically necessary to feminize the patient's
15 brow?
16 MS. BORELLI: Objection; form.
17 THE WITNESS: I think -- I mean, it's a
18 bit more complicated. That feels black and white.
19 It's not quite that black and white. I don't
20 refer people for surgery unless I think it's
21 medically necessary, but I'm not the ultimate
22 determiner of that.
23 So my letter that accompanies that
24 request for consultation puts the pieces of
25 knowledge that I have from knowing that person

1 into it to say, "These are the reasons that I
2 think this surgery is medically necessary," but
3 I'm not ultimately the person that is putting the
4 request for the procedure in to the third-party
5 payer.
6 Q. (BY MR. DAVID) And I think that that's a
7 very fair clarification.
8 You don't order surgeons to perform
9 surgery, correct?
10 MS. BORELLI: Objection; form.
11 THE WITNESS: Absolutely not.
12 Q. (BY MR. DAVID) Okay. So you can make
13 a -- you can draft one of these referral letters,
14 and the surgeon can say, "I'm not doing that"; is
15 that fair?
16 MS. BORELLI: Objection; form.
17 THE WITNESS: Yes, that's correct.
18 Q. (BY MR. DAVID) Okay. But if you are
19 writing a referral letter, then at least to you,
20 you believe that it is medically necessary for the
21 patient to undergo whatever specific type or
22 general type of surgery you have put in that
23 referral letter?
24 MS. BORELLI: Objection; form.
25 THE WITNESS: Yes.

1 Q. (BY MR. DAVID) Okay. Have you made
2 referrals for surgical consultation for
3 transfeminine people who have developed small
4 breasts as a result of hormone therapy and would
5 like to have larger breasts?
6 MS. BORELLI: Objection; form.
7 THE WITNESS: I have only done that on
8 two occasions. And it was -- they both were
9 patients who, despite many -- more than five years
10 of hormone therapy, had not progressed beyond
11 about Tanner Stage 2, which is the very, very
12 earliest stage of breast development, or maybe
13 early Tanner Stage 3. But no, that's not
14 something that I've done on a routine basis.
15 Q. (BY MR. DAVID) Is there a -- you
16 mentioned Tanner Stage 2 and Tanner Stage 3.
17 First, can you explain what Tanner
18 Stage 2 and Tanner Stage 3 means?
19 MS. BORELLI: Objection; form.
20 THE WITNESS: Sure. So the Tanner stages
21 are named after Tanner because he's the person
22 that wrote it down. But they describe sexual
23 maturity rating so that everybody -- prepubertally
24 everybody is at Tanner Stage 1 of development.
25 And then Tanner Stage 2 is an indicator of the

1 first stage of puberty.
2 So for -- when we're talking about breast
3 development, Tanner Stage 2 is basically
4 designated as when there is a difference between
5 the nipple and the areola from the flat chest
6 contour, from the flat chest wall.
7 And then Tanner Stage 3 -- and again,
8 these aren't absolutes. These are fuzzier
9 categories. But Tanner Stage 3 is when there's
10 breast tissue that's differentiated from the
11 nipple and the areola and from the flat chest
12 contour.
13 And Tanner Stage 4 and 5 are a little bit
14 more nebulous. Tanner Stage 5 is really like
15 considered an adult breast shape. That's breast
16 development.
17 Q. (BY MR. DAVID) Okay. And so in your
18 transfeminine patients, is there a level of breast
19 development in the terms of the Tanner stages
20 where it would no longer be medically necessary
21 for a breast augmentation?
22 MS. BORELLI: Objection; form.
23 THE WITNESS: I don't know if there's an
24 exact answer to that. But I will say that two
25 people that I sent for referrals have very, very

1 minimal breast development, which is not uncommon
2 for people who start hormone therapy later.
3 I work with young people, though, and
4 younger people have more hormone receptors, so
5 they generally tend to get better breast
6 development because they're starting younger.
7 Q. (BY MR. DAVID) So in those two
8 individuals, what specifically about their chest
9 appearance made it medically necessary for them to
10 have a surgical consultation for breast
11 augmentation?
12 MS. BORELLI: Objection; form.
13 THE WITNESS: So similarly to a cisgender
14 woman who did not develop breasts beyond Tanner
15 Stage 2, their chest is not identifiable as an
16 adult female chest. And that creates a lot of
17 havoc for anyone who identifies as a woman. If a
18 cisgender woman had a similar situation, I would
19 also refer them for that procedure.
20 Q. (BY MR. DAVID) So if a cisgender woman
21 had breast development that did not go beyond
22 Tanner Stage 2, it would also be medically
23 necessary for that woman to obtain breast
24 augmentation to have female or stereotypically
25 female or a feminizing chest appearance?

1 MS. BORELLI: Objection; form.
2 THE WITNESS: If it was causing them
3 distress, yes.
4 Q. (BY MR. DAVID) What is the medical
5 or -- what is the medical condition for that for a
6 cisgender woman?
7 MS. BORELLI: Objection; form.
8 THE WITNESS: I think it's called
9 hypomastia. I have to double check on that, but I
10 think that's technically what it's called.
11 Q. (BY MR. DAVID) I guess that makes sense
12 to me that it would be hypomastia, yeah. Okay.
13 Do you have any knowledge one way or
14 another whether West Virginia Medicaid covers
15 surgery for hypomastia in cisgendered women?
16 MS. BORELLI: Objection; form.
17 THE WITNESS: No.
18 Q. (BY MR. DAVID) Do you know whether
19 hypomastia requires clinically significant
20 distress to meet the diagnostic criteria?
21 MS. BORELLI: Objection; form.
22 THE WITNESS: No.
23 Q. (BY MR. DAVID) I may have asked you this
24 earlier, and if I did, I apologize.
25 Do you have patients that -- and since

1 REPORTER'S CERTIFICATE

2

STATE OF IDAHO )

3 ) ss.

COUNTY OF ADA )

4

5 I, AMY E. SIMMONS, Certified Shorthand Reporter

6 and Notary Public in and for the State of Idaho, do

7 hereby certify:

8 That prior to being examined, the witness named in

9 the foregoing deposition was by me duly sworn remotely to

10 testify to the truth, the whole truth and nothing but the

11 truth;

12 That said deposition was taken down by me in

13 shorthand at the time and place therein named and

14 thereafter reduced to typewriting under my direction, and

15 that the foregoing transcript contains a full, true

16 and verbatim record of said deposition.

17 I further certify that I have no interest in the

18 event of the action.

19 WITNESS my hand and seal this 10th day of May,

20 2022.

21

22 AMY E. SIMMONS

CSR, RPR, CRR, CRC and Notary

23 Public in and for the

State of Idaho.

24

25 My Commission Expires: 06-13-2022

1 DEPOSITION REVIEW
CERTIFICATION OF WITNESS

2

ASSIGNMENT REFERENCE NO: 5200240
3 CASE NAME: Fain, Christopher, et al. v.
Crouch, William, et al.
DATE OF DEPOSITION: 4/25/2022
4 WITNESS' NAME: Johanna Olson-Kennedy, M.D.
5 In accordance with the Rules of Civil
Procedure, I have read the entire transcript of
6 my testimony or it has been read to me.
7 I have listed my changes on the attached
Errata Sheet, listing page and line numbers as
8 well as the reason(s) for the change(s).
9 I request that these changes be entered
as part of the record of my testimony.
10

I have executed the Errata Sheet, as well
11 as this Certificate, and request and authorize
that both be appended to the transcript of my
12 testimony and be incorporated therein.
13 May 21, 2022 ______________________
Date Johanna Olson-Kennedy, M.D.
14

Sworn to and subscribed before me, a
15 Notary Public in and for the State and County,
the referenced witness did personally appear
16 and acknowledge that:
17 They have read the transcript;
They have listed all of their corrections
18 in the appended Errata Sheet;
They signed the foregoing Sworn
19 Statement; and
Their execution of this Statement is of
20 their free act and deed.
21 I have affixed my name and official seal
22 this ______ day of______________________, 20____.
23 ___________________________________
Notary Public
24
___________________________________
25 Commission Expiration Date

1 ERRATA SHEET

VERITEXT LEGAL SOLUTIONS MIDWEST

2 ASSIGNMENT NO: 5200240

3 PAGE/LINE(S) / CHANGE /REASON

| | PAGE/LINE(S) | CHANGE | REASON |
|---|---|---|---|
| 4 | P. 6 / line 6 | "OHANNA" to "JOHANNA" | Transcription error |
| 5 | P. 26 / line 3 | "therapy" to "puberty" | Transcription error |
| 6 | P. 30 / line 20 | "a gender" to "agender" | Transcription error |
| 7 | P. 34 / line 5 | "connectiveness" to "connectivity" | Transcription error |
| 8 | P. 58 / line 3 | strike "become broader, grants" | Transcription error |
| 9 | P. 111 / line 10 | "names" to "games" | Transcription error |
| 10 | P. 112 / line 25 | "before" to "about" | Transcription error |
| 11 | P. 134 / line 17 | "surgery" to "puberty" | Transcription error |
| 12 | P. 195 / line 20 | remove the word "capacity" | Transcription error |
| 13 | P. 200 / line 15 | "percent" to "points" | Transcription error |

14 ______________________________

15 ______________________________

16 ______________________________

17 ______________________________

18 ______________________________

19

May 21, 2022 ______________________________

20 Date Johanna Olson-Kennedy, M.D.

21 SUBSCRIBED AND SWORN TO BEFORE ME THIS ________

22 DAY OF ________________________, 20______ .

23 ______________________________

Notary Public

24

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25 Commission Expiration Date

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

EXHIBIT
1

| | |
|---|---|
| CHRISTOPHER FAIN, *et al.*, individually and on behalf of all others similarly situated,<br><br>*Plaintiffs,*<br><br>v.<br><br>WILLIAM CROUCH, *et al.*,<br><br>*Defendants.* | CIVIL ACTION NO. 3:20-cv-00740<br>HON. ROBERT C. CHAMBERS |

**CERTIFICATE OF SERVICE**

I hereby certify that the EXPERT REBUTTAL REPORT OF DR. JOHANNA OLSON-KENNEDY, M.D., M.S. was served electronically on the 18th day of March, 2022 on the following counsel for Defendants in the above-captioned case:

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EXHIBIT
6

Parent(s)/caregiver(s) may provide key information for the clinical team, including report on the young person's gender and overall developmental, medical, and mental health history as well as information about the young person's level of current support and general functioning and wellbeing. Concordance or divergence of report between the adolescent and their parent(s)/caregiver(s) may be important information for the assessment team, including for the designing and shaping of individualized youth and family supports (De Los Reyes et al., 2019; Katz-Wise et al., 2017). Knowledge of the family context, including resilience factors and challenges can help providers know where special supports would be needed during the medical treatment process. Engagement of parent(s)/caregiver(s) is also important for educating families around various treatment approaches, ongoing follow-up and care needs, and potential treatment complications. Through psychoeducation regarding clinical gender care options and participation in the assessment process, which may unfold over time, parent(s)/caregiver(s) may better understand their adolescent child's gender-related experience and needs (Andrzejewski et al., 2020; Katz-Wise et al., 2017).

Parent/caregiver concerns or questions regarding the stability of gender-related needs over time and implications of various gender affirming interventions are common, and should not be dismissed. It is appropriate for parent(s)/caregiver(s) to ask these questions, and there are cases in which the parent(s)/caregiver(s)' questions or concerns are particularly helpful in informing treatment decisions and plans. For example, parent/caregiver report may provide critical context in situations in which a young person experiences very recent and/or sudden self-awareness of gender diversity and a corresponding gender treatment request, or when there is concern for possible excessive peer and/or social media influence on a young person's current self-gender concept. Contextualization of parent/caregiver report is also critical, as the report of a young person's gender history as provided by parent(s)/caregiver(s) may or may not align with the young person's self-report. Gender histories may be unknown to parent(s)/caregiver(s) because gender may be an inward experience for youth, not known by others unless it is discussed.

Some parents may present with unsupportive or antagonistic beliefs about T/GD identities and/or clinical gender care (Clark et al., 2020). Such parent perspectives may in some cases seem rigid, but providers should not assume this is the case. There are many examples of parent(s)/caregiver(s) who, over time with support and psychoeducation, have become increasingly accepting of their T/GD's child's gender diversity and care needs. Helping youth and parent(s)/caregiver(s) to work together on important gender care decisions is a primary goal. However, in some cases, parent(s)/caregiver(s) may be too rejecting of their adolescent child and their child's gender needs to be part of the clinical evaluation process. In these situations, youth may require the engagement of larger systems of advocacy and support to move forward with necessary supports and care (Dubin et al., 2020).

Statement 12:
**We recommend that health professionals assessing trans and gender diverse adolescents should only recommend gender affirming medical or surgical treatments requested by the patient when:**

Statement 12A:
**The adolescent meets the diagnostic criteria of gender incongruence as per the ICD-11 where a diagnosis is necessary to access health care. In countries which have not implemented the latest ICD other taxonomies may be used but efforts should be undertaken to utilize the latest ICD as soon as is practicably possible.**

When working with transgender and gender diverse adolescents, health professionals should realize that a classification may give access to care, but pathologizing transgender identities may be experienced as stigmatizing (van Beek et al., 2016). Assessments related to gender health and gender diversity have been criticized, and controversies exist around classification systems (Drescher, 2016). Healthcare professionals should realize they do not diagnose a gender identity per se, as one's gender identity is the subjective experience of being male or female or another gender. Health professionals should assess the overall and gender-related history and transgender care related needs of youth. Through this assessment process, health care providers may provide a classification when needed to get access to transgender-related care. However, a classification involving gender diversity connotes no pathology, in and of itself.

Gender Incongruence and Gender Dysphoria are the two diagnostic terms used in respectively the World Health Organization's International Classification of Diseases (ICD) and the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM). Of these two widely used classification systems, the DSM is for psychiatric classifications only and the ICD contains all diseases and conditions related to physical as well as mental health. The most recent versions of these two systems, the DSM-5 and the ICD-11 respectively, reflect a long history of reconceptualizing and depsychopathologizing gender related diagnoses (American Psychiatric Association, 2013, World Health Organization, 2019). Compared to the earlier version, the DSM-5 replaced Gender Identity *Disorder* with Gender *Dysphoria* acknowledging the distress experienced by *some* people stemming from the incongruence between experienced gender identity and sex assigned at birth. Compared to the ICD 10th edition, the Gender Incongruence classification was moved from the Mental Health Chapter to a Chapter "Conditions related to Sexual Health" in the ICD-11. One important reconceptualization in comparison to the DSM-5 Gender Dysphoria classification is that distress is not a required indicator of the ICD-11 Gender Incongruence classification (WHO, 2019). After all, when growing up in a supporting and accepting environment, the distress and impairment criterion, an inherent part of every mental health condition, may not be applicable (Drescher, 2012). As such, the ICD-11 Gender Incongruence classification may better capture the fullness of gender diversity experiences and related clinical gender needs.

Criteria of the ICD-11 classification "*Gender Incongruence of Adolescence or Adulthood*" require a marked and persistent incongruence between an individual´s experienced gender and the assigned sex which often leads to a desire to 'transition,' in order to live and be accepted as a person of the experienced gender. For some, this includes hormonal treatment, surgery, or other health care services to make the individual´s body align as much as desired, and to the extent possible, with the person's experienced gender. Relevant for adolescents is the indicator that a classification cannot be assigned '*prior to the onset of puberty*'. Finally, it is noted "*that gender variant behaviour and preferences alone are not a basis for assigning the classification*" (WHO, ICD-11, 2019).

Criteria for the DSM-5 classification "*Gender Dysphoria in Adolescence and Adulthood*" denote 'a marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration' (criterion A, fulfilled when 2 of 6 subcriteria are manifest), associated with 'clinically significant distress or impairment in social, occupational, or other important areas of functioning' (Criterion B, APA 2013). As noted before, not all transgender and gender diverse people experience gender dysphoria and this should not preclude them from accessing medical affirming care. For adolescents, the DSM-5 makes two specific remarks, which make it possible to give the classification when secondary sex characteristics have yet to fully develop. First, there should be a marked incongruence between one's experienced/expressed gender and

one's primary and/or secondary sex characteristics *(or in younger adolescents, the anticipated secondary sex characteristics)*. Second, the strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (*or in younger adolescents, a desire to prevent the anticipated secondary sex characteristics*).

Of note, a gender related classification is one of the requirements for medical gender affirming care, but such a classification solely does not *indicate* a person *needs* medical affirming care. The range of youth experiences of gender incongruence necessitates professionals provide a range of treatments or interventions based on the individual's needs. Counseling, gender exploration and mental health assessment, and when needed, treatment with mental health providers trained in gender development may all be indicated with or without medical affirming care.

Statement 12B:
**There is well-documented (according to local context) evidence of persistent gender incongruence or gender nonconformity / diversity of several years.**

Identity exploration and consolidation are experienced by many adolescents (Klimstra et al., 2010; Topolewska-Siedzik & Cieciuch, 2018). Identity exploration during the teen years may include exploration of gender and gender identity (Steensma et al., 2013). Little is known about how processes of adolescent identity consolidation (e.g., the process of commitment to specific identities) may impact a young person's experience(s) of gender. Given potential shifts in gender-related experiences and needs during adolescence, as discussed below, it is important to establish that the young person has experienced several years of persistent gender incongruence or gender diversity prior to initiating gender-affirming hormones or providing gender-affirming surgeries. Establishing evidence of persistent gender incongruence or gender diversity typically requires careful assessment with the young person over time (see Statement 3). Whenever possible and appropriate, the assessment and discernment process should also include the parent(s)/caregiver(s) (see Statement 1). The documentation to demonstrate well documented gender diversity can be provided via history obtained directly from the adolescents and parents/cargivers when this is not documented in the medical records.

The research literature on continuity versus discontinuity of gender affirming medical care needs/requests is complex and somewhat difficult to interpret. A series of studies conducted over the last several decades, including some with methodological challenges (as noted by Temple Newhook et al., 2018; Winters et al., 2018), suggest that gender diversity is not consistent for all children as they progress into adolescence: A subset of youth who experienced gender diversity prior to puberty show reduced (or fully discontinued) gender diversity over time (de Vries et al., 2010; Ristori & Steensma, 2016; Singh et al., 2021, Wagner et al., 2021). However, there has been less research focus on rates of continuity and discontinuity of gender diversity and gender-related needs in pubertal and/or adolescent populations. The data available regarding broad *unselected* gender-referred pubertal/adolescent cohorts (from the Amsterdam transgender clinic) suggest that, following extended assessments over time, a subset of gender diverse adolescents presenting for gender care elect not to pursue gender-affirming medical care (Arnoldussen et al., 2019; de Vries et al., 2011). Importantly, findings from studies of gender diverse pubertal/adolescent cohorts who have undergone comprehensive gender evaluation over time, shown persistent gender diversity and gender-related need, and received resulting referrals for medical gender care, suggest very low levels of regret regarding gender-related medical care decisions (de Vries et al., 2014; Wiepjes

EXHIBIT 7



# Updated recommendations for hormone therapy in gender dysphoria in young people

Published: 22/02/2022 at 10:00

Share

The National Board of Health and Welfare today publishes new recommendations regarding hormone therapy of young people under the age of 18 with gender dysphoria. Uncertain science and newly acquired knowledge mean that the National Board of Health and Welfare now recommends restraint when it comes to hormone therapy. At the same time, it is important that children and young people suffering from gender dysphoria are taken seriously, well treated and offered adequate care measures.

Gender dysphoria means that you have a psychological suffering or a impaired ability to function in everyday life, which is caused by gender identity not being consistent with the registered sex. The National Board of Health and Welfare is updating knowledge support for gender dysphoria care for young people and today new recommendations are presented regarding puberty-inhibiting treatment and gender-affirming hormone therapy for young people.

The National Board of Health and Welfare has previously presented statistics showing that the group of young people seeking care for gender dysphoria has increased sharply. Between 2008 and 2018, the number of new cases of diagnosed gender dysphoria multiplied. Particularly large was the increase among those aged 13 to 17 years and with registered sex female at birth.

"The change is greater among young people than older people, and greater within the group with registered sex female than male at birth. Several factors have been put forward as explanations, but it has not been possible to clarify what causes are behind it. As a result, the changes represent an uncertainty that we have had to take into account when it comes to what care should be recommended for minors," says Thomas Lindén, Head of Department at the National Board of Health and Welfare.

## Lack of firm conclusions about the efficacy and safety of treatments

At the request of the National Board of Health and Welfare, SBU has produced a literature review that has reviewed all relevant studies on the efficacy and safety of hormone treatments. The report, which is published today, shows that it is not yet possible to draw any firm conclusions about the efficacy and safety of the treatments based on scientific evidence.

"The conclusion is that very little knowledge has been gained about the effects and safety of treatments since 2015," says Thomas Lindén.

- When the knowledge support for the care of children and adolescents with gender dysphoria was developed in 2015, it was stressed the importance of the measures offered in the framework of the clinical work being systematically followed up and evaluated in the best possible way. Now we see that this has not yet been realised, which contributes to the reason for changing the recommendations.

SBU has also compiled studies on changing perceptions of gender identity or interruption of treatment. It is not possible to determine how common it is for people who undergo gender affirming treatment to later change their perception of their gender identity, discontinue treatment or in any aspect regret it. At the same time, it is documented that detransition occurs, and there may also be a dark number.

"For the group that regrets or cancels a initiated treatment, there may be a risk that the treatment has led to poorer health or quality of life," says Thomas Lindén.

## The risks outweigh the benefits at present

Based on the results that have emerged, the National Board of Health and Welfare's overall conclusion is that the risks of puberty-inhibiting and gender-affirming hormone therapy for those under the age of 18 currently outweigh the possible benefit for the group as a whole.

"The assessment is that treatment with hormones should continue to be given within the framework of research. Increased knowledge is needed, among other things, about the impact of treatments on gender dysphoria, as well as the mental health and quality of life of minors, in both the short and long term," says Thomas Lindén.

"Pending the completion of a research study, our assessment is that the treatments can be given in exceptional cases. Here we propose a number of criteria that care can be based on in the individual clinical assessments.

At the same time, it is important that young people with gender dysphoria continue to receive care and treatment in the healthcare sector. These include both hormonal treatments where they are deemed justified and, for example, psychosocial interventions, child psychiatric treatment and suicide prevention measures when needed.

"Healthcare needs to continue to ensure that children and young people suffering from gender dysphoria are taken seriously, well treated and offered adequate care measures. In the future, this care will become national highly specialized care, and this will increase the opportunities for research and knowledge development in this area of care as well as for further strengthened patient safety and quality," says Thomas Lindén.

Facts

- The National Board of Health and Welfare has an ongoing work to update knowledge support for children and young people with gender dysphoria/gender incongruence.
- The work is carried out in stages and is done on behalf of the Government. Previously, chapters on support and investigation have been published.
- The update is made to weigh in on new knowledge and the changes in the field of care that have taken place since the knowledge support was published in 2015, and to make recommendations for good care based on today's conditions.

Support, investigation and hormone therapy in sex incongruence in children and adolescents

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Support, investigation and hormone therapy in gender incongruence in children and adolescents – Partial update of knowledge support, February 2022

Part number: 2022-2-7774

Published: 22/02/2022

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Socialstyrelsen

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

**CHRISTOPHER FAIN** and **SHAUNTAE ANDERSON;** individually and on behalf of all others similarly situated,

**Plaintiffs,**

**Civil Action No. 3:20-cv-00740**
**Hon. Robert C. Chambers, Judge**

**v.**

**WILLIAM CROUCH,** in his official capacity as Cabinet Secretary of the West Virginia Department of Health and Human Resources; **CYNTHIA BEANE,** in her official capacity as Commissioner for the West Virginia Bureau for Medical Services; and **WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, BUREAU FOR MEDICAL SERVICES,**

**Defendants.**

**AFFIDAVIT OF SARAH YOUNG**

STATE OF WEST VIRGINIA,

COUNTY OF KANAWHA

I, Sarah Young, duly sworn, make oath upon my knowledge as follows:

1. I currently serve as the Deputy Commissioner of Policy and Operations for the West Virginia Bureau for Medical Services (WVBMS).

2. I have knowledge regarding the West Virginia State Medicaid Plan, including whether coverage is provided for certain procedures and diagnostic codes.

3. Surgical treatment for hypomastia is not a covered service under the West Virginia State Medicaid Plan; thus, mammoplasty or other breast augmentation for hypomastia is not a covered service under the West Virginia State Medicaid Plan.

4. The coverage determination for surgical treatment for hypomastia does not consider and is not affected by a patient's gender identity.

5. Likewise, surgical treatment for gynecomastia is not a covered service under the West Virginia State Medicaid Plan unless the patient's condition is symptomatic.

6. The coverage criteria for surgical treatment of gynecomastia require the patient's condition to cause physical symptoms. Psychosocial symptoms are not sufficient to meet the coverage criteria for surgical treatment of gynecomastia.

7. The coverage determination for surgical treatment for gynecomastia does not consider and is not affected by a patient's gender identity.

8. Surgical treatment is not a covered service under the West Virginia State Medicaid Plan for any DSM-V diagnosis.

9. The coverage determination for surgical treatment for any DSM-V diagnosis does not consider and is not affected by a patient's gender identity.

10. Surgical treatment, including mastectomy, is a covered service for breast cancer under the West Virginia State Medicaid Plan.

11. The coverage determination for surgical treatment for breast cancer does not consider and is not affected by a patient's gender identity.

AND FURTHER AFFIANT SAYETH NOT.

Sarah Young
Deputy Commissioner of Policy and Operations
West Virginia Bureau for Medical Services

***NOTARY PAGE TO FOLLOW***

Sworn and subscribed to before me this 27th day of May, 2022.

My commission expires: July 28, 2026

Kimberly M. O'Brien
NOTARY PUBLIC

[SEAL]

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Kimberly Michelle O'Brien
WV DHHR Bureau for Medical Services
350 Capitol St. Rm 251, Charleston, WV 25301
My Commission Expires July 28, 2026

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
3 HUNTINGTON DIVISION
4 ------------------------------------------------------------
5 Christopher Fain, individually and on behalf of all
6 others similarly situated, et al.,
7 Plaintiffs,
8 vs. CIVIL ACTION NO. 3:20-cv-00740
9 William Crouch, et al.,
10 Defendants.
11 ------------------------------------------------------------
12
13
14 REMOTE VIDEOTAPED DEPOSITION OF DR. STEPHEN LEVINE
15
16
17
18 DATE: April 27, 2022
19 TIME: 8:00 a.m. CST
20 PLACE: Veritext Virtual Videoconference
21
22
23
24 REPORTED BY: KELLEY E. ZILLES, RPR (Via Videoconference)
25 JOB NUMBER: 5176996

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22
23 ALSO PRESENT: Kraig Hildahl, Videographer
24 (Via Videoconference)
25

1 healthcare?
2 A. Yes.
3 Q. And you testified in the Klair deposition that
4 you provided that if you provide a letter of
5 authorization to a patient for endocrine treatment, it's
6 nice if they can access that treatment if it might be
7 helpful to them, right?
8 A. Yes.
9 Q. And if you were treating a patient and
10 determined that they understood the risks and you and
11 the patient agreed the treatment would be -- actually,
12 let me back up, sorry. When you authorize medical
13 interventions for transgender patients, Dr. Levine, you
14 don't use the word medically necessary, right?
15 A. I generally do not.
16 Q. Is it correct to say that you use the word
17 psychologically beneficial?
18 A. Yes, it may be psychologically beneficial.
19 Q. Okay. So if you were treating a patient and
20 determined, as I said before, that the patient
21 understood the risks and you thought the treatment would
22 be psychologically beneficial, you would want the
23 patient to then be able to access that care, right?
24 A. Did you ask me this question expecting a yes or
25 no answer?

1 Q. Let me ask the question again. If you were
2 treating a patient and determined that they understood
3 the risks and you thought the treatment would be
4 psychologically beneficial and you provided letters of
5 authorization to them, you would want the patient then
6 to be able to access the care, right?
7 A. If after getting the letter of authorization the
8 patient still wanted to do it, then I had already said
9 to the endocrinologist or the surgeon it's okay with me
10 to go ahead, that I've done my due diligence in this
11 case.
12 But the reason I'm hesitating, Mr. Charles, is
13 that I've had several experiences, more than several,
14 where I write a letter of recommendation for a desired
15 treatment and then the patient does not follow through
16 as a reflection of ambivalence about what they're doing.
17 So I don't want to say that if I wrote a letter of
18 recommendation for a particular treatment that I would
19 want him to have it. I would say that if the patient
20 still wants to after they have the go-ahead from me
21 who's worked with the patient for a long time, then they
22 may go ahead and do it and they have my blessing. But I
23 am aware of the ambivalence that people have that
24 manifest itself only after they're on the verge of
25 getting what they say they want, and so that's why I

1 want to not answer your question yes or no.
2 Q. I understand. And I, embedded in my question
3 and what I can state explicitly is let's talk about the
4 patient who, as you say, does not have that ambivalence,
5 that as you said, you would give your blessing or you
6 have authorized it?
7 A. Is that a question?
8 Q. Yes.
9 A. Well, No. 1, theoretically I think any
10 reasonable human being would have ambivalence about
11 changing their body, and so.
12 Q. Dr. Levine, sorry, I don't think you're
13 understanding my question. Let me, let me restate it
14 for you.
15 A. Yes, okay.
16 Q. So I, I appreciate what you've described the
17 nuance, but I, that's not my question. The question is,
18 you've provided the letter of authorization, you're not
19 working with the patient who has ambivalence or who has
20 changed direction or changed course rather in their
21 desires, but rather a patient who has said yes, this is
22 right for me. Given that hypothetical, you would then
23 want the patient to be able to access that care provided
24 there's not any of that ambivalence?
25 MR. DAVID: Objection to the form.

1 this care and then after they lived following the care
2 they decided that their problems have not been solved
3 and they decided to return to the gender expression --
4 Q. I understand that, Dr. Levine, and I'm not
5 actually contesting the assertion in your, in your
6 report that detransition exists at all.
7 A. All right.
8 Q. What I'm asking about is your assertion in the
9 latter half of that sentence that says that there is a
10 growing number of young people who regret transition and
11 wish to reverse it. Again, I'm just trying to
12 understand what you're saying here and on what basis you
13 are making those assertions.
14 So I'm not asserting whether or not
15 detransitioning exists, my question is, this study did
16 not look at how many detransitioners are there now as
17 opposed to any other time in history, it was not a
18 qualitative or quantitative analysis. It was a study
19 according to the abstract here, and I'm just asking you
20 to confirm that, about the specific needs of
21 detransitioners, both psychological, medical, other
22 kinds of support, right? So that's what I'm saying is
23 this study is not, the aim is not to quantify the number
24 of, whether the number of detransitioners is growing or
25 shrinking or staying the same, right?

1 A. Yes, I can answer to your question, correct.
2 Q. Okay.
3 A. But it doesn't mean that -- I think you're
4 missing the point. And, and by, by having me say yes,
5 that it doesn't quantify the incidents of detransition,
6 it's missing the point.
7 Q. I understand that, Dr. Levine. But if your
8 point was, if your point in your report was detransition
9 is a thing and here are the psychological supports that
10 these people need, that's what you should have written,
11 but that's not what you wrote. You wrote that a growing
12 number of young people regret transition and wish to
13 reverse it.
14 So my question to you about the article you rely
15 on for that contention is, this article doesn't say
16 that, this article is not a study of the growing numbers
17 or small or diminishing numbers or staying the same
18 numbers of people who detransitioned. That's what I'm
19 asking you to confirm.
20 A. What I am confirming is that this particular
21 paper talks about 237 people who have detransitioned and
22 that WPATH has no serious discussion of detransition,
23 there's no chapter on this, on this phenomenon which is
24 extremely relevant to the care of transgender people,
25 especially transgender young people.

1 The reason I cited this is 237, and the reason,
2 the next thing, Littman is another additional 100
3 people. And if you, if you read closely some of the
4 references in this particular article, there is
5 Exposito-Campos' article talking about subreddit and the
6 number of people who were discussing detransition.
7 So what I'm saying if WPATH is responsible for,
8 for providing a scientific basis for affirmative care,
9 they must talk about the error rate as represented by
10 detransitioned people. And four years ago we had no
11 idea about the, the rate of detransitioned people and
12 today we have two studies that have been published from
13 the UK that begin to give us a rate of detransition.
14 And so to me you are making the wrong point and
15 that I have not been in error. You just have
16 misunderstood the difference of why I cited these
17 particular papers. These particular papers just
18 demonstrate that detransition is a real problem and, and
19 it is a moral and ethical and scientific problem. And
20 that WPATH if it's going to deal with the science of
21 transition, it has to deal with the error rates and what
22 happens to people who detransition, you see. And so I
23 don't, I don't have nothing more to say about that, I
24 just think your point is quite irrelevant.
25 Q. Okay. Well, I'm going to continue to ask you

1 REPORTER'S CERTIFICATE
2
3
STATE OF MINNESOTA )
4 ) ss.
COUNTY OF WASHINGTON )
5
6 I hereby certify that I reported the Zoom videotaped deposition of Dr. Stephen Levine on the 27th day of
7 April 2022, and that the witness was by me first duly sworn to tell the whole truth;
8
That the testimony was transcribed by me and is a
9 true record of the testimony of the witness;
10 That the cost of the original has been charged to the party who noticed the deposition, and that all
11 parties who ordered copies have been charged at the same rate for such copies;
12
That I am not a relative or employee or attorney or
13 counsel of any of the parties, or a relative or employee of such attorney or counsel;
14
That I am not financially interested in the action
15 and have no contract with the parties, attorneys, or persons with an interest in the action that affects or
16 has a substantial tendency to affect my impartiality;
17 That the right to read and sign the deposition by the witness was reserved.
18
WITNESS MY HAND AND SEAL THIS 27th day of May 2022.
19
20
21
22
23
24 Kelley E. Zilles, RPR
Notary Public, Washington County, Minnesota
25 My commission expires 1-31-2025

1 DEPOSITION REVIEW
CERTIFICATION OF WITNESS
2
ASSIGNMENT REFERENCE NO: 5176996
3 CASE NAME: Fain, Christopher Et Al v. Crouch, William Et Al
DATE OF DEPOSITION: 4/27/2022
4 WITNESS' NAME: Dr. Stephen Levine
5 In accordance with the Rules of Civil
Procedure, I have read the entire transcript of
6 my testimony or it has been read to me.
7 I have listed my changes on the attached
Errata Sheet, listing page and line numbers as
8 well as the reason(s) for the change(s).
9 I request that these changes be entered
as part of the record of my testimony.
10
I have executed the Errata Sheet, as well
11 as this Certificate, and request and authorize
that both be appended to the transcript of my
12 testimony and be incorporated therein.
13 6/1/2022 SB Levine MD
Date Dr. Stephen Levine
14
Sworn to and subscribed before me, a
15 Notary Public in and for the State and County,
the referenced witness did personally appear
16 and acknowledge that:
17 They have read the transcript;
They have listed all of their corrections
18 in the appended Errata Sheet;
They signed the foregoing Sworn
19 Statement; and
Their execution of this Statement is of
20 their free act and deed.
21 I have affixed my name and official seal
22 this 1st day of June, 2022.
23 Cheryl A Kostura
Notary Public
24 CHERYL A. KOSTURA
NOTARY PUBLIC, STATE OF OHIO
My Commission Expires Dec. 18, 2026
12/18/2026
25 Commission Expiration Date

1 ERRATA SHEET

VERITEXT LEGAL SOLUTIONS MIDWEST

2 ASSIGNMENT NO: 5176996

| PAGE/LINE(S) / | CHANGE | /REASON |
| --- | --- | --- |
| 100 / 1 | RAPIDITY | misspelled |
| 241 / 4 | de VRIES | misspelled |

19 6/1/2022 Stephen B Levine MD

20 Date Dr. Stephen Levine

21 SUBSCRIBED AND SWORN TO BEFORE ME THIS 1st

22 DAY OF June, 2022.

23 Cheryl A Kostura

Notary Public

24 CHERYL A. KOSTURA
NOTARY PUBLIC • STATE OF OHIO
My Commission Expires Dec 12, 2026

Oct 2022 26

25 Commission Expiration Date

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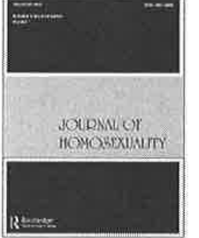

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# Detransition-Related Needs and Support: A Cross-Sectional Online Survey

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**ABSTRACT**
The aim of this study is to analyze the specific needs of detransitioners from online detrans communities and discover to what extent they are being met. For this purpose, a cross-sectional online survey was conducted and gathered a sample of 237 male and female detransitioners. The results showed important psychological needs in relation to gender dysphoria, comorbid conditions, feelings of regret and internalized homophobic and sexist prejudices. It was also found that many detransitioners need medical support notably in relation to stopping/changing hormone therapy, surgery/treatment complications and reversal interventions. Additionally, the results indicated the need for hearing about other detransitioners' experiences and meeting each other. A major lack of support was reported by the respondents overall, with a lot of negative experiences coming from medical and mental health systems and from the LGBT+ community. The study highlights the importance of increasing awareness and support given to detransitioners.

**KEYWORDS**
Detransition; gender dysphoria; gender identity; cross-sex hormones; detransitioners; transgender; transition; support

## Introduction

In recent years, there has been an increasing interest in the phenomenon of detransition. Many testimonies have been shared by self-identified detransitioners online and detrans communities have formed on social media. This phenomenon started to attract the attention of scholars, who have emphasized the need for research into the specific needs of this group (e.g., Butler & Hutchinson, 2020; Entwistle, 2020; Hildebrand-Chupp, 2020). A few case studies have been conducted in order to explore individual experiences of detransition (Pazos-Guerra et al., 2020; Turban & Keuroghlian, 2018). The latter studies highlighted the complexity of detransition experiences but did not provide sufficient data to assess the general needs and characteristics of detransitioners. The current study aims to explore this issue in more depth and to serve as a basis for future research on the phenomenon of detransition.

To date there has been little agreement on a definition of the word "detransition." As explained by Expósito-Campos (2021), this term has been used interchangeably to refer to what he perceives to be two distinctive situations: in

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the first, the detransitioning individual stops identifying as transgender; in the second, they do not. It is therefore necessary here to clarify exactly what is meant when writing about detransition.

In this paper, I will be using the following concepts: "medical detransition," "social detransition" and (male or female) "detransitioner." Medical detransition refers to the process of ceasing/reversing the medical aspects of one's medical transition. This might include stopping or changing hormone therapy and undergoing reversal surgeries, among others. Likewise, social detransition refers to the process of changing/undoing the social aspects of one's social transition. For example, it might include presenting oneself as one's birth sex again, changing one's post-transition name or going back to using the pronouns associated with one's birth sex.

The term "detransitioner" will be used here to refer to someone who possibly underwent some of these medical and/or social detransition steps and, more importantly, who identifies as a detransitioner. It is important to add this dimension, because the act of medical/social detransition can be performed by individuals who did not cease to identify as transgender and who do not identify as detransitioners or as members of the detrans community. Furthermore, some individuals might identify as detransitioners after having ceased to identify as trans, while not being in a position to medically or socially detransition due to medical or social concerns. As Hildebrand-Chupp (2020) puts it: "[B]ecoming a detransitioner involves a fundamental shift in one's subjective understanding of oneself, an understanding that is constructed within these communities." (p.802). More qualitative research should be conducted in order to better understand how members of the detrans community define themselves and make sense of their own detransition process. However, this goes beyond the scope of this study.

The creation of support and advocacy groups for detransitioners in recent years (e.g., DetransCanada, n.d., Detrans Voices, n.d., The Detransition Advocacy Network, n.d., Post Trans, n.d.) testifies to the formation of a detrans community whose members have specific needs. Scholars and clinicians have recently started raising concerns around the topic (e.g., Butler & Hutchinson, 2020; Entwistle, 2020; Hildebrand-Chupp, 2020; Marchiano, 2020). However, little research has been done specifically into the characteristics of this seemingly growing community.

Two informal surveys conducted by detransitioners (Hailey, 2017; Stella, 2016) have explored the demographics and (de)transition experiences of members of online female detrans communities. These will constitute interesting points of comparison in the discussion section of the current research.

The purpose of this exploratory study is to offer an overview of the current needs of detransitioners from online detrans communities, which will hopefully serve as a useful basis for further experimental studies around the topic of detransition. The current research primarily seeks to address the following

questions: What are the current needs of detransitioners? What support is given to detransitioners in order to fulfil these needs?

## Methods

### *Procedure*

A cross-sectional survey was conducted, using online social media to recruit detransitioners. Access to the questionnaire was open from the 16th of November until the 22nd of December 2019. Any detransitioner of any age or nationality was invited to take part in the study. The survey was shared by Post Trans (www.post-trans.com)—a platform for female detransitioners—via public posts on Facebook, Instagram and Twitter. Participants were also recruited through private Facebook groups and a Reddit forum for detransitioners (r/detrans). Some of the latter platforms were addressed exclusively to female detransitioners. The purpose of the study was presented as gaining a better understanding of detransitioners' current needs. Potential participants were asked to fill out the form and share it to fellow detransitioners. All participants have been fully anonymized.

Everyone who answered "yes" to the question "Did you transition medically and/or socially and then stopped?" was selected in the study. The individual questionnaires of the 9 respondents who answered "no" to this question were looked at closely, in order to assess whether they should be included in the study. Eight of them were added to the final sample, as their other answers indicated that their experiences lead them to identify as detransitioners.

This research was approved by the Ethics Committee for Noninvasive Research on Humans in the Faculty of Society and Economics of the Rhine-Waal University of Applied Sciences

### *Questionnaire design*

The questionnaire consisted of 24 questions (see Appendix). The first series of questions was aimed at defining the profile of the respondent (age, sex, country, etc.), the second was asking about relevant aspects of transition and detransition experiences (transition type, gender dysphoria, therapy, medical interventions, reasons for detransitioning etc.), and the third focused on the needs encountered as well as the support (or lack of) received during the process of detransition (medical, psychological, legal and social needs and support).

Most of the items were multiple-choice questions. The conception of the multiple choices was based on observations drawn from several detransition online resources and forums. An open "other" category was available when relevant for the respondents to write in possibly lacking options. The survey

was designed to leave a lot of free space to add answers, since the detransition population is still very much under-researched and there is a lot to learn from each of its members. This is why a more qualitative approach was taken for the last question notably, leaving an open field for adding comments about the support—or lack of—received while detransitioning. This qualitative data was analyzed through the identification of recurrent themes, which will be presented in the results section.

### *Participants*

A total of 237 participants were included in the final sample. The large majority was female; 217 female (92%) for 20 male respondents (8%). This was determined based on the answers to the question: "What sex were you assigned at birth?" The average age was 25.02 years (SD = 7.72), ranging from 13 to 64. The mean age of female detransitioners (M = 24.38; SD = 6.86) was lower than that of male detransitioners (M = 31.95; SD = 12.26).

Around half of the sample (51%) reported coming from the United States and close to a third from Europe (32%). Fifteen respondents are from Canada (6%), twelve from Australia (5%), and one from each of the following countries: Brazil, Kazakhstan, Mexico, Russia and South Africa.

Close to two thirds (65%) transitioned both socially and medically; 31% only socially. A few respondents rightly criticized the fact that the option of medically transitioning only was not available in the questionnaire. The absence of this option needs to be kept in mind when looking at the results.

Around half (51%) of the respondents started socially transitioning before the age of 18, and a quarter (25%) started medically transitioning before that age as well. The average age of social transition was 17.96 years (17.42 for females; 23,63 for males) (SD = 5.03) and that of medical transition was 20.70 years (20.09 for females; 26.19 for males) (SD = 5.36). Fourteen percent of the participants detransitioned before turning 18. The average age of detransition was 22.88 years (22.22 for females; 30.00 for males) (SD = 6.46). The average duration of transition of the respondents (including both social and medical transition) was 4.71 years (4.55 for females; 6.37 for males) (SD = 3.55).

Eighty percent of the male detransitioners underwent hormone therapy, compared to 62% for female detransitioners. Out of the respondents who medically transitioned, 46% underwent gender affirming surgeries.

## Results

For sake of clarity, the results will be presented based on the three categories mentioned above in the methods section: profile of the respondents, relevant aspects of transition and detransition and, finally, detransition-related needs and support. The qualitative results will be displayed at the end of this section.

### *Profile of the respondents*

Most of the information related to the profile of the respondents can be found in the methods section. The sample showed a high prevalence of comorbidities, considering that over half of the participants (54%) reported having had at least 3 diagnosed comorbid conditions (out of the 11 conditions listed in the survey—see Table 1). The most prevalent diagnosed comorbid conditions are depressive disorders (69%) and anxiety disorders (63%), including PTSD (33%) (see Table 1).

### *Relevant aspects of transition and detransition*

A great majority of the sample (84%) reported having experienced both social and body dysphoria. (Social dysphoria being defined as a strong desire to be seen and treated as being of a different gender, and body dysphoria as a strong desire to have sex characteristics of the opposite sex/rejection of your own sex). Eight percent reported having experienced only body dysphoria, 6% only social dysphoria and 2% neither of them.

Forty-five percent of the whole sample reported not feeling properly informed about the health implications of the accessed treatments and interventions before undergoing them. A third (33%) answered that they felt partly informed, 18% reported feeling properly informed and 5% were not sure.

The most common reported reason for detransitioning was realized that my gender dysphoria was related to other issues (70%). The second one was health concerns (62%), followed by transition did not help my dysphoria (50%), found alternatives to deal with my dysphoria (45%), unhappy with the social changes (44%), and change in political views (43%). At the very bottom of the list are: lack of support from social surroundings (13%), financial concerns (12%) and discrimination (10%) (see Figure 1).

34 participants (14%) added a variety of other reasons such as absence or desistance of gender dysphoria, fear of surgery, mental health concerns related

**Table 1.** Number of participants with comorbid conditions.

| Comorbid condition | Diagnosed | Suspected |
|---|---|---|
| Depressive disorder | 163 (70%) | 32 (14%) |
| Anxiety disorder | 149 (63%) | 43 (18%) |
| Post-traumatic stress disorder | 79 (33%) | 63 (27%) |
| Attention deficit disorder | 57 (24%) | 50 (21%) |
| Autism spectrum condition | 47 (20%) | 61 (26%) |
| Eating disorder | 46 (19%) | 58 (25%) |
| Personality disorder | 40 (17%) | 26 (11%) |
| Obsessive compulsive disorder | 35 (15%) | 44 (19%) |
| Polycystic ovary syndrome (only females) | 22 (10%) | 13 (6%) |
| Dissociative identity disorder | 14 (6%) | 23 (10%) |
| Schizo-spectrum disorder | 5 (2%) | 9 (4%) |

"Diagnosed" and "Suspected" were mutually exclusive categories.

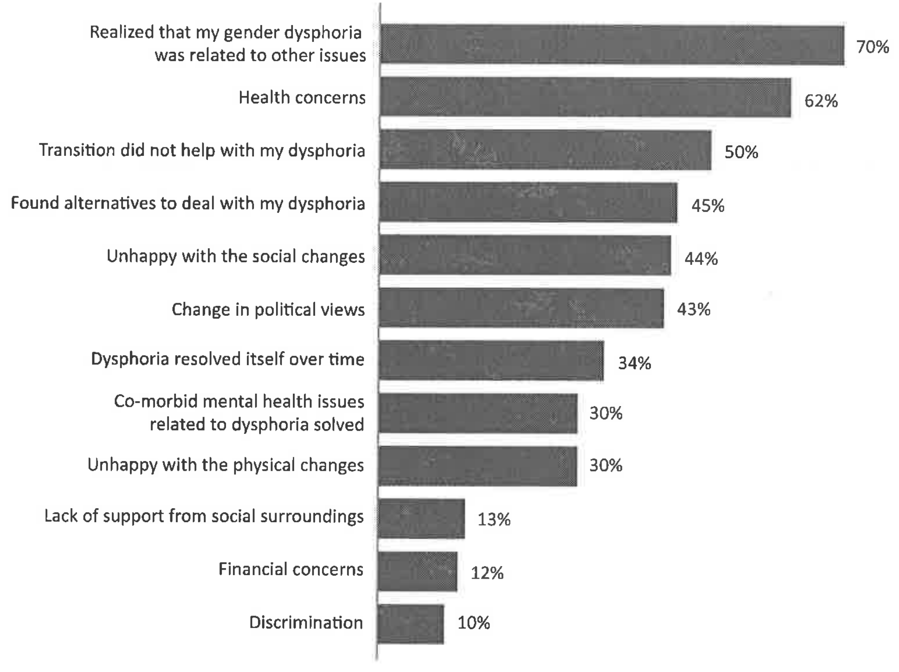


**Figure 1.** Reasons for detransitioning.

to treatment, shift in gender identity, lack of medical support, dangerosity of being trans, acceptance of homosexuality and gender non-conformity, realization of being pressured to transition by social surroundings, fear of surgery complications, worsening of gender dysphoria, discovery of radical feminism, changes in religious beliefs, need to reassess one's decision to transition, and realization of the impossibility of changing sex.

### *Detransition-related needs and support*

The different types of needs were divided into four categories in the questionnaire: medical, psychological, legal and social needs.

#### *Medical needs*

The most commonly chosen answer was the need for receiving accurate information on stopping/changing hormonal treatment (49%), followed by receiving help for complications related to surgeries or hormonal treatment (24%) and receiving information and access to reversal surgeries/procedures (15%). Forty-six percent of the participants reported not having any detransition-related medical need. Sixteen respondents (7%) added another non-listed answer, such as tests to determine current reproductive health, information

about long-term effects of hormone therapy, about the health consequences of having had a full hysterectomy and about pain related to chest binding.

***Psychological needs***

Psychological needs appeared to be the most prevalent of all, with only 4% of the respondents reporting not having any. The answers working on comorbid mental issues related to gender dysphoria and learning to cope with gender dysphoria; finding alternatives to medical transition are at the top of the list, both with 65%. Below that, learning to cope with feelings of regret (60%), followed by learning to cope with the new physical and/or social changes related to detransitioning (53%) and learning to cope with internalized homophobia (52%). Thirty-four respondents (14%) added another non-listed answer, such as trauma therapy, learning how to deal with shame and internalized misogyny, how to cope with rejection from the LGBT and trans communities and how to deal with the aftermath of leaving a manipulative group. Other answers disclosed the need for help recovering from addictive sexual behavior related to gender dysphoria, psychosexual counseling and peer support.

***Legal needs***

More than half of the sample (55%) reported not having any detransition-related legal need. The main legal need expressed was changing back legal gender/sex marker and/or name (40%), followed by legal advice and support to take legal action over medical malpractice (13%). Five respondents (2%) added another non-listed answer, such as employment legal aid and support to take legal action for having been forced to go through a sterilization.

***Social needs***

The big majority of the respondents reported a need for hearing about other detransition stories (87%). The second most common answer was getting in contact with other detransitioners (76%), followed by receiving support to come out and deal with negative reactions (57%). Thirty-three respondents (14%) added another non-listed answer such as being accepted as female while looking male, help navigating social changes at the workplace, building a new social network, more representation of butch lesbians, real life support and finding a community.

When looking at from whom the respondents received support while transitioning and detransitioning, it appears that the biggest source of help comes from online groups/forums/social media for both transition and detransition (65%). The support received from friends, partner(s) and family is a little higher for detransition (64%) than for transition (56%).

Only 8% of the respondents reported having received help from an LGBT+ organization while detransitioning, compared to 35% while transitioning.

Similarly, 5% reported having received help from a trans-specific organization while detransitioning, compared to 17% while transitioning.

A total of 29% reported having received support for their detransition from the medical professionals that helped them during their transition. In contrast, 38% sought support from a new therapist/doctor. A part of the sample reported not receiving help from anybody for transitioning (8%) and for detransitioning (11%) (see Figure 2).

Around half of the respondents (51%) reported having the feeling of not having been supported enough throughout their detransition, 31% said they did not know and 18% answered that they had received enough support.

### Qualitative results

Two open-ended questions allowed participants to write more extensively about their needs and support in the questionnaire. The first one enabled the respondents to write about any additional need that they encountered while detransitioning, while the second asked about the support—or lack of—that they had received.

#### Additional comments about needs

Thirty-seven participants (16%) left various comments about specific needs that they experienced during their transition and detransition.

Several respondents expressed the need for different types of therapy and counseling for dealing with issues of dissociation, childhood sexual trauma, anorexia, relationship issues and body issues caused by irreversible gender affirming surgeries. A participant also mentioned the importance of help revolving around suicide prevention for those who need it.

Additionally, someone emphasized the need for therapists to validate the feelings of being harmed by transition that some detransitioners experience, rather than dismissing or opposing them. Similarly, another respondent expressed the need for non-judgmental medical practitioners. Someone else described the need for as much medical autonomy as possible and a total freedom from psychology and psychiatry. A participant also explained that she would have needed to know the health risks of chest binding before experiencing them.

Furthermore, two respondents highlighted the need to look into individual experiences and needs without forcing them into a rigid model of transition. Others wrote about the need for more information about detransition and a better general understanding of this phenomenon.

Lastly, a few female detransitioners expressed the need for being valued as a woman, for learning about feminist theories and for more gender-nonconforming role models.

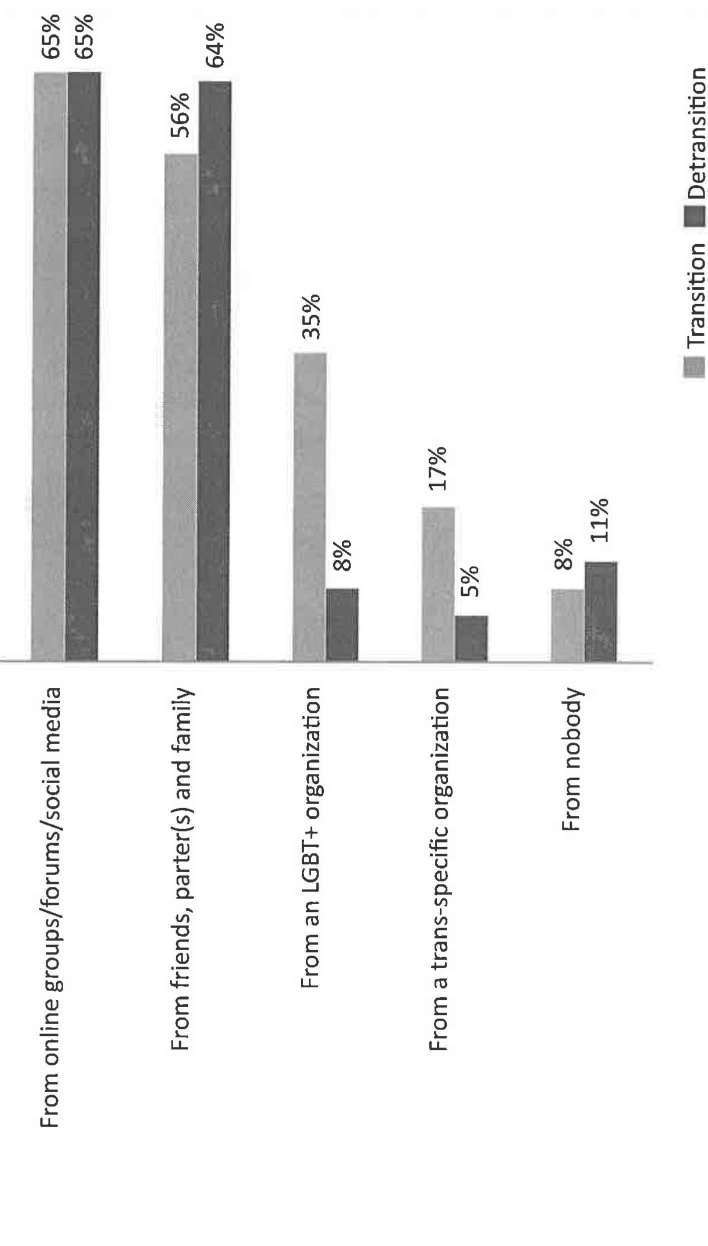


**Figure 2.** Comparison between transition and detransition support.

### *Additional comments about support*

At the end of the questionnaire, a second open-ended question invited the participants to give further comments about the support—or lack of—that they had received during their detransition process.

A third of the participants (34%) answered this question, often with long and detailed accounts of their personal experiences with regard to this aspect. The most common themes identified were: loss of support from the LGBT community and friends (see Table 2), negative experiences with medical professionals (see Table 3), difficulty to find a detrans-friendly therapist and lack of offered alternatives to transitioning (see Table 4), as well as isolation and lack of overall support. Some gave more positive accounts of the support that they had received from their family, partners and friends and emphasized their important role.

A recurrent theme in the answers was a sense amongst respondents that it was very difficult to talk about detransition within LGBT+ spaces and with trans friends. Many expressed a feeling of rejection and loss of support in relation to their decision to detransition, which lead them to step away from LGBT+ groups and communities (see Table 2).

Whilst a minority reported positive experiences with medical professionals during their detransition, most participants expressed strong difficulties finding the help that they needed during their detransition process. Participants' own descriptions of the nature of these difficulties can be found in Table 3.

Another reported issue was the difficulty of finding a therapist willing and able to look at the factors behind gender dysphoria and to offer alternatives to transitioning. Some respondents highlighted the fact that they were

**Table 2.** Extracts about experiences of exclusion from LGBT+ communities.

| |
|---|
| "The LGBT+ community doesn't support detransitioners and I lost all LGBT+ friends I had because they deemed me transphobic/terfy, only non-LGBT+ friends supported me." |
| "Where I live detransitioners are seen bad for most of the LGBT community, so it's hard to talk about it with freedom." |
| "It is unacceptable that, at least in my experience, detransition is not something allowed to be talked about in LGBT spaces." |
| "Only lesbians and feminists helped me. The trans and queer community demonized me and ostracized me for my reidentification." |
| "I lost a lot of support and attracted a lot of hostility from trans people when I detransitioned socially. I also deal with a lot of people assuming that my dysphoria is gone entirely/cured because I have detransitioned socially, and decided not to go through with medical transition." |
| "Lgbt organizations don't want to talk about detransition. I did not feel welcome at lgbt events after I detransitioned." |
| "Telling my trans friends that I'm desisting is nearly impossible. The community is too toxic to allow any kind of discussion about alternatives to transition, sources of dysphoria beyond 'that's just who you are', or stories about detransitioners." |
| "I've been shunned by most of my trans identifying friends. I had to leave my old doctor, therapist and LGBT group out of shame and embarrassment." |
| "I have several de-trans friends whom had permanent body alterations they regretted that led to more dysphoria and eventually their suicides. Biggest factors were a lack of medical support and outright rejection from LGBT organisations/communities." |
| "I still have transgender friends who don't want me to talk about detransition. They're okay with me being detransitioned, but they don't want me to criticize transition or discuss the negative side effects of HRT." |

Table 3. Extracts about negative medical experiences during detransition.

| |
|---|
| "I needed gender and transition experienced providers to assist with my medical detransition, but none of them seemed to understand or provide the type of care I needed, despite my self-advocacy. I got better care from providers outside of the LGBT and transgender specialty clinics." |
| "I still struggle to find a doctor who has knowledge of detransition and the effects HRT had on me/my best course of action since stopping." |
| "When I first brought up wanting to stop T to my doctor, they were very dismissive and condescending about it." |
| "My experience with transition left me with greatly diminished faith in medicine and zero faith in the mental health profession. I now avoid all doctors most of the time (unless I am convinced they are the only way to access a strongly evidence-based treatment or diagnostic tool for a condition which causes more suffering than doctors themselves- many do not) and totally avoid any contact with mental health professionals, and am much better off for it." |
| "As soon as I 'detransed' I was discharged from all gender services, despite asking for help in dealing with sex dysphoria should it arise again." |
| "I had no medical help from the doctor who prescribed me T, she wanted nothing to do with me." |
| "The team that transitioned you is not willing to help you detransition. You need new doctors." |
| "The medical team that helped me transition is helpful, but they are also causing a lot of hassle, which is very frustrating for me. Like for example they keep me stuck with my male sex marker for I don't know how long, and they don't believe I'm sure enough that I want to detransition, because they think I should have consistent 'reverse dysphoria' and mine kinda isn't so consistent." |
| "My hormone blocker implant is several years old and is only barely still functioning but they will not remove it. It's in my arm and I have no contact with the doctor because he shut down his business apparently." |

Table 4. Extracts about the difficulty of finding a detrans-friendly therapist.

| |
|---|
| "It is very hard to find a therapist who won't tell you it's 'internalized transphobia' or that dealing with dysphoria in other ways is 'conversion therapy'." |
| "The only thing that comes to mind is one of the therapists I had, who pushed me not to detransition." |
| "Therapists are unprepared to handle the detrans narrative and some that I have seen since detransitioning have pushed the trans narrative. Some therapists couldn't tell the difference between being transgender and having internalized misogyny and homophobia." |
| "I could have benefitted from counseling but don't trust psychologists ideological bias." |
| "I struggled to find a therapist who supported questioning my trans identity and considering alternatives to transitioning; most only knew how to encourage transitioning and reinforced the harmful ideas that led to my wrongly identifying as FtM in the first place." |
| "I was doubtful that transition would help my dysphoria before beginning and was assured by multiple professionals that transition was The Solution and proven to work for everyone with dysphoria. A 'gender specialist' therapist flat-out told me that transitioning was the only method of reducing dysphoria that worked when I expressed my desperation for an alternate solution." |
| "The gender clinic I went to basically told me that the only way to deal with gender dysphoria was transitioning even when I told them I wanted to detransition." |
| "I struggled to find a therapist who supported questioning my trans identity and considering alternatives to transitioning; most only knew how to encourage transitioning and reinforced the harmful ideas that led to my wrongly identifying as FtM in the first place." |
| "The biggest issue for me was that when I did try to get support from a therapist or psychologist on entangling the actual reasons behind my dysphoria and how to deal with it, and deal with detransitioning, nobody had any clue or any experience, so they couldn't help me. Which made me even feel more lonely, and made detransitioning so much harder mentally than transitioning was." |

cautious regarding the possible ideological bias or lack of knowledge of therapists.

Overall, most respondents explained that their detransition was a very isolating experience, during which they did not receive enough support. However, some participants emphasized the fact that the support that they received from their family, partners and friends, as well as online detrans groups and lesbian and feminist communities was extremely important and valuable to them.

## Discussion

The present study was designed to better understand the needs of detransitioners, as well as the support—or lack of—that they are currently receiving. In order to do so, members of online detrans communities were recruited to answer a survey, in which questions were asked about their demographics, their transition and detransition experiences and the needs that they faced as well as the support that they received while detransitioning. In this section, I will discuss the results in relation to the main research question of the current study: What are the needs of detransitioners?

The sample surveyed appeared to be mostly female, young, from Western countries, with an experience of both social and medical transition and a high prevalence of certain comorbid conditions. The current study found that most detransitioners stopped transitioning before their mid-twenties, after an average of 4 years of transition. This observation is consistent with that made by Stella (2016) in her informal study on female detransitioners. The average transition age of the 203 respondents of her survey was 17.09 years, compared to 17.42 years in female detransitioners of the current study. The average detransition age of her sample was 21.09 years, compared to 22.22 years here.

Another finding of the current study was that a majority of the sample underwent hormone therapy (62% for females; 80% for males) and 45% of those who medically transitioned underwent gender affirming surgeries. This is likely to have implications in terms of the medical needs faced by this population. Close to half of the sample (49%) reported a need for receiving accurate information on stopping or changing hormone therapy, and almost a quarter (24%) reported the need for receiving help for complications related to surgeries or hormone therapy. The latter finding is concerning when looking at the negative medical experiences described by respondents in Table 3. Participants recounted situations in which their doctors either did not believe them, did not listen to them, refused them services, or simply did not have the required knowledge to help them during their detransition process. These experiences had a negative impact on some of the participants' trust in healthcare providers.

Similarly, the current study suggested that detransitioners have important psychological needs. This was made visible on the one hand through the fact that a majority of respondents (65%) reported the need for help in working on comorbid mental conditions related to gender dysphoria and in finding alternatives to medical transition. Other needs were reported by a majority of participants, such as learning to cope with feelings of regret (60%), learning to cope with the new physical and/or social changes related to detransitioning (53%) and learning to cope with internalized homophobia (52%). On the other hand, the high prevalence of comorbid conditions described in Table 1 might also be an indicator of important psychological needs. These results are similar

to that found by Hailey (2017) in her informal survey of comorbid mental health in detransitioned females. In her study, 77% reported a diagnosis of a depressive disorder (compared to 70% here), 74% of the sample reported a diagnosis of an anxiety disorder (compared to 63% here), 32% reported a diagnosis of PTSD (compared to 33% here) and 22% reported a diagnosis of an eating disorder (compared to 19% here). This is also very concerning information considering the descriptions made by detransitioners about the difficulty of finding a therapist willing or able to help them, and of finding alternative ways to deal with gender dysphoria after detransitioning (see Table 4).

The majority (84%) of the respondents reported having experienced both body and social gender dysphoria. Half of the sample (50%) later reported having decided to detransition due to the fact that their transition did not alleviate their gender dysphoria. Others (45%) reported having found alternative ways to deal with their gender dysphoria (see Figure 1). These results highlight the necessity to start looking into alternative solutions for treating gender dysphoria, in order to help those who did not find medical and/or social transition fulfilling.

In addition to that, 70% of the sample reported having realized that their gender dysphoria was related to other issues. Further research should be conducted in order to identify the ways in which other issues such as comorbid mental health conditions, trauma or internalized misogyny and homophobia possibly interact with gender dysphoria, and what can be done to alleviate them.

Furthermore, the high prevalence of autism spectrum condition (ASC) (20%) found in detransitioners in the current study, which is supported by Hailey (2017) findings (15%), also constitutes an interesting avenue for future research. Previous studies have provided evidence suggesting a co-occurrence of gender dysphoria and ASC (e.g., De Vries, Noens, Cohen-Kettenis, Van Berckelaer- Onnes, & Doreleijers, 2010; Glidden, Bouman, Jones, & Arcelus, 2016; VanderLaan et al., 2014; Van Der Miesen, Hurley, & De Vries, 2016; Zucker et al., 2017), which might explain the high number of detransitioners with an ASC diagnosis found in the current study.

In general, support given to detransitioners seems to be very poor at the moment, considering the fact that only 18% of the participants in the current study reported having received enough support during their detransition.

Based on the results of the current study, it appears that detransitioning is often accompanied by a break with LGBT+ communities. Only 13% of the participants reported having received support from an LGBT+ or trans-specific organization while detransitioning, compared to 51% while transitioning (see Figure 2). In addition to that, many respondents described experiences of outright rejection from LGBT+ spaces due to their decision to detransition (see Table 2). Looking at studies showing the positive role

of peer support and trans community connectedness on the mental health of its members (Johnson & Rogers, 2019; Pflum, Testa, Balsam, Goldblum, & Bongar, 2015; Sherman, Clark, Robinson, Noorani, & Poteat, 2020), it seems reasonable to suspect that this loss of support experienced by detransitioners must have serious implications on their psychological well-being.

Fortunately, the current study shows that detransitioners have access to other sources of support, online (groups, forums, social media) and in their social surroundings (family, partners and friends) (see Figure 2). Online groups and websites for detransitioners seem to be particularly important in light of the social needs expressed by the respondents of the current study. An overwhelming majority of respondents reported the need for hearing about other detransition stories (87%) and for getting in contact with other detransitioners (76%). Detransitioners need platforms and spaces where they can connect with each other and build a community. This point is best illustrated by the following account of one participant: "I found the peer support I received through other detransitioned women to be totally adequate and feel I benefited substantially from learning how to exist without institutional validation."

## Conclusion

The aim of the present research was to examine detransitioners' needs and support. The four categories of needs (psychological, medical, legal and social) that were created for sake of clarity in the survey were a simplification of the real complexity of the experiences made by detransitioners and they have their limitations. Nonetheless, these categories enabled the current study to uncover the fact that most detransitioners could benefit from some form of counseling and in particular when it comes to psychological support on matters such as gender dysphoria, comorbid conditions, feelings of regret, social/physical changes and internalized homophobic or sexist prejudices. Medical support was also found to be needed by many, in order to address concerns related to stopping/changing hormone therapy, surgery/treatment complications and access to reversal interventions. Furthermore, the current study has shown that detransitioners need spaces to hear about other detransition stories and to exchange with each other.

Unfortunately, the support that detransitioners are receiving in order to fulfill these needs appears to be very poor at the moment. Participants described strong difficulties with medical and mental health systems, as well as experiences of outright rejection from the LGBT+ community. Many respondents have expressed the wish to find alternative treatments to deal with their gender dysphoria but reported that it was impossible to talk about it within LGBT+ spaces and in the medical sphere.

These accounts are concerning and they show the urgency to increase awareness and reduce hostility around the topic of detransition among health-care providers and members of the LGBT+ community in order to address the specific needs of detransitioners.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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## Appendix.

Full Questionnaire

(1) How old are you?

(2) What country are you living in?

(3) What sex were you assigned at birth?
- Female
- Male
- Other:

(4) How do you see yourself now? (Tick all that apply)
- Woman
- Man
- Trans man
- Trans woman
- Female detransitioner
- Male detransitioner
- Non binary
- Other:

(5) Did you transition socially and/or medically and then stopped?
- Yes, both
- Only socially
- No

(6) Did you experience body dysphoria and/or social dysphoria? (Body dysphoria = strong desire to have sex characteristics of the opposite sex/rejection of your own sex; Social dysphoria = strong desire to be seen and treated as being of a different gender)
- Yes, both
- Only body dysphoria
- Only social dysphoria
- No

(7) Who helped you starting your social/medical transition? (Tick all that apply)
- A medical team specialized in transition
- An LGBT+ organization
- A trans-specific organization
- A therapist/doctor
- Online groups/forums/social media
- Friends, partner(s) and family
- Nobody
- Other:

(8) If you transitioned medically, how long were you in therapy before getting any hormones or surgeries? (in months; write 0 if none)

(9) During your transition, did you undergo some of the following interventions/treatments? (Tick all that apply)
- Hormone blockers
- Feminizing hormone treatment
- Masculinizing hormone treatment
- Gender affirming surgery(ies)
- No

(10) Do you feel like you were properly informed about the health implications of these treatments/interventions before undergoing them?
- Yes
- Partly
- No
- I am not sure

(11) What were the reasons that made you stop transitioning/detransition? (Tick all that apply)
- Health concerns
- Change in political views
- Transition did not help with my dysphoria
- Lack of support from social surroundings
- Discrimination
- Financial concerns
- Dysphoria resolved itself over time
- Unhappy with the physical changes
- Unhappy with the social changes
- Comorbid mental health issues related to dysphoria solved
- Realized that my gender dysphoria was related to other issues
- Found alternatives to deal with dysphoria
- Other:

(12) Were you diagnosed with or do you suspect having any of the following conditions?

| | Diagnosed | Suspected | No |
|---|---|---|---|
| Attention Deficit (Hyperactive) Disorder | | | |
| Autism Spectrum Condition | | | |
| Anxiety Disorders | | | |
| Depressive Disorders | | | |
| Dissociative Identity Disorder | | | |
| Eating Disorders | | | |
| Obsessive Compulsive Disorder | | | |
| Polycystic Ovary Syndrome | | | |
| Post Traumatic Stress Disorder | | | |
| Personality Disorders | | | |
| Schyzo-spectrum Disorder | | | |

(13) If you transitioned socially, at what age did you start?
(14) If you transitioned medically, at what age did you start?
(15) At what age did you start detransitioning/stop transitioning?
(16) What are the medical needs that you had while detransitioning/stopping your transition? (Tick all that apply)
- Receiving accurate information on stopping/changing hormonal treatment
- Receiving information and access to reversal surgeries/procedures
- Receiving help for complications related to surgeries or hormonal treatment
- None
- Other:

(17) What are the psychological needs that you had while detransitioning/stopping your transition? (Tick all that apply)
- Learning to cope with gender dysphoria; finding alternatives to medical transition
- Learning to cope with the new physical and/or social changes related to detransitioning
- Learning to cope with feelings of regret
- Learning to cope with internalized homophobia
- Working on comorbid mental issues related to gender dysphoria
- None
- Other:

(18) What are the legal needs that you had while detransitioning/stopping your transition? (Tick all that apply)
- Changing back legal gender/sex marker and/or name
- Legal advice and support to take legal action over medical malpractice
- None
- Other:

(19) What are the social needs that you had while detransitioning/stopping your transition? (Tick all that apply)
- Getting in contact with other detransitioners
- Receiving support to come out and deal with negative reactions
- Hearing about other detransition stories
- None
- Other:

(20) Is there any other need that you would like to mention?

(21) Which of these needs did you get support for?

| | Full support | Partly | Not at all | Not needed |
|---|---|---|---|---|
| Medical needs | | | | |
| Psychological needs | | | | |
| Legal needs | | | | |
| Social needs | | | | |

(22) From whom? (Tick all that apply)
- The medical team that helped me transition
- An LGBT+ organization
- A trans specific organization
- The therapist/doctor who supported me through my transition
- A new therapist/doctor
- Online groups/forums/social media
- Friends, partner(s) and family
- Nobody
- Other:

(23) Do you feel like you have received enough support throughout your detransition process overall?
- Yes
- No
- I don't know

(24) If you have any comment concerning the support/lack of support you received during your detransition, you can write it here.

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WILLIAM CROUCH, *et al.*,

*Defendants*.

CIVIL ACTION NO. 3:20-cv-00740
HON. ROBERT C. CHAMBERS

**PLAINTIFFS' MOTION TO EXCLUDE EXPERT TESTIMONY OF STEPHEN B. LEVINE, M.D.**

Now come, Plaintiffs, by and through their counsel, and respectfully move this Court to exclude the expert report, opinions, and testimony of Defendants' proposed expert, Stephen B. Levine, M.D., pursuant to Federal Rules of Civil Procedure 26 and 37, and Federal Rules of Evidence 104, 403, and 702. Dr. Levine is not a qualified expert on gender dysphoria or its treatment, and his opinions and testimony are neither relevant nor reliable pursuant to the standards set forth in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), and its progeny. His opinions and testimony are likewise inadmissible because any probative value they may have is substantially outweighed by the danger of unfair prejudice, confusion of the issues, waste of time, undue delay, and needless presentation of cumulative evidence. *See* Fed. R. Evid. 403.

A memorandum of law is filed contemporaneously herewith.

Dated: May 31, 2022

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that the foregoing document, and any attachments, were served electronically on May 31, 2022 on the following counsel for Defendants in this case:

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Dated: May 31, 2022

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**DECLARATION OF CARL S. CHARLES**

Pursuant to 28 U.S.C. § 1746, I, Carl S. Charles, do hereby declare as follows:

1. I am over 18 years of age.

2. I am a Senior Attorney at Lambda Legal Defense and Education Fund, Inc. and serve as counsel of record for the plaintiffs in the above-captioned matter.

3. I have personal knowledge of the facts stated herein, except those stated upon information and belief, and if called upon, could and would testify competently to them.

4. I submit this declaration in support of Plaintiffs' Motion to Exclude Expert Testimony of Stephen B. Levine, M.D. ("Dr. Levine.").

5. Attached as **Exhibit A** is a true and correct copy of the expert witness declaration of Dr. Levine (including a copy of his curriculum vitae) in the above-captioned matter, which is dated and was served on Plaintiffs on February 18, 2022, and was entered as Exhibits 1 and 2 to Dr. Levine's deposition in this matter on April 27, 2022.

6. Attached as **Exhibit B** is a true and correct copy of excerpts of the transcript of

the deposition of Dr. Levine on April 27, 2022, taken in relation to the above-captioned matter.

7. Attached as **Exhibit C** is a true and correct copy of excerpts from the transcript of the deposition of Dr. Levine taken on September 10, 2021, in relation to *Kadel v. N. C. State Health Plan for Tchrs. and State Emps.*, 12 F.4th 422, 427 (4th Cir. 2021) which was entered as Exhibit 5 to Dr. Levine's deposition in this matter on April 27, 2022.

8. Attached as **Exhibit D** is a true and correct copy of excerpts from the transcript of the bench trial in *Soneeya v. Turco*, No. 07-12325-DPW (D. Mass 2019) where Dr. Levine testified on April 4, 2019.

9. Attached as **Exhibit E** is a true and correct copy of an excerpt of the transcript of the deposition of Commissioner Cynthia Beane taken on March 29, 2022, in relation to the above-captioned matter, which was entered as Exhibit 22 to Dr. Levine's deposition in this matter on April 27, 2022.

10. Attached as **Exhibit F** is a true and correct copy of excerpts of the zoomed deposition of Dr. Levine taken December 21, 2020, in relation to *Claire v. Florida Dept. of Management Services*, 504 F. Supp. 3d 1328 (N.D. Fla. 2020).

11. Attached as **Exhibit G** is a true and correct copy of the article "International Clinical Practice Guidelines For Gender Minority/Trans People: Systematic Review And Quality Assessment," published in April 2021, which was entered as Exhibit 10 to Dr. Levine's deposition in this matter on April 27, 2022.

12. Attached as **Exhibit H** is a true and correct copy of Marci Bowers. M.D.,'s statement entitled "Dear Colleagues and Friends," published on her website after October 4, 2021, which was entered as Exhibit 11 to Dr. Levine's deposition in this matter on April 27, 2022.

13. Attached as **Exhibit I** is a true and correct copy of a printout from the Cass

Review website "About The Review" page, which was accessed on April 26, 2022.

14. Attached as **Exhibit J** is a true and correct copy of an excerpt of the rebuttal report of Joanna Olson-Kennedy, M.D., signed on March 17, 2022, and served on Defendants March 18, 2022, in the above captioned matter.

15. Attached as **Exhibit K** is an excerpt from the published Ph.D. Thesis, "On Gender Dysphoria," written by Cecilia Dhejne, Ph.D., in 2017.

16. Attached as **Exhibit L** is a true and correct copy of the article "Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden," published in February 2011.

17. Attached as **Exhibit M** is a true and correct copy of the article "Long Term Follow-Up of Individuals Undergoing Sex-Reassignment Surgery: Somatic Morbidity and Cause of Death," published in March 2016.

18. Attached as **Exhibit N** is a true and correct copy of an excerpt from the Diagnostic and Statistical Manual of Mental Disorders, Version 5.

19. Attached as **Exhibit O** is a true and correct copy of an excerpt of the transcript of the deposition of Dan Karasic, M.D., taken on April 15, 2022, in relation to the above-captioned matter.

20. Attached as **Exhibit P** is a true and correct copy of Interqual Criteria Sheets for Gender-Confirming Surgeries (Hysterectomy and Phalloplasty) served on Plaintiffs on or about March 2022, in the above captioned matter.

21. Attached as **Exhibit Q** is a true and correct copy of the article "Correction: Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria," published March 19, 2019.

22. Attached as **Exhibit R** is a true and correct copy of the article "Do Clinical Data

From Transgender Adolescents Support the Phenomenon of 'Rapid-Onset Gender Dysphoria'?," published in The Journal of Pediatrics in April 2022.

23. Attached as **Exhibit S** is Defendant's Response to Plaintiff's [sic] Second Set of Interrogatories to Defendants William Crouch, Cynthia Beane, and West Virginia Department of Health and Human Resources, Bureau For Medical Services, served on Plaintiffs on October 25, 2021, in the above captioned matter.

24. Attached as **Exhibit T** is a true and correct copy of an excerpt from the transcript of the deposition of Stephen Levine, M.D., on March 31, 2022, in relation to *B. P. J.* v. *W. Va. State Bd. of Educ.*, 550 F. Supp. 3d 347 (S.D.W. Va. 2021), which was entered as Exhibit 3 to Dr. Levine's deposition in this matter on April 27, 2022.

I declare under the penalty of perjury that the foregoing is true and correct.

Dated this 31st day of May 2022.

Carl S. Charles

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HON. ROBERT C. CHAMBERS, JUDGE

**EXPERT DISCLOSURE REPORT OF DR. STEPHEN B. LEVINE, M.D.**

# I. CREDENTIALS & SUMMARY OF OPINIONS

## A. Academic and Clinical Activities

1. I am Clinical Professor of Psychiatry at Case Western Reserve University School of Medicine, and maintain an active private clinical practice. I received my MD from Case Western Reserve University in 1967, and completed a psychiatric residency at the University Hospitals of Cleveland in 1973. I then became an Assistant Professor of Psychiatry at Case Western and became a Full Professor in 1985.

2. Since July 1973, my specialties have included psychological problems and conditions relating to individuals' and couples' sexuality, therapies for sexual problems, and the relationship between love, intimate relationships, and wider mental health. In 2005, I received the Masters and Johnson Lifetime Achievement Award from the Society of Sex Therapy and Research. I am a Distinguished Life Fellow of the American Psychiatric Association. In 2021 I was placed in the Case Western Reserve University's Department of Psychiatry's Hall of Fame.

3. In 1974, I founded the Case Western Reserve University Gender Identity Clinic, and have served as Co-Director of a gender clinic since that time. Across the years, our Clinic

treated hundreds of patients who were experiencing a transgender identity. An occasional child was seen during this era. I was the primary psychiatric caregiver for several dozen of our patients and supervisor of the work of other therapists. I was an early member of the Harry Benjamin International Gender Dysphoria Association (later known as the World Professional Association for Transgender Health, or WPATH) and served as the Chairman of the committee that developed the 5th version of the *WPATH Standards of Care*. In 1993 the Gender Identity Clinic was renamed, moved to a new location, and became independent of Case Western Reserve University. I continued to serve as Co-Director. It has subsequently been renamed the Gender Diversity Clinic.

4. I have been a visiting professor at Stanford University and St. Elizabeth's Hospital in Washington, D.C., as well a grand rounds presenter at various departments of psychiatry over many years. I have served as a book and manuscript reviewer for numerous professional publications. I have been the Senior Editor of the first (2003), second (2010) and third (2016) editions of the *Handbook of Clinical Sexuality for Mental Health Professionals*. In addition to five other solo authored books, I authored *Psychotherapeutic Approaches to Sexual Problems*, published in 2020; it has a chapter titled "The Gender Revolution." I am a frequent reviewer of submitted papers to the *Archives Sexual Behavior*, *Journal of Sex & Marital Therapy*, and *Journal of Sexual Medicine*. I am an infrequent or occasional reviewer for 25 other journals in various medical specialties and psychological and sociologic journals on topics related to human sexuality. I have published 180 article and book chapters, nineteen of which focus on gender identity. A November 2021 publication, *Reflections on The Clinician's Role with Individuals Who Self-Identify as Transgender*, was published in the Archives of Sexual Behavior. Another publication, *Reconsidering Informed Consent for Trans-Identified Children, Adolescents, and*

*Young Adults,* which I am the lead author of, has been tentatively accepted for publication by the Journal of Sex & Marital Therapy awaiting minor changes.

5. I have received the following grants for scientific research and/or program development:

1. Twenty-three separate pharmaceutical company grants to study various pro-sexual medications;
2. U.S. National Institute of Health grant for the study of sexual consequences of Systemic Lupus Erythematosis. Co-principal investigator; and
3. Five separate grants from the private Sihler Mental Health Foundation create the Program for Professionals which evaluated medical and religious leaders accused of sexual offenses; to establish a Center for Marital and Sexual Health; to create a placebo-controlled research study on Clomipramine for premature ejaculation; to create a follow-up study of clergy accused of sexual impropriety; and to establish a new clinical service for women with breast cancer.

6. Over the years I have lectured frequently to professional groups. During the previous two years, these lectures have included:

1. The Mental Health Professionals' Role with the Transgendered: Making the Controversies Clear, given to Grand Rounds at the University Hospitals of Cleveland on March 12, 2021;
2. Psychotherapeutic Approaches to Sexual Problems, an invited lecture to the American Psychiatric Association Annual Meeting on May 1, 2021 (similar lecture in May 2020);

3. Seven years of six-hour Continuing Education Courses at the American Psychiatric Association Meetings on Love and Sexuality;
4. Grand Rounds at Akron General Hospital on Clinical Considerations in Dealing with Transgender Identified Individuals October 28, 2021;
5. Grand Rounds at Cleveland Clinic Foundation on Sexuality Education of Psychiatric Residents on June 25, 2020;
6. Grand Rounds at Cleveland Clinic Foundation June 2019 Transgenderism: Beware! Repeated by invitation at Akron General Hospital and at National meeting of American Association of Behavioral Health in 2019 in Washington, DC;
7. Three-hour workshop at Society of Sex Therapy and Research in April 2020 on Therapy for Sexual Problems;
8. Workshop on "Let's talk about sex!" at the American Association of Directors of Psychiatric Residency Training in March 2020 in Dallas, Texas;
9. Three-hour continuing education seminar with Massachusetts Department of Corrections Gender Identity Staff Fall 2019 in Foxboro, MA;
10. Four-hour workshop at Harvard Student Health Clinic in Boston on January 26, 2022;
11. Three one-hour lectures on Transgender Phenomena in June 2022 at Henry Ford Hospital Department of Psychiatry in Detroit; and
12. Semi-annual 2.5 hour lectures on the Ethical Prohibition against sex with patients at the Case Western Reserve University Department of Ethics seminars.

**B. Expert Witness Testimony**

7. In 2019, I was qualified as an expert and testified concerning the diagnosis, understanding, developmental paths and outcomes, and therapeutic treatment of transgenderism and gender dysphoria, particularly as it relates to children, in the matter of *In the Interest of J.A.D.Y. and J.U.D.Y.*, Case No. DF-15-09887-S, 255th Judicial District, Dallas County, TX (the "*Younger* litigation"). In addition, I have given testimony in:

1. U.S. District Court for the Eastern District of Massachusetts, Judge Mark L. Wolf's independent, court-appointed witness in *Michelle Kosilek vs. Massachusetts* of a transgender inmate within the Massachusetts prison system. I have been retained by the Massachusetts Department of Corrections as a consultant on the treatment of transgender inmates since 2007.
2. Deposition in the *Battista vs. Massachusetts Dept. of Corrections* case (transsexual issue) in Cleveland, October 2009;
3. Witness for Massachusetts Dept. of Corrections in their defense of a lawsuit brought by prisoner Katheena Soneeya. March 22, 2011 Deposition in October 2018 in Cleveland and 2019 in Boston;
4. Witness for *State of Florida vs. Reyne Keohane*, July 2017;
5. Pennsylvania legislative testimony. Written submission and live testimony before a committee of the Pennsylvania legislature, March 2020 (Engaged by Pennsylvania Family Institute);
6. *In the Interests of the Younger Children*. Expert testimony by deposition and at trial in Dallas, TX. (Engaged by Texas counsel Odeneal & Odeneal) (Dallas Cty. Dist. Ct. 2019);

7. *Doe v. Madison Metropolitan School District*. Expert declaration submitted February 19, 2020, rebuttal declaration submitted August 14, 2020;
8. *Hecox v. Idaho*. Expert declaration submitted June 4, 2020. (D. Idaho);
9. *In the matter of Rhys & Lynn Crawford*. March 30, 2021, *Tingley v. Washington State* (W.D. Wa.);
10. *Bell v. The Tavistock & Portman NHS Foundation Trust* [2020] EWHC (Admin) 3274 [64] in High Court of London, Decision handed down on December 1, 2020. The High Court cited evidence I offered about how young people mature through adolescence.
11. In the High Court of Justice Queen's Bench Division administrative court. *The Queen (on the application of) L. and Hampshire County Council*;
12. *North Carolina, Kadal v. Folwell* (M.D.N.C)
13. *Hennessy-Waller v. Snyder*, Case No. CV-20-00335-TUC-SHR, 2021 WL 1192842, at *5-6 & n.10 (D. Ariz. Mar. 30, 2021). The District of Arizona relied on evidence I submitted regarding the guidelines for treating adolescents with gender dysphoria.

8. In addition to the above, I have been retained by the defense in this case to serve as an expert witness. My compensation is $400 per hour. My compensation for depositions is $500 per hour. My compensation is not dependent upon the outcome of this litigation or the substance of my opinions.

9. A fuller review of my professional experience, publications, and awards is provided in my curriculum vitae, a copy of which is attached hereto as **Exhibit A**.

**C. Summary of Opinions**

10. Below is a key summary of my opinions in this case.

- The right to bodily autonomy via "gender-affirming" hormonal and surgical interventions should not be confused with medical necessity. An objective test for medical necessity of transgender interventions does not exist. The diagnosis is self-generated by the patient, and merely recorded by the clinician. The choice of interventions is granted based on a patient's wish. In transgender healthcare, this is often wrongly equated with medical necessity.
- Medically necessary care should not be conflated with "gender-affirming" care. The latter has not been shown to result in significant lasting improvements in mental health or reduction in suicidality/suicide long-term. Multiple quality systematic reviews of evidence failed to show credible improvements. Claims that such care is highly effective come from studies that are methodologically weak and biased.
- There are significant risks of complications associated with gender-affirming hormonal and surgical interventions. The established risks include adverse effects on bone health, cardiovascular health, and fertility. There are many other risks that are just now emerging in the literature.
- There is a crisis of inadequate or absent mental health assessments prior to undergoing transition. Because of the unfortunate politicization of transgender healthcare, ethical mental health clinicians report intense pressure to confirm every gender-dysphoric patient as transgender, and to recommend gender-affirming treatments. There is also an entire industry of mental health clinicians, hormone prescribers, surgeons and even hospitals who have built lucrative lines of

business from scaling the costly "transgender healthcare" model. Females as young as 13 are treated with mastectomies based on perfunctory evaluations.

- The risks of providing on-demand "gender-affirming" interventions are going to be borne out disproportionately by youth and by vulnerable populations. While the Plaintiffs are mature adults, patients who most commonly seek gender-affirming interventions are teenagers and young adults, 2-10% of whom currently identify as transgender. The majority suffer from a heavy burden of mental illness. This marked epidemiologic shift occurred around 2014-2015 and remains poorly understood. The evidence of hormonal and surgical treatment regret among patients coming from this population is starting to mount.
- There is a range of treatments to ameliorate gender dysphoria, from non-invasive to highly invasive. Gender dysphoria has many causes, and many ways to ameliorate it. The narrative that "only hormones and surgeries work" dominating the US is both erroneous and motivated by considerations other than the long-term well-being of the patient. In contrast, a growing number of European nations are now prioritizing psychotherapy as the first line of treatment for gender-dysphoric young people.
- To determine whether West Virginia Medicaid and PEIA should be forced to categorically cover medical and surgical interventions for gender dysphoria, one will need to consider the balance of benefits and harms of such a decision. The potential benefits of reduced out-of-pocket burdens for mature adults must be carefully weighed against long-term health risks; risks of harming youth; and the significant cost implications to the already-strained system. It is my opinion that given

the current poor state of transgender healthcare, West Virginia should invest in a process that, at a minimum, assures safeguarding of vulnerable youth, before any change to the status quo is contemplated.

## II. Expert Testimony

### A. My Assessment of the Plaintiff's Expert Witness Statements

11. I have reviewed the expert disclosure reports of the plaintiffs' experts that were submitted during discovery in this litigation. It is my educated opinion that these disclosures misrepresent the body of evidence regarding the safety and efficacy of hormonal and surgical interventions for gender dysphoria. The degree of misrepresentation varies from unduly focusing on weak unreliable studies that purport positive treatment results while ignoring problematic findings that come from more reliable high-quality studies, to outright misrepresenting the results of studies. Unfortunately, this type of biased promotion of the erroneous narrative of purportedly proven benefits of hormones and surgeries has become endemic in the field of transgender medicine.[1]

12. I maintain that while well-meaning and sincere in their beliefs, their apparent clinical certainty simplifies the weighty issues involved. They do not know what happens to most of their patients over time; they do not know the error rates of their clinical decisions; they pay no

[1] 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 Adoles Ment Health*. Published online December 22, 2021:camh.12533. doi:10.1111/camh.12533

attention to the well-known medical, social, and psychological problems of adult trans communities as consistently reported in cross-sectional studies over the years.[2]

13. Medicine learns about the efficacy of its treatments by careful follow up of its patients. Long-term follow up, and quality studies demonstrating long-term efficacy of interventions in the area of transgender health are conspicuously lacking. Scientific commitment requires professionals to separate beliefs from what science has firmly established.

14. Unfortunately, the testimonies by the two expert witnesses for the Plaintiffs are guided by their individual and passionately-held beliefs regarding the benefits of hormones and surgeries, not by the best available evidence, which raises serious questions about the risk/benefit profile of these interventions.

15. The body of evidence shows a lack of long-term demonstrated efficacy, and points to a growing risk of harm and regret, especially among young patients who are now seeking these interventions in record numbers. It is with these vulnerable patients' long-term health and wellbeing in mind that I share the below.

**B. Expert Witness Statement by Dr. Karasic.**

16. In my review of the "Expert Disclosure Report of Dan H. Karasic, M.D.," dated January 14, 2022 ("Karasic"), I note that Dr. Karasic makes a variety of inaccurate and misleading statements. They range from inaccurate information about the nature of sex and gender dysphoria, to biased overviews of what is known about various therapies for gender dysphoria, to misrepresentations of outcomes of therapies—all with a strong bias toward pharmacological and

[2] Dhejne C, Lichtenstein P, Boman M, Johansson ALV, Långström N, Landén M. Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden. Scott J, ed. *PLoS ONE*. 2011;6(2):e16885. doi:10.1371/journal.pone.0016885

surgical interventions. In addition, Dr. Karasic makes a number of sweeping and purportedly scientific assertions without any references at all. Below are examples of Dr. Karasic's misinterpretations and misrepresentations of the state of evidence.

17. Dr. Karasic's testimony conflates sex and gender identity. Dr. Karasic states, "[a]side from external genital characteristics, chromosomes, and endogenous hormones, other factors related to sex include...gender identity, and variations in brain structure and function."[3] This directly contradicts a recent Scientific Statement by the Endocrine Society, which implores researchers to not conflate biological sex, which is binary and straightforward in over 99% of the cases, with the concept of gender identity, which can indeed represent a wide spectrum.[4]

18. Despite the increasing ability of hormones and various surgical procedures to reconfigure some male bodies to visually pass as female, or vice versa, the biology of the person remains as defined by his (XY) or her (XX) chromosomes, including cellular, anatomic, and physiologic characteristics and the particular disease vulnerabilities associated with that chromosomally defined sex. For instance, the XX (genetically female) individual who takes testosterone to stimulate certain male secondary sex characteristics will nevertheless remain unable to produce sperm and father children. Contrary to the assertions of certain members of the medical community, the aspiration of some trans individuals to become "a complete man" or "a complete woman" is not biologically attainable.[5] [6] It is possible for some individuals to "pass" unnoticed as the opposite gender that they aspire to be—but with limitations, costs, and risks.

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[3] Karasic, p.5, para 20

[4] Bhargava A, et al. Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scientific Statement. *Endocrine Reviews*, Volume 42, Issue 3, June 2021, Pages 219–258, https://doi.org/10.1210/endrev/bnaa034.

[5] Levine SB. Informed Consent for Transgendered Patients. *Journal of Sex & Marital Therapy*. 2019;45(3):218-229. doi:10.1080/0092623X.2018.1518885

[6] Levine SB. Reflections on the Clinician's Role with Individuals Who Self-identify as Transgender. *Arch Sex Behav*. Published online September 15, 2021. doi:10.1007/s10508-021-02142-1

19. The binary nature of sex (with extremely rare exceptions known as Differences of Sexual Development /DSD or "intersex disorders"[7]) in no way invalidates one's subjective sense of a discordant gender identity. The push toward conflation of sex and gender identity is largely a politically-motivated move, which does a disservice to science, and which can cause direct medical harm to the patient.[8] [9]

20. Dr. Karasic misrepresents treatment recommendations from an advocacy organization as scientific facts. In his witness statement, Dr. Karasic regards treatment recommendations issued by the advocacy organization *The World Professional Association of Transgender Health* (WPATH) as "authoritative protocols." WPATH's core mission, since its inception, has been to destigmatize transgender identities and to advocate for easy access and broad insurance coverage for transgender-related procedures.[10] WPATH guidelines, entitled "Standards of Care" (SOC), do favor medicalized approaches to the management of gender dysphoria. While these guidelines have been influential in years past, they are increasingly coming under scrutiny, with a growing list of countries abandoning their use.

21. A recently published systematic review found the current WPATH SOC7 guidelines to be of very low quality and unfit tools for clinical decision-making, noting "incoherence"

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[7] Lee PA, Houk CP, Ahmed SF, Hughes IA, in collaboration with the participants in the International Consensus Conference on Intersex organized by the Lawson Wilkins Pediatric Endocrine Society and the European Society for Paediatric Endocrinology. Consensus Statement on Management of Intersex Disorders. *PEDIATRICS*. 2006;118(2):e488-e500. doi:10.1542/peds.2006-0738

[8] Stroumsa D, Roberts EFS, Kinnear H, Harris LH. The Power and Limits of Classification — A 32-Year-Old Man with Abdominal Pain. *N Engl J Med*. 2019;380(20):1885-1888. doi:10.1056/NEJMp1811491

[9] Whitley CT, Greene DN. Transgender Man Being Evaluated for a Kidney Transplant. *Clinical Chemistry*. 2017;63(11):1680-1683. doi:10.1373/clinchem.2016.268839

[10] Fraser L. Psychotherapy in the World Professional Association for Transgender Health's *Standards of Care* : Background and Recommendations. *International Journal of Transgenderism*. 2009;11(2):110-126. doi:10.1080/15532730903008057

within the recommendations.[11] (A similar low-quality assessment was given to the Endocrine Society guidelines, which Dr. Karasic refers to, and which, incidentally, has been co-authored by many of the several of the same authors as SOC7).

22. A newly released draft of the upcoming SOC8 version of the guidelines appears to continue to suffer from a number of serious methodological problems that will limit its clinical use.[12] It is perhaps not surprising that a growing number of countries are deviating from WPATH and Endocrine Society guidelines and are developing their own treatment guidelines that prioritize psychological treatments for youth. They include such pioneers in gender-affirming care as Sweden, Finland, and the UK. [13] [14] [15]

23. As the Co-Chair of WPATH SOC5 Committee, I have had first-hand experience with the organization and its evolution toward its current state of advocacy at the expense of rigorous science. I will detail my experiences in separate section of this document. My experience appears to be consistent with that of the incoming president of WPATH, a transgender woman and surgeon, Dr. Bowers, who recently admitted that activism within WPATH has taken over science, and that, within WPATH, any deviation from the hormonal and surgical "gender-affirming" treatment model is currently not tolerated: "There are definitely people [in WPATH] who are trying to keep out anyone who doesn't absolutely buy the party line that everything should be

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[11] Dahlen S, Connolly D, Arif I, Junejo MH, Bewley S, Meads C. International clinical practice guidelines for gender minority/trans people: systematic review and quality assessment. *BMJOpen*. 2021;11(4):e048943. doi:10.1136/bmjopen-2021-048943
[12] Society for Evidence-Based Gender Medicine. *WPATH SOC8 Draft Guideline*, Jan. 16, 2022, https://segm.org/draft_SOC8_lacks_methodological_rigor
[13] Society for Evidence-Based Gender Medicine. *One Year Since Finland Broke with WPATH "Standards of Care,"* July 2, 2021, https://segm.org/Finland_deviates_from_WPATH_prioritizing_psychotherapy_no_surgery_for_minors
[14] Society for Evidence-Based Gender Medicine. *Sweden's Karolinska Ends All Use of Puberty Blockers and Cross-Sex Hormones for Minors Outside of Clinical Studies*, May 5, 2021, https://segm.org/Sweden_ends_use_of_Dutch_protocol
[15] Cass Review, Independent Review of Gender Identity Services for Children and Young People, *About the Review*, https://cass.independent-review.uk/about-the-review/

affirming, and that there's no room for dissent."[16] Can an organization with such a stance legitimately represent itself as a scientific organization, or be relied upon to issue unbiased, science-based information to inform the care of gender dysphoric individuals?

24. Of note, in 2016, Health and Human Services (HHS) came under significant pressure from activists to adopt the WPATH "Standards of Care" as the prevailing guideline for determining medical necessity considerations for gender-affirming surgeries. After conducting a thorough evaluation of the evidence, the HHS refused, explaining their opinions in this way: "Based on our review of the evidence and conversations with the experts and patient advocates, we are aware some providers consult the WPATH Standards of Care, while others have created their own criteria and requirements for surgery, which they think best suit the needs of their patients. As such, and given that WPATH acknowledges the guidelines should be flexible, we are not in the position to endorse exclusive use of WPATH for coverage. The MACs, Medicare Advantage plans, and Medicare providers can use clinical guidelines they determine useful to inform their determination of whether an item or service is reasonable and necessary."[17] More generally, in that same Decision Memo, the HHS refused to mandate coverage for transgender surgeries, leaving it up to the individual states to decide, due to lack of evidence of long-term benefits.

25. <u>Dr. Karasic incorrectly asserts that gender-affirming treatments for gender dysphoria are "highly effective."</u>[18] In his expert witness testimony, Dr. Karasic states that hormonal and surgical treatments for gender dysphoria are "highly effective," suggesting that an expected

[16] Abigail Shrier, *Top Trans Doctors Blow the Whistle on 'Sloppy' Care*, Oct. 4, 2021, https://bari-weiss.substack.com/p/top-trans-doctors-blow-the-whistle

[17] Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N) :109. "WPATH Standards of Care" p. 41. https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=282

[18] Karasic, p.9, para 31

outcome of such treatments is "significant or potentially complete relief." [19] However, the most generous way to describe the state of evidence regarding the efficacy of hormonal and surgical interventions is "mixed," and more accurately, lacking any evidence of lasting long-term improvements in psychological functioning.

26. There are indeed a number of studies that show positive results, but such studies are typically short-term and suffer from significant methodological limitations. For example, several such studies that have made recent headlines in the US rely on the same large online panel of respondents recruited by politically active organizations promoting transgender rights. [20] [21] [22] The problems with those studies have been widely recognized. [23] [24] [25]

27. In contrast, long-term studies from quality samples, as well as independent systematic reviews that synthesize and evaluate the entire body of evidence, rather than being swayed by individual studies, nearly universally conclude that the benefits of hormonal and surgical interventions are of very low certainty. For example, two recent systematic reviews of evidence for hormonal interventions for youth conducted by the UK National Institute for Health

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[19] Karasic, p.1, para 39

[20] Turban JL, King D, Carswell JM, Keuroghlian AS. Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation. *Pediatrics*. 2020;145(2):e20191725. doi:10.1542/peds.2019-1725

[21] Turban JL, Beckwith N, Reisner SL, Keuroghlian AS. Association Between Recalled Exposure to Gender Identity Conversion Efforts and Psychological Distress and Suicide Attempts Among Transgender Adults. *JAMA Psychiatry*. 2020;77(1):68. doi:10.1001/jamapsychiatry.2019.2285

[22] James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). The Report of the 2015 U.S. Transgender Survey. Washington, DC: National Center for Transgender Equality

[23] Biggs M. Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria. *Arch Sex Behav*. 2020;49(7):2227-2229. doi:10.1007/s10508-020-01743-6

[24] D'Angelo R, Syrulnik E, Ayad S, Marchiano L, Kenny DT, Clarke P. One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria. *Arch Sex Behav*. Published online October 21, 2020. doi:10.1007/s10508-020-01844-2

[25] Biggs, Michael (2022): Comment on Turban et al. 2022: Estrogen is associated with greater suicidality among transgender males, and puberty suppression is not associated with better mental health outcomes for either sex. figshare. Journal contribution. https://doi.org/10.6084/m9.figshare.19018868.v1

and Care Quality (NICE), which is tasked with evaluating the efficacy of all treatments provided by UK's publicly-funded National Health Service (NHS), found both puberty blockers and cross-sex hormonal treatments for youth to be of questionable benefit. They concluded that the reported benefits come from "small, uncontrolled observational studies, which are subject to bias and confounding, and are of very low certainty." [26] [27] In this context, the "very low certainty" designation means that even when a study reports positive results, there is a high likelihood that patients will not experience the benefits of the proposed interventions outside of the study settings, in the real world.[28] Similar conclusions of very low certainty of benefits have been reached by a number of other independent systematic reviews of evidence both in the US and internationally. [29] [30] [31]

28. The results of independent evidence reviews by agencies responsible for ensuring equitable access to high quality healthcare and prudent use of scarce healthcare resources, stand

[26] National Institute for Health and Care Excellence - NICE, Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria, 11 March 2021, at https://www.evidence.nhs.uk/document?id=2334888&returnUrl=search%3fq%3dtransgender%26s%3dDate

[27] National Institute for Health and Care Excellence - NICE, Evidence review: Gender-affirming hormones for children and adolescents with gender dysphoria, p. 14. 11 March 2021, at https://www.evidence.nhs.uk/document?id=2334889&returnUrl=search%3ffrom%3d2021-03-10%26q%3dEvidence%2bReview%26to%3d2021-04-01

[28] Balshem H, Helfand M, Schünemann HJ, et al. GRADE guidelines: 3. Rating the quality of evidence. *Journal of Clinical Epidemiology*. 2011;64(4):401-406. doi:10.1016/j.jclinepi.2010.07.015

[29] Hayes, Inc., Sex Reassignment Surgery for the Treatment of Gender Dysphoria, Hayes Directory (Aug. 1, 2018).

[30] Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N). :109. https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=282

[31] Gender affirmation surgery for gender dysphoria - effects and risks: Health Technology Assessment review 2018. Swedish Health Authority. Published online 2018. https://alfresco-offentlig.vgregion.se/alfresco/service/vgr/storage/node/content/workspace/SpacesStore/441006af-62a7-4f19-be73-6d698bf635f5/2018_102%20Rapport%20K%C3%B6nsdysfori.pdf?a=false&guest=true&fbclid=IwAR2_BBlVfFBKok9XZ7JiTXfwOfT-gcCXIzAySkh6wlXUJK8s_L_8XZy-tdIA

in sharp contrast to systematic reviews of evidence commissioned and paid for by WPATH, which Dr. Karasic prefers to rely upon. These advocacy-driven reviews also accept that the quality of the evidence is low, but paradoxically conclude *with confidence* that hormonal and surgical treatments produce desired and lasting results. [32] The problems with activism-driven research and conflicts of interest influencing research outcomes have become endemic in the field of gender medicine. [33]

29. Dr. Karasic misrepresents what is known about the connection between gender-affirming treatments and suicide. Dr. Karasic makes a bold claim that failure to obtain gender-affirming medical and surgical interventions puts patients at heightened risk suicidality.[34] This assertion is directly contradicted by a key longitudinal study that examined this very question. [35, 36] The study, which utilized Sweden's entire health registry, accounted for every patient ever treated, and followed patients over a 10-year time period, found that gender-dysphoric patients who took hormones and underwent surgeries did not fare any better in the long-term than similarly gender-dysphoric patients who did not obtain these interventions. Specifically, there was no difference in the rates of ongoing levels of mental illness and no difference in the rates of serious suicide attempts. In fact, the "surgery" group had nearly twice as many suicide attempts than the group that did not receive surgery, although the difference did not reach statistical significance.[37]

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[32] Baker KE, Wilson LM, Sharma R, Dukhanin V, McArthur K, Robinson KA. Hormone Therapy, Mental Health, and Quality of Life Among Transgender People: A Systematic Review. *Journal of the Endocrine Society*. 2021;5(4):bvab011. doi:10.1210/jendso/bvab011
[33] Society for Evidence-Based Gender Medicine, *The Signal—and the Noise—in the Field of Gender Medicine*, Jan. 31, 2022, https://segm.org/flawed_systematic_review_puberty_blockers
[34] Karasic, p.1; p.8, para 28.
[35] Bränström R, Pachankis JE. Reduction in Mental Health Treatment Utilization Among Transgender Individuals After Gender-Affirming Surgeries: A Total Population Study. *AJP*. 2020;177(8):727-734. doi:10.1176/appi.ajp.2019.19010080
[36] Correction to Bränström and Pachankis. *AJP*. 2020;177(8):734-734. doi:10.1176/appi.ajp.2020.1778correction
[37] Society for Evidence-Based Gender Medicine, *Correction of a Key Study: No Evidence of "Gender-Affirming" Surgeries Improving Mental Health*, Aug. 30, 2020, https://segm.org/ajp_correction_2020

30. Instead of reflecting on the findings (or lack thereof) of this very prominent study, Dr. Karasic instead relies on a much lower quality study which did not include long-term follow-up, accounted for only 33% of the patients treated (compared to the 100% in the above-referenced study), and did not even attempt to evaluate suicidality. [38]

31. It is of note that the suicidality argument has been extensively misused by the proponents of rapid medicalization of gender-dysphoric individuals, and particularly minors, with the dark and emotive narrative of a choice between a "dead son or a live daughter." The rates of suicide attempts and completed suicide are significantly elevated in transgender-identifying patients compared to the general population. However, it is well-established that suicides are complex events and can rarely be attributed to a single cause.

32. The rate of death by suicide in gender dysphoric youth in the UK has recently been estimated to be 0.03% over a 10-year period. [39] The rate of suicides for transgender adults in Sweden is estimated to be 0.6% over a 20-year period.[40] A key longitudinal study from the Netherlands found that suicides occur at similar rates during all stages of transition, from the time the individual is placed on a wait list, and through decades following the final surgery. [41] This latter fact is the key reason why mental health treatments should be applauded by psychiatrists such as Dr. Karasic, rather than dismissed as ineffective or even stigmatized as unethical.

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[38] Owen-Smith AA, Gerth J, Sineath RC, et al. Association Between Gender Confirmation Treatments and Perceived Gender Congruence, Body Image Satisfaction, and Mental Health in a Cohort of Transgender Individuals. *The Journal of Sexual Medicine*. 2018;15(4):591-600. doi:10.1016/j.jsxm.2018.01.017

[39] Biggs M. Suicide by Clinic-Referred Transgender Adolescents in the United Kingdom. *Arch Sex Behav*. Published online January 18, 2022. doi:10.1007/s10508-022-02287-7

[40] Socialstyrelsen [National Board of Health and Welfare]. *Utvecklingen Av Diagnosen Könsdysfori [The Evolution of the Diagnosis of Gender Dysphoria]*. Socialstyrelsen [Swedish Health Authority]; 2020. Accessed October 29, 2020. https://www.socialstyrelsen.se/om-socialstyrelsen/pressrum/press/vanligt-med-flera-psykiatriska-diagnoser-hos-personer-med-konsdysfori/

[41] Wiepjes CM, den Heijer M, Bremmer MA, et al. Trends in suicide death risk in transgender people: results from the Amsterdam Cohort of Gender Dysphoria study (1972–2017). *Acta Psychiatr Scand*. 2020;141(6):486-491. doi:10.1111/acps.13164

33. Dr. Karasic conflates "medically indicated care" with affirmation and misrepresents the role of mental health services in treatment gender-dysphoric individuals as ineffective and unethical. Dr. Karasic asserts that "medically-indicated care" is "aligning an individual patient's body and presentation with their internal sense of self." [42]He asserts that other than gender-affirming hormones and surgeries, "no alternative treatments have been demonstrated to be effective." He further goes on to state, "gender identity change efforts provide no benefit and instead do harm." [43] Presumably, with these two statements, Dr. Karasic attempts to put to bed the vigorous ongoing debate in the scientific community about how to best care for the exponential and poorly understood rise in trans identifications in youth. Even the authors of the seminal study that gave rise to the practice of pediatric medical and surgical gender transition worldwide, known as the "Dutch Study," recently conceded the difficulty in determining "who will benefit from medical gender affirmation and for whom … mental health support might be more appropriate." [44]

34. It is a well-established fact that in both adult and pediatric populations of gender dysphoric individuals, the prevalence of co-occurring mental illness is extremely high.[45] According to a comprehensive data source from a major US-based health system, Kaiser Permanente, over 70% of gender-dysphoric youth suffer from comorbid mental health issues, and in the majority of these cases the mental health issues predated the onset of gender dysphoria. [46]

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[42] Karasic, p.8., para 28.
[43] Karasic, para 29, p 9.
[44] de Vries ALC. Challenges in Timing Puberty Suppression for Gender-Nonconforming Adolescents. *Pediatrics*. 2020;146(4):e2020010611. doi:10.1542/peds.2020-010611
[45] Hanna B, Desai R, Parekh T, Guirguis E, Kumar G, Sachdeva R. Psychiatric disorders in the U.S. transgender population. *Ann Epidemiol*. 2019;39:1-7.e1. doi:10.1016/j.annepidem.2019.09.009
[46] Becerra-Culqui TA, Liu Y, Nash R, et al. Mental Health of Transgender and Gender Nonconforming Youth Compared With Their Peers. *Pediatrics*. 2018;141(5):e20173845. doi:10.1542/peds.2017-3845

35. While scientists may never fully agree to what extent the high burden of mental illness is the result versus the cause of one's transgender identification, there is little doubt that vulnerable individuals considering embarking on a life-long pursuit of medical interventions need extensive psychological evaluations and support, and their mental health conditions need to be appropriately treated.

36. Recently-released guidance from a professional psychiatry association adopted the position that extensive psychotherapeutic support should be the first line of treatment for gender-dysphoric individuals and especially minors, stating: "There are polarised views and mixed evidence regarding treatment options for people presenting with gender identity concerns, especially children and young people. It is important to understand the different factors, complexities, theories, and research relating to Gender Dysphoria." [47]A set of guidelines released by Finland, a key pioneer in pediatric gender transition, recently reversed course and now states that psychotherapy, rather than hormones and surgeries, should be the first line of treatment for gender-dysphoric youth. [48]

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[47] The Royal Australian & New Zealand College of Psychiatrists, *Recognising and addressing the mental health needs of people experiencing Gender Dysphoria / Gender Incongruence*, Aug. 2021, https://www.ranzcp.org/news-policy/policy-and-advocacy/position-statements/gender-dysphoria

[48] Society for Evidence-Based Gender Medicine, *One Year Since Finland Broke with WPATH "Standards of Care,"* July 2, 2021, https://segm.org/Finland_deviates_from_WPATH_prioritizing_psychotherapy_no_surgery_for_minors

37. In a growing number of instances, especially among gender-dysphoric youth, proper therapeutic exploration has led to a resolution of gender dysphoria.[49] [50] [51] [52] [53] It is true that quality evidence proving long-term effectiveness of psychotherapy interventions is missing—just as they are lacking for the hormonal and surgical interventions. However, Dr. Karasic's attempts to stigmatize gender-exploratory psychotherapy as "gender identity change efforts,"[54] or to stigmatize as "unethical" appear to be politically motivated to maintain his beliefs with little concern for the patient's long-term outcomes in mind. Such efforts will only serve to limit access to quality healthcare for the already struggling and vulnerable group of gender dysphoric patients. [55]

38. Dr. Karasic inaccurately portrays what is known – and not known—about treatment regret. Dr. Karasic claims with certainty that regret for transgender-related procedures is extremely low. To support his assertion, he points to several sources, not the least of which is a

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[49] Schwartz D. Clinical and Ethical Considerations in the Treatment of Gender Dysphoric Children and Adolescents: When Doing Less Is Helping More. *Journal of Infant, Child, and Adolescent Psychotherapy*. Published online November 22, 2021:1-11. doi:10.1080/15289168.2021.1997344
[50] Spiliadis A. Towards a gender exploratory model: Slowing things down, opening things up and exploring identity development. *Metalogos Systemic Therapy Journal*. 2019;35:1-9. https://www.ohchr.org/Documents/Issues/SexualOrientation/IESOGI/Other/Rebekah_Murphy_TowardsaGenderExploratoryModelslowingthingsdownopeningthingsupandexploringidentitydevelopment.pdf
[51] Bonfatto M, Crasnow E. Gender/ed identities: an overview of our current work as child psychotherapists in the Gender Identity Development Service. *Journal of Child Psychotherapy*. 2018;44(1):29-46. doi:10.1080/0075417X.2018.1443150
[52] Churcher Clarke A, Spiliadis A. 'Taking the lid off the box': The value of extended clinical assessment for adolescents presenting with gender identity difficulties. *Clin Child Psychol Psychiatry*. 2019;24(2):338-352. doi:10.1177/1359104518825288
[53] Lemma A. Trans-itory identities: some psychoanalytic reflections on transgender identities. *The International Journal of Psychoanalysis*. 2018;99(5):1089-1106. doi:10.1080/00207578.2018.1489710
[54] Karasic, p.9, para 29
[55] D'Angelo R, Syrulnik E, Ayad S, Marchiano L, Kenny DT, Clarke P. One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria. *Arch Sex Behav*. Published online October 21, 2020. doi:10.1007/s10508-020-01844-2

seminal study in the field of pediatric gender medicine, which is known as the "Dutch Study," and which serves as the key pillar for the practice of pediatric gender transition.[56]

39. In describing the outcomes of the Dutch study, Dr. Karasic states, "none of the youth who received puberty blockers, hormones, and surgery, and followed over an 8-year period expressed regret".[57] What Dr. Karasic's assessment fails to reveal is that this "low regret" statistic excludes 4 patients (6% of the initial sample of 70) who were severely harmed by the treatment; they were merely dropped from the study's conclusions. This includes 1 death of a young person from surgical complications, and 3 cases of adolescents who developed new-onset obesity and diabetes in the course of being treated with hormones. Several more youths refused to engage with the researchers when they were contacted, leading to more questions.

40. Nor does Dr. Karasic accurately report the length of the study follow-up: rather than 8 years, these outcomes were assessed merely 1.5 years after the final phase of the treatment was completed. It is well-known in transgender research that regret takes approximately 10 years after the completion of procedures to materialize.[58]

41. Dr. Karasic also fails to reflect on the extensive vetting that the patients in the study from the Netherlands received, and how different the process of gender transition in the US is conducted. Most of the cases of gender dysphoria presenting with a wish for sex reassignment today are adolescents, many of whom came to identify as transgender first time after puberty,

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[56] de Vries ALC, McGuire JK, Steensma TD, Wagenaar ECF, Doreleijers TAH, Cohen-Kettenis PT. Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment. *Pediatrics*. 2014;134(4):696-704. doi:10.1542/peds.2013-2958

[57] Karasic, para 42, p12.

[58] Wiepjes CM, Nota NM, de Blok CJM, et al. The Amsterdam Cohort of Gender Dysphoria Study (1972–2015): Trends in Prevalence, Treatment, and Regrets. *The Journal of Sexual Medicine*. 2018;15(4):582-590. doi:10.1016/j.jsxm.2018.01.016

with no history of childhood gender incongruence.[59] [60] Such cases were explicitly disqualified by the Dutch protocol as having high potential for being a "false positive" and leading to future regret.[61]

42. To assert low regret rates, Dr. Karasic also leans heavily on a "pooled review." The profound limitations of this poor-quality, error-ridden review, conducted by a group of surgeons, rather than evidence evaluation experts, have been outlined in a recent publication.[62] In addition to been plagued by significant errors, such is misstating sample sizes of the included studies, and inaccurately categorizing the interventions received by the patients, the review suffers from a number of other limitations.

43. For example, the definition of "regret" in the reviewed studies is very narrow. To be considered a "regretter," an individual had to change legal sex markers, reverse surgeries, or start hormonal interventions to revert the body to the original state. [63] [64] However, few individuals know how to successfully navigate complex legal matters, and even fewer can afford to undergo reversal procedures, either due to financial limitations, or the physical impossibility to reverse surgeries. Regret in ordinary lives, let alone trans lives, is far more complicated, nuanced, conflictual, and often increases over time as the results of an experience is appreciated.

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[59] Kaltiala-Heino R, Sumia M, Työläjärvi M, Lindberg N. Two years of gender identity service for minors: overrepresentation of natal girls with severe problems in adolescent development. *Child Adolesc Psychiatry Ment Health*. 2015;9(1):9. doi:10.1186/s13034-015-0042-y
[60] Zucker KJ. Adolescents with Gender Dysphoria: Reflections on Some Contemporary Clinical and Research Issues. *Arch Sex Behav*. 2019;48(7):1983-1992. doi:10.1007/s10508-019-01518-8
[61] Levine et al., (in press). Reconsidering Informed Consent for Trans-Identified Children, Adolescents, and Young Adults. Journal of Sex & Marital Therapy.
[62] Expósito-Campos P, D'Angelo R. Letter to the Editor: Regret after Gender-affirmation Surgery: A Systematic Review and Meta-analysis of Prevalence. *Plastic and Reconstructive Surgery - Global Open*. 2021;9(11):e3951. doi:10.1097/GOX.0000000000003951
[63] Karasic, para 43, p12.
[64] Bustos VP, Bustos SS, Mascaro A, et al. Regret after Gender-affirmation Surgery: A Systematic Review and Meta-analysis of Prevalence. *Plastic and Reconstructive Surgery - Global Open*. 2021;9(3):e3477. doi:10.1097/GOX.0000000000003477

44. Additionally, the studies evaluated the outcomes of highly selected populations of patients who had to be approved for gender-transition following extensive psychiatric evaluations—a process that transgender rights advocates have decried as discriminatory, and which has been largely abandoned in the US. However, even these older studies likely significantly underestimate true rate of regret. They routinely lose to follow-up 30%-40% of individuals; those who drop out of care are more likely to be adversely affected.[65]

45. More pertinent to the current situation at hand, the recent relaxation of criteria for eligibility for these interventions appears to have created a growing number of regretters in the last several years—or at the very least, individuals who wish to stop gender-affirming treatments and reverse their effects. Two recent studies from the UK, a country that still maintains that some psychological evaluations, albeit abbreviated ones, are necessary, estimated that the rate of detransition is approximately 10% after a short period of time, and an even higher rate of dropping out of care for unknown reasons.[66] [67] Two other recent studies of detransitioners—individuals who underwent medical transition and later stopped or reversed transgender interventions—revealed that they felt rushed into transition, that their self-identification as transgender was a mistaken attribution of their generalized distress, same-sex attraction, or a myriad of other factors that were not properly explored. [68] [69]

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[65] D'Angelo R. Psychiatry's ethical involvement in gender-affirming care. *Australas Psychiatry*. 2018;26(5):460-463. doi:10.1177/1039856218775216

[66] Boyd I, Hackett T, Bewley S. Care of Transgender Patients: A General Practice Quality Improvement Approach. *Healthcare*. 2022;10(1):121. doi:10.3390/healthcare10010121

[67] Hall R, Mitchell L, Sachdeva J. 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*. 2021;7(6):e184. doi:10.1192/bjo.2021.1022

[68] Vandenbussche E. Detransition-Related Needs and Support: A Cross-Sectional Online Survey. *Journal of Homosexuality*. Published online April 30, 2021:20. doi:10.1080/00918369.2021.1919479

[69] Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. Published online October 19, 2021. doi:10.1007/s10508-021-02163-w

46. Three-quarters of them did not return to the doctors who recommended or administered gender-affirmative interventions to tell them about detransition.[70] This highlights that individual clinician experiences of low regret, such as the ones reported by Dr. Karasic, need to be balanced with an objective and rigorous outcomes analysis, which is sorely lacking.

47. Dr. Karasic fails to acknowledge the ongoing vigorous scientific debate in the scientific community. It appears that Dr. Karasic believes that a widespread scientific consensus regarding the safety and efficacy of gender-affirming interventions exists. While it is true that many US-based medical societies either do not oppose or even endorse these interventions, this should not be mistaken for scientific consensus—nor should it be forgotten that US medical societies have quite a history of endorsing interventions at one point, only to retract their positions later. While the lobotomy example, with major medical societies endorsing the procedure, is often cited, a much more recent example with the opioid treatment guidelines is readily available. To quote the incoming president of WPATH who reflected on the state transgender care in the US, "This is typical of medicine. We zig and then we zag, and I think maybe we zigged a little too far to the left…"[71]

48. There have been over 50 recent publications in peer-reviewed journals questioning the approach to care for gender dysphoric youth.[72] Key international pioneers of medical transition, from Sweden to Finland to the UK, in the last 48 months have recognized the profound lack of evidence that these interventions lead to long-term improvements and have also

[70] See Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. Published online October 19, 2021. doi:10.1007/s10508-021-02163-w
[71] Abigail Shrier, *Top Trans Doctors Blow the Whistle on 'Sloppy' Care*, Oct. 4, 2021, https://bariweiss.substack.com/p/top-trans-doctors-blow-the-whistle
[72] Society for Evidence-Based Gender Medicine, *B. Scientists Debate Medical Affirmation of Minors*, https://segm.org/studies (literature listing)

noted growing evidence that they can result in harm. As a result, these health systems are now deviating from the gender-affirmative model and are prioritizing psychological interventions for young people presenting with gender dysphoria.

49. The Karolinska Hospital, which is the home of the Nobel Prize for Medicine, announced in May that they will cease all medical transitions for those under 18 in general medical practice, only allowing them in strictly controlled clinical trial settings.

50. The situation is starting to shift in the US as well, as concerned clinicians, and even the leaders of WPATH are calling into question the irresponsible promotion of the medicalization model for minors. [73] [74] [75] Remarkably, WPATH issued a public statement reprimanding these professional for speaking out.[76]

51. Improper analysis of financial impact. Finally, Dr. Karasic rushes to assure that the cost of providing transgender interventions is exceedingly low. However, these assertions seem questionable. For example, treatment with puberty blockers can cost $6,000-$40,000 per year per child.[77] The cost of cross-sex hormones is lower, but these costs are greatly amplified by the life-long nature of hormonal supplementation. The cost of surgeries, re-operations, and occa-

[73] Anderson, E., Edwards-Leeper, L. (2021, November 24). The mental health establishment is failing trans kids. *Washington Post.* Accessed December 20, 2021 https://www.washingtonpost.com/outlook/2021/11/24/trans-kids-therapy-psychologist/

[74] Anderson, E. (2022, January 3). Opinion: When it comes to trans youth, we're in danger of losing our way. *The San Francisco Examiner.* Accessed January 5th, 2022 http://www.sfexaminer.com/opinion/are-we-seeing-a-phenomenon-of-trans-youth-social-contagion/

[75] Malone, W. J., Hruz, P. W., Mason, J. W., & Beck, S. (2021). 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." *Journal of Clinical Endocrinology and Metabolism*, 106(8), e3287–e3288. https://doi.org/10.1210/clinem/dgab205

[76] https://www.wpath.org/media/cms/Documents/Public%20Policies/2021/Joint%20WPATH%20USPATH%20Letter%20Dated%20Oct%2012%202021.pdf

[77] https://www.legacyhealth.org/-/media/Files/PDF/Services/Children/Transgender-Services/Resources/PUBERTAL-SUPPRESSION-MEDICATION-COVERAGE.pdf

sional requests to reverse the surgeries for those who regret the interventions, are in tens to hundreds of thousands of dollars, with some cases reaching into the millions.[78] The costs of treating side-effects of the treatments, such as the well-documented increase in cardiovascular complications, or the increasing evidence that bone health may be compromised long-term when such treatments are started in adolescence, also has to be factored in. [79] [80] [81] [82]

52. Last but not least, the costs of fertility preservations must be factored in. Adults undergoing cross-sex hormonal or surgical intervention have either diminished or lost fertility.[83] Children treated with puberty blockers followed by cross-sex-hormones are expected to be sterile.[84] This has given rise to an industry of fertility preservation for this population. Few children can comprehend the loss of future fertility, and as of today very few pursue these offers.[85] However, as these treatments continue to gain momentum, fertility preservation, including novel techniques of extracting immature eggs of young females and maturing them in vitro, are expected to

[78] https://www.newsweek.com/we-need-balance-when-it-comes-gender-dysphoric-kids-i-would-know-opinion-1567277

[79] Alzahrani T, Nguyen T, Ryan A, et al. Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population. *Circ: Cardiovascular Quality and Outcomes*. 2019;12(4). doi:10.1161/CIRCOUTCOMES.119.005597

[80] Getahun D, Nash R, Flanders WD, et al. Cross-sex Hormones and Acute Cardiovascular Events in Transgender Persons. *Ann Intern Med*. 2018;169(4):205-213. doi:10.7326/M17-2785

[81] Klink D, Caris M, Heijboer A, van Trotsenburg M, Rotteveel J. Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria. *The Journal of Clinical Endocrinology & Metabolism*. 2015;100(2):E270-E275. doi:10.1210/jc.2014-2439

[82] Biggs M. Revisiting the effect of GnRH analogue treatment on bone mineral density in young adolescents with gender dysphoria. *J Pediatr Endocrinol Metab*. 2021;34(7):937-939. doi:10.1515/jpem-2021-0180

[83] Cheng PJ, Pastuszak AW, Myers JB, Goodwin IA, Hotaling JM. Fertility concerns of the transgender patient. *Transl Androl Urol*. 2019;8(3):209-218. doi:10.21037/tau.2019.05.09

[84] 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;104(3):686-687. doi:10.1210/jc.2018-01925

[85] Nahata L, Tishelman AC, Caltabellotta NM, Quinn GP. Low Fertility Preservation Utilization Among Transgender Youth. *J Adolesc Health*. 2017;61(1):40-44. doi:10.1016/j.jadohealth.2016.12.012

gain momentum. [86] In addition, requests for reversal of such procedures are expected to increase, and therefore must factored into the final financial impact estimate.

53. These costs have to be considered in the context of the rapid rise in the rate of transgender identification, especially among youth. While Dr. Karasic estimates the prevalence of transgender identification to be 0.5%, recent studies of youth suggest it ranges from 2% to 9%.[87] [88] Although not all of trans-identifying individuals will choose to undergo medical interventions, the majority do, and this proportion will only increase when such interventions are provided at no cost to the patient, and when access to non-invasive treatments with psychotherapy is effectively curbed as "unethical."

54. The data already show that the numbers of individuals seeking transgender interventions on West Virginia Medicaid increased from 30 individuals in 2016, to 686 individuals through the end of September in 2021, a 2,300% increase in less than 5 years. Applying the upper bound of the current estimate of 9% trans-identification, as many as 30,000 West Virginia youth could be identifying as transgender, and an unknown number of them could be pursuing hormonal and surgical interventions in the future.

55. A proper economic analysis associated with the cost of providing gender-affirming interventions by West Virginia Medicaid and PEIA needs to be conducted before the asser-

[86] Mattawanon N, Spencer JB, Schirmer DA, Tangpricha V. Fertility preservation options in transgender people: A review. *Rev Endocr Metab Disord*. 2018;19(3):231-242. doi:10.1007/s11154-018-9462-3
[87] Kidd KM, Sequeira GM, Douglas C, et al. Prevalence of Gender-Diverse Youth in an Urban School District. *Pediatrics*. 2021;147(6):e2020049823. doi:10.1542/peds.2020-049823
[88] Johns MM, Lowry R, Andrzejewski J, et al. Transgender Identity and Experiences of Violence Victimization, Substance Use, Suicide Risk, and Sexual Risk Behaviors Among High School Students - 19 States and Large Urban School Districts, 2017. *MMWR Morb Mortal Wkly Rep*. 2019;68(3):67-71. doi:10.15585/mmwr.mm6803a3

tions of negligible costs, which are boldly made by Dr. Karasic, are accepted. Whatever the impressive skills of individual physicians maybe, economic analysis is not one of them. This includes myself. Others must be relied upon to answer the question.

56. Dr. Karasic is neither neutral nor logical in his assertions, betraying the mindset of an activist, rather than a dispassionate clinician pursing evidence. Dr. Karasic makes a number of sweeping statements that are self-contradictory. He acknowledges that "gender dysphoria [sic](uncapitalized) is distress related to the incongruence between one's gender identity and attributes related to one's sex…"[89] yet characterizes the role of mental health services to aid in the amelioration of gender dysphoria as conversion efforts that are unethical. [90] In all other areas of medicine treating distress with psychotherapy (alone or in conjunction with other interventions) is the standard treatment approach. He states that having gender dysphoria "is widely accepted as a variation in human development" and not a disorder,[91] yet asserts that the state of West Virginia should provide extensive medical and surgical interventions to treat this condition.

57. Dr. Karasic must pick a side: is gender dysphoria an illness that needs treatments, or is it a normal variation of human diversity with no significant inherent disadvantages, which needs no intervention? If treatments are needed, then why would one set of treatments, namely, hormones and surgeries, which carries a heavy continuing medical burden, be widely offered and privileged by being excused from having to demonstrate long-term safety and efficacy as is required in all other areas of medicine. Why should another set of treatments, namely psychological, which are non-invasive and a commonly-accepted approach to treating all other forms of distress, be labeled as "unethical"? Such contradictions abound the highly politicized field of

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[89] Karasic, para 22, p.6
[90] Karasic, para 21, p.6
[91] Karasic, para 27, p.7

transgender medicine, where a mere acknowledgement that the majority of gender-dysphoric people suffer from mental illness is either positioned as transphobic or is dismissed as merely resulting from the stress of being a minority. The reality is much more complex.

58. I am also concerned by Dr. Karasic's apparent attempts to silence scientific debate. For example, in 2017, Dr. Karasic[92] attempted to suppress the presentation of a key research paper at a scientific conference. [93] The research paper in question noted a sharp rise in trans identification among adolescent females with no childhood history of gender dysphoria and urged more research. [94]

59. The dramatic increase in the incidence of youths declaring a transgender identity in the last several years, and a marked demographic shift toward adolescent females seeking gender reassignment, described by the "offending" paper, has since been recognized by every pediatric gender clinic in the world. [95] [96] [97] In fact, this profound epidemiologic shift, and the lack of understanding of its etiology and appropriate interventions, is one of the key reasons why leading pediatric gender clinics throughout the world are currently changing their treatment guidelines toward much more caution—an approach that Dr. Karasic equates to "opposing trans care."

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[92] Alliance Health Project, University of California San Francisco. *Activist Psychiatrist Dan Karasic, MD Retiring*, June 11, 2020, https://alliancehealthproject.ucsf.edu/blog/activist-psychiatrist-dan-karasic-md-retiring

[93] Brie, J. 4thWaveNow, WPATH & The Advocate aim to suppress new research on adolescent gender dysphoria, Feb. 25, 2018, https://4thwavenow.com/2018/02/25/wpath-the-advocate-aim-to-suppress-new-research-on-adolescent-gender-dysphoria/

[94] Littman L. Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. Romer D, ed. *PLoS ONE*. 2018;13(8):e0202330. doi:10.1371/journal.pone.0202330

[95] de Graaf NM, Giovanardi G, Zitz C, Carmichael P. Sex Ratio in Children and Adolescents Referred to the Gender Identity Development Service in the UK (2009–2016). *Arch Sex Behav*. 2018;47(5):1301-1304. doi:10.1007/s10508-018-1204-9

[96] Kaltiala-Heino R, Bergman H, Työläjärvi M, Frisen L. Gender dysphoria in adolescence: current perspectives. *AHMT*. 2018;Volume 9:31-41. doi:10.2147/AHMT.S135432

[97] Zucker KJ. Adolescents with Gender Dysphoria: Reflections on Some Contemporary Clinical and Research Issues. *Arch Sex Behav*. 2019;48(7):1983-1992. doi:10.1007/s10508-019-01518-8

60. Dr. Karasic was not alone in attempting to suppress this research—pressured by other activists, the journal editors subjected the paper to a rarely conducted second peer review post-publication, following which the research was vindicated and republished with no substantive changes to its findings and conclusions. [98] Unfortunately, such politicization of research in the area of transgender medicine has become common. It is quite possible that such advocacy will hurt the very people these actions intend to protect—gender-dysphoric individuals in general, and vulnerable LGBT youth in particular.

61. Dr. Karasic's former employer characterizes him as an "activist psychiatrist." [99] While his activism for transgender rights is admirable, mixing politics and clinical matters creates a dangerous combination. I maintain that Dr. Karasic's "expert opinion" submission should be viewed as that of an ardent advocate of transgender rights and body autonomy. However, the submitted opinion is demonstrably biased and lacks the scientific rigor and credibility to be used as an expert opinion in determining whether these interventions are safe, effective, and medically necessary.

**C. Expert Witness Statement by Dr. Schechter.**

62. I have also reviewed the "Expert Disclosure Report of Loren S. Schechter, M.D.," dated January 14, 2022 ("Schechter"). Dr. Schechter appears to be highly qualified to perform various types of plastic surgery procedures (from Botox, to facelifts and "mommy makeover" surgeries, to gender confirmation surgeries).[100] He also claims to be an expert in the surgical and

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[98] Littman L. The Use of Methodologies in Littman (2018) Is Consistent with the Use of Methoologies in Other Studies Contributing to the Field of Gender Dysphoria Research: Response to Restar (2019). *Arch Sex Behav*. 2020;49(1):67-77. doi:10.1007/s10508-020-01631-z

[99] Alliance Health Project, University of California San Francisco. *Activist Psychiatrist Dan Karasic, MD Retiring*, June 11, 2020, https://alliancehealthproject.ucsf.edu/blog/activist-psychiatrist-dan-karasic-md-retiring

[100] Loren S. Schechter, MD, "Body," https://drlschechter.com/body/

post-operative care body of literature for gender-affirmative care, as evidenced by his work on WPATH's "Standards of Care" surgery and post-operative sections. However, Dr. Schechter seems to be unaware of the body of literature that shows that gender-affirming interventions fail to improve mental health or to reduce suicidality or suicide long-term.[101, 102]

63. In fact, he appears to be unaware of a key systematic review of surgeries for adults conducted by the HHS in 2016, which found no evidence of benefits of surgeries, and even posited that surgeries themselves may be contributing to the markedly elevated rate of morbidity and mortality found in the post-operative transgender populations.[103, 104] Another systematic review of evidence by the Hayes Corporation, which reviews treatments for insurance payers for 84% of insured Americans,[105] reviewed evidence for gender reassignment surgery, rating the quality of evidence from "A" (strongest) to "D2" (weakest). [106] The evidence for gender reassignment surgery for minors earned the lowest "D2" rating: "insufficient published evidence to assess the safety and/or impact on health outcomes or patient management."[107] The rating of the same surgeries for adults was "C," indicating "[p]otential but unproven benefit." Hayes noted,

[101] Correction to Bränström and Pachankis. *AJP*. 2020;177(8):734-734. doi:10.1176/appi.ajp.2020.1778correction

[102] Wiepjes CM, den Heijer M, Bremmer MA, et al. Trends in suicide death risk in transgender people: results from the Amsterdam Cohort of Gender Dysphoria study (1972–2017). *Acta Psychiatr Scand*. 2020;141(6):486-491. doi:10.1111/acps.13164

[103] Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N). :109. https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=282

[104] Dhejne C, Lichtenstein P, Boman M, Johansson ALV, Långström N, Landén M. Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden. Scott J, ed. *PLoS ONE*. 2011;6(2):e16885. doi:10.1371/journal.pone.0016885

[105] Hayes, Inc., Sex Reassignment Surgery for the Treatment of Gender Dysphoria, Hayes Directory (Aug. 1, 2018).

[106] Hayes, Inc., The Hayes Difference, https://www.hayesinc.com/about-hayes/.

[107] Hayes Inc., The Hayes Rating, https://www.hayesinc.com/about-hayes/.

"substantial uncertainty remains about safety and/or impact on health outcomes because of poor-quality studies, sparse data, conflicting study results, and/or other concerns."[108]

64. Dr. Schechter's lack of familiarity with quality systematic reviews and seminal studies in this area can be excused by the fact that his focus is on improving surgical care and on pursuing new frontiers, including Dr. Schechter's pioneering work of uterine transplantation for biological males who identify as female.[109]

65. It seems that Dr. Schechter's expertise in providing gender-affirming surgeries and training others to do the same makes him a stellar choice for an expert witness in cases where these types of surgeries may have been inadequately performed (which is, unfortunately, a frequent occurrence [110] [111])). However, he is a lesser-informed and, arguably, a problematically conflicted expert when it comes to elucidating the evidence on whether various types of transgender surgeries he performs should be viewed as medically necessary and qualifying for coverage with the Federal and State funds.

**D. Understanding WPATH and its "Standards of Care"**

66. Dr. Karasic and Dr. Schechter note that they are members of WPATH, invoke the guidelines that that organization publishes, and assert that those guidelines are "widely recognized" and "authoritative." (Karasic 32, 34; Schechter 22.) Accordingly, I provide some context concerning that private organization and its guidelines.

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[108] Id.
[109] Schechter, p.5
[110] Dreher PC, Edwards D, Hager S, et al. Complications of the neovagina in male-to-female transgender surgery: A systematic review and meta-analysis with discussion of management: Systematic Review of Neovaginal Complications. *Clin Anat*. 2018;31(2):191-199. doi:10.1002/ca.23001
[111] Walt Heyer, *The Federalist. 9 Transgender Patients Complain Of Mutilation, Botched Sex-Change Surgeries In Oregon*, Dec. 6, 2018, https://thefederalist.com/2018/12/06/9-transgender-patients-complain-mutilation-botched-sex-change-surgeries-oregon/

67. I was a member of the Harry Benjamin International Gender Dysphoria Association from 1974 until 2001. From 1997 through 1998, I served as the Chairman of the eight-person International Standards of Care Committee that issued the fifth version of its guidelines in 1999. I resigned my membership in 2002 due to my regretful conclusion that the organization and its recommendations had become dominated by politics and ideology, rather than by scientific process, as it was years earlier. In approximately 2007, the Henry Benjamin International Gender Dysphoria Association changed its name to the World Professional Association for Transgender Health, or WPATH.

68. WPATH is a voluntary membership organization. Since at least 2002, attendance at its biennial meetings has been open to trans individuals who are not licensed professionals. While this ensures taking patients' values, sensibilities, and perceived needs into consideration, it limits the ability for honest, methodologically competent debate. It also means that WPATH can no longer be considered a purely professional organization.

69. WPATH takes a narrow and ideologically driven view on increasingly controversial issues as to which there is a wide range of opinion among professionals. WPATH explicitly views itself as not merely a scientific organization, but also as an advocacy organization. (Levine, *Reflections*, at 240.) These are obviously incompatible goals. WPATH is supportive of those who want sex-reassignment surgery even though the purported benefits of such surgery is not borne out by the evidence. Skepticism as to the benefits of sex-reassignment surgery to patients, and strong alternate views, are not well tolerated in discussions within the organization or their educational outreach programs (as its current president recently pointed out). Such views

have been known to be shouted down and effectively silenced by the large numbers of nonprofessional adults who attend the organization's biennial meetings. Skepticism is not welcomed by those whose careers are based on providing these "treatments."

70. A group of respected endocrinologists recently recognized that "despite the misleading name, WPATH Standards of Care 7 are . . . practice guidelines, not standards of care."[112] "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 on their sponsor, may be biased." WPATH aspires to be both a scientific organization and an advocacy group for the transgendered. These aspirations sometimes conflict. The limitations of its guidelines, however, are not primarily political. They are caused by the lack of rigorous research in the field, which allows room for passionate convictions on how to care for the transgendered to hold sway.

71. In recent years, WPATH has fully adopted some mix of the medical and rights paradigms discussed above. It has downgraded the role of counseling or psychotherapy as a requirement for these life-changing processes. WPATH no longer considers preoperative psychotherapy to be a requirement. It is important to WPATH that the person has gender dysphoria; the pathway to the development of this state is not. (Levine, *Reflections*, at 240.) Two separate evaluations, one from Canada and one from the U.K. reviewed WPATH's guidelines and found them untrustworthy.[113]

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[112] W. Malone, et al. (2021), 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. of Clin. Endocrinol. & Metab.* at 1, doi: 10.1210/clinem/dgab205.
[113] S. Dahlen, et al. (2021) International Clinical Practice Guidelines for Gender Minority/Trans People: Systematic Review and Quality Assessment. *BMJ Open* 11(4). doi: 10.1136/bmjopen-2021-048943. PMID: see also https://genderreport.ca/bias-not-evidence-dominate-transgender-standard-of-care/

72. Most psychiatrists and psychologists who treat patients suffering severe distress from gender dysphoria sufficiently to seek inpatient psychiatric care are not members of WPATH. Many psychiatrists, psychologists, and pediatricians who treat some patients suffering gender dysphoria on an outpatient basis are not members of WPATH. WPATH represents a self-selected subset of the profession along with its many non-medical professional members; it does not capture the clinical experiences of others. WPATH claims to speak for the medical profession; however, it does not welcome skepticism and therefore, deviates from the philosophical core of medical science.

73. For example, in 2010 the WPATH Board of Directors issued a statement advocating that incongruence between sex and felt gender identity should cease to be identified in the DSM as a pathology.[114] This position was debated but not adopted by the (much larger) American Psychiatric Association, which maintained the definitions and diagnoses of gender dysphoria as a pathology in the DSM-5 manual issued in 2013.

74. In my experience most current members of WPATH have little ongoing experience with the mentally ill, and many trans care facilities are staffed by mental health professionals who are not deeply experienced with recognizing and treating frequently associated psychiatric comorbidities. Moreover, they have been educated in affirmative care without understanding the points I am making in this report. Because the 7th version of the WPATH guidelines deleted the requirement for therapy, trans care facilities that consider those guidelines sufficient are permitting patients to be counseled to transition by means of social presentation, hormones, and surgery by individuals with Master's degrees rather than medical or PhD psychology degrees.

[114] WPATH De-Psychopathologisation Statement (May 26, 2010), available at wpath.org/policies

75. As a result of the downgrading of the role of the psychiatric assessment of patients, new "gender affirming" clinics have arisen in many urban settings that quickly (sometimes within an hour's time) recommend transition. Indeed, Dr. Karasic recommends surgery for each of the named Plaintiffs following a single Zoom call with each. Patients and their families are not told they are entering an unproven, experimental, and potentially dangerous process.

76. Concerned parents who came wanting to know what is going on in their children are overwhelmed and feel disoriented, fearful for the health and safety of their children, and dependent on the professional. In has been ten years since the WPATH guidelines were last revised. Much has changed in that interval.

77. The increased incidence of post-pubertal gender dysphoria in biological females since the 7th edition of the WPATH guidelines is a cause for alarm among all knowledgeable professionals. As the Dahlen et al. study pointed out, standards of care throughout medicine have the ethical standard that no more than 30% of those formulating the recommendations should earn their income based on the guidelines offered. Experts in methodology are required, in addition, to be clinicians. But the majority of WPATH's writers' group were those whose income is derived from trans care. Their "inconsistent" recommendations did not flow from scientific evidence.

78. It is my understanding that the complex committee process that will generate the final version of SOC8 is at least two years delayed; this is most likely because of controversies with the organization about what is the best policy to govern children and adolescents. Voting on policy is the product of inadequate science, which ideally, speaks for itself in dictating treatment guidelines.

79. I have reviewed the draft SOC8 guidelines released by WPATH at the end of 2021. I, along with many other professionals, found it sorely lacking. While it purports to be evidence-based, none of the recommendations are linked to the evidence, as is done in a high-quality guideline. WPATH fails to acknowledge the well-documented phenomenon known as "rapid-onset gender dysphoria" now commonly occurring among adolescents, despite the fact that multiple clinicians report this is just what they are observing is happening.[115] There is also no chapter on detransition, despite the evidence that a growing number of young people regret transition and wish to reverse it. [116] [117] Yet, WPATH contains a chapter on eunuchs and describes a "male-to-eunuch gender dysphoria," and mentions the longevity benefits of pre-pubertal castration.

80. Thus, it is my opinion that WPATH is a problematically conflicted organization that misrepresents itself as credible scientific group.

### E. Key Opinions

81. I would like to elucidate the key dilemmas in the area of transgender care. Some of the statements may be somewhat repetitive with the information presented in the rebuttals of the Plaintiffs' witnesses above, so I will do my best to minimize such repetition.

#### 1. The right to bodily autonomy via "gender-affirming" hormonal and surgical interventions should not be confused with medical necessity

[115] Hutchinson A, Midgen M, Spiliadis A. In Support of Research Into Rapid-Onset Gender Dysphoria. *Arch Sex Behav*. 2020;49(1):79-80. doi:10.1007/s10508-019-01517-9
[116] *See* Vandenbussche E. Detransition-Related Needs and Support: A Cross-Sectional Online Survey. *Journal of Homosexuality*. Published online April 30, 2021:20. doi:10.1080/00918369.2021.1919479
[117] *See* Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. Published online October 19, 2021. doi:10.1007/s10508-021-02163-w

82. Individuals suffering from gender dysphoria who wish to re-align the body with their inner sense of self in some specific way have this right. Their desires interact with medical and surgical technologies such that, if patient wants it and we can attain it, why not? However, this should not be equated with medical necessity.

83. The list of gender-affirming interventions is ever-growing. It is not limited to puberty blockers, cross sex hormones, breast augmentation, and genital restructuring. Rather, it now commonly includes facial surgeries involving nose, chin, forehead, lips, eyes; vocal cord surgery; hair transplantation; [118] and a growing list of procedures for patients who identify as non-binary, which include phallos-preserving vaginoplasty (the construction of a neovagina while preserving the penis) and nullification procedures (which obliterate all sex organs).[119] As surgical techniques advance, so will the list of physical modification procedures, which will one day include advances such as uterine transplantation to allow trans women to gestate. The opportunities to modify a human body to match one's internally held sense of self are nearly limitless, with a willing surgeon and available financial compensation.

84. Advocates for affirmative care insist these are not cosmetic procedures when a person has gender dysphoria, and indeed growing numbers of states are compelled to cover such procedures under the umbrella of transgender healthcare.[120] [121] The advocates of the affirmative

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[118] Arocha Hair Restoration and Transplant Center, "Hair Transplants as a Part of Gender Reassignment Surgery," https://arochahairrestoration.com/gender-reassignment/hair-transplants-gender-reassignment-surgery/

[119] Align Surgical Associates, Inc., "Phallus-Preserving Vaginoplasty," https://www.alignsurgical.com/non-binary/phallus-preserving-vaginoplasty/

[120] COLORADO BENEFITS FOR HEALTH CARE COVERAGE 38, https://www.cms.gov/CCIIO/Resources/DataResources/ehb (listing covered "Gender Affirming Care").

[121] Washington State Senate Bill 5313-S2, amended by House Amendment 456, adopted Mar. 24, 2021, https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Amendments/House/5313-S2%20AMH%20CODY%20H1369.1.pdf

approach agree that not all people who identify as transgender need medical treatments. However, they assert that such treatments *are* medically necessary for those who desire them. In fact, "patient desire" for transgender interventions has supplanted the traditional definition of medical necessity used in all other areas of medicine. [122] The power of their rhetorical device –medically necessary—is considerable; it rests on the trusted reputation of the medical profession. Our noble profession tries hard but is not always correct.

85. West Virginia Medicaid defines medical necessity as "items or services furnished to a patient that are reasonable and necessary for the diagnosis or treatment of illness or injury, to improve the functioning of a malformed body member, to attain, maintain, or regain functional capacity, for the prevention of illness, or to achieve age appropriate growth and development." [123] PEIA defines a service as medically necessary in a similar fashion.[124] Asserting medical necessity for transgender treatments is challenging for several reasons, starting with the fact that the very ***nature of the diagnosis is in flux.***

86. First, the two prevailing diagnostic systems sharply disagree on the very fundamental aspect of the diagnosis—patient distress. [125] According to DMS-5, the patient must experience significant distress to qualify for the diagnosis of "gender dysphoria." To be considered

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[122] Turban JL, King D, Kobe J, Reisner SL, Keuroghlian AS. Access to gender-affirming hormones during adolescence and mental health outcomes among transgender adults. Radix AE, ed. *PLoS ONE.* 2022;17(1):e0261039. doi:10.1371/journal.pone.0261039

[123] National Academy for State Health Policy, "State Definitions of Medical Necessity under the Medicaid EPSDT Benefit," Apr. 23, 2021, https://www.nashp.org/medical-necessity/

[124] "A service is considered to be medically necessary if it is: consistent with the diagnosis and treatment of the injury or illness; in keeping with generally accepted medical practice standards; not solely for the convenience of the patient, family or health care provider; not for custodial, comfort or maintenance purposes; rendered in the most cost-efficient setting and level appropriate for the condition; and not otherwise excluded from coverage under the PEIA PPB Plans. See Summary Plan Description, PPB Plan A, B & D, Plan Year 2020, pg. 54. https://peia.wv.gov/Forms-Downloads/Pages/Summary-Plan-Descriptions.aspx

[125] See Levine et al., (in press). Reconsidering Informed Consent for Trans-Identified Children, Adolescents, and Young Adults. Journal of Sex & Marital Therapy.

for medical necessity, the contemplated treatments, therefore, must show that they can reduce the distress associated with "gender dysphoria." However, according to ICD-11, a diagnostic category which has come into effect in January 2022, and which is expected to supersede DSM-5 in regards to determining eligibility for transgender interventions, having distress is no longer required to be diagnosed, and rather than "gender dysphoria," the diagnosis is called "gender incongruence." If ICD-11 is to be relied on for medical necessity determination, it stands to reason that the contemplated interventions should aim to resolve the said "incongruence" in order to achieve "congruence." However, what "congruence" with one's body means is a highly personal feeling not subject to objective medical criteria. Few individuals (transgender or not) feel entirely happy with their bodies, which is one of the reasons for the booming cosmetic surgery industry in the US. Having the diagnosis for gender dysphoria / gender incongruence does not imply medical necessity for hormone replacement therapy or surgical intervention. There are many patients with gender dysphoria who do not want hormones while they are exploring their evolving identities and social roles.

87. Second, while the DSM-5 diagnosis of "gender dysphoria" (DSM-5) and its ICD-11 counterpart "gender incongruence" are actual diagnoses (albeit contradictory), it is the term "transgender" that is widely used in the context of medical necessity of hormonal and surgical interventions. However, it is not clear how the term "transgender" interacts with the diagnoses in the DSM-5 and ICD-11. For example, it is well-known that gender dysphoria can be a manifestation of underlying mental health conditions and resolves once those conditions are treated.[126] In this case, is the effected individual "transgender" while they experience gender dysphoria, but no longer "transgender" once it resolves?

[126] Urban-Kowalczyk M. Gender Dysphoria as a Clinical Manifestation of Schizophrenia – Case Series. *European Psychiatry*. 2015;30:1773. doi:10.1016/S0924-9338(15)31366-3

88. Third, there is no objective test to confirm that someone is "transgender" beyond an individual's thoughts and feelings, which are subject to change. I and other clinicians have witnessed reinvestment in the patient's biological sex in some individual patients following a period of time. There are now studies confirming that identifying as transgender for some period of time, and then re-identifying with one's sex is not an infrequent phenomenon. Such processes appear to be increasing now that quality mental health assessments are bypassed in favor of vastly eased access hormones and surgeries.

89. In the gender clinic that I founded in 1974 and continue to co-direct, we have seen many instances of individuals who claimed a transgender identity for a time, but ultimately changed their minds and reclaimed the gender identity congruent with their sex. I have published a paper on a patient who sought my therapeutic assistance to reclaim his male gender identity after 30 years living as a woman and is, in fact, living as a man today.[127] I have seen several Massachusetts inmates and trans individuals in the community abandon their trans female identity after several years.[128] A surgical group prominently active in the sex-reassignment surgery field has published a report on a series of seven male-to-female patients requesting surgery to transform their surgically constructed female genitalia back to their original male form.[129]

90. Even more importantly, the majority (61-98%) of children who identify as transgender will reidentify with their sex before reaching maturity absent any interventions. [130]

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[127] Levine SB. Transitioning Back to Maleness. *Arch Sex Behav*. 2018;47(4):1295-1300. doi:10.1007/s10508-017-1136-9

[128] *See* Levine SB. Reflections on the Clinician's Role with Individuals Who Self-identify as Transgender. *Arch Sex Behav*. Published online September 15, 2021. doi:10.1007/s10508-021-02142-1

[129] Djordjevic et al. (2016), Reversal Surgery in Regretful Male-to-Female Transsexuals After Sex Reassignment Surgery, *J. Sex Med.* 13(6) 1000, DOI: 10.1016/j.jsxm.2016.02.173.

[130] Ristori J, Steensma TD. Gender dysphoria in childhood. International Review of Psychiatry. 2016;28(1):13-20. doi:10.3109/09540261.2015.1115754

[131] Many professionals are unfamiliar with these eleven research studies indicating a high natural resolution rate of gender dysphoria children by late adolescence.[132] I have personally seen children desist even before puberty in response to thoughtful parental interactions and a few meetings of the child with a therapist. However, treating a child with gender-affirming interventions appears to solidify this identity in nearly 100% of the cases.[133] [134] [135]

91. I noted an increasingly visible online community of young women who have desisted after claiming a male gender identity at some point during their teen years.[136] One such online community has over 20,000 members. [137] While it would be wrong to assert that each of the members have detransitioned, it is reasonable to assume that many are considering it and many have accomplished some degree of it. "Desisters" and "detransitioners" appear to come from a cohort of young adults who began to transition in high numbers as teens 5-7 years ago.

[131] Singh D, Bradley SJ, Zucker KJ. A Follow-Up Study of Boys With Gender Identity Disorder. *Front Psychiatry*. 2021;12. doi:10.3389/fpsyt.2021.632784
[132] Cantor J. M. (2020). Transgender and Gender Diverse Children and Adolescents: Fact-Checking of AAP Policy. *Journal of Sex & Marital Therapy*, *46*(4), 307–313. https://doi.org/10.1080/0092623X.2019.1698481
[133] Zucker, *Myth of Persistence*, at 8 (citing H. Meyer-Bahlburg (2002), Gender Identity Disorder in Young Boys: A Parent- & Peer-Based Treatment Protocol, *Clinical Child Psychology & Psychiatry* 7, 360 at 362.).
[134] Brik T, Vrouenraets LJJJ, de Vries MC, Hannema SE. Trajectories of Adolescents Treated with Gonadotropin-Releasing Hormone Analogues for Gender Dysphoria. *Arch Sex Behav*. 2020;49(7):2611-2618. doi:10.1007/s10508-020-01660-8
[135] Carmichael P, Butler G, Masic U, et al. 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. Santana GL, ed. *PLoS ONE*. 2021;16(2):e0243894. doi:10.1371/journal.pone.0243894
[136] Entwistle K. Debate: Reality check – Detransitioner's testimonies require us to rethink gender dysphoria. *Child Adolesc Ment Health*. Published online May 14, 2020:camh.12380. doi:10.1111/camh.12380
[137] Reddit, Detransition Subreddit, https://www.reddit.com/r/detrans/

This phenomenon is driven primarily by adolescent females, although adolescent males also present for care in much higher numbers than previously observed.[138] For example, at a London pediatric gender clinic in 2000-2001, 26 requests for services occurred; in 2019-2020, 2728 referrals were recorded—more than a 100-fold increase.[139,140] The explosive growth of urban trans health centers in the US also reflects a similar trend.

92. Researchers are just starting to explore the phenomenon of rapid trans-identification followed by re-identification with their biological sex. Before this, neither advocates nor skeptics of hormonal and surgical interventions had any sense of the rate of these phenomena. One of the first studies to note the phenomenon or rapid trans-identification in teen years following a gender-normative childhood was by Littman.[141] This is the research that Dr. Karasic worked hard to suppress, as discussed above. The phenomenon she described has now been confirmed by every major pediatric gender clinic in the world. [142] [143] [144] Two very recent studies from several UK clinics that suggest the rate of detransition among patients who transitioned in recent years is as high as 10% in the first 18 months of treatment and could be much higher if the

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[138] Zucker K. J. (2019), Adolescents with Gender Dysphoria: Reflections on Some Contemporary Clinical and Research Issues, *Archives of Sexual Behavior*, 48(7), 1983-1992. https://doi.org/10.1007/s10508-019-01518-8

[139] de Graaf, N. M., Carmichael, P., Steensma, T. D., & Zucker, K. J. (2018). Evidence for a Change in the Sex Ratio of Children Referred for Gender Dysphoria: Data From the Gender Identity Development Service in London (2000-2017). *The Journal of Sexual Medicine*, 15(10), 1381–1383. https://doi.org/10.1016/j.jsxm.2018.08.002.

[140] Zucker K. J. (2017). Epidemiology of gender dysphoria and transgender identity. *Sexual Health*, 14(5), 404–411. https://doi.org/10.1071/SH17067

[141] *See* L. Littman (2018), Parent Reports of Adolescents & Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria, *PLoS ONE* 13(8): e0202330 at 13.

[142] *See* de Graaf NM, Giovanardi G, Zitz C, Carmichael P. Sex Ratio in Children and Adolescents Referred to the Gender Identity Development Service in the UK (2009–2016). *Arch Sex Behav*. 2018;47(5):1301-1304. doi:10.1007/s10508-018-1204-9

[143] *See* Kaltiala-Heino R, Bergman H, Työläjärvi M, Frisen L. Gender dysphoria in adolescence: current perspectives. *AHMT*. 2018;Volume 9:31-41. doi:10.2147/AHMT.S135432

[144] Zucker KJ. Adolescents with Gender Dysphoria: Reflections on Some Contemporary Clinical and Research Issues. *Arch Sex Behav*. 2019;48(7):1983-1992. doi:10.1007/s10508-019-01518-8

patients lost to follow-up are accounted for (20%+ dropped out of treatment). Two more studies that pursued in-depth exploration of the motivations that lead one to a trans identification and later desistance have been published, showing that social influence, uncontrolled mental illness, and other factors had led these individuals to an erroneous temporary conclusion that they were transgender. [145] [146] [147] [148]

93. Although numerous studies have been undertaken to attempt to demonstrate a distinctive physical "brain structure" associated with transgender identity, as of yet there is no credible scientific evidence that these patients have any defining abnormality in brain structure that precedes the onset of gender dysphoria.[149,150] More recent studies demonstrating diverse MRI patterns seem to be adding to the hypothesis that the brain may be different in these groups, but whether the differences are caused by the identity or themselves cause the identity is unclear. Most authorities in the field are clear such data are used to build an etiological hypothesis and do not justify statements suggesting gender dysphoria is a biological illness.[151]

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[145] *See* Boyd I, Hackett T, Bewley S. Care of Transgender Patients: A General Practice Quality Improvement Approach. *Healthcare*. 2022;10(1):121. doi:10.3390/healthcare10010121
[146] *See* Hall R, Mitchell L, Sachdeva J. 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*. 2021;7(6):e184. doi:10.1192/bjo.2021.1022
[147] *See* Vandenbussche E. Detransition-Related Needs and Support: A Cross-Sectional Online Survey. *Journal of Homosexuality*. Published online April 30, 2021:20. doi:10.1080/00918369.2021.1919479
[148] *See* Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. Published online October 19, 2021. doi:10.1007/s10508-021-02163-w
[149] Mueller, De Cuypere & T'Sjoen. Transgender research in the 21st century: A selective critical review from a neurocognitive perspective. *American Journal of Psychiatry* 174: 12, 2017.
[150] Frigerio et al (2021) Structural, functional, and metabolic brain differences as a function of gender identity or sexual orientation: A systematic review of the human neuroimaging literature. *Archives of Sexual Behavior*. 503329-3352. https://doi.org/10.1007/s10508-021-02005-9
[151] See Mueller SC, et al The Neuroanatomy of Transgender Identity: Mega-Analytic Findings From the ENIGMA Transgender Persons Working Group. *J Sex Med*. 2021 Jun;18(6):1122-1129. doi: 10.1016/j.jsxm.2021.03.079. Epub 2021 May 22. PMID: 34030966

94. Thus, because the causal mechanisms of gender incongruence are not scientifically established, the available diagnoses are contradictory in terms of what the nature of the problem that is addressed is, it is challenging to even begin to establish the basis for medical necessity.

**B. Medically-necessary care should not be conflated with "gender-affirming" care. The latter has not been shown to result in significant lasting improvements in mental health or reduction in suicidality/suicide long-term.**

95. Further, to demonstrate medical necessity, one must be able to demonstrate that treatments "improve the functioning of a malformed body member, to attain, maintain, or regain functional capacity, for the prevention of illness, or to achieve age appropriate growth and development." [152] However, despite decades of research, no convincing evidence exists that either hormonal or surgical interventions result *in lasting improvements* to the individuals' functioning, mental health, substance abuse, or suicidality. The research purporting to show these benefits comes from poor-quality, short-term studies, and is contradicted by longer-term, higher-quality studies and quality systematic reviews of evidence. [153] [154] [155] [156] I note that the Plaintiffs' expert

[152] *See* National Academy for State Health Policy, "State Definitions of Medical Necessity under the Medicaid EPSDT Benefit," Apr. 23, 2021, https://www.nashp.org/medical-necessity/

[153] Correction to Bränström and Pachankis. *AJP*. 2020;177(8):734-734. doi:10.1176/appi.ajp.2020.1778correction

[154] Hayes, Inc., Sex Reassignment Surgery for the Treatment of Gender Dysphoria, Hayes Directory (Aug. 1, 2018).

[155] See National Institute for Health and Care Excellence - NICE, Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria, 11 March 2021, at https://www.evidence.nhs.uk/document?id=2334888&returnUrl=search%3fq%3dtransgender%26s%3dDate

[155] *See* National Institute for Health and Care Excellence - NICE, Evidence review: Gender-affirming hormones for children and adolescents with gender dysphoria, 11 March 2021, at https://www.evidence.nhs.uk/document?id=2334889&returnUrl=search%3ffrom%3d2021-03-10%26q%3dEvidence%2bReview%26to%3d2021-04-01

[156] *See* Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N). :109. https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=282

witnesses do not address the quality of evidence in favor of their opinions. But it is an ethical principle throughout medicine that treatment should be based on science.

96. In evaluating claims of scientific or medical knowledge, it is important to recognize the widely accepted hierarchy of reliability when it comes to "knowledge" about medical or psychiatric phenomena and treatments. Unfortunately, in this field opinion is too often confused with knowledge. In order of increasing confidence, such "knowledge" may be based upon data comprising:

a. Expert opinion—it is surprising to educated laypersons that expert opinion standing alone is the lowest form of knowledge, the least likely to be proven correct in the future, and therefore does not garner as much respect from professionals as what follows:

b. A single case or series of cases (what could be called anecdotal evidence),

c. A series of cases with a control group,

d. A cohort study,

e. A randomized double-blind clinical trial,

f. An overview of the multiple studies (e.g., narrative review, descriptive review, etc.),

g. A systematic review of all available studies on a given topic. It may also include meta-analysis of multiple trials that maximizes the number of patients treated despite their methodological differences to detect trends from larger data sets.

97. Individual studies can suffer from methodological limitations that make them unreliable. As an experienced reviewer of submitted manuscripts to well respected scientific journals, I find myself frequently pointing out to authors that their conclusions are presented with too much confidence, certainty, or authority given the limitations that they have described in their

article. The danger of this is that when they or others quote their findings in a sentence or two, there is no hint of the studies known limitations. This phenomenon is one of the reasons why whenever possible, clinical and policy decision-makers more heavily rely on systematic reviews of evidence. Systematic reviews utilize reproducible methods to systematize and categorize all available knowledge. However, to be credible systematic reviews need to be conducted according to strict metrological standards. To date, every credible quality systematic review of evidence in the area of transgender medicine have found the evidence to be of low to very low quality, and the findings of benefits to be uncertain.

98. Cochrane reviews are generally considered the gold standard of systematic reviews in medicine.[157] Cochrane goes to great lengths to assure that researchers conducting the reviews of evidence are free from problematic conflicts of interest, and that they follow a strict and highly reproducible research methodology. A 2020 Cochrane review of hormonal treatment outcomes for male-to-female transitioners older than 16 years found "insufficient evidence to determine the efficacy or safety of hormonal treatment approaches." It is remarkable that six decades after the first transitioned male-to-female patient, quality evidence for the benefit of transition is still lacking.[158]

99. The National Institute of Health and Care Excellence (NICE) is another organization known for its excellence and expertise in evidence evaluation. They undertook two systematic evidence reviews of the use of GnRH agonists ("puberty blockers") and cross-sex hormones as treatments for gender dysphoric patients <18 years old. These reviews were led by Dr. Hilary

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[157] Deshpande S, Misso K, Westwood M, et al. Not All Cochrane Reviews Are Good Quality Systematic Reviews. *Value in Health*. 2016;19(7):A371. doi:10.1016/j.jval.2016.09.142

[158] See Haupt, C., Henke, M. et. al., Cochrane Database of Systematic Reviews, Review – Intervention, Antiandrogen or Estradiol Treatment or Both during Hormone Therapy in Transitioning Transgender Women, 28 November 2020. https://doi.org/10.1002/14651858.CD013138.pub2, at https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013138.pub2/full

Cass and published in March 2021. The reviews found the evidence of benefit of using puberty blocking drugs and cross sex hormones to treat young people struggling with gender identity as "very low certainty." For puberty blockers, the review's conclusions stated, "The results of 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. They suggest little change with GnRH [puberty blockers] analogues from baseline to follow-up."[159] To state it plainly, the review found no credible evidence that puberty blockers improve functioning of children. A similar conclusion of very low certainty was drawn regarding the evidence of treatment with cross-sex hormones. The review noted a possibility of benefits, but stated, "[a]ny potential benefits of gender-affirming hormones must be weighed against the largely unknown long-term safety profile of these treatments in children and adolescents with gender dysphoria."[160] NICE reviews did not address surgeries, but other systematic reviews did.

100. Another expert systematic review, conducted by the Hayes Corporation, which reviews treatments for insurance payers for 84% of insured Americans, reviewed evidence for gender reassignment surgery, rating the quality of evidence from "A" (strongest) to "D2" (weakest). The evidence of gender-affirming surgery for minors earned the lowest "D2" rating: "insuf-

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[159] *See* National Institute for Health and Care Excellence - NICE, Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria, p. 13. 11 March 2021, at https://www.evidence.nhs.uk/document?id=2334888&returnUrl=search%3fq%3dtransgender%26s%3dDate

[160] See National Institute for Health and Care Excellence - NICE, Evidence review: Gender-affirming hormones for children and adolescents with gender dysphoria, p. 14. 11 March 2021, at https://www.evidence.nhs.uk/document?id=2334889&returnUrl=search%3ffrom%3d2021-03-10%26q%3dEvidence%2bReview%26to%3d2021-04-01

ficient published evidence to assess the safety and/or impact on health outcomes or patient management." The rating for surgeries for adults was a higher grade of "C," indicating "[p]otential but unproven benefit." Hayes noted, "substantial uncertainty remains about safety and/or impact on health outcomes because of poor-quality studies, sparse data, conflicting study results, and/or other concerns." [161]

101. The Centers for Medicare & Medicaid Services, within the U.S. Department of Health and Human Services (HHS) conducted a systematic review of evidence of gender-affirming surgeries for adults. The HHS refused to mandate coverage for these services due to insufficient evidence of benefit. Remarkably, the HHS stated: "Further, we cannot exclude [gender-affirming] therapeutic interventions as a cause of the observed excess morbidity and mortality."[162]

102. The public health authorities in Sweden and Finland, countries that are among the pioneers of medical transition, have recently concluded their own systematic reviews of evidence of gender-affirming interventions, with a focus on youth. Both came to similar conclusions as the systematic reviews above: the evidence of benefit was found to be unconvincing. [163] [164] Consequently, both Finland, and Sweden's leading Karolinksa Hospital (which grants the Nobel Prize

[161] *See* Hayes, Inc., Sex Reassignment Surgery for the Treatment of Gender Dysphoria, Hayes Directory (Aug. 1, 2018).
[162] Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N). p. 46. :109. https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=282
[163] *See* Gender affirmation surgery for gender dysphoria - effects and risks: Health Technology Assessment review 2018. Swedish Health Authority. Published online 2018. https://alfresco-offentlig.vgregion.se/alfresco/service/vgr/storage/node/content/workspace/SpacesStore/441006af-62a7-4f19-be73-6d698bf635f5/2018_102%20Rapport%20K%C3%B6nsdysfori.pdf?a=false&guest=true&fbclid=IwAR2_BBlVfFBKok9XZ7JiTXfwOfT-gcCXIzAySkh6wlXUJK8s_L_8XZy-tdIA
[164] Pasternack I, Söderström I, Saijonkari M, Mäkelä M. Lääketieteelliset menetelmät sukupuolivariaatioihin liittyvän dysforian hoidossa. Systemaattinen katsaus. [Appendix 1 Systematic Review]. Published online 2019:106. Accessed March 1, 2021. https://app.box.com/s/y9u791np8v9gsunwgpr2kqn8swd9vdtx

in Medicine) have either stopped or sharply curtailed the practice of pediatric gender transitions, and now prioritize psychotherapy instead.

103. A review by Professor Carl Heneghan, the editor of the British Medical Journal, and the Director of the Centre for Evidence-Based Medicine in Oxford University, also conducted a review of evidence with a focus on young people (although it was not a "systematic review"). His conclusion was that the evidence for the use of gender-affirming puberty blockers and hormones in youth was of very low quality, and there are substantial risks and unknowns involved. He stated, "The development of these interventions should, therefore, occur in the context of research, and treatments for under 18 gender dysphoric children and adolescents remain largely experimental. There are a large number of unanswered questions that include the age at start, reversibility; adverse events, long term effects on mental health, quality of life, bone mineral density, osteoporosis in later life and cognition. We wonder whether off label use is appropriate and justified for drugs such as spironolactone which can cause substantial harms and even death. We are also ignorant of the long-term safety profiles of the different GAH regimens. The current evidence base does not support informed decision making and safe practice in children." [165]

104. In 2017, the Endocrine Society published clinical guidelines for the treatment of patients with persistent gender dysphoria. [166] These guidelines were based on two systematic reviews, which also found the evidence for hormonal use to be of "very low" and "low" quality

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[165] Heneghan C, Jefferson T. Gender-affirming hormone in children and adolescents. BMJ EBM Spotlight. Published February 25, 2019. Accessed October 9, 2020. https://blogs.bmj.com/bmjebmspotlight/2019/02/25/gender-affirming-hormone-in-children-and-adolescents-evidence-review/

[166] See Hembree, W. C. et al. Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab*, doi: 10.1210/jc.2017-01658 (2017) p.3-4.

(i.e., which translates into low confidence in the balance of risk and benefits)." Despite this sober assessment, the Endocrine Society instructed clinicians to proceed with treating gender-dysphoric youth with hormonal interventions in its guidelines. However, while the guidelines "recommended" hormonal interventions for gender dysphoric individuals, these recommendations were graded as "weak." The guidelines' authors had this to say about what differentiates a "weak" recommendation from a "strong" one: "the task force has confidence that persons who receive care according to the strong recommendations will derive, on average, more benefit than harm. Weak recommendations require more careful consideration of the person's circumstances, values, and preferences to determine the best course of action." In other words, the Endocrine Society is saying: we cannot be sure that on average, the benefits of administering hormonal interventions will outweigh the harm—for either adults or children." This indeed is a sobering notion.

105. There are, of course, "overviews" and "systematic reviews" that will claim just the opposite—that hormones and surgeries are a proven, safe, and effective treatment. Such reviews are often problematically conflicted. Rather than being conducted by independent experts in evidence evaluation with no conflicts of interest, they are often commissioned by activist clinicians and/or funded by organizations such as WPATH (the organization with a stated goal of creating broad access for hormones and surgeries for all those who wish to receive them) or one of its pharmaceutical company sponsors.

106. I am familiar with least two such recent reviews, which are problematically flawed, although I am certain there are others.[167] [168] One of them was recently harshly critiqued by a group of researchers and exposed as deeply flawed.[169] The authors note that the review of the evidence for puberty blockers, "illustrates a concerning trend, that we have observed in the GD [gender dysphoria] literature, to overstate the evidence underpinning clinical practice recommendations for youth with GD. New publications reference prior ones with increasing and unwarranted confidence, and with the risk of misleading clinicians regarding the state of evidence. There is also a marked asymmetry in outcomes reporting: findings of positive outcomes of medical interventions are trumpeted in abstracts, while their profound limitations cannot be seen by busy clinicians unless they have a subscription to the journal. (Journals typically charge ~$40 per article.) To the best of my knowledge, another group of researchers contacted the publishing journal of the other review, commissioned by WPATH, and which will serve as the basis for WPATH's upcoming SOC8 recommendation, but the editor refused to publish the critique.

107. A discerning consumer of systematic reviews will note that reviews published by independent authorities with no conflict of interest universally find no compelling evidence that gender-affirming treatments lead to demonstrable lasting improvements in mental health, while reviews commissioned and / or led by transgender rights activists tend to find just the opposite.

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[167] Rew L, Young CC, Monge M, Bogucka R. Review: Puberty blockers for transgender and gender diverse youth—a critical review of the literature. *Child Adolesc Ment Health*. 2021;26(1):3-14. doi:10.1111/camh.12437

[168] Baker KE, Wilson LM, Sharma R, Dukhanin V, McArthur K, Robinson KA. Hormone Therapy, Mental Health, and Quality of Life Among Transgender People: A Systematic Review. *Journal of the Endocrine Society*. 2021;5(4):bvab011. doi:10.1210/jendso/bvab011

[169] *See* 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 Adoles Ment Health*. Published online December 22, 2021:camh.12533. doi:10.1111/camh.12533

108. The question of suicide and whether gender-affirming treatments reduce suicide deserves special consideration. Like many proponents of unfettered access to hormones and surgery, Dr. Karasic raises the specter of suicide and claims that "[t]he denial of medically indicated care to transgender people … causes additional distress and poses other health risks, such as … suicidality."[170] Contrary to such assertions, no studies show that "affirmation" with hormones and surgeries reduces suicides in the long term.

109. Individuals with gender dysphoria are well known to have a higher risk of committing suicide or otherwise suffering increased mortality before and after gender-confirmation. [171] For example, in the United States, the death rates of trans veterans are comparable to those with schizophrenia and bipolar diagnoses—20 years earlier than expected. These crude death rates include significantly elevated suicide rates.[172] Similarly, researchers in Sweden have reported on almost all individuals who underwent sex-reassignment surgery over a 30-year period.[173] The Swedish follow-up study found a suicide rate in the post-surgery population 19.1 times greater than that of the controls after affirmation treatment. Decades later, the suicide rate was still 3.5 times greater among the trans identified Swedish population than other citizens.

[170] Karasic, p.8 para 28
[171] *See* Levine SB. Reflections on the Clinician's Role with Individuals Who Self-identify as Transgender. *Arch Sex Behav*. Published online September 15, 2021. doi:10.1007/s10508-021-02142-1
[172] Levine SB. Ethical Concerns About Emerging Treatment Paradigms for Gender Dysphoria. *Journal of Sex & Marital Therapy*. 2018;44(1):29-44. doi:10.1080/0092623X.2017.1309482
[173] C. Dhejne et al. (2011), Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden, *PLOS ONE* 6(2) e16885 ("Long Term"); R. K. Simonsen et al. (2016), Long-Term Follow-Up of Individuals Undergoing Sex Reassignment Surgery: Psychiatric Morbidity & Mortality, *Nordic J. of Psychiatry* 70(4).

110. However, there is no evidence that transition reduces suicide rates. For example, a key study from the Netherlands found that suicide rates are similar across all stages of transition from pre-treatment assessment, to several post-surgery.[174]

111. The most conclusive results, however, come from a key paper by Bränström and Panchankis published in 2019.[175] The original paper did not find that hormones improved long-term mental health or suicide attempted, but did find such an effect for surgeries, claiming "the longitudinal association between gender-affirming surgery and reduced likelihood of mental health treatment lends support to the decision to provide gender-affirming surgeries to transgender individuals who seek them." They claimed their research provided the first empirical evidence that gender transition surgeries had long-term mental-health benefits.

112. Seven letters were submitted to the editor from MDs, PhDs, and other methodologists that clarified methodological blunders and/or misrepresentations of the data. These were published in August 2020 along with the original article. Following these letters, the journal editors commissioned independent statistical reviews, and following a re-analysis, the researchers had to admit that there was no evidence that surgeries improved mental health or suicidality either (in fact, suicide attempts were roughly double in the "surgery" compared to the "no surgery" group although the result was not statistically significant).

[174] C.M. Wiepjes, et al. (2020), Trends in Suicide Death Risk in Transgender People: Results from the Amsterdam Cohort of Gender Dysphoria Study (1972–2017), *Acta Psychiatr Scand* 141(6). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7317390/.

[175] See Bränström R, Pachankis JE: Reduction in Mental Health Treatment Utilization among Transgender Individuals after Gender-affirming Surgeries: A Total Population Study. *Am J Psychiatry* 2020; 177: 727–734.

113. The journal published a correction, along with the authors' statement that "more research" is needed.[176] [177] Remarkably, the journal allowed the original publication with its flawed title, which states that surgeries reduce risk of suicide, to stand uncorrected. The correction is instead residing along with the original article, unconscious, despite the fact that the correction entirely invalidated the study's main conclusion. This illustrates the bias that currently plagues transgender research literature, where studies with "positive" findings are quickly published and lauded, while correction of flawed data are either not undertaken, or if pursued, tend to be "buried." As pervasive and powerful a problem this is within trans medicine, I would like to again emphasize that the Bränström and Panchankis study was undertaken in order to investigate the long term psychological benefits of these increasingly common interventions.

114. Another example of the gross bias in the state of transgender treatment literature toward escalating poor quality "positive" findings while suppressing well-reasoned critique is the 2020 article by Turban, et al.[178] This publication, purporting that puberty blockers prevent suicidality, has been heavily promoted by the journal that published it, and has been widely covered by lay press. The study suffers from very serious limitations and cannot be used to justify such a sweeping claim. It has been rigorously criticized for a range of issues, not least among which was not emphasizing that both those treated and not treated with puberty blockers had high suicidal ideation rates and more patients on these drugs were hospitalized for suicidal plans than the untreated. However, the researchers who escalated these concerns to the journal editor were not permitted to publish their critique. Instead, they had to find other journals to make their critique

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[176] See Correction to Bränström and Pachankis. *AJP*. 2020;177(8):734-734.

[177] See Bränström, R. and Pachankis, J. , Toward Rigorous Methodologies for Strengthening Causal Inference in the Association Between Gender-Affirming Care and Transgender Individuals' Mental Health: Response to Letters, *Am J Psychiatry* 2020; 177:769–772; doi: 10.1176/appi.ajp.2020.20050599.

[178] *See* J. Turban et al., Puberty Suppression for Transgender Youth and Risk of Suicidal Ideation, *Pediatrics* 145(2), DOI: 10.1542/peds.2019-1725

public.[179] [180] [181] This is highly unusual for other areas of research, where debate is welcomed. Notably, a recent re-analysis of the same data used by Dr. Turban and his colleagues showed no effect of puberty blockers on mental health, invalidating the study's headline findings.[182]

115. It is important to note that in considering "suicide," mental health professionals distinguish between suicidal thoughts (ideation), suicide gestures, suicide attempts with a lethal potential, and completed suicide. Numerous studies have found suicidal ideation to have been present at some time in life in at least ~40-50% of adolescents and adults before and after various forms of transition. This figure is approximately twice that in gay and lesbian communities. In the heteronormative communities it is approximately 4%.

116. While elevated, suicide in trans-identified individuals remains, thankfully, a relatively rare event. The estimated suicide rate of trans adolescents is similar to that of teenagers who are in treatment for serious mental illness.[183] What trans teenagers do demonstrate is more suicidal ideation and attempts (however serious) than other teenagers.[184] Recently, the UK data was used to estimate the suicide rate in trans-identified teens and found it to be 0.03% over a 10-

[179] See Biggs M. Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria. *Arch Sex Behav*. 2020;49(7):2227-2229. doi:10.1007/s10508-020-01743-6

[180] *See* D'Angelo R, Syrulnik E, Ayad S, Marchiano L, Kenny DT, Clarke P. One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria. *Arch Sex Behav*. Published online October 21, 2020. doi:10.1007/s10508-020-01844-2

[181] *See* 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 Adoles Ment Health*. Published online December 22, 2021:camh.12533. doi:10.1111/camh.12533

[182] *See* Biggs, Michael (2022): Comment on Turban et al. 2022: Estrogen is associated with greater suicidality among transgender males, and puberty suppression is not associated with better mental health outcomes for either sex. figshare. Journal contribution. https://doi.org/10.6084/m9.figshare.19018868.v1

[183] de Graaf NM, Steensma TD, Carmichael P, et al. Suicidality in clinic-referred transgender adolescents. *Adolescent Psychiatry*. Published online June 2020:17. doi:https://doi.org/10.1007/s00787-020-01663-9

[184] A. Perez-Brumer, J. K. Day et al. (2017), Prevalence & Correlates of Suicidal Ideation Among Transgender Youth in Cal.: Findings from a Representative, Population-Based Sample of High Sch. Students, *J. Am. Acad. Child Adolescent Psychiatry* 56(9), 739 at 739.

year period, while the adult rate was estimated to be 0.6% over a 20-year period in Sweden . [185] [186]

117. In sum, claims that affirmation will reduce the risk of suicide are not based on science. Such claims overlook the complexity of suicide as a phenomenon which is rarely driven by a single cause and the lack of long-term evidence that gender-affirmation reduces suicides. They also overlook the other tools that the profession does have for addressing depression and suicidal thoughts in a patient once that risk is identified, including cognitive behavioral therapy, medication, a new psychotherapy process. and other proven interventions. Psychiatry, of course, has a long history of striving to prevent suicide in those who seek our care.[187]

**C. There are significant risks of complications associated with gender-affirming hormonal and surgical interventions.**

118. The risks associated with medical transition are significant. They tend to be underplayed in the literature promoting transgender medical and surgical interventions. The risks affect a range of domains.

[185] Biggs M. Suicide by Clinic-Referred Transgender Adolescents in the United Kingdom. *Arch Sex Behav*. Published online January 18, 2022. doi:10.1007/s10508-022-02287-7

[186] Socialstyrelsen [National Board of Health and Welfare]. *Utvecklingen Av Diagnosen Könsdysfori [The Evolution of the Diagnosis of Gender Dysphoria]*. Socialstyrelsen [Swedish Health Authority]; 2020. Accessed October 29, 2020. https://www.socialstyrelsen.se/om-socialstyrelsen/pressrum/press/vanligt-med-flera-psykiatriska-diagnoser-hos-personer-med-konsdysfori/

[187] *See* Levine S. B. (2021). Reflections on the Clinician's Role with Individuals Who Self-identify as Transgender. *Archives of Sexual Behavior*, 50(8), 3527–3536. https://doi.org/10.1007/s10508-021-02142-1

Disease and mortality generally

119. Hormonal interventions are associated with 3-5 fold increase in rates of heart attacks and strokes, with effects on bone health, and with generally elevated morbidity and mortality of adults. [188] [189] [190] [191] [192]

120. Shortened life expectancy has been repeatedly documented in Sweden, the US, and Denmark..

121. Many of the long-term risks for young people are not yet known, as the practice of medically transitioning minors and young people is relatively new and no long-term data are available.

122. After puberty, the individual who wishes to live as the opposite sex will in most cases have to take cross-sex hormones for most of life. The long-term health risks of this major alteration of hormonal levels have not yet been quantified in terms of exact risk.[193] However, a recent study found greatly elevated levels of strokes and other acute cardiovascular events among male-to-female transgender individuals taking estrogen. Those authors concluded, "it is

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[188] *See* Alzahrani T, Nguyen T, Ryan A, et al. Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population. *Circ: Cardiovascular Quality and Outcomes*. 2019;12(4). doi:10.1161/CIRCOUTCOMES.119.005597

[189] *See* Getahun D, Nash R, Flanders WD, et al. Cross-sex Hormones and Acute Cardiovascular Events in Transgender Persons. *Ann Intern Med*. 2018;169(4):205-213. doi:10.7326/M17-2785

[190] *See* Klink D, Caris M, Heijboer A, van Trotsenburg M, Rotteveel J. Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria. *The Journal of Clinical Endocrinology & Metabolism*. 2015;100(2):E270-E275. doi:10.1210/jc.2014-2439

[191] *See* Biggs M. Revisiting the effect of GnRH analogue treatment on bone mineral density in young adolescents with gender dysphoria. *J Pediatr Endocrinol Metab*. 2021;34(7):937-939. doi:10.1515/jpem-2021-0180

[192] *See* C. Dhejne et al. (2011), Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden, *PLOS ONE* 6(2) e16885 ("Long Term"); R. K. Simonsen et al. (2016), Long-Term Follow-Up of Individuals Undergoing Sex Reassignment Surgery: Psychiatric Morbidity & Mortality, *Nordic J. of Psychiatry* 70(4).

[193] *See* Tishelman et al., *Serving TG Youth* at 6-7 (Long-term effect of cross-sex hormones "is an area where we currently have little research to guide us.").

critical to keep in mind that the risk for these cardiovascular events in this population must be weighed against the benefits of hormone treatment."[194]

123. Another group of authors similarly noted that administration of cross-sex hormones creates "an additional risk of thromboembolic events"—blood clots which are associated with strokes, heart attacks, and lung and liver failure.[195] The reason medical follow up of lipid parameters, weight gain, smoking history, and red blood cell counts is recommended for patients on hormones is that these are known predisposing factors to cardiovascular disease in the future.

124. Clinicians must distinguish the apparent short-term safety of hormones from likely or possible long-term consequences, and help the patient or parents understand these implications as well. Although the young patient may feel, "I don't care if I die young, just as long I get to live as a woman," the mature adult may take a different view of such risks, including that of reduced life expectancy.[196]

<u>Health risks inherent in complex surgery</u>

125. Complications of surgery exist for each procedure,[197] and complications in surgery affecting the reproductive organs and urinary tract can have significant anatomical and functional complications for the patient's quality of life. In the famous "Dutch study," one of 70 treated adolescents died as a result of surgery. [198]

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[194] D. Getahun et al. (2018), Cross-Sex Hormones and Acute Cardiovascular Events in Transgender Persons: A Cohort Study, *Annals of Internal Medicine* at 8, DOI:10.7326/M17-2785.
[195] *See* C. Guss et al., *TGN Adolescent Care* at 5.
[196] See Blosnich, J. R., Brown, G. R., Wojcio, S., Jones, K. T., & Bossarte, R. M. (2014). Mortality among Veterans with Transgender-related Diagnoses in the Veterans Health Administration, FY2000–2009. *LGBT Health*, 1, 269–276. doi:10.1089/lgbt.2014.0050
[197] Levine, *Informed Consent*, at 5 (citing T. van de Grift, G. Pigot et al. (2017), A Longitudinal Study of Motivations Before & Psychosexual Outcomes After Genital Gender-Confirming Surgery in Transmen, *J. Sexual Medicine* 14(12) 1621.).
[198] *See* de Vries ALC, McGuire JK, Steensma TD, Wagenaar ECF, Doreleijers TAH, Cohen-Kettenis PT. Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment. *Pediatrics*. 2014;134(4):696-704. doi:10.1542/peds.2013-2958

126. Non-fatal but serious surgical complications are common for all surgeries, from mastectomies, where a significant proportion of individuals permanently lose sensation, to genital surgeries, which can result in lasting problems with pain, urination, and a myriad of other issues. [199] [200] [201] Re-operations are frequently performed.

Infertility and Sterility

127. Sex-reassignment surgery that removes testes, ovaries, or the uterus is inevitably sterilizing. While by no means all transgender adults elect sex-reassignment surgery, many patients do ultimately feel compelled to take this serious step in their effort to live fully as the opposite sex.

128. Treating children with puberty blockers followed by cross-sex hormones is expected to result in sterility.[202] Fertility preservation is often not possible with children whose gonads have not yet matured. Most children do not opt for fertility preservation when such options are offered.[203] Children cannot adequately anticipate their future desires to be a biological parent. The future psychological burden of sterility for such youth is yet unknown, as no long-term follow-up exists on children who were treated in this manner.

[199] *See* Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest Reconstruction and Chest Dysphoria in Transmasculine Minors and Young Adults: Comparisons of Nonsurgical and Postsurgical Cohorts. *JAMA Pediatr*. 2018;172(5):431. doi:10.1001/jamapediatrics.2017.5440

[200] Dreher PC, Edwards D, Hager S, et al. Complications of the neovagina in male-to-female transgender surgery: A systematic review and meta-analysis with discussion of management: Systematic Review of Neovaginal Complications. *Clin Anat*. 2018;31(2):191-199. doi:10.1002/ca.23001

[201] Rashid M, Tamimy MS. Phalloplasty: The dream and the reality. *Indian J Plast Surg*. 2013;46(2):283-293. doi:10.4103/0970-0358.118606

[202] *See* 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;104(3):686-687. doi:10.1210/jc.2018-01925

[203] *See* Nahata L, Tishelman AC, Caltabellotta NM, Quinn GP. Low Fertility Preservation Utilization Among Transgender Youth. *J Adolesc Health*. 2017;61(1):40-44. doi:10.1016/j.jadohealth.2016.12.012

[203] Mattawanon N, Spencer JB, Schirmer DA, Tangpricha V. Fertility preservation optio

129. Practitioners must also recognize that the administration of cross-sex hormones creates a risk of infertility or irreversible sterility. These risks have never been properly studied nor quantified in a systematic manner. [204] [205]

130. The life-long negative emotional impact of infertility on both men and women has been well studied. While this impact has not been studied specifically within the transgender population, the opportunity to be a parent is likely a human, emotional need, and so should be considered an important risk factor when considering gender transition for any patient. However, it is particularly difficult for parents of a young child to seriously contemplate that child's potential as a future parent and grandparent. This makes it even more critical that the mental health professional spend substantial and repeated time with parents to help them see the implications of what they are considering. The percentage of transitioned patients who will become increasingly suicidal as they fully realize the meaning of permanent sterility and the loss of the possibility of being a biological parent has never been studied and is thus unknown.

Loss of sexual function

131. Puberty blockers prevent maturation of the sexual organs and response. Some, and perhaps many, transgender individuals who transitioned as children and thus did not go through puberty consistent with their sex face significantly diminished sexual response as they enter adulthood and are unable ever to experience orgasm. Dr. Karasic and Dr. Schechter do not acknowledge these physical effects of puberty blockers.

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[204] *See* Cheng PJ, Pastuszak AW, Myers JB, Goodwin IA, Hotaling JM. Fertility concerns of the transgender patient. *Transl Androl Urol*. 2019;8(3):209-218. doi:10.21037/tau.2019.05.09

[205] *See* C. Guss et al., *TGN Adolescent Care* at 4 ("a side effect [of cross-sex hormones] may be infertility") and 5 ("cross-sex hormones . . . may have irreversible effects"); Tishelman et al., *Serving TG Youth* at 8 (Cross-sex hormones are "irreversible interventions" with "significant ramifications for fertility").

132. Additionally, youth will also experience the social, psychological, and interpersonal impact of not being in puberty for 2-5 years while their peers are challenged by the normative processes of maturing bodies and minds. To my knowledge, data quantifying these impacts have not been published. In the case of males, the cross-sex administration of estrogen limits penile genital function.

133. More generally, sexual dysfunction is not an uncommon complication of genital surgery. [206] Much has been written about the negative psychological and relational consequences of anorgasmia among non-transgender individuals that is ultimately applicable to the transgender population.[207]

Psychosocial and other effects

134. Besides puberty blockers' physical side effects like affecting height and bone density, the drugs also have irreversible psychosocial effects. That is because puberty blockers also halt the normal social and psychological process of maturation at that developmentally crucial stage, with lifelong effects.

135. The social and psychological impacts of remaining puerile for, e.g., two-to-five years while one's peers are undergoing pubertal transformations, and of undergoing puberty at a substantially older age, have not been systematically studied. However, clinical mental health professionals often hear of distress and social awkwardness in those who otherwise suffer delayed onset of puberty. In my opinion, individuals in whom puberty is delayed for multiple years are likely to suffer at least subtle negative psychosocial and self-confidence effects as they stand

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[206] Dunford C, Bell K, Rashid T. Genital Reconstructive Surgery in Male to Female Transgender Patients: A Systematic Review of Primary Surgical Techniques, Complication Profiles, and Functional Outcomes from 1950 to Present Day. *European Urology Focus*. 2021;7(2):464-471. doi:10.1016/j.euf.2020.01.004

[207] Levine, *Informed Consent,* at 6; see Perelman and Watters, 2016, Delayed Ejaculation in *Handbook of Clinical Sexuality for Mental Health Professionals* 3rd edition, New York, Routledge.

on the sidelines while their peers are developing the social relationships (and attendant painful social learning experiences) that come with adolescence.

136. We should recall that puberty introduces sexual desire, changes socialization patterns, and enables teens to enter into early romantic relationships, all of which can lead to maturation, self-confidence, and an understanding of the complexity of partner relationship. Delaying puberty can reasonably be assumed to increase the adolescent's sense of isolation, otherness, and being an outsider. [208] Please note that social anxiety is a very common symptom among candidates for puberty blocking hormones.

137. The Endocrine Society guidelines rightly recognize both "the sense of social isolation from having the timing of puberty to be so out of sync with peers" and the "potential harm to mental health (emotion and social isolation) if initiation of secondary sex characteristics must wait until the person has reached 16 years of age."[209]

138. Just as medicine does not know what the long-term health effects on bone, brain, and other organs are from delaying puberty between ages 11-16, psychology likewise does not know the long-term effects on coping skills, interpersonal comfort, and sexual function comfort (intimate relationships) of blocking puberty in a young person while one's peers are undergoing their maturational gains in these vital arenas of future mental health. It is well known that many effects of cross-sex hormones cannot be reversed should the patient later regret his transition.

139. Claims that using puberty blockers for gender-transition procedures is "reversible" or that they merely "pause" puberty are also false, misleading, and naive. Based on concerns that virtually all adolescents who begin puberty blockers proceed to cross-sex hormones,

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[208] *See* Levine SB. Informed Consent for Transgendered Patients. *Journal of Sex & Marital Therapy*. 2019;45(3):218-229. doi:10.1080/0092623X.2018.1518885

[209] Wylie C. Hembree, et al., Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons, p. 3885.

the UK National Health Service has officially recommended against such language, stating that "[r]esearchers and clinical staff working in gender identity development should consider carefully the terms that they use in describing treatments e.g. avoid referring to puberty suppression as providing a 'breathing space,' to avoid risk of misunderstanding."[210] This is a wise recommendation, and it should be followed.

Family, friendship, and romantic relationships

140. Gender transition routinely leads to isolation from at least a significant portion of one's family in adulthood. In the case of a juvenile transition, this will be less dramatic while the child is young, but commonly increases over time.

141. Friendship in general is highly desirable, many trans teens and older individuals desire to interact more fully and extensively with those in the larger population. But, by adulthood, the friendships of transgender individuals tend to be confined to other transgender individuals and the generally limited set of others who are most comfortable interacting with them. [211] Among young adolescent trans-identified teens, friends are often virtual. For some these are their only friends, while for others conversations over the Internet dominate their connections with others.[212]

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[210] Investigation into the Study "Early Pubertal Suppression in a Carefully Selected Group of Adolescents with Gender Identity Disorders," National Health Service Health Research Authority (October 14, 2019), https://www.hra.nhs.uk/about-us/governance/feedback-raising-concerns/investigation-study-early-pubertal-suppression-carefully-selected-group-adolescents-gender-identity-disorders/

[211] *See* Levine SB. Ethical Concerns About Emerging Treatment Paradigms for Gender Dysphoria. *Journal of Sex & Marital Therapy*. 2018;44(1):29-44. doi:10.1080/0092623X.2017.1309482

[212] Shrier A. (2019) The Transgender Craze Seducing Our Daughters, Regnery Publishing, Washington, DC

142. There is also a sexual-romantic risk that needs to be considered. After adolescence, transgender individuals find the pool of individuals willing to develop a romantic and intimate relationship with them to be greatly diminished. When a trans person who passes well reveals his or her natal sex, many potential mates lose interest. When a trans person does not pass well, he discovers that the pool of those interested consists largely of individuals looking for exotic sexual experiences rather than genuinely loving relationships. [213],[214]

Potential for worsened mental health

143. One would expect the negative physical and social impacts reviewed above to adversely affect the mental health of individuals who have transitioned. In addition, adult-transitioned individuals find that living as the other sex (or, in a manner that is consistent with the stereotypes of the other sex as the individual perceives them) is a continual challenge and stressor, and many find that they continue to struggle with a sense of inauthenticity in their transgender identity and bear chronic uneasiness. [215]

144. In addition, individuals often pin excessive hope in transition, believing that transition will solve mental health co-morbidities or what are in fact ordinary social stresses associated with maturation. Thus, transition can result in deflection from mastering personal challenges at the appropriate time or addressing conditions that require treatment. Whatever the reason, transgender individuals including transgender youth certainly experience greatly increased rates of mental health problems. I have detailed this above with respect to adults living under a

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[213] *See* Levine SB. Ethical Concerns About Emerging Treatment Paradigms for Gender Dysphoria. *Journal of Sex & Marital Therapy*. 2018;44(1):29-44. doi:10.1080/0092623X.2017.1309482
[214] Anzani, A., Lindley, L., Tognasso, G., Galupo, M. P., & Prunas, A. (2021). "Being Talked to Like I Was a Sex Toy, Like Being Transgender Was Simply for the Enjoyment of Someone Else": Fetishization and Sexualization of Transgender and Nonbinary Individuals. *Archives of Sexual Behavior*, 50(3), 897–911. https://doi.org/10.1007/s10508-021-01935-8
[215] *See* Levine SB. Informed Consent for Transgendered Patients. *Journal of Sex & Marital Therapy*. 2019;45(3):218-229. doi:10.1080/0092623X.2018.1518885

transgender identity. Indeed, Swedish researchers in a long-term study (up to 30 years since sex-reassignment surgery, with a median time since sex-reassignment surgery of > 10 years) concluded that individuals who have sex-reassignment surgery should have postoperative lifelong psychiatric care. [216] With respect to youths a cohort study found that transgender youth had an elevated risk of depression (50.6% vs. 20.6%) and anxiety (26.7% vs. 10.0%); a higher risk of suicidal ideation (31.1% vs. 11.1%), suicide attempts (17.2% vs. 6.1%), and self-harm without lethal intent (16.7% vs. 4.4%) relative to the matched controls; and a significantly greater proportion of transgender youth accessed inpatient mental health care (22.8% vs. 11.1%) and outpatient mental health care (45.6% vs. 16.1%) services.[217]

**D. There is a crisis of inadequate or absent mental health assessments prior to undergoing transition.**

145. Prominent mental health experts in the area of transgender health have recently gone public with their concerns about the state of mental health assessments of youth.

146. Dr. Edwards-Leeper, who claims to have brought the practice of pediatric gender transition from the Netherlands to the US, and Dr. Anderson, a transwoman and a former leader of the US Chapter of WPATH who recently stepped down amid the controversy of her whistle-blowing, said this in a recent interview about the state of mental health care:

“Providers may also be afraid of being cast as transphobic bigots by their local colleagues and referral sources if they engage in gender exploring therapy with patients, as some have equated

[216] *See* Dhejne C, Lichtenstein P, Boman M, Johansson ALV, Långström N, Landén M. Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden. Scott J, ed. *PLoS ONE*. 2011;6(2):e16885. doi:10.1371/journal.pone.0016885

[217] Reisner et al. (2015), Mental Health of Transgender Youth in Care at an Adolescent Urban Community Health Center: A Matched Retrospective Cohort Study, *J. of Adolescent Health* 56(3) at 6, DOI:10.1016/j.jadohealth.2014.10.264.

this with conversion therapy," and continued, "the field has moved from a more nuanced, individualized and developmentally appropriate assessment process to one where every problem looks like a medical one that can be solved quickly with medication or, ultimately, surgery. As a result, we may be harming some of the young people we strive to support — people who may not be prepared for the gender transitions they are being rushed into."[218] [219]

147. To properly assess medical necessity of various treatments, clinicians must carefully and thoroughly consider each individual patient's clinical history, including mental health comorbidities, previous physical and psychological treatments, characteristic patterns, quality of relationships with each family member, and behavioral and verbal manifestations concerning gender nonconformity to determine the influences upon the patient's gender incongruity. [220] The history will undoubtedly be unique to each patient. So should be treatment recommendations.

148. Unfortunately, currently in the US, if therapists are involved at all, they are typically the "gender-affirming" therapists, who are expected to accept a patient's self-diagnosis of gender dysphoria or gender incongruence based upon the patient's report of a transgender identity. The result of such wide-spread, preconceived, unsupported motives not based in medical science is that the vast majority of patients who present for medical care reporting gender-related distress or with a self-diagnosis of gender dysphoria or gender incongruence based upon a transgender identity, will get rapid approval for hormonal and surgical interventions.

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[218] Edwards-Leeper, Laura and Erica Anderson, "The mental health establishment is failing trans kids," *The Washington Post*, https://www.washingtonpost.com/outlook/2021/11/24/trans-kids-therapy-psychologist/

[219] Anderson, E. (2022, January 3). Opinion: When it comes to trans youth, we're in danger of losing our way. *The San Francisco Examiner.* Accessed January 5th, 2022

[220] *See* Levine SB. Reflections on the Clinician's Role with Individuals Who Self-identify as Transgender. *Arch Sex Behav*. Published online September 15, 2021. doi:10.1007/s10508-021-02142-1

149. Yet according to WPATH, perfunctory mental health assessments, which the draft SOC8 describe as "brief assessment process," are sufficient to approve 14-year-olds for treatment with irreversible cross-sex hormones, 15-year-olds with double mastectomies, and 17-year-olds with removal of their testes. Remarkably, the draft version of SOC8 claims that even if a patient is unable to provide informed consent, this should not be a barrier to surgery: "limits to capacity to consent to treatment should not be an impediment to individuals receiving appropriate GAMST [gender affirmative medical and surgical treatments]." [221]

**E. The risks of providing on-demand "gender-affirming" interventions are going to be borne out disproportionately by youth and by vulnerable populations.**

150. There has been a recent sharp rise in trans-identification among youth, affecting 2% - 10% of the population, which remains poorly understood. Most are adolescent females with no history of childhood gender dysphoria, although the prevalence of males has also significantly increased. The majority suffer from significant mental health comorbidities. [222] [223]

151. The understanding of this phenomenon remains controversial. One group considers the Internet and rising status of trans persons to influence naïve youngsters to come out as trans while the other group thinks that the knowledge of treatment possibilities has allowed teens

[221] Society for Evidence-Based Gender Medicine, "WPATH SOC8 Draft Guideline," Jan. 16, 2022, https://segm.org/draft_SOC8_lacks_methodological_rigor
[222] Kaltiala-Heino, Riittakerttu, Hannah Bergman, Marja Työläjärvi, and Louise Frisen. "Gender Dysphoria in Adolescence: Current Perspectives." *Adolescent Health, Medicine and Therapeutics* Volume 9 (March 2018): 31–41, https://doi.org/10.2147/AHMT.S135432
[223] Zucker, Kenneth J. "Adolescents with Gender Dysphoria: Reflections on Some Contemporary Clinical and Research Issues." *Archives of Sexual Behavior* 48, no. 7 (October 2019): 1983–92. https://doi.org/10.1007/s10508-019-01518-8

who always felt like the opposite gender to courageously reveal their status. The latter explanation rests on the assumption that trans identities are biologically dictated, which has not been demonstrated to be true.

152. Although research suggests there may be a biological influence, no studies have been able to identify a "transgender brain" once they have controlled for sexual orientation and cross-sex hormonal exposure. [224] [225] Such vital methodological confounds are rarely mentioned by those who present their hypothesis of a biogenic etiology as proven fact.

153. It is unknown how to best care for the rapidly growing group of trans-identified youth. A fundamental issue that is not being addressed is the adult fate of teens undergoing hormonal and surgical interventions. This glaring unanswered question is central for three reasons: first, multiple scientific reviews have pointed out a lack of convincing evidence of improved mental health during adolescence; second, every study of adult trans populations has indicated a high prevalence of various mental health problems; third, the age at which irreversible interventions are offered are getting progressively lower. For example, a key study reports that gender-dysphoric adolescents have had "top surgery" as young as 13.[226]

154. As pointed out earlier, in the absence of such early and aggressive interventions, the majority of children in eleven studies (typically, a large majority) who are diagnosed with

[224] Skorska MN, Chavez S, Devenyi GA, et al. A Multi-Modal MRI Analysis of Cortical Structure in Relation to Gender Dysphoria, Sexual Orientation, and Age in Adolescents. Published online 2021:24.
[225] Hoekzema E, Schagen SEE, Kreukels BPC, et al. Regional volumes and spatial volumetric distribution of gray matter in the gender dysphoric brain. *Psychoneuroendocrinology*. 2015;55:59-71. doi:10.1016/j.psyneuen.2015.01.016

[226] *See* Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest Reconstruction and Chest Dysphoria in Transmasculine Minors and Young Adults: Comparisons of Nonsurgical and Postsurgical Cohorts. *JAMA Pediatr*. 2018;172(5):431. doi:10.1001/jamapediatrics.2017.5440

gender dysphoria "desist"—that is, their gender dysphoria does not persist—by puberty or adulthood. It is not currently known how to distinguish children who will persist from those who will not.[227] [228] Nor is it known how many of the adolescents from the newly-presenting cohorts, who had no childhood history of gender incongruence, will persist versus desist, and how to best help them overcome their distress.

155. Detransitioners from the novel cohort of youth have begun to vocally voice regret, saying they were let down by the medical establishment.[229] [230]

156. In considering the appropriate response to gender dysphoria, it is important to know that certain groups of children and adolescents have an increased prevalence and incidence

[227] *See* Ristori J, Steensma TD. Gender dysphoria in childhood. International Review of Psychiatry. 2016;28(1):13-20. doi:10.3109/09540261.2015.1115754
[228] *See* Singh D, Bradley SJ, Zucker KJ. A Follow-Up Study of Boys With Gender Identity Disorder. *Front Psychiatry*. 2021;12. doi:10.3389/fpsyt.2021.632784
[229] *See* Vandenbussche E. Detransition-Related Needs and Support: A Cross-Sectional Online Survey. *Journal of Homosexuality*. Published online April 30, 2021:20. doi:10.1080/00918369.2021.1919479
[230] *See* Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. Published online October 19, 2021. doi:10.1007/s10508-021-02163-w

of trans identities. These include: children of color,[231] children with mental developmental disabilities,[232] including children on the autistic spectrum (at a rate more than 7x the general population),[233] children residing in foster care homes, adopted children (at a rate more than 3x the general population),[234] children with a prior history of psychiatric illness,[235] and more recently adolescent girls (in a large recent study, at a rate more than 2x that of boys).[236] These data are consistent with Littman's research.[237] Properly protecting vulnerable, marginalized patients from unproven, potentially dangerous treatments should be an essential concern. (G. Rider at 4.)

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[231] G. Rider et al. (2018), Health and Care Utilization of Transgender/Gender Non-Conforming Youth: A Population Based Study, *Pediatrics* at 4, DOI: 10.1542/peds.2017-1683. (In a large sample, non-white youth made up 41% of the set who claimed a transgender or gender-nonconforming identity, but only 29% of the set who had a gender identity consistent with their sex.)

[232] D. Shumer & A. Tishelman (2015), The Role of Assent in the Treatment of Transgender Adolescents, *Int'l J. of Transgenderism* at 1, DOI: 10.1080/15532739.2015.1075929.

[233] D. Shumer et al. (2016), Evaluation of Asperger Syndrome in Youth Presenting to a Gender Dysphoria Clinic, *LGBT Health*, 3(5) 387 at 387.

[234] D. Shumer et al. (2017), Overrepresentation of Adopted Adolescents at a Hospital-Based Gender Dysphoria Clinic, *Transgender Health* Vol. 2(1) 76 at 77.

[235] L. Edwards-Leeper et al. (2017), Psychological Profile of the First Sample of Transgender Youth Presenting for Medical Intervention in a U.S. Pediatric Gender Center, *Psychology of Sexual Orientation and Gender Diversity*, 4(3) 374 at 375 ("Psychological Profile"); R. Kaltiala-Heino et al. (2015), Two Years of Gender Identity Service for Minors: Overrepresentation of Natal Girls with Severe Problems in Adolescent Development, *Child & Adolescent Psychiatry & Mental Health* 9(9) 1 at 5 (In 2015 Finland gender identity service statistics, 75% of adolescents assessed "had been or were currently undergoing child and adolescent psychiatric treatment for reasons other than gender dysphoria."); L. Littman (2018), Parent Reports of Adolescents & Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria, *PLoS ONE* 13(8): e0202330 at 13 (Parental survey concerning adolescents exhibiting Rapid Onset Gender Dysphoria reported that 62.5% of gender dysphoric adolescents had "a psychiatric disorder or neurodevelopmental disability preceding the onset of gender dysphoria."

[236] G. Rider at 4; See G. Rider et al. (2018), Health and Care Utilization of Transgender/Gender Non-Conforming Youth: A Population Based Study, *Pediatrics* at 4, DOI: 10.1542/peds.2017-1683. (In a large sample, non-white youth made up 41% of the set who claimed a transgender or gender-nonconforming identity, but only 29% of the set who had a gender identity consistent with their sex.); see D. Shumer & A. Tishelman (2015), The Role of Assent in the Treatment of Transgender Adolescents, *Int. J. Transgenderism* at 1, DOI: 10.1080/15532739.2015.1075929; D. Shumer et al. (2016), Evaluation of Asperger Syndrome in Youth Presenting to a Gender Dysphoria Clinic, *LGBT Health*, 3(5) 387 at 387; Shumer et al. (2017), Overrepresentation of Adopted Adolescents at a Hospital-Based Gender Dysphoria Clinic, *Transgender Health*, Vol. 2(1) 76 at 77; L. Edwards-Leeper et al. (2017), Psychological Profile of the First Sample of Transgender Youth Presenting for Medical Intervention in a U.S. Pediatric Gender Center, Psychology of Sexual Orientation and Gender Diversity, 4(3) 374 at 375 ("Psychological Profile"); R. Kaltiala-Heino et al. (2015), Two Years of Gender Identity Service for Minors: Overrepresentation of

157. The lack of knowledge of etiology of the current presentations and future outcomes, combined with the lack of proper assessments, creates a very problematic situation for youth and vulnerable people, who are disproportionately affected by the lack of safeguards and wide accessibly of on-demand hormonal and surgical interventions.

**F. There is a range of treatments to ameliorate gender dysphoria, from non-invasive to highly invasive.**

158. Gender dysphoria has multiple causal influences and multiple resolutions.

159. As demonstrated above, hormones and surgeries have not been demonstrated to improve long-term outcomes of gender dysphoria sufferers.

Natal Girls with Severe Problems in Adolescent Development, *Child and Adolescent Psychiatry & Mental Health*, 9(9) 1 at 5 (in the 2015 Finland gender identity service statistics, 75% of adolescents assessed "had been or were currently undergoing child and adolescent psychiatric treatment for reasons other than gender dysphoria.").

[237] See L. Littman (2018), Parent Reports of Adolescents & Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria, *PLoS ONE* 13(8): e0202330 at 13 (Parental survey concerning adolescents exhibiting Rapid Onset Gender Dysphoria reported that *62.5%* of gender dysphoric adolescents had "a psychiatric disorder or neurodevelopmental disability preceding the onset of gender dysphoria.").

160. The results of alternative approaches, such as watchful waiting for children, or gender-psychotherapy, are likewise lacking in long-term evidence. However, emerging evidence suggests that psychotherapy is a promising intervention for young people. [238] [239] [240] [241] [242] It should be noted that a key Finnish gender program recently announced that psychotherapy should be the first line of treatment for all gender dysphoric youth. A growing list of European countries appear to be moving in the same direction.

**G. To determine whether West Virginia Medicaid and PEIA should be forced to categorically cover medical and surgical interventions for gender dysphoria, one will need to consider the balance of benefits and harms of such a decision.**

161. Plaintiffs advocate for a lessened financial burden to achieve their desires for hormonal and various surgical procedures. These desires assume long lasting psychological benefits. Their personal economic benefits must be weighed against the harms to youth and other vulnerable individuals who include many transgender adults.

[238] Schwartz D. Clinical and Ethical Considerations in the Treatment of Gender Dysphoric Children and Adolescents: When Doing Less Is Helping More. *Journal of Infant, Child, and Adolescent Psychotherapy*. Published online November 22, 2021:1-11. doi:10.1080/15289168.2021.1997344

[239] Spiliadis A. Towards a gender exploratory model: Slowing things down, opening things up and exploring identity development. *Metalogos Systemic Therapy Journal*. 2019;35:1-9. https://www.ohchr.org/Documents/Issues/SexualOrientation/IESOGI/Other/Rebekah_Murphy_TowardsaGenderExploratoryModelslowingthingsdownopeningthingsupandexploringidentitydevelopment.pdf

[240] Bonfatto M, Crasnow E. Gender/ed identities: an overview of our current work as child psychotherapists in the Gender Identity Development Service. *Journal of Child Psychotherapy*. 2018;44(1):29-46. doi:10.1080/0075417X.2018.1443150

[241] Churcher Clarke A, Spiliadis A. 'Taking the lid off the box': The value of extended clinical assessment for adolescents presenting with gender identity difficulties. *Clin Child Psychol Psychiatry*. 2019;24(2):338-352. doi:10.1177/1359104518825288

[242] Lemma A. Trans-itory identities: some psychoanalytic reflections on transgender identities. *The International Journal of Psychoanalysis*. 2018;99(5):1089-1106. doi:10.1080/00207578.2018.1489710

162. Financial considerations must also be taken into account. The life-long costs of transgender interventions which are ever-growing in numbers and complexity, the cost of managing complications, fertility preservation, the costs of covering detransition procedures that will grow in numbers, and even the cost of potential future litigation over lack of safeguarding of youth and vulnerable populations must be accounted before any changes to the current laws are implemented.

163. It is my opinion that if West Virginia Medicaid and PEIA are forced to categorically cover medical and surgical treatments for patients with gender dysphoria without regard for traditional views of medical necessity and in contradiction to the unbiased, peer-reviewed, and high-quality literature cited herein, substantial harmful effects will occur. Vulnerable and impressionable youth will be disproportionately affected.

164. At this late half-century stage of surgical trans care, trans medicine is actually at an early scientific stage of hormonal and surgical trans care. What is glaringly necessary to advance the field is a social commitment to designing and implementing multiple site studies for each of the areas of uncertainty among children, young teens, older adolescents, and adults. It is most prudent and protective to support psychological services for trans-identified individuals, particularly for youth and their families. The least prudent approach would be to open the insurance gates so that all who think they want a medical or surgical intervention for themselves or their child should have it. I hope that I have made the reasons for this final statement abundantly clear.

*****SIGNATURE PAGE TO FOLLOW*****

**I declare under penalty of perjury that the foregoing is true and correct.**

**Executed on February 18, 2022.**

Stephen B Levine MD

Stephen B. Levine, M.D.

Curriculum Vita

# Stephen B. Levine, M.D.

**Introduction:**

Dr. Stephen B. Levine is Clinical Professor of Psychiatry at Case Western Reserve University School of Medicine. He is the solo author of four books, Sex Is Not Simple in 1989 (translated to German in 1992 and reissued in English in 1997 as Solving Common Sexual Problems); Sexual Life: A Clinician's Guide in 1992; Sexuality in Midlife in 1998 and Demystifying Love: Plain Talk For the Mental Health Professional in 2006; Barriers to Loving: A Clinician's Perspective in October 2013. He is the Senior Editor of the first (2003), second (2010) and third (2016) editions of the Handbook of Clinical Sexuality for Mental Health Professionals. He has been teaching, providing clinical care, and writing since 1973 and has generated original research, invited papers, commentaries, chapters, and book reviews. He has served as a journal manuscript and book prospectus reviewer for many years. From 1993 to 2017, he was co-director of the Center for Marital and Sexual Health/Levine, Risen & Associates, Inc. in Beachwood, Ohio. He and two colleagues received a lifetime achievement Masters and Johnson's Award from the Society for Sex Therapy and Research in March 2005.

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**Education:**

- 1963 BA Washington and Jefferson College
- 1967 MD Case Western Reserve University School of Medicine
- 1967-68 internship in Internal Medicine University Hospitals of Cleveland
- 1968-70 Research associate, National Institute of Arthritis and Metabolic Diseases, Epidemiology Field Studies Unit, Phoenix, Arizona, United States Public Health Service
- 1970-73 Psychiatric Residency, University Hospitals of Cleveland
- 1976 Board Certification American Board of Neurology and Psychiatry
- 1974-77 Robert Wood Johnson Foundation Clinical Scholar

**Appointments at Case Western Reserve University, School of Medicine:**

- 1973- Assistant Professor of Psychiatry
- 1979-Associate Professor
- 1982-Tenure
- 1985-Full Professor



Exhibit A

- 1993-Clinical Professor

**Honors:**

- Summa Cum Laude, Washington & Jefferson
- Teaching Excellence Award-1990 and 2010 (residency program)
- Visiting Professorships
  - Stanford University-Pfizer Professorship program (3 days)–1995
  - St. Elizabeth's Hospital, Washington, DC –1998
  - St. Elizabeth's Hospital, Washington, DC--2002
- Named to America's Top Doctors consecutively since 2001
- Invitations to present various Grand Rounds at Departments of Psychiatry, Continuing Education Lectures and Workshops
- Masters and Johnson Lifetime Achievement Award from the Society of Sex Therapy and Research, April 2005 along with Candace Risen and Stanley Althof
- 2006 SSTAR Book Award for The Handbook of Clinical Sexuality for Mental Health Professionals: Exceptional Merit

**Professional Societies:**

- 1971- American Psychiatric Association; fellow
- 2005-American Psychiatric Association- **Distinguished Life Fellow**
- 1973- Cleveland Psychiatric Society
- 1973-Cleveland Medical Library Association
  - 1985-Life Fellow
  - 2003-Distinguished Life Fellow
- 1974-Society for Sex Therapy and Research
  - President 1987-89
- 1983- International Academy of Sex Research
- 1983- Harry Benjamin International Gender Dysphoria Association
  - 1997-98 Chairman, Standards of Care Committee
- 1994- 1999 Society for Scientific Study of Sex

**Community Boards:**

- 1999-2002 Case Western Reserve University Medical Alumni Association
- 1996-2001 Bellefaire Jewish Children's Bureau
- 1999-2001 Physicians' Advisory Committee, The Gathering Place (cancer rehabilitation)

**Editorial Boards:**

- 1978-80 Book Review Editor Journal Sex and Marital Therapy
- Manuscript Reviewer for:
  - Archives of Sexual Behavior
  - Annals of Internal Medicine
  - British Journal of Obstetrics and Gynecology

  - JAMA
  - Diabetes Care
  - American Journal of Psychiatry
  - Maturitas
  - Psychosomatic Medicine
  - Sexuality and Disability
  - Journal of Nervous and Mental Diseases
  - Journal of Neuropsychiatry and Clinical Neurosciences
  - Neurology
  - Journal Sex and Marital Therapy
  - Journal Sex Education and Therapy
  - Social Behavior and Personality: an international journal (New Zealand)
  - International Journal of Psychoanalysis
  - International Journal of Transgenderism
  - Journal of Urology
  - Journal of Sexual Medicine
  - Current Psychiatry
  - International Journal of Impotence Research
- Prospectus Reviewer for:
  - Guilford
  - Oxford University Press
  - Brunner/Routledge
  - Routledge

**Expert Witness Appearances:**

- US District Court, Judge Mark L.Wolf's witness in Michelle Kosilek vs. Massachusetts Dept of Corrections et al. case (transsexual issue) in Boston 2007
- Deposition in the Battista vs. Massachusetts Dept of Corrections case (transsexual issue) in Cleveland October 2009
- Witness for Massachusetts Dept. of Corrections in their defense of a lawsuit brought by prisoner Katheena Soneeya. March 22, 2011 Deposition in Boston
- Witness for Florida Department of Corrections in Keohone case, July, 2017

**Consulting:**

- Massachusetts Department of Corrections—evaluation of 12 transsexual prisoners and the development of a Gender Identity Disorders Program for the state prison system.
- Monthly consultation with the GID treatment team since February 2009 and the GID policy committee since February 2010
- California Department of Corrections and Rehabilitation; 2012-2015; education, inmate evaluation, commentary on inmate circumstances, suggestions on future policies
- Virginia Department of Corrections –evaluation of an inmate

- New Jersey Department of Corrections—evaluation of an inmate

**Grant Support/Research Studies;**

- Principal Investigator of approximately 70 separate studies involving pharmacological interventions for sexual dysfunction since 1989.
- TAP–studies of Apomorphine sublingual in treatment of erectile dysfunction
- Pfizer–Sertraline for premature ejaculation
- Pfizer–Viagra and depression; Viagra and female sexual dysfunction; Viagra as a treatment for SSRI-induced erectile dysfunction
- NIH- Systemic lupus erythematosis and sexuality in women
- Sihler Mental Health Foundation
  - Program for Professionals
  - Setting up of Center for Marital and Sexual Health
  - Clomipramine and Premature ejaculation
  - Follow-up study of clergy accused of sexual impropriety
  - Establishment of services for women with breast cancer
- Alza–controlled study of a novel SSRI for rapid ejaculation
- Pfizer–Viagra and self-esteem
- Pfizer- double-blind placebo control studies of a compound for premature ejaculation
- Johnson & Johnson – controlled studies of Dapoxetine for rapid ejaculation
- Proctor and Gamble: multiple studies to test testosterone patch for post menopausal sexual dysfunction for women on and off estrogen replacement
- Lilly-Icos—study of Cialis for erectile dysfunction
- VIVUS – study for premenopausal women with FSAD
- Palatin Technologies- studies of bremelanotide in female sexual dysfunction—first intranasal then subcutaneous administration
- Medtap – interview validation questionnaire studies
- HRA- quantitative debriefing study for Female partners os men with premature ejaculation, Validation of a New Distress Measure for FSD,
- Boehringer-Ingelheim- double blind and open label studies of a prosexual agent for hypoactive female sexual desire disorder
- Biosante- studies of testosterone gel administration for post menopausal women with HSDD
- J&J a single-blind, multi-center, in home use study to evaluate sexual enhancement effects of a product in females.
- UBC-Content validity study of an electronic FSEP-R and FSDS-DAO and usability of study PRO measures in premenopausal women with FSAD, HSDD or Mixed FSAD/HSDD
- National registry trial for women with HSDD
- Endoceutics—two studies of DHEA for vaginal atrophy and dryness in post menopausal women

- Palatin—study of SQ Bremelanotide for HSDD and FSAD
- Trimel- a double-blind, placebo controlled study for women with acquired female orgasmic disorder.
    - S1 Biopharma- a phase 1-B non-blinded study of safety, tolerability and efficacy of Lorexys in premenopausal women with HSDD
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1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
3 HUNTINGTON DIVISION
4 --------------------------------------------------------
5 Christopher Fain, individually and on behalf of all
6 others similarly situated, et al.,
7 Plaintiffs,
8 vs. CIVIL ACTION NO. 3:20-cv-00740
9 William Crouch, et al.,
10 Defendants.
11 --------------------------------------------------------
12
13
14 REMOTE VIDEOTAPED DEPOSITION OF DR. STEPHEN LEVINE
15
16
17
18 DATE: April 27, 2022
19 TIME: 8:00 a.m. CST
20 PLACE: Veritext Virtual Videoconference
21
22
23
24 REPORTED BY: KELLEY E. ZILLES, RPR (Via Videoconference)
25 JOB NUMBER: 5176996

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4 (Original exhibits attached to original transcript.

5 Copies attached to transcript copies.)

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1 of your career, right?
2 A. Yes.
3 Q. Okay. You listed 23 separate pharmaceutical
4 company grants to study various pro-sexual medications,
5 right?
6 A. Yes.
7 Q. Were any of these 23 grants related to the
8 treatment of gender dysphoria in transgender people?
9 A. No.
10 Q. And were any of the grants related to the
11 treatment, any kind of treatment of prepubertal children
12 with gender dysphoria?
13 A. No.
14 Q. Or adolescents with gender dysphoria?
15 A. No.
16 Q. You also list in that same section in your
17 report, Dr. Levine, that you received a U.S. National
18 Institute of Health grant for the study of sexual
19 consequences of systemic lupus erythematosus and that
20 you were a co-principle investigator. Does that ring a
21 bell, is that accurate?
22 A. It is accurate.
23 Q. Okay. And did this grant have to do with the
24 study of anything related to gender dysphoria?
25 A. No.

1 A. Only to the extent that the grant helped us to
2 set up the Center For Marital & Sexual Health. The
3 Center For Marital & Sexual Health had a program called
4 the Case Western Reserve Gender Identity Clinic, and so
5 this was, this was not a grant for research, this was a
6 grant for the establishment, the administrative
7 establishment of our center that dealt with many sexual,
8 all sexual things including trans phenomenon. We didn't
9 in those days call it so much trans phenomenon, but we
10 called it gender identity problems.
11 Q. Right. So one of the grants was used to start
12 the Center for Marital & Sexual Health, but those five
13 separate grants were not for the study or, or direct
14 treatment under the Sihler Mental Health Foundation?
15 A. That's correct.
16 Q. Okay. But the Center For Marital & Sexual
17 Health, as a clinician there you saw a wide range of
18 patients there, right?
19 A. Yes.
20 Q. With a variety of problems related to sexuality
21 or sexual well-being?
22 A. Yes.
23 Q. Okay. And did you treat any children with
24 gender dysphoria at the Center For Marital & Sexual
25 Health?

1 A. If I can clarify your question, by you do you
2 mean me personally or do you mean under me as the
3 supervisor of people who did that?
4 Q. Let's start with you personally.
5 A. Yes, I have only on a rare occasion personally
6 treated or directly or indirectly treated a child. My
7 center, however, over the years has, has seen children
8 and, and I've been involved in the, the treatment as a
9 supervisor of those children.
10 Q. Okay. So you've reviewed their cases by way of
11 your supervision of clinicians at the center, but not
12 individually?
13 A. That's right.
14 Q. Okay. And is that the same for any adolescents
15 with gender dysphoria who were seen at the center? In
16 the early years I'm talking about now, not in recent
17 times.
18 A. Well, in the early years I occasionally saw
19 personally an older teenager, older adolescent, but in
20 the early years you must understand most of the patients
21 were adults.
22 Q. Okay. So to your knowledge, Dr. Levine, have
23 you received any grants to study the treatment -- I'm
24 sorry, excuse me. Have you received any grants to study
25 treatment for adults with gender dysphoria?

1 April 27, 2022. We're going back on the record at
2 10:36 a.m.
3 BY MR. CHARLES:
4 Q. Okay. Dr. Levine, talking about your writing
5 credentials, you've testified previously that you were
6 involved in drafting portions of the WPATH standards of
7 care Version 5, right?
8 A. Yes, I was the chairman of that group.
9 Q. And besides that, have you developed -- let me
10 back up. Have you helped to develop treatment
11 guidelines for the treatment of children or adolescents
12 with gender identity issues?
13 A. If you mean have I been part of a national or
14 international group that tried to, to publish, that
15 published guidelines about the treatment of these
16 individuals, the answer is no. But in my November of
17 2021 article I gave, I offered my opinions about what
18 the evaluation of adolescents and children ought to
19 consist of. In that sense I'm hoping that would
20 influence the guidelines of those committees who might
21 function in the future.
22 Q. I see. When we spoke in September of 2021 for
23 the Kadel vs. Folwell deposition, you said that you were
24 working with SEGM to develop some treatment guidelines.
25 What, what happened to those?

1 Q. Yes, Exhibit 01.
2 A. Would you give me the pages again.
3 Q. Sure, Page 2, Paragraph 3, so that will be the
4 top of Page 2, the paragraph does begin on Page 1.
5 A. Yeah.
6 Q. Okay. So in that paragraph your report states
7 that, "During this era an occasional child was seen."
8 By this era do you mean from around 1974 to 1993?
9 A. Yes.
10 Q. Okay. And by occasional do you mean infrequent?
11 A. Infrequent is a good word.
12 Q. So is it fair to say during that period your
13 clinic did not see many children with gender dysphoria?
14 A. It's fair to say that.
15 Q. And in your deposition on March 30th you
16 estimated that over the course of your career you've
17 probably only seen regularly six prepubertal children,
18 right?
19 A. It's an estimate, yes.
20 Q. And around 50 adolescents, give or take?
21 A. Give or take an unknown number, yeah, ten, 12,
22 five.
23 Q. Sorry, so you --
24 A. I've had extensive experience talking to
25 adolescents over the course of my career, adolescents

1 should do about the whole problem of insuring people
2 with this condition, I think it's beyond my expertise.
3 Given my medical knowledge and given my, what I
4 would like to say my knowledge of the literature, given
5 my knowledge of the patient, I recognize that there are
6 lots of possibilities and I think it would be a shame
7 for some people not to have access to that care and I
8 think even though it's a shame, it poses new
9 developmental challenges for the patient which they may,
10 may very well rise to the occasion and find some other
11 solution to their dilemma.
12 Q. Okay. So, so you're not offering an expert
13 opinion about what insurance should or should not cover
14 here?
15 A. Yeah, I believe that that's the policy level
16 done at government level and insurance company level
17 having to do with all sorts of decisions that no doctor,
18 including Dr. Levine, has adequate background
19 information to make that determination.
20 Q. But generally would it be fair to say you want
21 what is best for your patients?
22 A. Yes, I do.
23 Q. Even if they're not wealthy or affluent, right?
24 A. Even if they're not wealthy or affluent or
25 insurance covered.

1 A. I got it.

2 Q. Oh, you can see it?

3 A. I got it now.

4 MR. CHARLES: So for the record, this is

5 Exhibit SL05, deposition of Stephen B. Levine on

6 September 10th, 2021 in the matter of Kadel, et al. vs.

7 Folwell.

8 Q. And you, you said earlier today, Dr. Levine, you

9 remember giving this deposition last year?

10 A. I did, I do.

11 Q. Okay. And if you'll just scroll to Page 2

12 there. Actually, no, that's okay, Doctor, just leave it

13 open for a minute for me, if you would. The page

14 numbers on this document are in the upper right-hand

15 corner.

16 A. I see.

17 Q. Okay. So if you could please scroll to Page 51.

18 A. Getting close, 50, 51, I'm there.

19 Q. Okay. So then down at line 14, it's about

20 halfway down the page, do you see that? The page, I'm

21 sorry, the line numbers are on the left-hand side of the

22 page.

23 A. I see it.

24 Q. Okay. So the question was, "And using that same

25 framing of regular, how many children, so under age 11?

1 Answer, in the last year? Question, yes, yes, in the
2 last year. Answer, zero." So I just wanted to refresh
3 your recollection of your testimony there and ask, have
4 you seen, like has that number changed in the last seven
5 months since you provided this testimony?
6 A. No.
7 Q. Okay. Let's see. And then on that same page,
8 Dr. Levine, at line 19, it begins, "How many
9 adolescents," do you see that?
10 A. Yes.
11 Q. Okay. It says, "How many adolescents in regular
12 treatment for gender dysphoria would you approximate
13 you've seen in the last five years individually,
14 exclusive of your supervision of other clinicians?" At
15 line 24, "Answer, if you ask me the question in the last
16 year, I would have told you five or six, but since
17 you've asked it as a five-year period, I'm at a loss to
18 tell you whether it's 12 or 15." That's on the top of
19 Page 52, do you see that, Dr. Levine?
20 A. I see it.
21 Q. Okay. So then has that -- so let me start
22 first, in September of '21 you said in the last year you
23 had seen about five or six adolescents, would that, has
24 that number changed in the last seven months?
25 A. A little bit, yeah.

1 A. Page 51.
2 Q. Okay. Can you please scroll to Page 55.
3 A. I'm there.
4 Q. Okay. So at line 13 on Page 55, "Question,
5 okay, and I'm sorry, just by recent, when was the last
6 time you wrote a letter of authorization for a gender
7 affirming surgery for an adult? Answer, probably
8 12 months ago." So have you written a letter of
9 authorization for a gender affirming surgery in the last
10 seven months, Dr. Levine?
11 A. I think the last letter -- you, I need to, I
12 need to help you qualify your question. I have in the
13 last seven months given my, my approval to several
14 letters for bilateral mastectomies for members in Mass
15 at Framingham, the correctional institution in
16 Massachusetts. I don't know if that would number two or
17 three, but since September the 10th I believe at least
18 two and possibly three letters. I haven't personally
19 written the letter, but I am the consultant to a group
20 of team that approves such surgeries, and so the answer
21 to the question is yes.
22 Q. Okay. Thank you. And to your recollection,
23 any, any such letter outside the, outside of that
24 context?
25 A. Since September the 10th?

1 Q. That's correct, yes.
2 A. Yes, I think the answer is that, no, but I
3 believe at our center someone else has written one
4 letter for bilateral mastectomies.
5 Q. Okay. Thank you. Dr. Levine, are you familiar
6 with the, the exclusion for gender affirming surgical
7 care in the West Virginia Medicaid Program that's at
8 issue in this case?
9 MR. DAVID: Objection to form.
10 Q. You can answer.
11 A. I'm vaguely familiar that surgical care is
12 excluded currently, but endocrine care is not excluded.
13 Q. Have you reviewed any documents that, that show
14 that exclusion or was that information just communicated
15 to you by counsel?
16 A. Verbally communicated.
17 Q. Okay. And so you're aware that there are
18 categorical exclusions, which means that the exclusions
19 prohibit surgical care related to the treatment of
20 gender dysphoria regardless of a West Virginia Medicaid
21 member's need for it or appropriateness for such
22 intervention?
23 MR. DAVID: Objection to form.
24 Q. Let me simplify my question.
25 A. Thank you.

1 Q. The categorical, the exclusion does not
2 investigate or contemplate whether someone receiving
3 West Virginia Medicaid needs or is an appropriate
4 candidate for such intervention, it just prohibits it,
5 period?
6 MR. DAVID: Objection to form.
7 A. The categorical exclusion would include surgery
8 for teenagers and surgery for adults, so it would cover
9 removing the breasts or removing the scrotum of a
10 15-year-old who feels like --
11 Q. Not my question, Dr. Levine. Let me, let me
12 rephrase again. The, the West Virginia Medicaid Program
13 and the exclusion it maintains, which excludes surgical
14 care for members for whom it is appropriate, it, it just
15 excludes it, you're, you're aware it just excludes it,
16 there's no, there's no conditional considerations or any
17 investigation done into the member's health at all, it
18 just, there's no coverage for that care, you understand
19 that?
20 A. I, I --
21 MR. DAVID: Objection to form.
22 A. I think that's what categorical means, so I
23 think the answer is I understand that at the moment,
24 yes.
25 Q. Okay. But you don't view your testimony here in

1 your expert report as being in support of that exclusion
2 or whether it should exist, right?
3 A. Yeah, it's my understanding that, that the
4 lawyers who hired me wanted me to testify to the state
5 of science in this field, and, and so I have not been
6 involved with the legal questions, per se, or giving an
7 opinion about those matters. As I sort of indicated to
8 you before, I don't really feel that the, my expertise
9 extends to how the insurance industry works and how
10 governments and legislatives works and so forth. So I,
11 I think the answer to the question is that I'm not
12 considering myself to be expert on the question that
13 you're asking me.
14 Q. Right. So you're, you, you are an expert about
15 what your testimony is about though, right, and you're
16 saying your testimony is not about whether or not that
17 exclusion should exist?
18 A. Yes, I'm not offering an opinion about pro or
19 con about that question.
20 Q. I see. Because you're, you're, as you say,
21 you're not a politician or a law maker?
22 A. Or an insurance expert.
23 Q. Right. Or a public health expert, right?
24 A. Well, I'm a little more ambivalent about public
25 health matters, yeah. I'm not as, I'm not, I really

1 think that public health is the issue here and so I, I
2 don't want to say I'm not an expert. I'm not an expert
3 in public health, but I do have opinions about the
4 long-term public health of people who are prematurely
5 having their bodies changed because I do think this has
6 public health implications for the future of each of
7 these, these adolescence children and young adults.
8 Q. Understood.
9 A. And adults as well.
10 Q. And you, generally speaking, don't advocate to
11 deny all forms of medical intervention to people with
12 gender dysphoria though, right?
13 A. That's right.
14 Q. Okay. I'm going to introduce another exhibit,
15 Dr. Levine, give me just a moment.
16 (Exhibit 6 marked for identification.)
17 Q. Okay. It should be now or shortly visible, you
18 might need to refresh.
19 A. I now have Exhibit 6 here.
20 Q. Okay.
21 MR. CHARLES: So I'm showing Dr. Levine
22 what has been marked as SL06.
23 Q. Dr. Levine, this is a short document, please
24 just take a minute and scroll through it.
25 A. Okay, I, I've scrolled.

1 (A break was taken at 11:33 a.m.)
2 VIDEO TECHNICIAN: We're going back on the
3 record at 12:34 p.m.
4 MR. CHARLES: Okay. So I'm showing Dr.
5 Levine what has been marked as SL09, an article from
6 Society for Evidence Based Gender Medicine entitled,
7 "One year since Finland broke with WPATH standards of
8 care."
9 BY MR. CHARLES:
10 Q. Dr. Levine, do you see the date of publication
11 in the left corner of that first page?
12 A. July 2nd.
13 Q. And, and the year is 2021, right?
14 A. Yes.
15 Q. So looking at the first paragraph there, I'm
16 just going to read that, "A year ago the Finnish Health
17 Authority (PALKO/COHERE) deviated from WPATH standards
18 of care 7 by issuing new guidelines that state that
19 psychotherapy rather than puberty blockers and cross sex
20 hormones should be a first line treatment for gender
21 dysphoric youth. This change occurred following a
22 systematic evidence review which found a body of
23 evidence for pediatric transition inconclusive."
24 And then the next paragraph, the first sentence,
25 "Although pediatric medical transition is still allowed

1 in Finland, the guidelines urge caution given the
2 unclear nature of the benefits and the interventions,
3 largely reserving puberty blockers and cross sex
4 hormones for minors with early onset gender dysphoria
5 and no co-occurring mental health conditions." Did I
6 read that correctly?
7 A. Yes, you did.
8 Q. Okay. So as this article states, medical
9 interventions are still available in Finland for youth
10 experiencing gender dysphoria, right?
11 A. On a case-by-case basis I think.
12 Q. And --
13 A. I should say on a case-by-case basis and two
14 research centers as opposed to in any practitioner's
15 office throughout the country.
16 Q. Right. But it's, it's not been completely
17 prohibited is what I'm asking?
18 A. Oh, it's been, it's been, the brakes have been
19 put on.
20 Q. But it's not been completely prohibited is what
21 I'm asking?
22 A. That's what you and I have agreed on, yes.
23 Q. So it's not been completely prohibited, right?
24 A. Right.
25 Q. So then in the third paragraph beginning with,

1 "The qualifying criteria for gender reassignment of
2 youth articulated in the 2020 Finnish treatment
3 guidelines are consistent with the original Dutch
4 protocol, but represent a significant tightening of the
5 more recent practices promoted by WPATH." So the
6 article describes it as a tightening of the standards
7 which WPATH allows for, right?
8 A. Yes.
9 Q. So you, you've talked about in your report an
10 idea of rapid affirmation treatment where you allege
11 that diagnoses of gender dysphoria are being made in an
12 hour and then, and then prescriptions provided for
13 medical interventions, right?
14 A. Yes.
15 Q. Do you have, or I should say, your evidence for
16 that is anecdotal in nature, right?
17 A. My evidence for that is what has been told to me
18 by parents, what has been told to me by patients and
19 what this, what the third paragraph of this document
20 says.
21 Q. Right. So --
22 A. So I don't really think the answer is simply
23 anecdotal, it's based upon a considerable consistent
24 range of, of experiences, both of my personal
25 experiences, of my patient's personal experiences, and

1 paragraph -- actually, hang on a second. Dr. Levine,
2 let's go ahead and go to Page 26 of your report,
3 Exhibit 1.
4 A. Okay. Let me, I have to scroll back. Did you
5 say page or Paragraph 26?
6 Q. That would be Page 26.
7 A. Okay, I'm on Page 26.
8 Q. Okay. Okay. So, Dr. Levine, you've testified
9 previously that you generally provide care along some of
10 the same guidelines as WPATH, right?
11 A. In a general way, sure.
12 Q. And the difference from your view is that you
13 require psychotherapy for some not necessarily
14 predetermined length of time for patients that you see
15 before you will authorize any kind of like medical
16 intervention, right?
17 A. I don't want to answer that question right or
18 wrong because embedded in the question is the word
19 psychotherapy and I don't know what you understand by
20 psychotherapy, I mean, you're a lawyer and I'm a
21 practitioner of psychotherapy. And I think when a
22 lawyer uses psychotherapy it is a certain concept about
23 I'm trying to achieve a certain aim, you see. And in
24 the context of the question that you've asked, you could
25 substitute an extended period of time with the patient

1 working with patients.

2 Q. Okay. So back to my question. On some, on some

3 level that that is, that universe of care that you are

4 providing, which again, I think I'm still going to call

5 it psychotherapy, but I understand your explanation that

6 it is, that encompasses a lot that you do in your, in

7 your clinical practice, but again, the difference for

8 you between the Levine way, if we can shorthand, and

9 WPATH is that you cultivate, you engage in that process

10 as a requirement before you will authorize any kind of

11 medical intervention for a patient for the treatment of

12 gender dysphoria?

13 A. That's true.

14 Q. Okay. Thank you. But even still as a part of

15 your practice as we discussed earlier, you still

16 occasionally write letters of authorization for medical

17 interventions, like endocrine treatments or surgical

18 interventions?

19 A. Yes.

20 Q. Okay. Okay. Let's go back to your report,

21 please, to Page 35.

22 A. I am there.

23 Q. Okay. And looking at Paragraph 70, let's start

24 with Paragraph 70. I take that back, let's go with

25 Paragraph 71 at the bottom of the page, "In recent years

1 WPATH has fully adopted some mix of the medical and
2 rights paradigm discussed above. It has downgraded the
3 role of counseling or psychotherapy as a requirement for
4 these life-changing processes. WPATH no longer
5 considers pre-operative psychotherapy to be a
6 requirement. It is important to WPATH if the person has
7 gender dysphoria, the pathway to the true, the
8 development of this state is not. Cited Levine,
9 Reflections, at 240. Two separate evaluations, one from
10 Canada and one from the UK reviewed WPATH's guidelines
11 and found them untrustworthy."
12 So for that footnote 113 you've cited the Dahlen
13 study which we talked about and then there's also a
14 citation here that says, "See also," and then there's a,
15 a Web address, do you see that, the very last line?
16 A. Yeah, yeah, right.
17 Q. It says, "Gender report, CA"?
18 A. Yeah.
19 (Exhibit 13 marked for identification.)
20 Q. Okay. There should be another exhibit there for
21 you, Exhibit 13. Just let me know when you can see
22 that.
23 A. Okay. Okay.
24 Q. Okay.
25 A. Yeah, okay.

1 Q. Have you, have you seen this article before
2 either on the Internet or printed out perhaps?
3 A. The reason I cited it is that I had read it
4 before.
5 Q. Okay. And this is not a peer reviewed journal,
6 is it?
7 A. This is a journalist, but if you look very
8 carefully at the, its length and its content, it's very
9 impressive.
10 Q. Okay. Is this the review from Canada that you
11 were talking about in that sentence --
12 A. Yes, yes, it is.
13 Q. Okay. But it's, it's not a systematic review
14 like the one from the UK?
15 A. It's not systematic in that it wasn't done by a
16 community of scientists, a committee of scientists.
17 Q. Okay. And the --
18 A. It is systematic and it is a review, but it's
19 one person's review.
20 Q. Right. So it's more, we were discussing the
21 difference between systematic reviews earlier today,
22 it's a, it's, it's not a scientific committee that's
23 done in a, in a formal way that we were discussing, it's
24 more akin to that latter one person reviewing things
25 kind of --

1 A. It's an investigative report by a journalist.
2 Q. Right. And you see in the first page, Dr.
3 Levine, it says, "The following investigative report was
4 developed by @LisaMacRichards (a pseudonym)"?
5 A. Yeah, okay, right.
6 Q. Okay.
7 A. I see I'm wrong, she wasn't the journalist.
8 Q. So we, you don't know who this author is, right?
9 A. Well, her real identity?
10 Q. Correct, yeah.
11 A. No, I don't know who Lisa Mac Richards really
12 is.
13 Q. Okay. So it's hard to know if she's an actual
14 person?
15 A. If she's an actual person, is that what you
16 said?
17 Q. What I mean to say is, because she's using a
18 pseudonym, you can't confirm her identity is what she
19 represents it is, right?
20 A. Well, she says it's a pseudonym, so I presume
21 the rest of the paragraph is correct, that she works at
22 a Canadian hospital and holds a master's of science
23 degree and, yeah.
24 Q. But what I mean is there's no way to confirm
25 that because we don't know what her name is?

1 A. It could be written by a man, I don't know, it
2 could be written by a committee, I have no idea.
3 Q. Okay. Okay. So going back to what we were
4 talking about just a few minutes ago, Dr. Levine, about
5 your approach versus WPATH. You, you've said before,
6 not, not necessarily today, but you've testified in
7 other depositions that your approach has the limitation
8 that there's not any scientific evidence or long-term
9 studies to support it, right?
10 A. I think in particular what I said is that, that
11 the status of the outcome, the outcome status and the
12 methodologic status of psychotherapy as a first line
13 approach to the trans adolescent has, does not have a
14 firm evidence base just as trans affirmative care does
15 not have a firm evidence base.
16 So oftentimes that's, that's, I get a question
17 just like you ask, you just posed sort of implying that
18 there's no evidence that my, my recommendations have a
19 scientific proven basis to it. And that is correct,
20 except that all other psychiatric difficulties are
21 treated with, in our society both European and American
22 and Asian societies by a psychotherapeutic extended
23 evaluation and treatment approach before, with or
24 without psychiatric medications, you see.
25 And so we are trying to make a, you, some people

1 centers have cropped up that are providing affirming
2 care in one hour, again, we talked about the 35 parents
3 you had talked to, you've mentioned a couple of patients
4 you've talked to, but you don't have, or I should say
5 what evidence can you provide me today that is, is
6 scientific peer reviewed published data showing that
7 this is actually what's happening in these clinics?
8 A. Well, if I look at Exhibit 6. Do you know what
9 the, the first name for this center was and the name of
10 so many of the 50 or so centers are? And it has the
11 term gender affirming care, the clinic, you see. If you
12 look at all of the materials in Exhibit 6, it's about
13 support and affirmation, it's not about investigation,
14 it's not about psychotherapy. And, and you see, gender
15 affirming care has been taken over, it's been taking
16 over the world's sensibilities without any scientific,
17 first demonstrating its efficacy with scientifically
18 respectable methods.
19 Q. I understand that, Dr. Levine, but that's not my
20 question. My question is, what evidence can you point
21 to that these kinds of interactions are happening in
22 clinics? Is your basis that the, are you basing that on
23 the way these centers are named?
24 A. I'm basing it on what they're named and I'm
25 looking at the document that you are, are talking about.

1 friendly especially designed specialty clinic. Those
2 clinics exist to take care of trans people, to give them
3 hormones and to get them surgery, that exists.
4 Q. But what you're describing --
5 A. It exists to do psychotherapy.
6 Q. Okay. And what you described, Dr. Levine, is
7 the basis for your, for this opinion, right?
8 A. The basis for my opinion is my collective
9 experience of dealing, watching, participating in the
10 evolution of the study of transsexual care over, over
11 since 1974.
12 Q. Okay. So your report states that you were
13 involved with WPATH before it was called WPATH, when it
14 was called the Harry Benjamin --
15 A. Can I help you?
16 Q. Yes. Harry Benjamin?
17 A. International Gender Dysphoria Association.
18 Q. Thank you. And you were involved around 1999
19 when the 6th version of the standards of care was
20 released, right, we talked about that?
21 A. Yes.
22 Q. Okay. And it's, it's true that you helped to
23 draft portions of that version, right?
24 A. Actually, my report misstates me as the
25 co-chair. If I remember correctly, I was the chairman.

1 Q. The chairman of that committee, okay. Thank
2 you.
3 A. And most, with very little exception I had a
4 significant editorial role in creating every sentence in
5 that 21-page document.
6 Q. Okay. And you've testified in other depositions
7 that even though the, there have been changes made to
8 the standards of care in subsequent versions, you still
9 continue to see your work reflected in those versions,
10 right?
11 A. Yes, my language.
12 Q. Yes, mm-hmm.
13 A. Yeah, my language, right. In fact, the next
14 version which came out I think three years later or two
15 years later I think was pretty much word for word except
16 for a requirement for one letter for endocrine treatment
17 rather than two, which is what my committee of eight
18 people recommended.
19 Q. Okay. And you've testified before that even
20 Version 7, which is, you know, one more, obviously one
21 more removed from Version 6, that that, as you read it
22 much of the language you had actually still, it was
23 still reflecting your language in that version even,
24 even though it's a much longer document?
25 A. Well, yeah, I think the introduction section

1 about what guidelines were and, and the problems of
2 cross culture, cross country rules affecting the laws
3 are different and the, that we wanted this to be a
4 information guide for, for patients and parents and
5 wives and husbands and so forth.
6 I think, you know, once, once we got, I mean, I
7 don't have it in front of me and I'm not sure I could
8 recognize every sentence I wrote anyway, but, but they
9 did, they did continue to use some of my sentences, some
10 of my concepts. It was my concept that there is a
11 difference between readiness criteria and eligibility
12 criteria, that was one of my contributions
13 Q. Thank you. And, and I think also you testified
14 in the Soneeya trial that you had asked to be involved
15 in helping to write standards of care 8 but were told
16 that you, in order to do so you had to be a WPATH
17 member, right?
18 A. Yes.
19 Q. And looking back at your report -- actually,
20 give me just a minute here. Actually, Dr. Levine,
21 let's --
22 MR. CHARLES: Sorry, Kelley and Kraig, can
23 we go off the record real quick.
24 VIDEO TECHNICIAN: We're going off the
25 record at 2:26 p.m.

1 be trans boys or trans males.
2 The historic pattern throughout most of the
3 world was 3.5 to 4 biologic males who wanted to be women
4 to biologic females who wanted to be men dominated
5 dramatically for decades in the '70s and the '80s and
6 the '90s and the early 2000s. But since 2005 there's
7 been a growing incidence of request for services and
8 particularly request for services from girls assigned at
9 birth who wanted to be males.
10 Some of us have come to in recent years call
11 this delayed or pubertal or rapid onset of gender
12 dysphoria, meaning it's a pubertal phenomenon because
13 there was no evidence prior to that except in the
14 retrospective subjective histories given by these kids
15 that they had any indication, parents and themselves,
16 had no behavioral indications that they were trans
17 identified or even sort of leaning in that direction.
18 Q. I understand that, Dr. Levine, and I'm not
19 talking necessarily about the, the increase in
20 referrals, I'm talking about this phenomenon that you
21 referenced called rapid onset gender dysphoria. So not
22 just adolescent onset gender dysphoria, which I
23 understand you're saying has somewhat increased since
24 2005, but rapid onset gender dysphoria. And I'm
25 specifically asking what peer reviewed studies, what

1 papers and what research would you refer me to or is
2 referenced in your report as evidence that this
3 hypothesis actually exists or that there's any
4 scientific study to support it?
5 A. No. 1, this is not a hypothesis, this is a
6 demonstrated fact.
7 Q. Okay. Based on what, Dr. Levine, that's what
8 I'm asking, what are the peer reviewed studies?
9 A. If you look up the presentations of Kenneth
10 Zucker, if you look at papers, I can't give you the
11 authors at the moment from Europe, this has been
12 documented by DiAngelo I believe in Australia, by
13 Clayton in Australia.
14 It seems to me there is no disagreements about
15 this except I've heard the cynical response that what
16 rapid onset gender dysphoria really means is that the
17 parents have suddenly discovered that their kids have
18 been transgender, meaning to deny the parental reports
19 that the children were not cross gender identified prior
20 to that, even though the kids say, well, I was never
21 comfortable with being a boy or a girl.
22 Q. Okay. So you, for this contention in your
23 report you cite one thing and that is Midgen A.
24 Hutchinson and her study is entitled, "In support of
25 research into rapid onset gender dysphoria." So that

1 was published in 2020 and I don't, I'm not seeing here
2 any of the other --
3 A. One, one of the reasons you're not seeing it is
4 that I assume that everyone understands that this is
5 true.
6 Q. Well, Dr. Levine, this is an expert report and
7 you have to include all of your expert opinions, and
8 you're also required under Rule 26 to disclose all of
9 the data and research that you considered for those
10 opinions. That's the purpose of our deposition today is
11 for me to understand and to have you put on the record
12 what you relied on to establish your opinions, so that's
13 what I'm trying to get at. And, and I understand what
14 you're saying that from your vantage point as a
15 clinician outside of the legal sphere that there are
16 things you think are givens, but we can't operate like
17 that unfortunately. So I need to, I need to understand,
18 and all I see here is the Midgen A. Hutchinson study
19 that's asking for support of, that's offering that she
20 wants to support research into this phenomenon, not that
21 the phenomenon has been evidenced to exist. Does that
22 make sense?
23 A. Yes. May I comment on that?
24 Q. On Hutchinson, yeah. Let me pull it up
25 actually.

1 this care and then after they lived following the care
2 they decided that their problems have not been solved
3 and they decided to return to the gender expression --
4 Q. I understand that, Dr. Levine, and I'm not
5 actually contesting the assertion in your, in your
6 report that detransition exists at all.
7 A. All right.
8 Q. What I'm asking about is your assertion in the
9 latter half of that sentence that says that there is a
10 growing number of young people who regret transition and
11 wish to reverse it. Again, I'm just trying to
12 understand what you're saying here and on what basis you
13 are making those assertions.
14 So I'm not asserting whether or not
15 detransitioning exists, my question is, this study did
16 not look at how many detransitioners are there now as
17 opposed to any other time in history, it was not a
18 qualitative or quantitative analysis. It was a study
19 according to the abstract here, and I'm just asking you
20 to confirm that, about the specific needs of
21 detransitioners, both psychological, medical, other
22 kinds of support, right? So that's what I'm saying is
23 this study is not, the aim is not to quantify the number
24 of, whether the number of detransitioners is growing or
25 shrinking or staying the same, right?

1 A. Yes, I can answer to your question, correct.
2 Q. Okay.
3 A. But it doesn't mean that -- I think you're
4 missing the point. And, and by, by having me say yes,
5 that it doesn't quantify the incidents of detransition,
6 it's missing the point.
7 Q. I understand that, Dr. Levine. But if your
8 point was, if your point in your report was detransition
9 is a thing and here are the psychological supports that
10 these people need, that's what you should have written,
11 but that's not what you wrote. You wrote that a growing
12 number of young people regret transition and wish to
13 reverse it.
14 So my question to you about the article you rely
15 on for that contention is, this article doesn't say
16 that, this article is not a study of the growing numbers
17 or small or diminishing numbers or staying the same
18 numbers of people who detransitioned. That's what I'm
19 asking you to confirm.
20 A. What I am confirming is that this particular
21 paper talks about 237 people who have detransitioned and
22 that WPATH has no serious discussion of detransition,
23 there's no chapter on this, on this phenomenon which is
24 extremely relevant to the care of transgender people,
25 especially transgender young people.

1 The reason I cited this is 237, and the reason,
2 the next thing, Littman is another additional 100
3 people. And if you, if you read closely some of the
4 references in this particular article, there is
5 Exposito-Campos' article talking about subreddit and the
6 number of people who were discussing detransition.
7 So what I'm saying if WPATH is responsible for,
8 for providing a scientific basis for affirmative care,
9 they must talk about the error rate as represented by
10 detransitioned people. And four years ago we had no
11 idea about the, the rate of detransitioned people and
12 today we have two studies that have been published from
13 the UK that begin to give us a rate of detransition.
14 And so to me you are making the wrong point and
15 that I have not been in error. You just have
16 misunderstood the difference of why I cited these
17 particular papers. These particular papers just
18 demonstrate that detransition is a real problem and, and
19 it is a moral and ethical and scientific problem. And
20 that WPATH if it's going to deal with the science of
21 transition, it has to deal with the error rates and what
22 happens to people who detransition, you see. And so I
23 don't, I don't have nothing more to say about that, I
24 just think your point is quite irrelevant.
25 Q. Okay. Well, I'm going to continue to ask you

1 about evidence that you cite in your report that you use
2 as support for assertions you're making, so I'm just
3 going to flag that for you now. And again, this --
4 let's actually, let me, let me just ask one more time.
5 This study does not speak to the numbers of people who
6 have detransitioned now as opposed to any other time in
7 history, right?
8 A. As far as I remember this paper, the answer to
9 your question is right.
10 Q. Sorry, the answer to my question is -- okay,
11 right, okay. So let's actually now that you mention it,
12 let me just pull up really quickly the Littman study
13 that you mentioned.
14 (Exhibit 15 marked for identification.)
15 Q. This will be Exhibit 15.
16 A. Okay.
17 Q. Okay.
18 MR. CHARLES: So for the record, I'm
19 showing Dr. Levine what has been marked as SL15,
20 "Individuals treated for gender dysphoria with medical
21 and/or surgical transition who subsequently
22 detransitioned, a survey of 100 detransitioners by Lisa
23 Littman, received," well, published online 19 October
24 '21.
25 Q. Okay. So looking at the abstract again, the

1 whether or not the numbers of detransitioners are
2 growing, right?
3 MR. DAVID: Objection to form.
4 A. You know, I, I don't know if I should just
5 repeat what I said before. Detransition is a
6 phenomenon, science is only now beginning to get, we
7 have two studies that were published within the last I
8 think four months or five months.
9 Q. Okay. So, Dr. Levine, are you refusing to
10 answer my question because --
11 A. Not at all, I'm answering your question, I'm
12 answering.
13 Q. No, you're not.
14 A. Well, then ask me the question again. I'm
15 sorry, I apologize. You want to confine me to an answer
16 and so, so set me up for the answer you want, please.
17 Q. Okay. What I'm asking is, this sentence by the
18 admission of the author was not designed to assess the
19 prevalence of detransition?
20 A. That's true.
21 Q. Okay. Instead the purpose of this study was to
22 identify detransition reasons and narratives in order to
23 inform clinical care and future research, right?
24 A. Correct.
25 Q. Okay. Thank you. Okay. Let's, I'm going to

1 guidelines has confidence that persons who receive care
2 according to the strong recommendation will derive on
3 average more benefit than harm." The following sentence
4 says, "Weak recommendations require more careful
5 consideration of the person's circumstances, values and
6 preferences to determine the best course of action."
7 That sentence does not say weak recommendations mean
8 that we're, mean that so and so is going to derive more
9 harm than benefit or so and so, we're not sure if
10 they're going to derive more harm than benefit. It says
11 there, "Weak recommendations require more careful
12 consideration of the person's circumstances, values and
13 preferences to determine the best course of action." So
14 my question is, where are you getting that weak
15 recommendations mean what you are saying it means in the
16 second to last sentence of your report?
17 A. Because I interpret that sentence, which we
18 agree upon, you see. What, what that sentence really
19 means to me, Mr. Charles, is that science cannot answer
20 the question because we haven't done the appropriate
21 studies and there is this issue of the long-term
22 consequences. So reading our sentences, reading my
23 reports we should, we're not, we don't have, we don't
24 have to rest on science now, science can't help you,
25 what can help you is what the patient prefers, what the

1 doctor's values are and what the patient's values are.
2 Q. Okay. So, Dr. Levine, that's your
3 editorializing, it's not based on what the, what the,
4 what the actual words of the guidelines are saying.
5 A. Well, you know, every reader, especially every
6 professional reader integrates the scientific or these
7 consensus documents with his own values and personal
8 clinical experiences and what he knows in terms of other
9 data. And so even though you say it's my personal
10 interpretation, I, I don't want that to be demeaned.
11 Lots of people --
12 Q. I'm not, I'm not demeaning it at all, Dr.
13 Levine. I'm just making sure that you and I are reading
14 the same words from the guidelines and that you aren't
15 quoting something that I'm not seeing from the
16 guidelines, that's what I mean, I'm not demeaning your
17 professional experience at all.
18 A. Right. Well, thank you for that.
19 Q. So let me, let me ask one follow-up. You said
20 that you thought some people read these recommendations,
21 some, some clinicians read them and said, oh, the
22 Endocrine Society is recommending hormones and without
23 any, without any nuance or, or without really say
24 understanding the various, in my view, pretty, pretty
25 nuanced things that this guideline says. What evidence

1 A. This is --

2 Q. Well, let me just ask you, Dr. Levine, you don't

3 speak Finnish, do you?

4 A. I'm an American, which means I have one

5 language.

6 Q. Okay. Okay.

7 A. I only speak English.

8 Q. Okay. Are you saying you have read a

9 translation of this document at some point?

10 A. Yes.

11 Q. And do you know if it was an official

12 translation, a certified official translation?

13 A. I don't know if it was a certified one. I think

14 I, I accessed it through SEGM.

15 Q. Okay. All right. Let's go, let's go back to

16 your report, Exhibit 1.

17 A. God, I'm having the same damn problem again.

18 All right. Exhibit 1, I'm going to get there. All

19 right, here I am.

20 Q. Okay. And you, you said earlier that the UK was

21 also changing some of their guidelines with regard to

22 medical interventions for the treatment of gender

23 dysphoria, right?

24 A. Yes.

25 Q. Give me just a second here. But the UK has also

1 not completely banned all medical interventions, right,
2 they're just adjusting them?
3 A. That's correct, you're correct.
4 Q. And then are you aware of the Cass review?
5 A. Yes.
6 Q. That the UK is doing?
7 A. Yes.
8 Q. Okay. And, and as a part of that review you're
9 aware that the, that the national, what do they call it,
10 the National Health Service acknowledges that some
11 children do experience gender dysphoria and will need
12 clinical support and interventions?
13 A. Yes.
14 Q. Okay.
15 A. That's the clinical perception around many
16 people, yeah.
17 Q. Okay. All right. Let's take a look, hopefully
18 you still have it up, Page 51 of your report,
19 Paragraph 103.
20 A. Getting there. Okay, I'm here.
21 Q. Okay. So in Paragraph 103 you're talking about
22 a review by Professor, excuse me, Professor Carl
23 Heneghan, the editor of the British Medical Journal.
24 And the citation provided to that review is at the end
25 of the paragraph, do you see that, footnote 165?

1 list that those are between $6,000 and $4,000 per year
2 per child. Do you, do you know, Dr. Levine, how cost
3 sharing works between West Virginia Medicaid Program and
4 the federal government?
5 A. I presume that Medicaid patients who are insured
6 by Medicaid don't pay for their medications.
7 Q. Okay. But I guess what I'm asking is, do you
8 know what percentage or do you know what the cost is to
9 West Virginia Medicaid versus what the cost is to the
10 federal government, CMS, HHS that subsidizes the West
11 Virginia Medicaid Program?
12 A. Oh, no.
13 Q. Okay. So you're not offering an opinion about
14 the cost of puberty blockers under the West Virginia
15 cost sharing plans, right?
16 A. You mean to the insurance company?
17 Q. Correct, yeah.
18 A. Oh, yeah, no. This is, this kind of information
19 is very kept, very carefully kept from physicians.
20 Q. Okay. So not, no, making no representations in
21 this report about the ultimate cost to the program or
22 even to the patient, right?
23 A. No, we physicians don't know about things like
24 that.
25 Q. Okay. So then the, in the same paragraph at the

1 bottom of Page 26, going into Page 27 you say, "The cost
2 of surgeries, reoperations and occasional requests to
3 reverse the surgeries for those who request the
4 interventions are in the tens to hundreds of thousands
5 of dollars with some cases reaching into the millions."
6 But again, you're not offering an expert opinion here
7 about the cost of surgical care for the treatment of
8 gender dysphoria under the West Virginia Medicaid
9 Program, right?
10 A. No, I'm just saying that physicians like myself
11 have a hard time keeping up with our fields of expertise
12 and, and Dr. Karasic is probably no exception. And when
13 he assures the world that this is cost-effective care, I
14 don't really think he has any basis for knowing that,
15 for the same reasons that you are, you know, pointing to
16 my deficiencies of knowledge.
17 Q. Fair enough. And, and you also don't represent
18 that you know how much the federal government subsidizes
19 surgeries that West Virginia excludes or doesn't exclude
20 from its coverage under the Medicaid program?
21 A. I don't, I don't know at all.
22 Q. Okay. And you're not offering an opinion about
23 which members or how many West Virginia Medicaid
24 recipients might need surgery, right, for treatment of
25 gender dysphoria, let me be clear?

1 A. Well, I don't think West Virginia is an
2 exception to the international phenomenon of increasing
3 numbers of gender, cross gender identified adolescents.
4 Q. Oh, no, but I'm, Dr. Levine, I'm asking about
5 surgery specifically. You, you're not offering an
6 opinion about how many West Virginia Medicaid members
7 may need or be indicated for surgery for gender
8 dysphoria, that's not an opinion you're offering here?
9 A. I still want to say that West Virginia is
10 probably no exception and if we increase the number of
11 people getting treatment and given, you know, some
12 professionals' concepts about how to ideally treat these
13 individuals, I wouldn't be surprised if more West
14 Virginia citizens would be requesting surgery.
15 Q. But you don't know how many West Virginia
16 Medicaid member recipients may need surgery?
17 A. Oh, no, I don't know that.
18 Q. Okay. And you can't, you can't then also know
19 like what particular surgeries any of those people might
20 need?
21 A. Oh, yes, oh, yes, I do, I can.
22 Q. No, no, I'm saying the individual people, you
23 can't know what, what they need because you don't --
24 A. Oh, if I know if they're females --
25 Q. Dr. Levine, I'm talking about you're not

1 representing that you know what individual members might
2 need as per their specific individual treatment? I'm
3 not asking do you know the range of types of surgeries,
4 that's not my question. My question is, you are not
5 offering an opinion that you know what individual West
6 Virginia Medicaid members, what kinds of surgery they
7 may or may not need?
8 A. So if you tell me there's a person named Jane
9 Doe and John Doe in West Virginia and that they're
10 20 years old and they're persistent in their transgender
11 identity for eight years, I, you know, I can, as you
12 said, I could pretty much predict what the first surgery
13 would, that would be requested would be. But I would, I
14 couldn't guarantee that I would be right because someone
15 may want a rhinoplasty when I think they want, they
16 would want an orchiectomy. But, you know, but I don't
17 want to, you know, I mean, these, this is not rocket
18 science because there are only a limited range of
19 surgeries that could possibly be done.
20 Q. Okay. I guess what I mean is, treatment for
21 transgender people for the treatment of gender dysphoria
22 is individualized, so you're not saying I know what this
23 particular person needs because you haven't met with
24 them, right?
25 A. Well, that's right. But on the other hand --

Deposition of:

**Stephen B. Levine , MD**

*September 10, 2021*

In the Matter of:

**Kadel, et al vs. Folwell**

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1 IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA
2
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3
MAXWELL KADEL, et al.,
4
5 Plaintiffs,
6
vs. Case No. 1:19-cv-272-LCB-LPA
7
8 DALE FOLWELL, in his official
capacity as State Treasurer of
9 North Carolina, et al.,
10
Defendants.
11
12 ~~~~~~~~~~~~~~~~~~~~
13 Video Deposition of
STEPHEN B. LEVINE, M.D.
14
15 September 10, 2021
9:05 a.m.
16
17 Taken at:
Veritext Legal Solutions
18 1100 Superior Avenue
Cleveland, Ohio
19
20 Tracy Morse, RPR
21
22
23
24
25
~~~~~~~~~~~~~~~~~~~~

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| NUMBER | DESCRIPTION | MARKED |
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| Exhibit 2 | 12/21/2020 Zoom Deposition of Stephen Levine, M.D. | 56 |
| Exhibit 3 | Typewritten Three-Page Document Entitled, "Special Programs," | 62 |
| Exhibit 4 | 1/1/2019-12/31/2019 North Carolina State Health Plan Benefits Booklet, Bates Numbers PLAN DEF0001785-0001900 | 78 |
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| Exhibit 12 | "Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden," Article | 154 |
| Exhibit 13 | 2017 "On Gender Dysphoria," Booklet From Department of Clinical Neuroscience, Karolinska Institutet | 156 |
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| Exhibit 21 | "Practice Parameter on Gay, Lesbian, or Bisexual Sexual Orientation, Gender Nonconformity, and Gender Discordance In Children and Adolescents," Article | 223 |

1 Q. Okay. And so then were there any
2 external grants to research and publish about
3 the treatment of children or adolescents --
4 A. No.
5 Q. -- with gender dysphoria?
6 Okay. Is that a, "No," when I included
7 the, "Gender dysphoria," as well?
8 A. That is a, no.
9 Q. Okay. Thank you. Okay. So on
10 page 3 of your report -- actually, I'm sorry.
11 It's going to be the bottom of page 4 and to
12 the top of page 5. Your report lists your
13 experience as an expert witness, which we
14 talked about a little bit earlier. I just --
15 I'm wondering if you would confirm this is not
16 an exhaustive list of your experience as an
17 expert witness either via deposition or report.
18 A. I wouldn't want to testify that
19 this is absolutely complete, given the fact
20 that I don't keep a list compiled. This is
21 kind of compiled retrospectively from memory
22 and documents. And so this is the best I could
23 have done on April of 2021 --
24 Q. Understood. Thank you. So --
25 A. -- you might find something else.

1 Q. Was it --
2 A. -- in a commercial building where
3 our clinic was. It was just, you know, a
4 conference room in our clinic.
5 Q. And that was within -- was that
6 within a business --
7 A. It was --
8 Q. -- a psychiatric practice?
9 A. I'm sorry. I interrupted you.
10 It was within The Center For Marital
11 Health, which was a business that I and two
12 other people started and owned and ran. And in
13 that business, we continued the same kind of
14 work we did with the University minus the large
15 number of trainees.
16 Q. You mentioned that after '93, you
17 were not being paid by the University. Were
18 you providing your clinical psychiatric
19 professorship gratuitously?
20 A. Meaning without pay? Yes.
21 Q. Okay. Do you know if, after you
22 moved the clinic away from Case Western
23 Reserve, if Case Western Reserve University
24 Medical School created a separate gender
25 identity clinic?

1 A. Years later they did --
2 Q. Oh, sorry.
3 A. -- I would say, they created a
4 separate clinic perhaps in 2017, 2016.
5 Q. Do you know the name of that
6 clinic?
7 A. I don't think it's in the
8 department of psychiatry. I think it's in the
9 department of pediatrics. And the answer to
10 your question is, no.
11 Q. Does The LGBTQ and Gender Care
12 Program sound familiar?
13 A. No.
14 Q. But have you -- sorry. Have you
15 evaluated any patients through that separate
16 clinic that Case Western Reserve has?
17 A. No. Much to my dismay, that clinic
18 was formed and maintained without any input
19 from me, who I thought was one of the experts
20 in the field.
21 Q. Do you know if they have
22 psychiatrists, within that clinic?
23 A. I -- I'm not knowledgeable about
24 the composition of that clinic. There is a
25 very strong liaison between our department of

1 What do you mean by, "This era"?
2 A. Before 1993.
3 Q. Okay. And what do you mean by,
4 "Occasional"?
5 A. I would say that 95 percent of the
6 patients that we saw were 16 and 17, 18 and up.
7 We could debate what the word, "Child," means,
8 but to me an 11-year-old is a child, even
9 a 13-year-old is a child, especially when my
10 children were 13. And so we -- in the first
11 twenty years, transgender issues were primarily
12 an older teenager and adult, mostly adult
13 issues. In recent years, I would say, 12, 15
14 years, the number of adolescents appearing in
15 gender clinics at our place and everywhere as
16 far as I can see has increased exponentially,
17 especially the number of teenage girls who are
18 declaring themselves trans boys.
19 Q. So how many -- sorry. So the first
20 twenty or so years, you said approximately 5
21 percent of all patients were children.
22 A. Were younger -- on the younger end
23 of the spectrum --
24 Q. Right.
25 A. -- yes.

1 it, you see? But at this moment -- this week,
2 I have one patient that I see weekly, who is a
3 transgender teen. My staff -- if I can be
4 presumptuous to call them, "My staff" -- our
5 staff sees more.
6 Q. And thinking about the last year,
7 approximately how many adult patients did you
8 see -- and let's use your framing of,
9 "Regular." So that could be one, for one
10 followup visit or that could be for more -- how
11 many adult patients did you see for treatment
12 of gender dysphoria?
13 A. Approximately six.
14 Q. And using that same framing of,
15 "Regular," how many children, so under age 11?
16 A. In the last year?
17 Q. Yes, yes. In the last year.
18 A. Zero.
19 Q. How many adolescents in regular
20 treatment for gender dysphoria would you
21 approximate you've seen in the last five years
22 individually, exclusive of your supervision of
23 other clinicians?
24 A. If you ask me the question in the
25 last year, I would have told you five or six,

1 but since you ask it as a five-year period, I'm
2 at a loss to tell you whether it's twelve or
3 fifteen. I --
4 Q. An approximate is fine. Thank you.
5 A. -- let's just say a dozen with an
6 asterisk, very approximate.
7 Q. And jumping a little bit more in
8 terms of time. How about the last ten years?
9 A. Again, using the same asterisk, I
10 would say, double it.
11 Q. Okay. And you said zero people
12 under age 11, so children this last year. What
13 about in the last five years?
14 A. Oh, two years ago, we had this
15 charming little 6-year-old. One of my
16 colleagues specializes in children and I get to
17 hear about these cases. Occasionally I get to
18 meet the parents, but I personally have not
19 delivered a psychotherapeutic care or
20 evaluation directly of a child with the
21 exception of this one person that I was
22 involved with.
23 Q. And that was this last year, you
24 said?
25 A. That was -- I think it was probably

1 two, two and a half years ago.
2 Q. Oh, okay. And what kind of
3 treatment -- I should say, have you referred
4 any of those adolescent patients for additional
5 treatment, besides psychotherapy, for the
6 treatment of gender dysphoria?
7 A. Yes.
8 Q. And what kinds of treatment have
9 you referred them for?
10 A. For endocrine treatment.
11 Q. Okay. And approximately what
12 percentage of those adolescent patients have
13 you referred for endocrine treatment?
14 A. Give me the timeframe of that
15 question, please.
16 Q. Sure. So you said a few moments
17 ago, in the last five years, you saw maybe,
18 asterisk, 12 to 15 adolescent individually
19 yourself. Of those 12 to 15, what would be the
20 approximate percentage you referred for
21 endocrine treatment?
22 A. I'm hesitating to answer the
23 question, because some of those children have
24 been taking testosterone or estrogen
25 surreptitiously from their parents. And while

1 I didn't refer them for the treatment, I was
2 seeing them while they were taking the
3 treatment. So if we're only talking about
4 adolescent -- referrals of adolescents for
5 hormones, I would say a very small percentage
6 of those, say, I guess you would say 10
7 percent.
8 Q. Fair enough. Have you had yourself
9 individually as a clinician, have you had any
10 non-transgender children who you have made a
11 referral for endocrine treatments related to
12 other conditions?
13 A. No.
14 Q. Okay. So then zooming out 30,000
15 foot view of your 48-year career now, would you
16 say overall, you have provided treatment --
17 that is, psychiatric treatment -- to mostly
18 adults experiencing gender dysphoria, gender
19 identity issues?
20 MR. KNEPPER: Objection, form.
21 A. I would say that throughout my
22 career, we should divide my career into the
23 first twenty years where mostly adults were
24 seen by our team and myself. And then we ought
25 to talk about the last ten or fifteen years

1 where the number of adults has diminished and
2 the number of adolescents has increased
3 dramatically.
4 Q. Okay. Thank you. So as a part of
5 your private practice, do you write letters of
6 authorization for endocrine treatments?
7 A. Yes.
8 Q. And do you write letters of
9 authorization for gender affirming surgeries?
10 A. I have. I have not recently,
11 because most of my patients are 13 or 15 or 16,
12 you know.
13 Q. Okay. And I'm sorry. Just by,
14 "Recent," when was the last time you wrote a
15 letter of authorization for a gender affirming
16 surgery for an adult?
17 A. Probably twelve months ago.
18 Q. Okay. And over the course of your
19 career focusing on your treatment of adults
20 experiencing gender identity issues, for what
21 percentage of those patients would you estimate
22 you wrote a letter of authorization for gender
23 affirming surgery for?
24 MR. KNEPPER: Objection, form.
25 A. Again, I would like to put an

1 asterisk to whatever I answer this question as.
2 I have not kept track of those figures. I have
3 written -- I've written or cosigned letters for
4 hormone treatments and for gender confirming
5 surgeries for many people. There were more
6 people in the '70s and '80s than in recent
7 decades. In part as a reflection of my own
8 evolution of understanding of these problems
9 and in part it's a reflection of the demography
10 of patients who are coming to see me. I really
11 would not like to answer that question, only
12 because I don't know if the word, "Fifteen," or
13 the word, "Twenty-five," or the word,
14 "Thirty-five," is more accurate --
15 Q. Understood.
16 A. -- but I can tell you, I have
17 written letters, especially in the early years,
18 for the things that you're making reference to.
19 - - - - -
20 (Thereupon, Deposition Exhibit 2,
21 12/21/2020 Zoom Deposition of
22 Stephen B. Levine, M.D., was marked
23 for purposes of identification.)
24 - - - - -
25 Q. Okay. For the record, I'm showing

1 Q. Do you think as a general matter
2 that it's good for patients who come to DELR
3 for services related to gender dysphoria to be
4 able to have insurance coverage of that care?
5 MR. KNEPPER: Objection, form.
6 Beyond the scope.
7 A. Well, the people who come to DELR
8 are generally coming for evaluation and
9 psychotherapy services. And I believe it's
10 very important that people have access to
11 mental health care and that mental health care
12 for many of our patients are not wealthy,
13 affluent people. And the fees that even
14 masters prepared people charge can become
15 prohibitive. And so I think it's a very nice
16 idea, the psychiatric services, mental health
17 services evaluation and ongoing treatments,
18 with or without medication, it would be nice to
19 be able to cover those things, yes. I think
20 that's a long answer, yes.
21 Q. Understood. And thinking about the
22 treatment that you refer patients out for, the
23 endocrine treatments in particular, do you
24 think it is generally good if you provide
25 authorization for that treatment that the

1 patient be able to afford it?
2 MR. KNEPPER: Objection, form.
3 A. May I say, of course?
4 Q. You may. You may say anything you
5 would like.
6 A. Of course.
7 Q. Thank you. Well, anything you
8 would like within reason.
9 If you make a letter of authorization for
10 a patient for the treatment of gender dysphoria
11 specifically related to a surgical treatment,
12 do you think it is good that they be able to
13 access that treatment that you've authorized?
14 MR. KNEPPER: Objection, form.
15 A. Not to be cagey, I want to talk
16 about one word you just used in that sentence.
17 I need you to understand that historically in
18 our clinic for those 47 years, our clinics
19 for 47 years, we are not in the business and we
20 have never been in the business of recommending
21 surgery or recommending hormones. We recommend
22 a continued evaluation so that we -- the person
23 can make up their mind how to proceed.
24 It is not our knowledge base to know
25 who's going to do better and who's going to do

1 worse and who is not going to have any
2 difference at all with hormones or with
3 surgery. So what we do is we say, we will
4 write a letter of support for endocrine
5 treatment or for hormones if this is what you
6 want. And we say what our concerns are. We
7 tell the endocrinologist and we tell the
8 surgeon what our concerns are and that we
9 see -- we have reservations about this, and
10 these are our reservations, but the patient has
11 decided this is what he or she wants to do.
12 And so we write a letter of support, but
13 I don't -- every time you use the word,
14 "Recommendation," there's part of me that wants
15 to say, no, we do not recommend. We have never
16 recommended. We have not had the knowledge
17 base. We have not had the clinical experience
18 and the knowledge base to say, I'm a doctor. I
19 know this field. This is what I recommend to
20 make you better. We do not talk that way. We
21 do not think that way. And so I may want to
22 always put an asterisk to any sentence that you
23 use the word, "Recommend." I need you to
24 understand that that's where I'm coming from.
25 MR. CHARLES: Thank you,

1 Dr. Levine.
2 Excuse me just a moment. Can you read
3 back my question. I don't recall if I used,
4 "Recommend." I thought I used,
5 "Authorization." I just want to make sure.
6 (Record was read.)
7 MR. CHARLES: If we could just go
8 off the record for a second.
9 VIDEOGRAPHER: Off the record 10:52.
10 (Discussion held off the record.)
11 VIDEOGRAPHER: On the record 10:53.
12 BY MR. CHARLES:
13 Q. Okay. Thank you for that
14 clarification, Dr. Levine. I'll be more
15 careful about using terminology more close to,
16 "Authorization," rather than, "Recommendation,"
17 and I understand your distinction in your
18 practice. So do you, though, think it's good,
19 if you are authorizing a treatment, a patient
20 has said, This is the treatment I would like,
21 and you have done an evaluation and determined
22 that you will write, as you said, a letter of
23 support, do you then, as a practitioner, think
24 it's good that they can access it, that they
25 can afford it?

1 concept of agency and being a doctor, I think
2 is different than the implication of your
3 question.
4 Q. Is the worrisomeness for a
5 patient's future health, is that a reason to
6 deny all medical care for gender dysphoria?
7 A. Absolutely not.
8 Q. Dr. Levine, I'd like to return back
9 to, I believe it's Exhibit 2, the Claire
10 deposition. And please, if you would turn to
11 page 156.
12 A. I'm sorry. 150 what?
13 Q. Page 156. And beginning at line 10
14 on page 156, Dr. Levine, I'll read it, if
15 you'll just follow along, please.
16 Question: "Are you aware that this case
17 concerns an insurance exclusion that is
18 categorical at preventing" --
19 Skipping to line 15.
20 "-- hormones and surgery as a treatment
21 for gender dysphoria?"
22 Answer: "I am aware that your plaintiffs
23 are suing to get coverage for -- that is not
24 provided by their particular insurance. I am
25 aware of that."

1 demonstrate their efficacy. This is the
2 problem.
3 This is the essence of the problem. This
4 is, I think the essence of my testimony with
5 you today. It's not whether I personally as a
6 doctor would like this patient to have
7 insurance to cover their hormones. It's about,
8 is this the right thing to do for this person
9 and can I help the person see clearly what the
10 dangers are and what the benefits are. That's
11 the issue for a doctor, for Stephen Levine as a
12 doctor. I hope that's a cogent answer --
13 Q. It is --
14 A. -- to your question.
15 Q. -- it is cogent. Thank you.
16 Given all of that, is that -- so you just
17 explained, testified that there are
18 complications, some lack of -- and I'm
19 summarizing here, so I will confirm that this
20 is an accurate summary of what you just shared,
21 but I can't possibly repeat all of that. Given
22 all of those concerns that you have, is that a
23 reason to deny all medical interventions to
24 people with gender dysphoria?
25 MR. KNEPPER: Objection, form.

1 A. No, but that's not -- that's a
2 separate question about insurance.
3 Q. Yes, it is a separate question. So
4 now I'm asking: Are those concerns you raised
5 justifications in your mind for denying medical
6 interventions to all people with gender
7 dysphoria?
8 MR. KNEPPER: Objection, form.
9 A. You know, I'm not advocating
10 denying endocrine treatment or surgical
11 treatment. I'm just saying that we as a
12 medical profession need to walk the walk that
13 we talk. We say as a principle of ethics that
14 our interventions should be based upon the best
15 current knowledge, it should be based on
16 science. It should not be based on politics.
17 It should not be based on fashion. It should
18 not be based on civil rights considerations.
19 They should be based on the kinds of studies
20 that I just described to you with predetermined
21 outcome majors that are agreed upon --
22 Q. Sorry?
23 A. -- period.
24 Q. I was --
25 A. I forgot to put the period.

1 Q. That's okay. Did you just say,
2 Dr. Levine, you're not an expert in health
3 insurance?
4 A. I am not an expert in health
5 insurance.
6 Q. Okay. Or what insurance should or
7 should not cover?
8 A. Yes.
9 Q. Do you recall what the insurance
10 billing code typically is for psychotherapy for
11 gender dysphoria? I know it's been a long time
12 since you've accepted commercial insurance, so
13 I'm not sure if the billing codes are the same,
14 but do you recall --
15 A. The billing code is 90837.
16 Q. Okay. Is there a code that you're
17 familiar with that is F64.0?
18 A. That's not a billing -- that's
19 diagnostic code --
20 Q. Thank you.
21 A. -- there's a separate code for
22 diagnosis and a separate code for procedure.
23 Q. I see. So F64.0 is a diagnostic
24 code?
25 A. Yes.

1 VIDEOGRAPHER: Off the record 11:26.
2 (Recess taken.)
3 VIDEOGRAPHER: On the record 11:31.
4 BY MR. CHARLES:
5 Q. Okay. Dr. Levine, in your report,
6 you stated that you had not met with any of the
7 plaintiffs in this case, correct?
8 A. Yes.
9 Q. Okay. And you have not interviewed
10 any of the plaintiffs in this case, correct?
11 A. Correct.
12 Q. And so you are not offering any
13 opinions about the plaintiffs in this case,
14 correct?
15 A. Correct.
16 Q. Okay. And that would include the
17 veracity of their experiences of gender
18 dysphoria, correct?
19 A. Yes, correct.
20 Q. And that would not include the
21 accuracy of their gender dysphoria diagnoses,
22 correct?
23 A. Correct.
24 Q. Okay. You're not offering any
25 opinions about their mental health histories?

1 A. Correct.
2 Q. Nor any of the affects of the
3 gender affirming treatment they may have
4 received?
5 A. Correct.
6 Q. Okay. Thank you. Let's return to
7 your report. I don't know if you have that --
8 A. My report?
9 Q. Yes. You can put away that
10 document in your hand.
11 So if you would, please, turn to page 6
12 of your report.
13 Okay. So on page 6, paragraph a. at the
14 bottom of the page there, Dr. Levine. The
15 report states that this is one of the opinions
16 you're offering, which is, "Sex as defined by
17 biology and reproductive function cannot be
18 changed. While hormonal and surgical
19 procedures may enable some individuals to
20 'pass' as the opposite gender during some or
21 all of their lives, such procedures carry with
22 them physical, psychological, and social risks,
23 and no procedures can enable an individual to
24 perform the reproductive role of the opposite
25 sex." Did I read that correctly?

1 methodology and are capable of critically
2 reviewing the literature. So your statement is
3 true on the most superficial level, but is
4 totally incorrect when it comes to scientific
5 standards of care for issuing guidelines for
6 the medical profession. So I don't know how to
7 answer the question. On the surface, the
8 answer is, yes. And underneath the surface,
9 the answer is, no.
10 Q. So the International Journal For
11 Transgender Health is still a peer-reviewed
12 source, though, right?
13 A. It's peer reviewed by people who
14 make their living supporting transgender care.
15 Q. But it's still peer reviewed,
16 right?
17 A. It's peer reviewed --
18 Q. And as for your --
19 A. -- I think it's peer reviewed.
20 Q. Okay. Understood. And as for your
21 more conservative approach, can you cite to any
22 studies or research that resulted in better
23 outcomes than people who adhere strictly to the
24 WPATH standards of care version 7?
25 A. No. This is part of the problem in

1 evaluation leading to a therapeutic process, it
2 seems prudent, given the fact that we are
3 changing people's bodies, especially teenagers'
4 bodies, and they are not of developmental
5 sophistication yet that court systems or at
6 least one court system thinks they're certainly
7 too young to make these life-altering
8 decisions. So people in SEGM are biased in the
9 direction of being conservative and providing
10 psychotherapeutic evaluations of the child, of
11 the teenager and of their parents, of their
12 family systems to see if we can find a way to
13 help them be informed about what is going --
14 what they think they want to do in their
15 future.
16 Q. And so when you provide letters of
17 authorization for hormones or for surgery, do
18 you do so in accordance with the WPATH
19 standards of care?
20 A. Yes. That is the standard, to
21 provide a letter of recommendation.
22 Q. Okay. So turning back to your
23 report, Dr. Levine. You can go ahead and put
24 away the trial transcript there.
25 A. I'm sorry. Did you say, "Turning

1 Q. Okay. So is a, "Hypothesis," an
2 idea about why something happens, but doesn't
3 provide evidence for why something is
4 happening?
5 MR. KNEPPER: Objection, form.
6 A. A, "Hypothesis," generates the
7 pursuit of evidence.
8 Q. Has social contagion as an
9 explanation for increased cases of gender
10 dysphoria been scientifically proven yet?
11 A. No. But when you seek -- when you
12 see -- actually see patients and talk to them
13 about their friends and hear about the
14 influence of the Internet and the gurus on the
15 Internet who tell 13 and 12-year-old children
16 who are concerned about menses or concerned
17 about breast development or concerned about
18 their bodies changing and then they're told
19 that they're transsexual by somebody that
20 they've never met that they talked to on the
21 Internet, that would be social contagion or
22 social education.
23 Or when you hear about a friend who
24 declares themselves trans and then your patient
25 six months later declares themselves trans, you

1 wonder about the -- the interpersonal,
2 psychological link between best friends in
3 young puberty, young years of puberty and how
4 one can identify with one's friends and that
5 would be a social contagion. Those are 3the
6 kinds of ideas that people like me get when we
7 sit with people week after week talking about
8 their lives. You see, that's not science.
9 But that is clinician and this is the
10 kind of thing that leads to intuition, clinical
11 intuition and that's the source of the
12 generation of the hypothesis. But we think as
13 clinicians, when we hear -- I mean, I don't
14 think I've ever seen a teenager trans person
15 who hasn't been heavily involved and influenced
16 by the Internet, for example, but I have not
17 done studies to document that in a way that
18 would be scientifically acceptable. There are
19 other people who have.
20 And I doubt very much if you'll ever find
21 a clinician on any side of this issue, you see,
22 who would say, oh, no most of my patients have
23 never talked to anyone on the Internet about
24 transgender. The Internet is just part of life
25 today and -- but transgender teenagers spend

1 hours and hours of their time getting counseled
2 or participating with the virtual trans
3 community. That's a hypothesis.
4 Q. So no scientific citation?
5 A. When we use the word, "Scientific,"
6 in the best sense, yes, the answer to your
7 question is, no scientific.
8 Q. Okay. No studies of citations you
9 can point to today to support that hypothesis?
10 A. Oh, I think Lisa Littman's studies
11 are in the literature and/or in press that
12 documents this.
13 - - - - -
14 (Thereupon, Deposition Exhibit 7,
15 "Correction: Parent reports of
16 adolescents and young adults
17 perceived to show signs of a rapid
18 onset of gender dysphoria," Article,
19 was marked for purposes of
20 identification.)
21 - - - - -
22 Q. Okay. For the record, please note
23 I'm showing to Dr. Levine what has been marked
24 as Exhibit 7. "Correction: Parent reports of
25 adolescents and young adults perceived to show

1 signs of a rapid onset of gender dysphoria," by
2 Lisa Littman published March 19, 2019. Have
3 you seen this material before, Dr. Levine?
4 A. I've seen of it. I don't think
5 I've read it.
6 Q. Okay. Were you aware that the Lisa
7 Littman article had to be withdrawn, corrected
8 and republished?
9 A. Yes.
10 Q. Okay. And were you aware that the
11 initial article was based on a survey of
12 parents --
13 A. Yes.
14 Q. -- of purportedly transgender
15 children and the parents were recorded -- I'm
16 sorry. Let me start over. Were you aware that
17 the Littman article was based on a survey of
18 parents who were recruited through some parent
19 groups?
20 MR. KNEPPER: Objection, form.
21 A. I knew it was a survey of parents.
22 Q. Okay. And did you know there were
23 no report-outs from the young adults of those
24 parents in the article?
25 A. It was a report of parents'

1 transitioning. However, it is...important to
2 note that there are other survey items where
3 the parent would have direct access to
4 information about their child and that those
5 answers reflect items that can be directly
6 observed." Did I read that correctly?
7 A. Yes, you did.
8 Q. All right. Your report also cites
9 as support for the social contagion hypothesis
10 to an article from Medscape.com written by
11 Becky Mccall and Lisa Nainggolan as support for
12 the social contagion theory. Is that correct?
13 I'm sorry. It's not going to be on this
14 article, Doctor.
15 A. I don't know that article.
16 Q. Okay.
17 A. You haven't asked me a question
18 about this. Did I misunderstand something?
19 Q. No, no. Sorry. We're just --
20 A. You haven't asked my opinions about
21 that, yeah.
22 - - - - -
23 (Thereupon, Deposition Exhibit 8,
24 "Transgender Teens: Is the Tide
25 Starting To Turn?" Article, was

1 marked for purposes of
2 identification.)
3 - - - - -
4 Q. Yeah. So, for the record, I'm
5 showing Dr. Levine what has been marked as
6 Exhibit 8. "Transgender Teens: Is the Tide
7 Starting To Turn?" by Becky McCall and Lisa
8 Nainggolan, April 26, 2021. Dr. Levine, you
9 said you have not reviewed this article before?
10 A. Which one are you referring to?
11 Q. I'm sorry. That one to your left.
12 A. This?
13 Q. Yes. Take your time.
14 A. Have I reviewed it, no. You know,
15 I've seen the picture of Keira Bell. I've seen
16 news reports of this in the past, but they were
17 just news reports, yeah.
18 Q. Do you know if either of the
19 authors of this article is a scientist?
20 A. I have no idea.
21 Q. Okay. Or a psychiatrist?
22 A. (Indicating.)
23 Q. I'm sorry. Could you make your
24 responses verbal? I'm forgetting.
25 A. I have no idea.

1 Q. Okay. Thank you. Have either of
2 them ever treated transgender children or
3 adolescents?
4 A. I would have no idea.
5 Q. Okay. To your knowledge, is the
6 information provided on Medscape.CA subject to
7 peer review?
8 A. I don't know how Medscape works.
9 I've heard there have been retractions, but I
10 don't know how their peer reviewed is made.
11 Perhaps people write in that, This is
12 ridiculous what you've been teaching or what
13 you've been saying, but whether they're peer
14 reviewed or not, I have no idea.
15 Q. So you probably -- I'm sorry. So
16 do you know if this article has been published
17 in a peer-reviewed journal to your knowledge?
18 A. "Transgender teens: Is the
19 Tides" -- that article?
20 Q. Yes.
21 A. I don't know. I don't know this
22 article. I don't know where it's from.
23 Q. Okay. So your report includes a
24 quotation from this article. "The vast
25 majority of youth now presenting with gender

1 multi-continental set of observations from
2 Europe, from Australia, from North America --
3 Q. Okay.
4 A. -- it almost doesn't even need
5 citations it's so clinically apparent.
6 Q. Okay. But there's no citation in
7 your report?
8 A. In my report, yes.
9 Q. Okay. So on page 18, going back to
10 your report, at the bottom of page 18, you use
11 a term, "Transgender Treatment Industry." Is
12 this the first time you have used this term?
13 A. In this report?
14 Q. No.
15 A. You mean, did I ever use it in
16 another report?
17 Q. Yeah, yeah.
18 A. I'm not sure. If this is -- if
19 it's not the first, it might be the second.
20 Q. And where did the term originate?
21 A. I think it -- the term originated
22 from Dwight Eisenhower at the end of his --
23 when he was leaving the presidency in 1952, he
24 warned the people about the military industrial
25 complex and that there was a very comfortable

1 the methods we made reference to before, the
2 efficacy of the treatment and the downsides of
3 the treatment. But because WPATH is an
4 advocacy organization and the scientific
5 establishment of the efficacy of their
6 treatments are not important to them, what they
7 are doing is teaching young mental health
8 professionals and medical professionals as a
9 whole what their ideology is. They say it's
10 scientifically established.
11 I'm here to tell you to the extent that I
12 understand science, it is not scientifically
13 established. In a sense, there is an industry
14 that has different elements that feed each
15 other; that's the transgender treatment
16 industry. I think if we put our heads
17 together, we could find another term.
18 Q. So did you coin that phrase then?
19 A. No --
20 Q. Okay.
21 A. -- no.
22 Q. Have you seen it used before in any
23 peer-reviewed articles?
24 A. Not in a peer-reviewed article.
25 I've seen it used in these kind of expert

1 opinion -- (Indicating.)
2 Q. Okay.
3 A. -- I would -- you know, if I had
4 time and I had a committee of people, I -- I
5 would probably find a different term for it.
6 But I don't mean it in a disparaging way. I
7 mean that this is a group of compassionate
8 people trying to help other people who actually
9 believe that the science has established the
10 best practices when in fact they're not well
11 informed.
12 Q. Do you need a sip of water after
13 that?
14 A. No. I'm just a long-winded guy.
15 I want to add, if I may, that we should
16 make a distinction between education and
17 indoctrination. Education can be based on
18 science. Indoctrination is based on preferred
19 beliefs that, if you allow me to use this term
20 again. The transgender treatment industry is
21 heavy on indoctrination and has declared, if
22 you look at the standards of care, if you don't
23 believe these systems, you're not a
24 competent -- you're not competent to take care
25 of people. That of course is the height of

1 A. No. Their gender dysphoria may be
2 a product, you see, of these other things. For
3 example, if you have someone who has been
4 sexually abused by her stepfather and becomes a
5 trans person in adolescents, we want to talk
6 about the sexual abuse and the process between
7 that person and what fears for the present and
8 the future that has caused the child. And
9 we're not attacking their trans identity.
10 We're trying to help them understand where they
11 came from and what they're coping with and why
12 they're so fearful or so distressed by their
13 body changing.
14 Q. And their gender dysphoria could be
15 separate and apart from that traumatic
16 experience?
17 A. Theoretically it could be, yes.
18 Q. And if it persisted sufficiently
19 enough, you would consider a letter of
20 authorization for --
21 A. Yes.
22 Q. -- hormones?
23 A. Yes.
24 MR. KNEPPER: Objection, form.
25 Q. Okay. If you would, please, turn

1 A. That is correct. And may I add
2 that it's very, very difficult to understand.
3 The natural question would be, how do you
4 compare the general population with the trans
5 people who did not have surgery with the trans
6 people who did have surgery.
7 Q. Thank you, Dr. Levine. That's not
8 my question, though. I just wanted to confirm
9 that was not the control group. You mentioned
10 this study later in your report, page 66
11 beginning at paragraph 74. Do you see that?
12 A. Um-hum.
13 Q. Okay. And basically that -- well,
14 here, let me point you exactly. The sentence
15 starts with, "Similarly," about halfway down
16 the page, third sentence of that paragraph.
17 A. Um-hum.
18 Q. And, as you mentioned, you cite the
19 Dhejne study and I believe -- or I should ask:
20 Is the Denmark study you're referencing the
21 study directly after it --
22 A. The Simonsen study.
23 Q. -- the Simonsen study?
24 A. Yes.
25 Q. Okay. So beginning with the Dhejne

1 study, do you think because that study showed
2 that some people committed suicide after gender
3 affirming surgery that no patient should be
4 able to access gender affirming surgery?
5 MR. KNEPPER: Objection, form.
6 A. That would be illogical.
7 Q. Okay. Dr. Levine, I understand you
8 said that would be illogical, but just to be
9 clear. You're not recommending -- sorry. I'm
10 not using that word. You're not saying that
11 the fact that some people commit suicide
12 following gender affirming surgery means that
13 there should be a ban on access to that
14 surgery. Is that right?
15 A. Not for that reason, no.
16 MR. KNEPPER: Objection, form.
17 Q. Not for that reason. Okay. Are
18 you recommending that there would be bans on
19 gender affirming surgery for any reason?
20 A. I think there are -- you know, I
21 think most prudent people in this field, just
22 to use the example of what you read out loud
23 about the Finland study, a case-by-case basis.
24 That's how doctor need to decide things, but
25 there are many, many reasons to be cautious

1 fashion and to be very hesitant about going
2 forward.
3 Q. But you're not recommending total
4 bans on gender affirming surgery?
5 A. I'm not recommending total bans.
6 I'm aware of the individual circumstances of
7 individual people's lives and their commitment
8 to transgender living. And I don't want to be
9 draconian about this. I want to be
10 compassionate about this.
11 Q. I understand. I appreciate that.
12 I just want to make sure I'm understanding you
13 correctly.
14 - - - - -
15 (Thereupon, Deposition Exhibit 12,
16 "Long-Term Follow-Up of Transsexual
17 Persons Undergoing Sex Reassignment
18 Surgery: Cohort Study in Sweden,"
19 Article, was marked for purposes of
20 identification.)
21 - - - - -
22 Q. So for the record, I'm presenting
23 to Dr. Levine what has been marked as
24 Exhibit 12. "Long-Term Follow-Up of
25 Transsexual Persons Undergoing Sex Reassignment

1 For the 22nd time today, did I read that
2 correctly?
3 A. It's the 23rd time.
4 Q. Oh, okay.
5 A. Yes.
6 Q. I was hoping you weren't counting,
7 but, okay. Did you testify earlier today that
8 the limitation of the Dhejne study is that the
9 controls were not transgender persons who had
10 not undergone gender affirming surgery?
11 A. Yes.
12 MR. KNEPPER: Objection, form.
13 Q. Okay. You can set that aside,
14 Dr. Levine.
15 - - - - -
16 (Thereupon, Deposition Exhibit 13,
17 2017 "On Gender Dysphoria," Booklet
18 From Department of Clinical
19 Neuroscience, Karolinska Institutet,
20 Stockholm, Sweden, was marked for
21 purposes of identification.)
22 - - - - -
23 Q. For the record, Dr. Levine has an
24 exhibit that has been marked as Exhibit 13.
25 "On Gender Dysphoria," by Cecilia Dhejne from

1 ideation in transgender people.
2 A. Well, you know about the
3 Branstrom-Pachankis study and the criticism of
4 the study --
5 Q. But I'm not talking about the
6 study.
7 A. -- and part of the study
8 demonstrated that it increased suicidal
9 ideation and attempts in the first two and a
10 half years after surgery, especially in the
11 first year --
12 Q. Right. Is your testimony --
13 A. -- so I'm not testifying that. I
14 thought you were asking me about this, which I
15 need to comment on, because this is not an
16 accurate depiction of my statement in the
17 reference. (Indicating.)
18 Q. Well, that's not what I'm asking
19 about, Dr. Levine.
20 A. Well, you're reading this and I'm
21 misquoted here. So I don't want you to imply
22 that she is accurately representing my views,
23 because I did not say that gender affirming
24 treatment in general should be stopped. I've
25 never said that. This is an article about

1 at different times have reported that in the
2 large majority of patients, absent a
3 substantial intervention such as social
4 transition and/or hormone therapy, gender
5 dysphoria does not," continue, "through
6 puberty."
7 So there are some children who persist in
8 their asserted gender identity through puberty,
9 correct?
10 MR. KNEPPER: Objection, form.
11 A. Correct.
12 Q. And some who persist in wanting to
13 transition via medical treatments?
14 MR. KNEPPER: Objection, form.
15 A. Yes. Some of the children have
16 learned about medical treatments somewhere
17 along the line and they feel instantly that
18 this is for them.
19 Q. And then looking at paragraph 56,
20 which is on page 41, so just the very next page
21 on the bottom, the second sentence in that
22 paragraph. "I observe an increasingly vocal
23 online community of young women who have
24 reclaimed a female identity after claiming a
25 male...identity at some point during their teen

1 transgender people is individual based, right?
2 A. Well, it's both --
3 MR. KNEPPER: Objection, form.
4 A. -- yes, that's partially true. And
5 ideally that's true, but it's obviously not
6 entirely true. It's why we're here, is it's
7 categorically based.
8 Q. Let me rephrase that. You design
9 treatment for your patients based on what that
10 patient in front of you, what they need, what
11 they want, what you determine -- sorry. Not
12 what you determine, but what you might
13 authorize?
14 MR. KNEPPER: Objection, form.
15 A. What the patient and I discern
16 together.
17 Q. Thank you. Okay. Let's jump to,
18 again, still in your report, page 68.
19 A. We've left 40 and 41? 68.
20 Q. Okay. Looking at the bottom of
21 page 68, Dr. Levine, paragraph 78. It states,
22 "Similarly, the American Psychological
23 Association has stated because approach" --
24 A. Sorry.
25 Q. I apologize.

1 Gender Nonconforming People (2015)."
2 So is that lack of consensus that you
3 discuss a justification to categorically ban
4 social transition for children as a treatment
5 for gender dysphoria?
6 MR. KNEPPER: Objection, form.
7 A. By, "Children," you mean 6 and 7
8 year olds?
9 Q. Those for whom medical intervention
10 is not indicated.
11 A. Is that a reason to ban it?
12 Q. Correct, social transition.
13 MR. KNEPPER: Objection, form.
14 A. The reason to -- so let me qualify
15 that. There's a, yes, answer, there's a reason
16 to ban it. And the reason to ban it is both a
17 developmental and an ethical reason. There
18 have been eleven studies of these cross-gender
19 identity children who are not socially
20 transitioned and the vast majority of them
21 de-transition by the time they're mid
22 adolescents or older adolescents. They become
23 homosexual individuals usually or bisexual
24 individuals, but they are cis gender.
25 So if we take a 6-year-old child and

1 A. -- nor you didn't ask me to comment
2 on that.
3 Q. It was related to what you had said
4 before. So this is related but not related to
5 what we just read. So you can put that aside.
6 A. Okay. But your next question was
7 about puberty blocking hormones, which are not
8 being used for 6-year-old's and 7-year-old's --
9 Q. Correct, yes, a separate group of
10 people.
11 A. -- so we're on a different
12 category.
13 Q. Yes.
14 A. Okay. So you asked me if I think
15 puberty blocking hormones should be used on a
16 case-by-case basis?
17 Q. Correct, yes.
18 A. I don't think so.
19 Q. So that is to say, there are no
20 circumstances you would advocate for a total
21 ban on that intervention?
22 MR. KNEPPER: Objection, form.
23 A. Number one, I've never seen a child
24 where that has come up where I thought it was a
25 good idea. In the cases I've seen, it was like

1 a treatment for the mother's pathology, not for
2 the child. And it's like a warning sign, boy,
3 be careful. You see, if you see one case like
4 that, you wonder -- and it's so conspicuous,
5 you wonder in the next case, if the same thing
6 is going on in a more subtle way.
7 Is the child acting out the ambitions of
8 the mother or the father? I just think
9 prudence -- I think considering the child has
10 not gone through puberty or has not gone far
11 into puberty and puberty brings all kind of
12 psychological, physical and social changes to a
13 child and those changes lead to desistance in
14 many, many children, to put them into a state
15 where all their peers are developing physically
16 and they're going to be poirot (phonetic).
17 And then most of those children have
18 social anxiety problems and they avoid -- they
19 don't have friends, right. And this is going
20 to make them even more different than their
21 peers and it's gone to deprive them of the
22 sexualization of their mind and the discovery
23 of masturbation and the discovery of sexual
24 desire for partners, you see. This is only
25 going to increase the child's difference from

1 her peers or his peers and I don't think this
2 is a prudent idea.
3 And if you wanted me to suggest a ban on
4 anything, it would be a ban on using puberty
5 blocking hormones, especially when the
6 evaluation of those children are focused on the
7 gender dysphoria of the child and not on the
8 background of the child and not on what's going
9 on. So I think that's an answer to your
10 question.
11 If we're going to use these drugs, if
12 we're going to use social transformation of
13 children, if we're going to use puberty
14 blocking hormones, it should only be used in a
15 carefully designed protocol. And follow up has
16 to be guaranteed so in one year and in two
17 years and in three years and before we start
18 giving cross-gender hormones we have data --
19 Q. Sorry.
20 A. -- so the answer to your question
21 is, I would consider banning puberty blocking
22 hormones even for children who have been
23 cross-gender identified for four years to give
24 them a chance to desist, which is exactly what
25 the Dutch protocol did, by the way.

1 Q. Sorry. So you just said you would
2 ban -- you would recommend a ban on --
3 A. If --
4 MR. KNEPPER: Objection, form.
5 A. -- look, I'm a doctor. I'm not a
6 policy maker --
7 Q. I understand, yes.
8 A. -- if you ask me my political
9 opinion about, should we ban this, is that a
10 reasonable thing, I think there's a very strong
11 argument for banning puberty blocking hormones.
12 Q. Okay. And, right. So you're here
13 as an expert offering an expert opinion. So
14 are you separating that from -- like are you
15 saying your political views that you would
16 advocate for bans or are you saying your expert
17 opinion you're offering in this case is you
18 would recommend ban?
19 MR. KNEPPER: Objection, form.
20 A. I would recommend ban. To what
21 extent it's from my politics or from my being a
22 parent or from my being a doctor, I don't know.
23 I would recommend we not use puberty blocking
24 hormones.
25 Q. In Claire, in this case that we

1 Answer: "Where we had a healthy mother
2 and father, an intact family who was
3 psychologically informed and who has -- where a
4 child has come out of toddlerhood acting
5 consistently in a gender atypical fashion, and
6 where the parents are not homophobic..."
7 Question: "The parents are not what kind
8 of people?"
9 Answer: "Homophobic."
10 For the 27th time, did I read that
11 correctly? Did I read that correctly?
12 A. Yes.
13 MR. CHARLES: Okay. All right.
14 Let's go ahead and take a break for a few
15 minutes.
16 VIDEOGRAPHER: Off the record 3:20.
17 (Recess taken.)
18 VIDEOGRAPHER: On the record 3:38.
19 BY MR. CHARLES:
20 Q. So, Dr. Levine, before the break,
21 you were talking about 6 and 7 year olds and
22 you mentioned there were eleven studies. Can
23 you identify which eleven studies from your
24 report you're referring to?
25 A. Cantor, the reference Cantor lists

1 the eleven studies and these eleven studies
2 have been done over probably thirty years.
3 Q. Okay. So Cantor was one review of
4 eleven studies?
5 A. Cantor was a review of the eleven
6 studies. I can't list to you the eleven
7 individual studies. The latest one is written
8 by Singh, S-i-n-g-h. It was published in April
9 of 2021, in the Frontiers of Psychiatry. And
10 that perhaps is the most comprehensive of them.
11 And that's the one that confirms -- that's a
12 study of boys and it confirmed that 12.2, I
13 think percentage of them persisted over a
14 thirteen-year period.
15 Q. So that was one -- that was the
16 Singh study that came out. Is that same study
17 mentioned in the Cantor review?
18 A. (Nodding.)
19 Q. Okay. And you said that
20 established that 12.2 percent of prepubertal
21 boys persisted into adolescents? Okay.
22 A. Yes. This harkens back to the
23 ethical issue that I talked about before. You
24 know, if you know that 88 percent of them are
25 going to persist -- desist, why in the world

1 identified 60,000 case reports world wide on
2 the Internet. See Exposito-Campos..." --
3 A. That is an error, by the way.
4 Q. Sorry. Which part of that is an
5 error?
6 A. That, "60,000," is my error. It
7 should say, "16,000."
8 - - - - -
9 (Thereupon, Deposition Exhibit 17,
10 "A Typology of Gender Detransition
11 and Its Implications for Healthcare
12 Providers," Article, was marked for
13 purposes of identification.)
14 - - - - -
15 Q. Okay. So for the record, I'm
16 showing Dr. Levine what has been marked as
17 Exhibit 17. "A Typology of Gender Detransition
18 and Its Implications for Healthcare Providers,"
19 Pablo Exposito-Campos, 2021. Okay. Have you
20 seen this study before, Dr. Levine?
21 A. Yes.
22 Q. Okay. So on page 1 of this report,
23 about halfway through the very first paragraph
24 in the introduction beginning with, "As a
25 consequence." Do you see that there?

1 important to note that this typology does not
2 suggest two clear-cut categories, for a
3 secondary detransition can lead to a primary
4 detransition" -- oh, sorry. Let me start over.
5 Sorry.
6 Okay. Let me start from a different
7 place, Dr. Levine. The second sentence.
8 "In r/detrans" --
9 And there's an HTTP address --
10 A. Okay.
11 Q. Okay. You see that.
12 -- "a subreddit for detransitioners to
13 share their experiences with more than 16,000
14 members, one can find several stories of people
15 who call their transgender status into question
16 after stopping transitioning due to medical
17 complications or feeling dissatisfied with
18 their treatment results"?
19 Do you know what a, "Subreddit," is,
20 Dr. Levine?
21 A. I believe it's just a division of a
22 larger website where people, you know, with
23 similar interests.
24 Q. Okay. Do you understand this
25 sentence to be suggesting that all 16,000 of

1 those members have offered a story of
2 detransition?
3 MR. KNEPPER: Objection, form.
4 A. I think -- I think it may be true
5 that either they have offered a personal story
6 or they're fascinated because of their own
7 considerations of that story. They're thinking
8 about it themselves, which would be in keeping
9 with the idea that even people who have
10 transitioned begin to doubt whether they made a
11 wise decision and they're considering
12 detransition. I'm not so sure it means that
13 all 16,000. I would have no way of
14 ascertaining that. You know, in my worry, I
15 would lean towards most of them are seriously
16 considering or have detransitioned. And in my
17 skepticism, I would say I'm not sure whether
18 it's 15,000 or 12,000 or 8,000.
19 Q. But you have no way to confirm
20 that --
21 A. I have no way.
22 Q. -- if it's all of them or a few of
23 them or three of them?
24 A. You're absolutely right. I have no
25 way of confirming that.

1 where hormones are safe and surgery is a good
2 thing to do. If a person said that, you know,
3 skeptically, I think that would disappoint
4 certain patients, but how it was said and when
5 it was said in response to what would either
6 determine whether the person is engaged with
7 the mental health professional or leaves the
8 mental health professional. You know, all
9 mental health professionals are not created
10 equal.
11 Q. So it sounds like you're saying it
12 could do harm to that patient?
13 MR. KNEPPER: Objection, form.
14 A. No, I'm not saying that. I'm
15 saying it could be disappointing to that
16 person. What that person did with the
17 disappointment may prove harmful just because
18 of that person or it may prove in fact
19 beneficial.
20 Q. Are you satisfied -- let's orient
21 this question around the patients you've seen
22 in the last 12 months. Are you satisfied that
23 those patients -- actually, sorry. Let me
24 start over. Are you satisfied that the
25 patients you have seen historically for whom

1 you provide letters of authorization for
2 hormones give sufficiently informed consent?
3 MR. KNEPPER: Objection, form.
4 A. From my point of view, I did what I
5 could to reach the standard of having the
6 person internalize and think about, digest,
7 dream about and come back and talk to me about
8 it. That's all I can do. I can't guarantee
9 that if I do what I do that it's going to
10 change your mind or help you steer your ship in
11 a slightly different angle --
12 Q. So --
13 A. -- so I would not write a letter of
14 recommendation if I didn't feel like I did my
15 part. And if the person indicated that they
16 couldn't pay attention to me, I wouldn't write
17 the letter.
18 MR. CHARLES: Understood.
19 Okay. John, finished.
20 MR. KNEPPER: You're finished?
21 MR. CHARLES: I mean, barring --
22 MR. KNEPPER: Barring --
23 MR. CHARLES: We can't tell the
24 future.
25 MR. KNEPPER: I wasn't ready for

1 history and current psychiatric diagnosis, it's
2 more complicated than just the internet.
3 But we need to understand who these
4 children are and how they're different from
5 their peers and what we could possibly do to
6 help them to have a better life. I know some
7 of the conversation today was, we'll help them
8 have a better life by giving them puberty
9 blocking hormones, but that doesn't address --
10 I think it has a risk of harming them further.
11 And it doesn't address the comorbid
12 developmental challenges that these children
13 face.
14 And I'm afraid -- and it's controversial,
15 because I don't have the answer. I'm afraid
16 there's a possibility we're making these
17 children have a worse outcome. And until you
18 can demonstrate to me in a very careful
19 controlled study that separates the autistic
20 from the non-autistic, you see? That separates
21 the kids who come from a family that's intact
22 from a family where there's a single parent.
23 Where you can separate the kids who were
24 sexually abused from the kids who were not
25 sexually abused. I'm not sure puberty blocking

1 UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS
2
3 ________________________________
4 KATHEENA SONEEYA,
5 Plaintiff, Civil Action
No. 07-12325-DPW
6 V.
April 8, 2019
7 THOMAS A. TURCO III, in his official
capacity as Commissioner of the
8 Massachusetts Department of Correction, 10:23 a.m.
9 Defendant.
________________________________
10
11
12 TRANSCRIPT OF BENCH TRIAL DAY 1
13 BEFORE THE HONORABLE DOUGLAS P. WOODLOCK
14 UNITED STATES DISTRICT COURT
15 JOHN J. MOAKLEY U.S. COURTHOUSE
16 1 COURTHOUSE WAY
17 BOSTON, MA 02210
18
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Boston, MA 02210
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1 witness, ask me.

2 MS. HANCOCK: Okay. Apologies, your Honor.

3 BY MS. HANCOCK:

4 Q. So two versions were released since 1999, correct?

5 A. Correct.

6 Q. And one in 2001, as you just testified, right?

7 A. Right.

8 Q. And another one in 2011; is that right?

9 A. Yes.

10 Q. And as you understand it, there's going to be an eighth

11 version coming out soon, correct?

12 A. Yes.

13 Q. And you're not involved in drafting that version, correct?

14 A. I am not.

15 Q. And you requested to participate in drafting that version,

16 correct?

17 A. I'm not sure that's correct.

18 Q. You did not ask to be involved in drafting that version?

19 A. I think -- I think I actually might have, now that you

20 bring it up, but I was told I had to be a member of WPATH.

21 Q. Now, you've worked as a consultant for the DOC since

22 around 2007 or 2008. Does that sound right?

23 A. That sounds right.

24 Q. And you're not technically engaged by the DOC, though,

25 right?

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
3 HUNTINGTON DIVISION
4 --------------------------------------------------------
5 Christopher Fain, individually and on behalf of all
6 others similarly situated, et al.,
7 Plaintiffs,
8 vs. CIVIL ACTION NO. 3:20-cv-00740
9 William Crouch, et al.,
10 Defendants.
11 --------------------------------------------------------
12
13
14 REMOTE DEPOSITION OF COMMISSIONER CYNTHIA BEANE
15
16
17 DATE: March 29, 2022
18 TIME: 8:00 a.m. CST
19 PLACE: Veritext Virtual Videoconference
20
21
22
23
24 REPORTED BY: KELLEY E. ZILLES, RPR (Via Videoconference)
25 JOB NUMBER: 5096149

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23 NOTE: The original deposition transcript will be
24 delivered to Tara Borelli, Esq., as the taking attorney.
25

1 occurred in West Virginia and we put a modifier on so we
2 can get those claims paid.
3 Q. Does BMS track a gender marker for its members?
4 A. Meaning male, female?
5 Q. Correct, including male and female. Does BMS
6 have a gender marker of male or female or any other kind
7 of gender marker on each member?
8 A. Yes, when you apply for Medicaid you say whether
9 you're male or female, that's in the system.
10 Q. And just to go back to our questions a moment
11 ago about that modifier. So the modifier doesn't,
12 there's no modifier that's attached to transgender
13 members generally, it sounds like that modifier that we
14 were discussing uses one kind to refer access to
15 pregnancy care of a transgender man, is that correct?
16 A. You are correct.
17 Q. So back to gender markers. You testified that
18 each Medicaid member has to designate a marker of male
19 or female when they apply for Medicaid, is that correct?
20 A. Correct.
21 Q. And can members change that gender marker at any
22 time after they have originally designated it?
23 A. I would assume so. I don't think we have
24 anything stopping that, but I would, I honestly don't
25 know if that's occurring or if that's happening. I

1 works with that does research for Dr. Becker, and I know
2 that Dr. Becker was on the call.
3 Q. So on a slightly different topic, are you
4 familiar with what social transition refers to?
5 A. I'm sorry, did you say -- I can't hear you.
6 Q. Are you familiar with what social transition
7 refers to?
8 A. I am not.
9 Q. So that would mean BMS does not have a position
10 on whether transgender children should be prevented from
11 socially transitioning, correct?
12 A. I don't believe we have a position. I'm not
13 even sure what it is.
14 Q. And are you familiar with what is sometimes
15 referred to as conversion therapy?
16 A. For someone who is gay, like pray the gay away?
17 Q. Yes, it can be referred to that. And for
18 purposes of this question, assume that it's applying
19 that principle to be transgender, so assume --
20 A. Yes, I have heard of that.
21 Q. Does BMS have a position on whether transgender
22 children should be subjected to conversion therapy?
23 A. No one should be subjected to that therapy.
24 Q. Thank you. All right. If you are good to keep
25 going for a little while, then I think I'll turn to our

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IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF FLORIDA
TALLAHASSEE DIVISION

CASE NO. 4:20-cv-00020-MW/MAF

JAMI CLAIRE, KATHRYN LANE and
AHMIR MURPHY,

Plaintiffs,

vs.

FLORIDA DEPARTMENT OF
MANAGEMENT SERVICES, et al,

Defendants.

______________________________

ZOOMED DEPOSITION OF STEPHEN B. LEVINE, M.D.

Monday, December 21, 2020

9:30 a.m. - 2:51 p.m.

Via Zoom

Tallahassee, Florida 32308

STENOGRAPHICALLY REPORTED BY:

SANDRA L. NARGIZ
RPR, CM, CRR, CRC, FPR, CCR-GA

Job No. 166551



USCA4 Appeal: 22-1927 Doc: 20-4 Filed: 10/31/2022 Pg: 561 of 616

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25

USCA4 Appeal: 22-1927 Doc: 20-4 Filed: 10/31/2022 Pg: 563 of 616



1 I N D E X

2 WITNESS PAGE

STEPHEN B. LEVINE, M.D. 5

3

Direct Examination by Mr. Tilley 5

4 Cross Examination by Ms. Coles 171

5

6

7

8 (STENOGRAPHER'S NOTE: Exhibits were received premarked electronically; only Exhibits 1, 2, 3, 7,

9 10, 11 and 13 were referred to in deposition.)

10

11 INDEX OF EXHIBITS

12

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| 3 | Dhejne study | 165 |
| 7 | Standards of Care, V7 | 48 |
| 10 | Kosilek report | 83 |
| 11 | Soneeya 2011 report | 94 |
| 13 | Soneeya case trial transcript | 167 |

18

19

20

21

22

CERTIFICATE OF OATH 181

23 CERTIFICATE OF REPORTER 182

READ AND SIGN LETTER 183

24 ERRATA SHEET 184

25

1 right?

2 A No, that is. I think -- we'll quibble

3 over the word only. If you use the word

4 predominantly, I would say they are predominantly

5 taking care of. They are a specialty clinic for the

6 transgender.

7 **Q So predominantly treating transgender**

8 **people, but not 100 percent?**

9 A That's my guess.

10 **Q Okay. What sorts of treatments do you**

11 **provide for your patients with gender dysphoria?**

12 A Psychiatric evaluation of the patient and

13 the family, the parents and the other siblings;

14 psychotherapy to further the process of

15 understanding this whole phenomenon; recommendations

16 for hormones and occasionally recommendations for --

17 depending on the biologic sex of the patient, for

18 genital or breast surgery.

19 **Q How many patients have you recommended**

20 **hormone therapy for?**

21 A You mean over 47 years?

22 **Q Let's start with the 47 years, yeah.**

23 A I don't know. Can I give you a gross

24 estimate?

25 **Q Sure.**

1 to be directed to the surgeon.

2 **Q Okay. If a surgeon told you I require a**

3 **letter for this facial feminization surgery, are**

4 **there circumstances under which you could see**

5 **yourself providing a letter, not of recommendation**

6 **but of authorization, for a person to receive this**

7 **surgery from the surgeon?**

8 A I could see myself under certain

9 circumstances, if I understood the patient's motives

10 and had a lot of time to discover and discuss this,

11 the history and alternative approaches and wondering

12 about the psychology of wanting this, I could see

13 theoretically.

14 That's what I do, you know, as a

15 psychiatrist; I am trying to investigate the meaning

16 of the wish and the solution that the patient is

17 hoping for, the problem the patient is hoping this

18 would be a solution for.

19 And so I want to be able to consider this

20 and have a respectful, mutual, slow dialogue that is

21 slow, meaning multiple sessions, to consider the

22 nuances of this because, you know, all of us have a

23 self-concept of how handsome we are or pretty we

24 are, and most everyone wants to get a little more

25 handsome and a little more pretty and we are -- we



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1 **Q Okay.**
2 A I believe that if a surgeon is going to do
3 this, he ought to know what I think -- what I know
4 about the person's history and the person's
5 intellectual capacities and the prices they paid for
6 their gender dysphoria already.
7 For example, the loss of a family and no
8 relations to children, or the inability to have a
9 relationship, an intimate relationship with other
10 people. I believe the surgeon needs to have an
11 understanding of the person.
12 I don't have an understanding whatsoever
13 of the techniques of surgery. You see? I am just a
14 psychiatrist. And the psychiatrist -- and the
15 surgeon has very little understanding of how a
16 person got to be in his office. And I believe that
17 the letters of recommendation should capture the
18 humanness of this person and the desperation of this
19 person and the justification that the person uses
20 and the hopes they have for this surgery. But
21 that's Levine, you know.
22 **Q I want to show you the WPATH Centers of**
23 **Care section that discusses letters. This is**
24 **Exhibit 7 which we are going to put on the screen.**
25



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1 (Exhibit 7 was marked for identification.)
2 BY MR. TILLEY:
3 Q Let's go to page 27. It looks like the
4 document page 27, it's .pdf page 33, Bates stamp
5 PL 0450524.
6 You see, Dr. Levine --
7 MS. COLES: Can you read that, Dr. Levine?
8 It looks a little small on my computer.
9 THE WITNESS: I can read it. It says
10 referral for surgery.
11 MS. COLES: Okay. Just making sure.
12 BY MR. TILLEY:
13 Q At the bottom, I am going to start there
14 and then we'll go on to the following page. At the
15 bottom it says, The recommended content of the
16 referral letters for surgery is as follows: 1, the
17 client's general identifying characteristics -- now
18 we are continuing on to the next page -- number 2,
19 results of the client's psychosocial assessment,
20 including any diagnoses.
21 And then it goes on to 3, 4, 5, and 6.
22 Dr. Levine, can you just review those if
23 you can read it and then let me know if you agree
24 with those statements.
25 (Short pause.)



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1 A I don't disagree with the statements, but
2 each of those statements, of course, need to be
3 operationalized by the letter writer. For example,
4 the first one, identifying characteristics,
5 oftentimes identifying characteristics would be like
6 this is a 63-year-old Caucasian veterinarian. But
7 there are many other identifying characteristics
8 that might be included.
9 So you can interpret these things with
10 terse statements or elaborate statements. I favor
11 elaborate statements. For example, I would like to
12 say a divorced father of four, or a roller derby
13 official. I would like to identify him as much as a
14 person as possible. But in the history of medicine,
15 race, age, and nourishment passes for identifying
16 information.
17 So the results of the psychosocial
18 assessment, including any diagnosis. Psychosocial
19 assessment would be the processes in his life
20 history, including any current or past diagnoses,
21 you see. So substance abuse might be a very
22 important part of number 2.; and the duration. So
23 if I am writing a letter, if I am one of two people
24 who have been hired to write a letter for genital
25 surgery, and I might have had three visits with the

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1 not inquiring about your medical history and your
2 psychiatric history. But it may be psychologically
3 beneficial to you and an M.D. may recommend that you
4 do that. And that recommendation would be based on
5 his or her knowledge that you are likely to suffer
6 from seasonal affective disorder, and the treatment
7 is bright lights and sunshine. And sunshine would
8 be far superior because of its luminescence, the
9 number of lumens exposed, than bright lights.
10 BY MR. TILLEY:
11 **Q Let's go back just briefly to WPATH. And**
12 **I know you mentioned you have a more conservative**
13 **approach. So let me ask you this.**
14 **Is it fair to say that if you personally**
15 **believed that you would authorize hormones or**
16 **surgery for someone with gender dysphoria, someone**
17 **following the WPATH Standards of Care would also**
18 **believe that?**
19 A Yes.
20 **Q Okay. Let's talk about insurance for a**
21 **little bit. If you recommended that -- if you**
22 **authorized some form of treatment for gender**
23 **dysphoria, whether it be hormones or some form of**
24 **surgery, would you expect that that treatment would**
25 **be covered by your patient's insurance?**



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1 offering an opinion on transgender people accessing
2 sex-specific public places; is that right?
3 A No.
4 Q It's correct that that's not right?
5 A You mean like bathrooms, and so forth?
6 Q Right. You are not making an expert
7 opinion in this case concerning sex-specific spaces;
8 is that correct?
9 A That's right.
10 Q Okay. Let's go to page 13. You say that
11 plaintiffs assert that the WPATH Standards of Care
12 are widely accepted. Do you see that statement?
13 A Please tell me what paragraph it's in.
14 Q Under heading number 4.
15 A Yes. Okay.
16 Q Do you disagree that the WPATH Standards
17 of Care are widely accepted by the major medical and
18 mental health associations?
19 A No.
20 Q Okay. You just think that they are wrong;
21 is that correct?
22 A Yes, and widely accepted doesn't tell you
23 60 percent or 40 percent. It just says widely
24 accepted.
25 Q Okay. Is it -- how would -- how would you



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1 You see?
2 So I am saying, please, let me talk to you
3 about human beings here and how important having
4 ongoing lifelong relations with one's children are
5 and being a grandfather or grandmother, and being
6 connected to a family of origin. I am not talking
7 about categorical bans. I am talking about being
8 smart.
9 BY MR. TILLEY:
**10 Q Are you aware that this case concerns an**
**11 insurance exclusion that is categorical at**
**12 preventing --**
13 MS. COLES: Form.
14 BY MR. TILLEY:
**15 Q -- hormones and surgery as a treatment for**
**16 gender dysphoria?**
17 MS. COLES: Form.
18 A I am aware that your plaintiffs are suing
19 to get coverage for -- that is not provided by their
20 particular insurance. I am aware of that.
21 BY MR. TILLEY:
**22 Q Do you think that exclusion is**
**23 appropriate?**
24 MS. COLES: Form.
25 A I've already answered that question, I



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1 believe.
2 BY MR. TILLEY:
3 **Q What is the answer?**
4 A That it's a political decision that varies
5 from state to state, and it belongs to the process
6 of political science and the courts and not doctors.
7 **Q And if you yourself were treating them and**
8 **determined that they understood the risks and you**
9 **thought the treatment would be psychologically**
10 **beneficial and provided letters of authorization to**
11 **them, you would want that treatment to be covered by**
12 **insurance; is that correct?**
13 MS. COLES: Form.
14 A I am an agent of the patient, I want
15 what's best for the patient, and especially if the
16 patient couldn't otherwise afford it, I would wish
17 for my patient to have it, yes.
18 BY MR. TILLEY:
19 **Q I know you said you are not about**
20 **categorical bans, but let me ask you about minors**
21 **again.**
22 **Would you support a categorical ban on**
23 **access to puberty blockers to treat gender**
24 **dysphoria?**
25 MS. COLES: Form.



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BMJ Open

# International clinical practice guidelines for gender minority/trans people: systematic review and quality assessment

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## ABSTRACT

**Objectives** To identify and critically appraise published clinical practice guidelines (CPGs) regarding healthcare of gender minority/trans people.

**Design** Systematic review and quality appraisal using AGREE II (Appraisal of Guidelines for Research and Evaluation tool), including stakeholder domain prioritisation.

**Setting** Six databases and six CPG websites were searched, and international key opinion leaders approached.

**Participants** CPGs relating to adults and/or children who are gender minority/trans with no exclusions due to comorbidities, except differences in sex development.

**Intervention** Any health-related intervention connected to the care of gender minority/trans people.

**Main outcome measures** Number and quality of international CPGs addressing the health of gender minority/trans people, information on estimated changes in mortality or quality of life (QoL), consistency of recommended interventions across CPGs, and appraisal of key messages for patients.

**Results** Twelve international CPGs address gender minority/trans people's healthcare as complete (n=5), partial (n=4) or marginal (n=3) focus of guidance. The quality scores have a wide range and heterogeneity whichever AGREE II domain is prioritised. Five higher-quality CPGs focus on HIV and other blood-borne infections (overall assessment scores 69%–94%). Six lower-quality CPGs concern transition-specific interventions (overall assessment scores 11%–56%). None deal with primary care, mental health or longer-term medical issues. Sparse information on estimated changes in mortality and QoL is conflicting. Consistency between CPGs could not be examined due to unclear recommendations within the World Professional Association for Transgender Health Standards of Care Version 7 and a lack of overlap between other CPGs. None provide key messages for patients.

**Conclusions** A paucity of high-quality guidance for gender minority/trans people exists, largely limited to HIV and transition, but not wider aspects of healthcare, mortality or QoL. Reference to AGREE II, use of systematic reviews, independent external review, stakeholder participation and patient facing material might improve future CPG quality.

**PROSPERO registration number** CRD42019154361.

## Strengths and limitations of this study

- First systematic review to identify and use a validated quality appraisal instrument to assess all international clinical practice guidelines (CPGs) addressing gender minority/trans health.
- International CPGs were studied due to their influential status in gender minority/trans health, though further research is needed on national and local CPGs.
- An innovative prioritisation exercise was performed to elicit stakeholders' priorities and inform the setting of AGREE II (Appraisal of Guidelines for Research and Evaluation tool) quality thresholds, however these stakeholder priorities may not be applicable outside the UK.
- An inclusive approach using wide criteria, extensive searches and approaching key opinion leaders should have allowed the study to identify all relevant international CPGs, however it is possible some may have been missed.

## INTRODUCTION

### Assessing the quality of clinical practice guidelines

Evidence-based practice integrates best available research with clinical expertise and the patient's unique values and circumstances. High-quality clinical practice guidelines (CPGs) support high-quality healthcare delivery. They can guide clinicians and policymakers to improve care, reduce variation in clinical practice, thereby affecting patient safety and outcomes. The Institute of Medicine defines CPGs as: 'statements that include recommendations intended to optimise patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options',[1] although other definitions exist.[2] Recommendations are used alongside professional judgement, directly or within decision aids, in training and practice. CPGs are important but have limitations depending on evidence selection and

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development processes.[3] Grading of Recommendations, Assessment, Development and Evaluation (GRADE) was developed to address the evidence that is selected and appraised during CPG development.[4–6] Using a systematic approach and transparent framework for developing and presenting summaries of evidence, GRADE is the most widely adopted tool worldwide for grading the quality of evidence and making recommendations,[7] but does not alone ensure a CPG is high quality. Strength of evidence is only one component of what makes a 'good' CPG; factors such as transparency, rigour, independence, multidisciplinary input, patient and public involvement, avoidance of commercial influences and rapidity[8 9] should also be considered. Broader domains of CPG quality are included in the Appraisal of Guidelines for Research and Evaluation instrument AGREE II.[10–12] Despite widely recognised principles and methods for developing sound CPGs, current research shows that guidelines on various topics lack appropriate uptake of systematic review methodologies in their development,[13] give recommendations that conflict with scientific evidence[14] or do not adequately take into account existing CPG quality and reporting assessment tools.[15] This emphasises the ongoing need to appraise guidelines to ensure evidence-informed care.

### Healthcare for gender minority/trans people

'Trans' is an umbrella term for individuals whose inner sense of self (gender identity) or how they present themselves using visual or behavioural cues (gender expression) differs from the expected stereotypes (gender) culturally assigned to their biological sex.[16] 'Gender minority' is an often-used alternative population description. Some gender minority/trans people may seek medical transition, which involves interventions such as hormones or surgery that alter physical characteristics and align appearance with gender identity. Patient numbers referred to UK gender identity clinics and length of waiting lists have increased in the last decade, particularly for adolescents,[17] a phenomenon seen elsewhere.[18] Gender minority/trans people may have continuing, sometimes complex, life-long healthcare needs whether they undergo medical transition or not. Gender minority/trans people may experience more mental health issues such as mood and anxiety disorders,[19] substance use[20] and higher rates of suicidal ideation.[21] They may seek assistance with sexual health, mental health,[22] substance use disorders,[23] prevention and/or management of HIV[24] as well as usual general health enquiries. However, they may encounter difficulties in accessing healthcare,[25] reporting negative healthcare experiences,[26] discrimination and stigma.[27 28] Like all individuals, gender minority/trans people require high-quality evidence-based healthcare[25 29] addressing general and specific needs.

### Guidelines used internationally and in the UK

The quality of current guidelines on gender minority/trans health is unclear. The World Professional Association for Transgender Health (WPATH) Standards of Care Version 7 (SOCv7)[30] represent normative standards for clinical care, acting as a benchmark in this field.[31] Globally, many national and local guidelines[32–35] are adaptations of, acknowledge being influenced by, or are intended to complement WPATH SOCv7,[30] despite expressed reservations that WPATH SOCv7[30] is based on lower-quality primary research, the opinions of experts and lacks grading of evidence.[36]

In the UK, an advocacy group worked to incorporate WPATH SOCv7[30] into national practice.[37] WPATH SOCv7[30] informs National Health Service (NHS) gender identity clinics[38] and guidelines produced by the Royal College of Psychiatrists (without use of GRADE).[39] No CPGs were available from the National Institute for Health and Care Excellence (NICE), Scottish Intercollegiate Guidelines Network (SIGN), British Association of Gender Identity Specialists, or medical Royal Colleges, although the Royal College of General Practitioners issued a position statement on gender minority/trans healthcare in 2019.[40] Assessing quality of international CPGs such as WPATH SOCv7[30] has practice implications for the NHS[38] and private sector. CPGs with international scope may present additional challenges (eg, the implementability of key recommendations might not be easily translated among different contexts) but they seem to influence discourse around gender minority/trans health.[36] No prior study has investigated the number and quality of guidelines to support the care and wellbeing of gender minority/trans people. The purpose of this research was to identify and critically appraise all published international CPGs relating to the healthcare of gender minority/trans people.

## METHODS

### Approach/research design

The rationale was to identify the key CPGs available to healthcare practitioners in this field of clinical practice. Following preliminary searches, we chose international CPGs in view of WPATH's influence within the UK and elsewhere, and to avoid 'double-counting'. We considered AGREE II[10–12] the most appropriate tool; it is the most comprehensively validated and evaluated instrument available for assessing CPGs,[41 42] designed for use by non-expert stakeholders[10] such as healthcare providers, practicing clinicians and educators.[11] It benefits from clear instructions and prompts regarding scoring and several people applying the criteria independently (a minimum of two reviewers, but four are recommended). AGREE II synthesis calculates quality scores from 23 appraisal criteria organised into six key domains (scope and purpose, stakeholder involvement, rigour of development, clarity of presentation, applicability, editorial independence) and an overall assessment of 'Recommend for use?' (answer options; yes, no, yes if modified). This systematic review was conducted according to a prespecified PROSPERO protocol https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=154361

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uploaded 19 December 2019. The MEDLINE strategy was straightforward; although not formally processed,[43] it was peer-reviewed by an information specialist.

### Inclusion and exclusion criteria

We defined a CPG as a systematically developed set of recommendations that assist practitioners and patients in the provision of healthcare in specific circumstances, produced after review and assessment of available clinical evidence.[1 2 44–46] CPGs published after 1 January 2010 were eligible if they (or part thereof) specifically targeted patients/population with gender minority/trans status and/or gender dysphoria, were evidence-based, with some documentation of development methodology, had international scope (more than one country, defined as a Member State of the United Nations) and were an original source. We chose the time frame to focus on the most recent guidelines, currently applicable to practice and to include WPATH SOCv7.[30] CPGs were eligible if they met the following inclusion criteria: participants/population was adults and/or children who are gender minority/trans with no exclusion due to comorbidities or age although differences/disorders in sex development (intersex) were excluded; exposure/intervention was any health intervention related to gender dysphoria or gender affirmation, or health concerns of gender minority/trans people, including screening, assessment, referral, diagnosis and interventions. We excluded previous versions of the same CPG. We used broad criteria because terminology has been in flux with changes made in both International Classification of Diseases and Diagnostic and Statistical Manual of Mental Disorders diagnostic criteria.[16] There were no restrictions on setting or language.

### Search strategy and guideline selection

We conducted the searches up to 11 June 2020 (CM), using search terms and appropriate synonyms (as Medical Subject Heading (MeSH) terms and text words) that we developed based on population and exposures (online supplemental table 1). We searched six databases (Embase, MEDLINE, Web of Science, PsycINFO, CINAHL, LILACS) and six CPG websites (Agency for Healthcare Research and Quality National Guideline Clearinghouse (NGC), eGuidelines and Guidelines, NICE National Library for Health, SIGN, EBSCO DynaMed Plus, Guidelines International Network Library) and the World Health Organization (WHO). The NGC closed in 2017 but CM hand-searched the archive. In addition to protocol, individual reviewers (IA, DC and MHJ) hand-searched four specialty journals (International Journal of Transgender Health, Transgender Health, LGBT Health, Journal of Homosexuality) to ensure key subject-relevant sources of abstracts were thoroughly checked. In order to find potential grey literature CPGs outwith the scholarly literature, two reviewers (IA and SD) independently performed four separate Google searches (not Google Scholar as misstated in the protocol) by using one generic (clinical practice guidelines) plus one specific term (transgender, gender dysphoria, trans health or gender minority) and examining the first 100 hits. We identified International Key Opinion Leaders (n=24) via publications known to reviewers (DC and SD) and contacted them via email, with one reminder, to identify further guidelines. Reference lists of relevant reviews and all full-text studies were hand-searched to identify any relevant papers or CPGs not found by database searching. Two reviewers (SB and SD) independently read all titles and abstracts and assessed for inclusion. If there was uncertainty or disagreement, or reasonable suspicion that the full-text might lead to another relevant CPG, the full-text was obtained. Non-English abstracts were Google-translated but if a possible CPG could not be reliably excluded, the full-text paper was obtained and translated. Where full-text publications could not be accessed, we contacted authors directly. Two reviewers (SB and either DC/MHJ) independently carried out full-text assessment to determine inclusion or exclusion from the systematic review based on the above criteria, and noted reasons for excluding full-texts. The whole team discussed uncertainties and disagreements to achieve consensus, with voting and final adjudication by the senior author (CM).

### Data extraction

Two reviewers (SB and SD) independently collected formal descriptive data of included CPGs. All ambiguities or discrepancies were referred to the team for discussion and to re-examine original texts and extract data. Information collected was title, author, year of publication, number of countries covered, originating organisation, audience, methods used, page and reference numbers (excluding accompanying materials) and funding. Key recommendations were extracted for comparison between CPGs. We searched for all text mentions of mortality or any measures of quality of life (QoL), and noted if accompanied by a citation. All patient facing material was extracted. In addition, we extracted data about publication outlet (journal/website), and whether the quantity of information pertaining to the health of gender minority/trans people represented a complete, partial or marginal proportion of recommendations in the CPG.

### Outcomes

Outcomes were: the number and quality assessment scores (using AGREE II) of international CPGs addressing the health of gender minority/trans people; analysis and comparison of the presence or absence of information on estimated changes in mortality or QoL (any measure) following any specific recommended intervention, over any time interval; the consistency (or lack thereof) of recommendations across the CPGs; and the presence (or absence) of key messages for patients.

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### Quality assessment

All authors completed AGREE II video training, a practice assessment and two pilots whose results were discussed. The six reviewers (IA, SB, DC, SD, MHJ and CM) independently and anonymously completed quality scoring on every CPG by rating each of the items using the standard proforma on the My AGREE PLUS online platform (AGREE enterprise website),[11] which also calculated group appraisal scores.

### Patient and public involvement

The AGREE II instrument generates quality scores but does not set specific parameters for what constitutes high quality, recommending that decisions about defining such thresholds should be made prior to performing appraisals, considering relevant stakeholders and the context in which the CPG is used.[11] To help set quality thresholds, we conducted an AGREE II domain prioritisation exercise in January 2020 via email, with one reminder. It was considered impossible to ensure comprehensive representation of international stakeholders. We chose the UK for feasibility, although validity might be limited to UK-based clinicians. Fifty-two UK service-user stakeholder groups and gender minority/trans advocacy organisations, identified via reviewer knowledge and internet searches (IA, SB, DC, SD, MHJ and CM), were informed about the study. They were invited to participate in a stakeholder prioritisation of the AGREE II domains, created using SurveyMonkey and with an option to remain anonymous (https://www.surveymonkey.co.uk/r/WLZ55NQ gives invitation wording, links to resources and protocol). The reviewer team performed an anonymous prioritisation for comparison.

### Strategy for data and statistical analyses

Simple frequencies were used to present the stakeholder and reviewer priorities, and outcomes. Following team discussion of the prioritisation exercise results, no prespecified quality threshold score was used to define high or low quality, although colour was superimposed (≤30%, 31%–69% and ≥70%) on the final scores table to aid visual comparisons and interpretation.

## RESULTS

### Search results

Figure 1 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow chart[47]) shows that 1815 citations were identified, of which 134 full-text publications were read (all available, three supplied by authors) and 122 excluded (online supplemental table W2 with reasons).

### Data extraction

Table 1 shows the characteristics of the CPGs. Online supplemental tables W3 and W4 show raw data of key recommendations and mortality and QoL evidence.

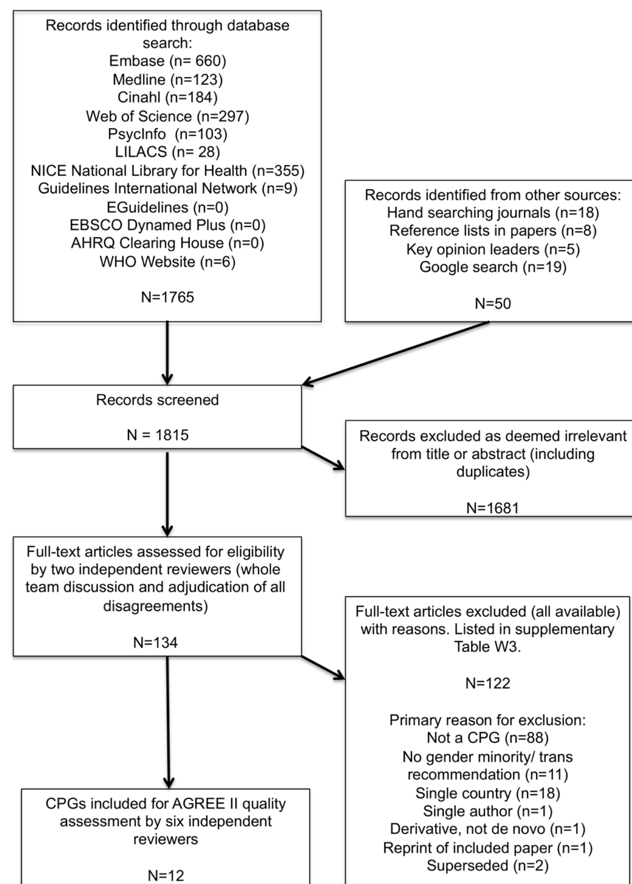


**Figure 1** Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow diagram. AGREE II, Appraisal of Guidelines for Research and Evaluation tool; CPG, clinical practice guideline; NICE, National Institute for Health and Care Excellence.

### Number and characteristics of clinical practice guidelines

Twelve CPGs (table 1) originated from: WHO (n=3),[48–50] WPATH (n=2),[30 51] professional specialist/special-interest societies (n=4),[52–55] small groups of experts (n=2)[56 57] and one consortium.[58] All were published in English, in journals,[51–57] the organisation's website[48–50 58] or both.[30] Guideline development methodology was variable, including use of systematic reviews (table 1). Ten CPGs had no external review, eight had no update plans. Gender minority/trans health recommendations made up complete (n=5),[30 51 53 55 57] partial (n=4)[48–50 56] or marginal (n=3)[52 54 58] focus of content. CPGs contained 10 to 155 pages, and 20 to 505 references. Funding sources were wide-ranging and sometimes multiple, from government agencies, professional societies, charities and private donations. Two CPGs provided no funding details.[52 56]

A 13th CPG was excluded post-scoring as it had been superseded by a 2020 version without recommendations for gender minority/trans people.[59] It was arguable if four included CPGs did meet criteria: one had not been withdrawn[48]; one contained minimal relevant content[52]; one might not have been intended as a CPG[30] (although

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**Table 1** General characteristics of included clinical practice guidelines (n=12)

| Number | Author (year) | Full title | Countries covered | Origin | Primary audience | Design (systematic review, SR, used and methods thereafter) | Planned update given | Funding |
|---|---|---|---|---|---|---|---|---|
| 1 | Coleman *et al* (2012)[30] | Standards of care for the health of transsexual, transgender and gender non-conforming people V.7 | Global | WPATH | Health professionals | Work groups submit manuscripts based on prior literature reviews, no explicit links of recommendations to evidence, expert consensus. No independent external review | No | Tawani Foundation and gift from anonymous donor |
| 2 | Davies *et al* (2015)[51] | Voice and communication change for gender non-conforming individuals: giving voice to the person inside | Global | WPATH | Speech-language therapists | Review of evidence. Expert consensus. No independent external review | No | Transgender Health Information Program of British Columbia Canada |
| 3 | ECDC (2018)[58] | Public health guidance on HIV, hepatitis B and C testing in the EU/EEA | EU/EEA | ECDC consortium CHIP, PHE, SSAT and EATG | Member states' public health professionals who coordinate the development of national guidelines or programmes for HBV, HCV and HIV testing | Four SRs, SIGN, NICE and AXIS checklists. Ad hoc internal and external expert panel, independent chair, expert consensus. No independent external review | No | Commissioned by ECDC, contractor Rigshospitalet CHIP |
| 4 | Gilligan *et al* (2017)[52] | Patient-clinician communication: American Society of Clinical Oncology consensus guideline | USA and others | ASCO | Clinicians who care for adults with cancer | Nine questions (one SR), expert consensus and a Delphi exercise. No independent external review | Regular review 3-year check | None declared |
| 5 | Hembree *et al* (2017)[53] | Endocrine treatment of gender-dysphoric/ gender-incongruent persons: an Endocrine Society clinical practice guideline | Global | Endocrine Society | Endocrinologists, trained mental health professionals and trained physicians | Two SRs and GRADE, rest expert consensus. No independent external review | No | Endocrine Society |
| 6 | IAPHCCO (2015)[54] | IAPAC guidelines for optimising the HIV care continuum for adults and adolescents | Global | IAPAC | Care providers, programme managers, policymakers, affected communities, organisations, and health systems involved with implementing HIV programmes and/ or delivering HIV care | A systematic search of CDC database, expert consensus. No independent external review | No | IAPAC, US NIH and Office of AIDS Research |
| 7 | Ralph *et al* (2010)[56] | Trauma, gender reassignment and penile augmentation | Not specified (international publication) | Author group | Not stated (urological surgeons) | No SR. Unclear if literature review. Leading experts' consensus opinion. No independent external review | No | None declared |
| 8 | Strang *et al* (2018)[57] | Initial clinical guidelines for co-occurring autism spectrum disorder and gender dysphoria or incongruence in adolescents | Not specified (international publication) | Author group | Clinicians | No SR or literature review. Two-stage Delphi consensus. No independent external review | No | Isadore and Bertha Gudelsky Family Foundation |
| 9 | T'Sjoen *et al* (2020)[55] | ESSM Position Statement 'Assessment and hormonal management in adolescent and adult trans people, with attention for sexual function and satisfaction' | Europe | ESSM | European clinicians working in transgender health, sexologists and other healthcare professionals | No SR. Leading experts' consensus opinion. No independent external review | No | ESSM |
| 10 | WHO (2011)[48] | Prevention and treatment of HIV and other sexually transmitted infections among men who have sex with men and transgender people. Recommendations for a public health approach | Global | WHO | National public health officials and managers of HIV/AIDS and STI programmes, NGOs including community and civil society organisations, and health workers | 13 SRs for PICOs and GRADE, external GDG, and independent external review | Yes in 2015 | BMZ and PEPFAR through CDC and USAID |
| 11 | WHO (2012)[49] | Guidance on oral pre-exposure prophylaxis for serodiscordant couples, men and transgender women who have sex with men at high risk of HIV. Recommendations for use in the context of demonstration projects | Global | WHO | Countries/member states | Four SRs (including values and preferences reviews) and GRADE, external GDG and independent external review group | Yes in 2015 | Bill & Melinda Gates Foundation |

Continued

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**Table 1** Continued

| Number | Author (year) | Full title | Countries covered | Origin | Primary audience | Design (systematic review, SR, used and methods thereafter) | Planned update given | Funding |
|---|---|---|---|---|---|---|---|---|
| 12 | WHO (2016)[50] | Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. 2016 update | Global | WHO | National HIV programme managers and other decision-makers within ministries of health and those responsible for health policies, programmes and services in prisons | Two new SRs in revised guidance, GRADE, external GDGs and 79 independent external peer reviewers | Regular updates; no detail | UNAIDS, PEPFAR, Global Fund |

AACE, American Association of Clinical Endocrinologists; ASA, American Society of Andrology; ASCO, American Society of Clinical Oncology; ASD, autism spectrum disorder; AXIS, Appraisal Tool for Cross-Sectional Studies; BMZ, German Federal Ministry for Economic Cooperation and Development; CDC, the Centers for Disease Control and Prevention; CHIP, CHIP/Region H, Rigshospitalet, University of Copenhagen; CPG, clinical practice guideline; EATG, European AIDS Treatment Group; EAU, European Association of Urology; ECDC, European Centre for Disease Prevention and Control; ESE, European Society of Endocrinology; ESPE, European Society for Pediatric Endocrinology; ESSM, European Society for Sexual Medicine; EU/EEA, European Union/European Economic Area; GDG, guideline development group; Global Fund, Global Fund to Fight AIDS, Tuberculosis and Malaria; GRADE, Grading of Recommendations, Assessment, Development and Evaluation; HBV, hepatitis B virus; HCV, hepatitis C virus; IAPAC, International Association of Providers of AIDS Care; IAPHCCO, International Advisory Panel on HIV Care Continuum Optimization; NGO, non-governmental organisations; NICE, National Institute of Health and Care Excellence; NIH, National Institutes of Health; PEPFAR, US President's Emergency Plan for AIDS Relief; PES, Pediatric Endocrine Society; PHE, Public Health England; PICO, Participants/patients, Intervention, Comparators, Outcomes; SIGN, Scottish Intercollegiate Guidelines Network; SR, systematic review; SSAT, St Stephen's AIDS Trust; STI, sexually transmitted infection; UNAIDS, The Unified Budget, Results and Accountability Framework of the Joint United Nations Programme on HIV/AIDS; USAID, US Agency for International Development; WPATH, World Professional Association for Transgender Health.

WPATH SOCv7's stated overall goal is 'to provide clinical guidance for health professionals'[30] it contains no list of key recommendations nor auditable quality standards, yet is widely used to compare procedures covered by US providers[60 61]); one variously described itself as 'position statement' and 'position study' (stating it did 'not aim to provide detailed clinical guidelines for professionals such as… [named][30 53]', but evidence was obviously linked to key recommendations for clinicians[55]). After discussion it was decided not to exclude these borderline CPGs, as the definition of CPG in the protocol was intended to favour an inclusive approach.

### Quality prioritisation and assessment

Results of the domain prioritisation by stakeholders (n=19 replies, response rate 39% excluding 3 'undeliverable') and reviewers (n=6) showed that stakeholders prioritised stakeholder involvement, whereas the reviewer team prioritised methodological rigour (online supplementary table W5). No stakeholder asked for clarification or more information.

Table 2 shows AGREE II scores by domain (8%–94%), and overall (11%–94%). The quality scores have a wide range and heterogeneity. Five CPGs focused on trans people as a key population for HIV and other blood-borne infections (overall assessment scores 69%–94%). Six CPGs concerned transition-specific interventions (overall assessment scores 11%–56%). Transition-related CPGs tended to lack methodological rigour and rely on patchier, lower-quality primary research. The two prioritised domain scores were usually comparable with the overall AGREE II quality assessment (ranges; stakeholder involvement 14%–93%, methodological rigour 17%–87%). Four CPGs obtained a majority opinion 'recommend for use',[48–50 58] five CPGs had unanimous 'do not recommend'[30 51 55–57] and three had minority support with division about the extent of 'yes, if modified'[52–54] (table 2). Despite wide variation there was a pattern; HIV and blood-borne infection guidelines[48–50 54 58] were higher quality, and those focusing on transition were lower quality.[30 53 55–57]

### Content

Four CPGs concerning HIV prevention, transmission and care[48–50 54] and one public health guideline on population screening for blood-borne viruses,[58] contained recommendations for gender minority/trans people as a 'key population'. Three CPGs were devoted to overall transition care for all gender minority/trans people,[30 53 55] two to an aspect of transition[51 56] and one to transition in a specific group.[57] One oncology communication guideline contained a single recommendation relating to gender minority/trans people.[52] No international guidelines were found that addressed primary care, psychological support/mental health interventions, or general medical/chronic disease care (such as cardiovascular, cancer or elderly care).

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**Table 2** AGREE II (Appraisal of Guidelines for Research and Evaluation tool) domain percentages and overall assessment of included guidelines, and summary of mortality/quality of life measures (n=12)

| Number | Author (year) | Scope and purpose | Stakeholder involvement | Rigour of development | Clarity and presentation | Applicability | Editorial independence | Overall assessment | Recommendation to use | Mortality | Quality of life | Mortality (any comment) and quality of life (any formal measure) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Coleman *et al* (2012)[30] | 63% | 47% | 20% | 37% | 16% | 15% | 31% | Yes **0** No **5** If modified **1** | Y | Y | M: Higher in post SRS vs matched no SRS, and both pre and post SRS vs gen popn. QoL: FtM<gen popn, FtM post breast/chest surgery >not surgery, mixed results at 15 years. |
| 2 | Davies *et al* (2015)[51] | 62% | 38% | 17% | 61% | 28% | 14% | 28% | Yes **0** No **3** If modified **3** | N | Y | QoL: A voice-related TG QoL measure correlated with own and others' perception. |
| 3 | ECDC (2018)[58] | 94% | 56% | 55% | 76% | 68% | 38% | 69% | Yes **4** No **0** If modified **2** | Y | Y | M: Reduced by early diagnosis. QoL: Cost/QALY in anti-HCV birth cohort screening is acceptable. Universal offer HIV testing in hospital settings is highly cost effective. |
| 4 | Gilligan *et al* (2017)[52] | 84% | 67% | 66% | 81% | 47% | 61% | 78% | Yes **2** No **0** If modified **4** | N | N | |
| 5 | Hembree *et al* (2017)[53] | 65% | 40% | 41% | 73% | 29% | 65% | 56% | Yes **1** No **2** If modified **3** | Y | Y | M: TW/TM's CV mortality same ('insufficient very low quality data' for TM) and younger age at death after SRS. QoL: long-term psychological and psychiatric issues post SRS. |
| 6 | IAPHCCO (2015)[54] | 85% | 56% | 61% | 87% | 40% | 63% | 81% | Yes **3** No **0** If modified **3** | Y | Y | M: Lower if early ART, easy access, immediate ART, and community distribution. QoL: ART preserves QoL, and stigma and mental health impact on QoL. |
| 7 | Ralph *et al* (2010)[56] | 45% | 14% | 19% | 64% | 5% | 32% | 28% | Yes **0** No **5** If modified **1** | N | N | |
| 8 | Strang *et al*[57] (2018)57 | 57% | 33% | 19% | 39% | 8% | 25% | 11% | Yes **0** No **6** If modified **0** | N | N | |
| 9 | T'Sjoen *et al* (2020)[55] | 59% | 37% | 35% | 58% | 15% | 33% | 42% | Yes **0** No **4** If modified **2** | N | Y | QoL: Sexual life improves after GAMI, but not to non-TG levels. |
| 10 | WHO (2011)[48] | 94% | 89% | 87% | 86% | 64% | 82% | 83% | Yes **5** No **0** If modified **1** | Y | Y | M: Looked for mortality evidence but none found. QoL: Positive QALYs if HIV averted. |
| 11 | WHO (2012)[49] | 85% | 60% | 81% | 76% | 41% | 72% | 72% | Yes **4** No **0** If modified **2** | N | Y | QoL: Positive QALYs modelled if PrEP. |
| 12 | WHO (2016)[50] | 94% | 93% | 81% | 89% | 84% | 65% | 94% | Yes **5** No **0** If modified **1** | Y | N | M: Better if access and if adhere to OST, and at prison release; if early ART and completed TB Rx, HBV/ HCV managed; and access to post-abortion care. Worse if food insecure, poor nutrition, low body mass index. |

Colours to aid interpretation (not thresholds) ≤30 RED, 31–69 AMBER, ≥70 GREEN.
ART, antiretroviral therapy; CV, cardiovascular; ECDC, European Centre for Disease Prevention and Control; FtM, female-to-male; GAMI, gender affirming medical intervention; gen popn, general population; HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus; IAPHCCO, International advisory panel on HIV care continuum optimization; M, mortality; OST, opiate substitute therapy; PrEP, pre-exposure prophylaxis; QALY, quality adjusted life year; QoL, Quality of life; Rx, treatment; SR, systematic review; SRS, sex reassignment surgery; TB, tuberculosis; TG, trans people/gender-minority; TM, trans man; TW, trans woman.





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### Mortality and quality of life

Six CPGs referred to mortality[30 48 50 53 54 58] and eight to QoL[30 48 49 51 53–55 58] (table 2). Online supplemental table W4 shows all extractions of sentences relating to mortality or morbidity, associated references and which CPGs included no such data. More robust evidence was linked to the recommendations in the HIV and blood-borne virus CPGs whereas there was little, inconsistent data and poorer linking to evidence in transition-related CPGs.

### Consistency of recommendations across the CPGs

Online supplemental table W5 contains all extracted key recommendations where these could be distinguished. It shows little overlap of topic content across the CPGs. Many recommendations in WHO 2011[48] and 2016[50] were similar, but not identical, the former not being stood down after the latter was published. No statements were highlighted by the WPATH SOCv7[30] authors as key recommendations, and it proved impossible for all six reviewers independently performing data extraction to identify them. The total number of extracted recommendations ranged between 0 and 168 with little consistency or agreement on what passages were selected. Some extracted statements might have been intended as recommendations or standards, but many were flexible, disconnected from evidence and could not be used by individuals or services to benchmark practice. After discussion of this incoherence within WPATH SOCv7[30] and our inability therefore to compare recommendations across all CPGs, it was decided not to revisit inclusions post hoc but to abandon this protocol aim.

### Patient facing material

No patient-facing material was found in any guideline.

## DISCUSSION

### Statement of principal findings

Variable quality international CPGs regarding gender minority/trans people's healthcare contain little, conflicting information on mortality and QoL, no patient facing messages and inconsistent use of systematic reviews in generating recommendations. A major finding is that the scope of the guidelines is confined to HIV/STI prevention or management of transition with an absence of guidelines relating to other medical issues. WPATH SOCv7[30] cannot be considered 'gold standard'.

### Strengths and weaknesses of this study

Strengths include protocol preregistration, stakeholder involvement, piloting all stages, an extensive systematic search without language restriction for any relevant current guidelines, wide inclusion criteria including grey literature, use of key opinion leaders, close attention to avoidance of bias, double full-text reading and data entry and careful presentation of results. Six trained reviewers, exceeding AGREE II recommendations,[11] compensated for expected variation in scoring. Extensive searches should have mitigated loss of CPGs. Limitations include some uncertainty about stakeholder understanding despite a good response rate, and generalisability of the prioritisation only to the UK; stakeholders elsewhere might have different priorities. Focusing only on international CPGs might have missed higher quality national and local CPGs derived from them or written de novo. The social acceptance and consequent healthcare system coverage of gender minority/trans health related interventions vary among different countries, which may limit the space for international and multinational guidelines. While the search strategy yielded an oncology communication CPG with a single recommendation for gender minority/trans people,[52] other general health CPGs with similar solo statements might have been missed.

### Comparison with other studies, discussing important differences in results

This is the first systematic review using a validated quality appraisal instrument of international CPGs addressing gender minority/trans health. It may act as a benchmark to monitor and improve population healthcare. CPG quality results correspond with, and quantitatively confirm, previously noted concerns about the evidence-base[36 62 63] and variable use of quality assessment in systematic reviews,[64–66] in a healthcare field with unknown or unclear longitudinal outcomes.[17] AGREE II has been applied to CPGs in other medical areas, including cancer,[67] diabetes,[68] pregnancy[69] and depression.[70] These exercises tend to show room for improvement. Developers have been criticised for not using methodological rigour when writing reliable evidence-based guidelines,[71] as well as not implementing high-quality CPGs.[72] Thus, finding poor quality CPGs is not confined to this area of healthcare.[73] Improvement messages are generalisable to other specialties.

### Meaning of the study: possible explanations

The finding of higher-quality, but narrow, focus on gender minority/trans people's healthcare for blood-borne infections may relate to the global HIV pandemic and the WHO applying twin lenses of public health and human rights (ie, the population as 'means' and 'ends'). The lower-quality CPGs focus on transition. WPATH SOCv7[30] originated nearly a decade ago from a special-interest association; diagnostic criteria and CPG methodology have since changed. Although HIV and transition are important, it is puzzling to have found so little else, maybe suggesting CPGs for gender minority/trans people have been driven by provider-interests rather than healthcare needs. Including gender minority/trans people in guidelines can be considered a matter of health equity, where CPGs have a role to play.[74] GRADE suggests CPG developers may consider equity at various stages in creating guidelines, such as deciding guideline questions, evidence searching and assembly of the guideline group.[75] How CPGs may impact more vulnerable members of

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society should be reflected-upon during guideline development,[76] and implementation.[77]

### Implications for clinicians, UK and international policymakers and patients

Clinicians should be made aware that gender minority/trans health CPGs outside of HIV-related topics are linked to a weak evidence base, with variations in methodological rigour and lack of stakeholder involvement. While patient care plans ought to take into account the individual needs of each gender minority/trans person, a gap appears to exist between clinical practice and research in this field.[78] Clinicians should proceed with caution, explain uncertainties to patients and recruit to research.

Policymakers ought to invest in both primary research and high-quality systematic reviews in areas relevant for CPG and service development. Organisations producing guidelines and aspiring to higher-level quality could use more robust methods, handling of competing interests[79 80] and quality assessment. CPG developers should label key recommendations clearly. Although editorial independence was lowest priority for stakeholders, independent external review is important to avoid biases and bad practices, examine use of resources, resist commercial interests and gain widespread credibility outside the field.

The UK is fortunate in being familiar with developing priority-setting partnerships (eg, James Lind Initiative[81]) and generating suites of clinical questions that might cover all steps in patient pathways (eg, in partnership with Cochrane Collaboration[82]). These could underpin multidisciplinary and funded research priorities whose results feed into future better evidence-based CPGs. Implications for UK education and curricular content (eg, new gender identity healthcare credentials[83]), should be carefully scrutinised.

Internationally, CPG development and implementation will vary depending on local country contexts and available resources. Those countries with quality assurance agencies might use them for external assurance. Countries might reconsider the wisdom of adapting low-quality 'off the shelf' international CPGs without due assessment of the evidence for recommendations (eg, using the GRADE-ADOLOPMENT framework[84]). WHO demonstrates how CPGs can achieve high quality.

Patients should be positively encouraged to engage with CPG development as stakeholders. The lack of patient-facing material should be addressed, especially as medical and non-medical online material contains jargon, is unreliable and potentially misleading.[85] Future CPGs should be populated with patient-facing decision aids (eg, fact boxes[86] and icon arrays[87]) that explain sizes of benefits and harms to support informed patient choice. Patients and carers will benefit from a more focused approach to throughout-life healthcare. As the figures for gender minority/trans patients increase within the NHS and internationally, so does the need for consistent guidance to clinicians across specialisms on specific risks to, and means of treating, this population. Current patients should be welcomed to contribute, where they are comfortable, to any research being undertaken by their clinicians, in order to improve data and future practice for gender minority/trans health.

### Unanswered questions and future research

This study should be replicated as new iterations of international CPGs become available. It can be applied to national guidelines and countries should perform their own stakeholder prioritisation. When 'best available evidence' is poor, quality improvement can be driven both from inside and outside the field. International guideline developers require more primary research for this population, and impetus from clinicians and scientists to build a better evidence base using robust data from randomised controlled trials and long-term observational cohort studies, especially regarding chronic diseases, health behaviours, substance use, screening and how interventions (eg, hormones) might impact on long-term health (eg, risk of cardiovascular and thromboembolic disease). Mortality and QoL data are required to address questions of clinical and cost-effectiveness.

## CONCLUSION

Gender minority/trans health in current international CPGs seems limited to a focus on HIV or transition-related interventions. WPATH SOCv7[30] is due for updating and this study should be used positively to accelerate improvement. Future guideline developers might better address the holistic healthcare needs of gender minority/trans people by enhancing the evidence-base, upgrading the quality of CPGs and increasing the breadth of health topics wherein this population is considered.

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JA2095

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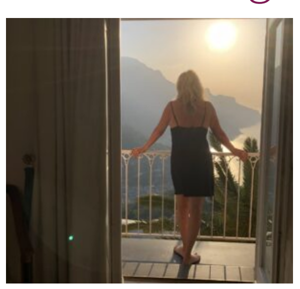
# Dear colleagues, clients and friends,



Regarding the 10/4/21 article by Abigail Shrier, I remain disappointed by the tone and intent of the article. My comments were taken out of context and used to cast doubt upon trans care, particularly the use of puberty blockers. Worse, Jazz Jennings was disrespectfully and erroneously portrayed as a puberty blockade failure, based solely upon her television portrayal. That said, the author conveyed to me that she is *not against* the use of puberty blockade but rather, interested in better informed consent, a principle upon which we both agreed. I did believe that my comments would be conveyed fairly.



My comments were limited to transfeminine persons, not transmasculine, a point not made.

My concerns regarding consent included long term sexual function, data that we currently do not know, although patients retain sensation including clitoris and G-spot. Sexual naivete is a potential concern but not central to my argument and it is far from certain that patients will sustain permanent sexual dysfunction. It is still possible that adults with a history of puberty blockade will go on to have satisfying sexual lives, but these patients need to be tracked and this measure documented.

My concerns regarding fertility are secondary, a potential that many transfeminine persons are willing to forego.

My concerns regarding puberty blockade and its negative impact upon later genital surgery remain and are not allayed by new techniques of vaginoplasty including peritoneal pull through. Complications and challenges for these patients are without a doubt, increased.

My hope is that colleagues, onlookers and members of the transgender community at large will recognize my long-term contributions to the field, my unwavering advocacy for patients, the 'one off' regarding this article—wrong time, wrong venue. Although my comments were my own professional opinions, I do recognize that, as President-elect, I now speak for WPATH as well. I have learned from this experience and will be better. I also hope that my comments will help future clinicians, families and patients make more certain, informed choices. I believe that this moment will spur studies, will inspire surgeons to seek better results, and encourage families to consider a bit of puberty when weighing treatment options.

What I hope for, most of all, is that my out-of-context comments will not be excerpted to weaponize ongoing attacks upon transgender persons. We have been here since the beginning of time and will be here in the future. We must not allow the critics and skeptics to undo our legitimacy. Rather than attack one another, we are best served by our support of WPATH and its goal of establishing evidence-based care that affirms gender identity as another important aspect of global diversity.

For patients and families seeking guidance going forward, I will say this based upon my own professional experience:

- consider consultation with a gender surgeon prior to blockers. Not all puberty blocked individuals will have insufficient growth going into blockers though puberty may be deemed beneficial for some
- If you can possibly stand a bit of puberty, the extra genital skin growth, likely orgasm and potential fertility may be attractive enough to consider the option. Early post-pubertal kids in their early teens still transition extremely well

For doubters, conservatives, naysayers and haters who continue to misgender, mischaracterize and malign trans persons around the globe, you've lost credibility with me, and likely, with God above.

Marci L. Bowers, MD

← *60 Minutes Overtime Interview*

*Detransition, Baby: Examining Factors Leading to 'Detransitioning' and Regret in the Transgender Community* →

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# About the Review

An Introduction to the Cass Review

*Hear from Hilary about why she got involved in the Review*

Children and young people accessing the NHS deserve timely and supportive services, and clinical staff with the training and expertise to meet their healthcare needs.

Not all children and young people who are exploring their gender identity require clinical support from the NHS. However, some young people whose gender identity differs from their gender assigned at birth can experience extreme distress; this is referred to by clinicians as gender dysphoria. These children and young people need clinical support to help them understand the options available to them and to provide appropriate treatment.

The aim of the Cass Review is to ensure that children and young people who are questioning their gender identity or experiencing gender dysphoria, and who need support from the NHS, receive a high standard of care that meets their needs and is safe, holistic and effective.

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**About the Review** (https://cass.independent-review.uk/about-the-review/)

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**Approach** (https://cass.independent-review.uk/about-the-review/approach/)

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# Cass Review

Independent Review of Gender Identity
Services for Children and Young People

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

CHRISTOPHER FAIN, *et al.*, individually and on behalf of all others similarly situated,

*Plaintiffs*,

v.

WILLIAM CROUCH, *et al.*,

*Defendants*.

CIVIL ACTION NO. 3:20-cv-00740

HON. ROBERT C. CHAMBERS, JUDGE

**EXPERT REBUTTAL REPORT OF DR. JOHANNA OLSON-KENNEDY, M.D., M.S.**

I, Johanna Olson-Kennedy, M.D., M.S., declare as follows:

1. My name is Johanna Olson-Kennedy. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

2. I have been asked by Plaintiffs' counsel to provide my expert opinion on gender identity, the treatment and diagnosis of gender dysphoria, particularly as it pertains to children and adolescents, and to respond to, rebut, and provide my expert opinion regarding the report by Dr. Stephen B. Levine in this case ("Levine Report").

3. I have actual knowledge of the matters stated herein. If called to testify in this matter, I would testify truthfully and based on my expert opinion.

## I. BACKGROUND AND QUALIFICATIONS

4. I received my Doctor of Medicine (M.D.) degree from the Chicago Medical School in 1997. In 2000, I completed my residency in pediatrics at the Children's Hospital of

which demonstrate the safety and positive impact of gender affirming medical interventions. Additionally, larger longitudinal studies are currently underway to help substantiate the significant existing data we have. (de Vries, et al, 2021; Weinand, 2015).

55. Additionally, although it is not possible to ethically conduct randomized control trials for gender-affirming care, we have a large de facto group of untreated individuals with gender dysphoria who experience significant psychiatric symptoms because of widespread barriers to access to care. Clinicians who are competent in the care of transgender individuals practice according to a "first do no harm" ethic which understands that doing nothing is not a neutral option for those with gender dysphoria. Multiple studies have demonstrated the safety of gender affirming hormones, and a growing body of evidence does the same with regards to the safety of GnRH analogs. (Kuper, et al., 2020; Chew, et al., 2018; Colton-Meier, et al., 2011). The same is true with regards to surgery. (Marano, et al., 2021; Olson-Kennedy, et al., 2018; Murad, et al., 2010; Smith, et al., 2005; Pfafflin & Junge, 1998).

56. Dr. Levine inaccurately suggests that diagnosis of gender dysphoria is done solely through a patient's self-diagnosis. Levine Report ¶ 148. His critique demonstrates a fundamental misunderstanding of how gender affirming care is provided. While we have continued to attain a greater understanding about the etiology of gender incongruence, patients do not "self-diagnose," as Dr. Levine suggests. However, it is not unusual or extraordinary in medicine for a provider to consider patients' reports of their symptoms as part of the medical assessment. Much like the diagnosis of many clinical conditions, providers rely on self-report to ascertain accurate diagnoses. Consider the diagnosis of chronic fatigue. The diagnostic criteria for this diagnosis include the following: fatigue so severe that it interferes with the ability to engage in pre-illness activities; of new or definite onset (not lifelong); not substantially alleviated

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed this 17 day of March, 2022.

Johanna Olson-Kennedy (Mar 17, 2022 10:26 PDT)

Johanna Olson-Kennedy, M.D., M.S.

Subscribed and sworn before me, a Notary Public in and for the County of Norfolk, State of Virginia, this 17 day of March, 2022.

KETSIA MCCLEASE
Electronic Notary Public
Commonwealth of Virginia
Registration No. 327724
My Commission Expires Apr 30, 2023

Ketsia McClease
Signature of Notary

This notarial act was performed online by way of two-way audio/video communication technology.

# 1647520704-olson-kennedy-rebuttal-report_final

Final Audit Report 2022-03-17

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From DEPARTMENT OF CLINICAL NEUROSCIENCE
Karolinska Institutet, Stockholm, Sweden

# ON GENDER DYSPHORIA

Cecilia Dhejne

Stockholm 2017

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# On Gender Dysphoria

## THESIS FOR DOCTORAL DEGREE (Ph.D.)

at Karolinska Institutet, to be publicly defended in lecture hall Nanna Svartz, Karolinska University Hospital Solna.

**Friday, March 31, 2017 at 9:00 a.m.**

By

## Cecilia Dhejne

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Division of Psychiatry

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Sophiahemmet University

# 6 ON THE IMPACT OF RESEARCH FINDINGS

Researchers are happy if their findings are recognized and have an impact. However, once published, the researcher loses control of how results are used. Study III is the first long-term cohort study of mortality and psychiatric inpatient care following gender transition (Dhejne et al., 2011). This paper has also had an impact outside the scientific world. Our findings have been used to argue that gender-affirming treatment should be stopped since it could be dangerous (Levine, 2016). But the results have also been used to show the vulnerability of the group and that better transgender health care is needed (Arcelus & Bouman, 2015; Zeluf et al., 2016). Despite the paper clearly stating that the study is not designed to evaluate whether or not gender-affirming is beneficial, it has been interpreted as such. But we do not know what would have happened without gender-affirming treatment; the situation may have been even worse. As an analogy, similar studies have found increased somatic morbidity, suicide rates, and overall mortality for patients treated for depression and bipolar disorder (Ösby, Brandt, Correia, Ekbom, & Sparen, 2001). This is important information, but it does not follow that antidepressant or mood stabilizing treatment cause the mortality. Most of the articles that use the study to argue against gender-affirming health care are published in non-peer reviewed papers and the public media in general. These non-scientific publications are difficult to keep track of. I am grateful to friends, colleagues, patients, LGBT organizations, and journalists who have alerted me when the results of the study have been misinterpreted, giving me a possibility to respond to the authors. One could argue that the results should never have been published due to the hurt caused to transgender persons. However, not publishing the results would also hurt the transgender group and take away an opportunity to receive better health care.

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# Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden

**Cecilia Dhejne[1], Paul Lichtenstein[2], Marcus Boman[2], Anna L. V. Johansson[2], Niklas Långström[2,3], Mikael Landén[1,2,4]***

**1** Department of Clinical Neuroscience, Division of Psychiatry, Karolinska Institutet, Stockholm, Sweden, **2** Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden, **3** Centre for Violence Prevention, Karolinska Institutet, Stockholm, Sweden, **4** Institute of Neuroscience and Physiology, The Sahlgrenska Academy at Gothenburg University, Gothenburg, Sweden

## Abstract

***Context:*** The treatment for transsexualism is sex reassignment, including hormonal treatment and surgery aimed at making the person's body as congruent with the opposite sex as possible. There is a dearth of long term, follow-up studies after sex reassignment.

***Objective:*** To estimate mortality, morbidity, and criminal rate after surgical sex reassignment of transsexual persons.

***Design:*** A population-based matched cohort study.

***Setting:*** Sweden, 1973-2003.

***Participants:*** All 324 sex-reassigned persons (191 male-to-females, 133 female-to-males) in Sweden, 1973–2003. Random population controls (10:1) were matched by birth year and birth sex or reassigned (final) sex, respectively.

***Main Outcome Measures:*** Hazard ratios (HR) with 95% confidence intervals (CI) for mortality and psychiatric morbidity were obtained with Cox regression models, which were adjusted for immigrant status and psychiatric morbidity prior to sex reassignment (adjusted HR [aHR]).

***Results:*** The overall mortality for sex-reassigned persons was higher during follow-up (aHR 2.8; 95% CI 1.8–4.3) than for controls of the same birth sex, particularly death from suicide (aHR 19.1; 95% CI 5.8–62.9). Sex-reassigned persons also had an increased risk for suicide attempts (aHR 4.9; 95% CI 2.9–8.5) and psychiatric inpatient care (aHR 2.8; 95% CI 2.0–3.9). Comparisons with controls matched on reassigned sex yielded similar results. Female-to-males, but not male-to-females, had a higher risk for criminal convictions than their respective birth sex controls.

***Conclusions:*** Persons with transsexualism, after sex reassignment, have considerably higher risks for mortality, suicidal behaviour, and psychiatric morbidity than the general population. Our findings suggest that sex reassignment, although alleviating gender dysphoria, may not suffice as treatment for transsexualism, and should inspire improved psychiatric and somatic care after sex reassignment for this patient group.

**Citation:** Dhejne C, Lichtenstein P, Boman M, Johansson ALV, Långström N, et al. (2011) Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden. PLoS ONE 6(2): e16885. doi:10.1371/journal.pone.0016885

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**Competing Interests:** The authors have declared that no competing interests exist.

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## Introduction

Transsexualism (ICD-10),[1] or gender identity disorder (DSM-IV),[2] is a condition in which a person's gender identity - the sense of being a man or a woman - contradicts his or her bodily sex characteristics. The individual experiences gender dysphoria and desires to live and be accepted as a member of the opposite sex.

The treatment for transsexualism includes removal of body hair, vocal training, and cross-sex hormonal treatment aimed at making the person's body as congruent with the opposite sex as possible to alleviate the gender dysphoria. Sex reassignment also involves the surgical removal of body parts to make external sexual characteristics resemble those of the opposite sex, so called sex reassignment/confirmation surgery (SRS). This is a unique

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intervention not only in psychiatry but in all of medicine. The present form of sex reassignment has been practised for more than half a century and is the internationally recognized treatment to ease gender dysphoria in transsexual persons.[3,4]

Despite the long history of this treatment, however, outcome data regarding mortality and psychiatric morbidity are scant. With respect to suicide and deaths from other causes after sex reassignment, an early Swedish study followed 24 transsexual persons for an average of six years and reported one suicide.[5] A subsequent Swedish study recorded three suicides after sex reassignment surgery of 175 patients.[6] A recent Swedish follow-up study reported no suicides in 60 transsexual patients, but one death due to complications after the sex reassignment surgery.[7] A Danish study reported death by suicide in 3 out of 29 operated male-to-female transsexual persons followed for an average of six years.[8] By contrast, a Belgian study of 107 transsexual persons followed for 4–6 years found no suicides or deaths from other causes.[9] A large Dutch single-centre study (N = 1,109), focusing on adverse events following hormonal treatment, compared the outcome after cross-sex hormone treatment with national Dutch standardized mortality and morbidity rates and found no increased mortality, with the exception of death from suicide and AIDS in male-to-females 25–39 years of age.[10] The same research group concluded in a recent report that treatment with cross-sex hormones seems acceptably safe, but with the reservation that solid clinical data are missing.[11] A limitation with respect to the Dutch cohort is that the proportion of patients treated with cross-sex hormones who also had surgical sex-reassignment is not accounted for.[10]

Data is inconsistent with respect to psychiatric morbidity post sex reassignment. Although many studies have reported psychiatric and psychological improvement after hormonal and/or surgical treatment,[7,12,13,14,15,16] other have reported on regrets,[17] psychiatric morbidity, and suicide attempts after SRS.[9,18] A recent systematic review and meta-analysis concluded that approximately 80% reported subjective improvement in terms of gender dysphoria, quality of life, and psychological symptoms, but also that there are studies reporting high psychiatric morbidity and suicide rates after sex reassignment.[19] The authors concluded though that the evidence base for sex reassignment "is of very low quality due to the serious methodological limitations of included studies."

The methodological shortcomings have many reasons. First, the nature of sex reassignment precludes double blind randomized controlled studies of the result. Second, transsexualism is rare [20] and many follow-ups are hampered by small numbers of subjects.[5,8,21,22,23,24,25,26,27,28] Third, many sex reassigned persons decline to participate in follow-up studies, or relocate after surgery, resulting in high drop-out rates and consequent selection bias.[6,9,12,21,24,28,29,30] Forth, several follow-up studies are hampered by limited follow-up periods.[7,9,21,22,26,30] Taken together, these limitations preclude solid and generalisable conclusions. A long-term population-based controlled study is one way to address these methodological shortcomings.

Here, we assessed mortality, psychiatric morbidity, and psychosocial integration expressed in criminal behaviour after sex reassignment in transsexual persons, in a total population cohort study with long-term follow-up information obtained from Swedish registers. The cohort was compared with randomly selected population controls matched for age and gender. We adjusted for premorbid differences regarding psychiatric morbidity and immigrant status. This study design sheds new light on transsexual persons' health after sex reassignment. It does not, however, address whether sex reassignment is an effective treatment or not.

## Methods

### National registers

The study population was identified by the linkage of several Swedish national registers, which contained a total of 13.8 million unique individuals. The Hospital Discharge Register (HDR, held by the National Board of Health and Welfare) contains discharge diagnoses, up to seven contributory diagnoses, external causes of morbidity or mortality, surgical procedure codes, and discharge date. Discharge diagnoses are coded according to the 8th (1969-1986), 9th (1987–1996), and 10th editions (1997-) of the International Classification of Diseases (ICD). The register covers virtually all psychiatric inpatient episodes in Sweden since 1973. Discharges that occurred up to 31 December 2003 were included. Surgical procedure codes could not be used for this study due to the lack of a specific code for sex reassignment surgery. The Total Population Register (TPR, held by Statistics Sweden) is comprised of data about the entire Swedish population. Through linkage with the Total Population Register it was possible to identify birth date and birth gender for all study subjects. The register is updated every year and gender information was available up to 2004/2005. The Medical Birth Register (MBR) was established in 1973 and contains birth data, including gender of the child at birth. National censuses based on mandatory self-report questionnaires completed by all adult citizens in 1960, 1970, 1980, and 1990 provided information on individuals, households, and dwellings, including gender, living area, and highest educational level. Complete migration data, including country of birth for immigrants for 1969–2003, were obtained from the TPR. In addition to educational information from the censuses, we also obtained highest educational level data for 1990 and 2000 from the Register of Education. The Cause of Death Register (CDR, Statistics Sweden) records all deaths in Sweden since 1952 and provided information on date of death and causes of death. Death events occurring up to 31 December 2003 are included in the study. The Crime Register (held by the National Council of Crime Prevention) provided information regarding crime type and date on all criminal convictions in Sweden during the period 1973–2004. Attempted and aggravated forms of all offences were also included. All crimes in Sweden are registered regardless of insanity at the time of perpetration; for example, for individuals who suffered from psychosis at the time of the offence. Moreover, conviction data include individuals who received custodial or non-custodial sentences and cases where the prosecutor decided to caution or fine without court proceedings. Finally, Sweden does not differ considerably from other members of the European Union regarding rates of violent crime and their resolution.[31]

### Study population, identification of sex-reassigned persons (exposure assessment)

The study was designed as a population-based matched cohort study. We used the individual national registration number, assigned to all Swedish residents, including immigrants on arrival, as the primary key through all linkages. The registration number consists of 10 digits; the first six provide information of the birth date, whereas the ninth digit indicates the gender. In Sweden, a person presenting with gender dysphoria is referred to one of six specialised gender teams that evaluate and treat patients principally according to international consensus guidelines: Standards of Care.[3] With a medical certificate, the person applies to the National Board of Health and Welfare to receive permission for sex reassignment surgery and a change of legal sex status. A new national registration number signifying the new gender is assigned after sex reassignment surgery. The National



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Board of Health and Welfare maintains a link between old and new national registration numbers, making it possible to follow individuals undergoing sex reassignment across registers and over time. Hence, sex reassignment surgery in Sweden requires (i) a transsexualism diagnosis and (ii) permission from the National Board of Health and Welfare.

A person was defined as exposed to sex reassignment surgery if two criteria were met: (i) at least one inpatient diagnosis of gender identity disorder diagnosis without concomitant psychiatric diagnoses in the Hospital Discharge Register, and (ii) at least one discrepancy between gender variables in the Medical Birth Register (from 1973 and onwards) or the National Censuses from 1960, 1970, 1980, or 1990 and the latest gender designation in the Total Population Register. The first criterion was employed to capture the hospitalization for sex reassignment surgery that serves to secure the diagnosis and provide a time point for sex reassignment surgery; the plastic surgeons namely record the reason for sex reassignment surgery, i.e., transsexualism, but not any co-occurring psychiatric morbidity. The second criterion was used to ensure that the person went through all steps in sex-reassignment and also changed sex legally.

The date of sex reassignment (start of follow-up) was defined as the first occurrence of a gender identity disorder diagnosis, without any other concomitant psychiatric disorder, in the Hospital Discharge Register after the patient changed sex status (any discordance in sex designation across the Censuses, Medical Birth, and Total Population registers). If this information was missing, we used instead the closest date in the Hospital Discharge Register on which the patient was diagnosed with gender identity disorder without concomitant psychiatric disorder prior to change in sex status. The reason for prioritizing the use of a gender identity disorder diagnosis *after* changed sex status over *before* was to avoid overestimating person-years at risk of sex-reassigned person.

Using these criteria, a total of 804 patients with gender identity disorder were identified, whereof 324 displayed a shift in the gender variable during the period 1973–2003. The 480 persons that did not shift gender variable comprise persons who either did not apply, or were not approved, for sex reassignment surgery. Moreover, the ICD 9 code 302 is a non specific code for sexual disorders. Hence, this group might also comprise persons that were hospitalized for sexual disorders other than transsexualism. Therefore, they were omitted from further analyses. Of the remaining 324 persons, 288 were identified with the gender identity diagnosis *after* and 36 *before* change of sex status. Out of the 288 persons identified *after* changed sex status, 185 could also be identified *before* change in sex status. The median time lag between the hospitalization *before* and *after* sex change for these 185 persons was 0.96 years (mean 2.2 years, SD 3.3).

Gender identity disorder was coded according to ICD-8: 302.3 (transsexualism) and 302.9 (sexual deviation NOS); ICD-9: 302 (overall code for sexual deviations and disorders, more specific codes were not available in ICD-9); and ICD-10: F64.0 (transsexualism), F64.1 (dual-role transvestism), F64.8 (other gender identity disorder), and F64.9 (gender identity disorder NOS). Other psychiatric disorders were coded as ICD-8: 290-301 and 303-315; ICD-9: 290-301 and 303-319; and ICD-10: F00-F63 as well as F65-F99.

## Identification of population-based controls (unexposed group)

For each exposed person (N = 324), we randomly selected 10 unexposed controls. A person was defined as unexposed if there were no discrepancies in sex designation across the Censuses, Medical Birth, and Total Population registers *and* no gender identity disorder diagnosis according to the Hospital Discharge Register. Control persons were matched by sex and birth year and had to be alive and residing in Sweden at the estimated sex reassignment date of the case person. To study possible gender-specific effects on outcomes of interest, we used two different control groups: one with the same sex as the case individual at birth (birth sex matching) and the other with the sex that the case individual had been reassigned to (final sex matching).

## Outcome measures

We studied mortality, psychiatric morbidity, accidents, and crime following sex reassignment. More specifically, we investigated: (1) all-cause mortality, (2) death by definite/uncertain suicide, (3) death by cardiovascular disease, and (4) death by tumour. Morbidity included (5) any psychiatric disorder (gender identity disorders excluded), (6) alcohol/drug misuse and dependence, (7) definite/uncertain suicide attempt, and (8) accidents. Finally, we addressed court convictions for (9) any criminal offence and (10) any violent offence. Each individual could contribute with several outcomes, but only one event per outcome. Causes of death (Cause of Death Registry from 1952 and onwards) were defined according to ICD as suicide (ICD-8 and ICD-9 codes E950-E959 and E980-E989, ICD-10 codes X60-X84 and Y10-Y34); cardiovascular disease (ICD-8 codes 390-458, ICD-9 codes 390-459, ICD-10 codes I00-I99); neoplasms (ICD-8 and ICD-9 codes 140-239, ICD-10 codes C00-D48), any psychiatric disorder (gender identity disorders excluded); (ICD-8 codes 290-301 and 303-315, ICD-9 codes 290-301 and 303-319, ICD-10 codes F00-F63 and F65-F99); alcohol/drug abuse and dependence (ICD-8 codes 303-304, ICD-9 codes 303-305 (tobacco use disorder excluded), ICD-10 codes F10-F16 and F18-F19 (x5 excluded); and accidents (ICD-8 and ICD-9 codes E800-E929, ICD-10 codes V01-X59).

Any criminal conviction during follow-up was counted; specifically, violent crime was defined as homicide and attempted homicide, aggravated assault and assault, robbery, threatening behaviour, harassment, arson, or any sexual offense.[32]

## Covariates

Severe psychiatric morbidity was defined as inpatient care according to ICD-8 codes 291, 295-301, 303-304, and 307; ICD-9 codes 291-292, 295-298, 300-301, 303-305 (tobacco use disorder excluded), 307.1, 307.5, 308-309, and 311; ICD-10 codes F10-F16, F18-F25, F28-F45, F48, F50, and F60-F62. Immigrant status, defined as individuals born abroad, was obtained from the Total Population Register. All outcome/covariate variables were dichotomized (i.e., affected or unaffected) and without missing values.

## Statistical analyses

Each individual contributed person-time from study entry (for exposed: date of sex reassignment; for unexposed: date of sex reassignment of matched case) until date of outcome event, death, emigration, or end of study period (31 December 2003), whichever came first. The association between exposure (sex reassignment) and outcome (mortality, morbidity, crime) was measured by hazard ratios (HR) with 95% CIs, taking follow-up time into account. HRs were estimated from Cox proportional hazard regression models, stratified on matched sets (1:10) to account for the matching by sex, age, and calendar time (birth year). We present crude HRs (though adjusted for sex and age through matching) and confounder-adjusted HRs [aHRs] for all outcomes. The two potential confounders, immigrant status (yes/no) and history of severe psychiatric morbidity (yes/no) prior to sex

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reassignment, were chosen based on previous research[18,33] and different prevalence across cases and controls (Table 1).

Gender-separated analyses were performed and a Kaplan-Meier survival plot graphically illustrates the survival of the sex reassigned cohort and matched controls (all-cause mortality) over time. The significance level was set at 0.05 (all tests were two-sided). All outcome/covariate variables were without missing values, since they are generated from register data, which are either present (affected) or missing (unaffected). The data were analysed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA).

### Ethics

The data linking of national registers required for this study was approved by the IRB at Karolinska Institutet, Stockholm. All data were analyzed anonymously; therefore, informed consent for each individual was neither necessary nor possible.

## Results

We identified 324 transsexual persons (exposed cohort) who underwent sex reassignment surgery and were assigned a new legal sex between 1973 and 2003. These constituted the sex-reassigned (exposed) group. Fifty-nine percent (N = 191) of sex-reassigned persons were male-to-females and 41% (N = 133) female-to-males, yielding a sex ratio of 1.4:1 (Table 1).

The average follow-up time for all-cause mortality was 11.4 (median 9.1) years. The average follow-up time for the risk of being hospitalized for any psychiatric disorder was 10.4 (median 8.1).

### Characteristics prior to sex reassignment

Table 1 displays demographic characteristics of sex-reassigned and control persons prior to study entry (sex reassignment). There were no substantial differences between female-to-males and male-to-females regarding measured baseline characteristics. Immigrant status was twice as common among transsexual individuals compared to controls, living in an urban area somewhat more common, and higher education about equally prevalent. Transsexual individuals had been hospitalized for psychiatric morbidity other than gender identity disorder prior to sex reassignment about four times more often than controls. To adjust for these baseline discrepancies, hazard ratios adjusted for immigrant status and psychiatric morbidity prior to baseline are presented for all outcomes [aHRs].

### Mortality

Table 2 describes the risks for selected outcomes during follow-up among sex-reassigned persons, compared to same-age controls of the same birth sex. Sex-reassigned transsexual persons of both genders had approximately a three times higher risk of all-cause mortality than controls, also after adjustment for covariates. Table 2

**Table 1.** Baseline characteristics among sex-reassigned subjects in Sweden (N = 324) and population controls matched for birth year and sex.

| Characteristic at baseline | Sex-reassigned subjects (N = 324) | Birth-sex matched controls (N = 3,240) | Final-sex matched controls (N = 3,240) |
|---|---|---|---|
| Gender | | | |
| Female at birth, male after sex change | 133 (41%) | 1,330 (41%) | 1,330 (41%) |
| Male at birth, female after sex change | 191 (59%) | 1,910 (59%) | 1,910 (59%) |
| Average age at study entry [years] (SD, min-max) | | | |
| Female at birth, male after sex change | 33.3 (8.7, 20–62) | 33.3 (8.7, 20–62) | 33.3 (8.7, 20–62) |
| Male at birth, female after sex change | 36.3 (10.1, 21–69) | 36.3 (10.1, 21–69) | 36.3 (10.1, 21–69) |
| Both genders | 35.1 (9.7, 20–69) | 35.1 (9.7, 20–69) | 35.1 (9.7, 20–69) |
| Immigrant status | | | |
| Female at birth, male after sex change | 28 (21%) | 118 (9%) | 100 (8%) |
| Male at birth, female after sex change | 42 (22%) | 176 (9%) | 164 (9%) |
| Both genders | 70 (22%) | 294 (9%) | 264 (8%) |
| Less than 10 years of schooling prior to entry vs. 10 years or more | | | |
| Females at birth, males after sex change | 49 (44%); 62 (56%) | 414 (37%); 714 (63%) | 407 (36%); 713 (64%) |
| Males at birth, females after sex change | 61 (41%); 89 (59%) | 665 (40%); 1,011 (60%) | 595 (35%); 1,091 (65%) |
| All individuals with data | 110 (42%); 151 (58%) | 1,079 (38%); 1,725 (62%) | 1,002 (36%); 1,804 (64%) |
| Psychiatric morbidity* prior to study entry | | | |
| Female at birth, male after sex change | 22 (17%) | 47 (4%) | 42 (3%) |
| Male at birth, female after sex change | 36 (19%) | 76 (4%) | 72 (4%) |
| Both genders | 58 (18%) | 123 (4%) | 114 (4%) |
| Rural [vs. urban] living area prior to entry | | | |
| Female at birth, male after sex change | 13 (10%) | 180 (14%) | 195 (15%) |
| Male at birth, female after sex change | 20 (10%) | 319 (17%) | 272 (14%) |
| Both genders | 33 (10%) | 499 (15%) | 467 (14%) |

**Note:**
*Hospitalizations for gender identity disorder were not included.
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**Table 2.** Risk of various outcomes among sex-reassigned subjects in Sweden (N = 324) compared to population controls matched for birth year and birth sex.

| | Number of events cases/ controls 1973–2003 | Outcome incidence rate per 1000 person-years 1973–2003 (95% CI) | | Crude hazard ratio (95% CI) 1973–2003 | Adjusted* hazard ratio (95% CI) 1973–2003 | Adjusted* hazard ratio (95% CI) 1973–1988 | Adjusted* hazard ratio (95% CI) 1989–2003 |
|---|---|---|---|---|---|---|---|
| | | Cases | Controls | | | | |
| Any death | 27/99 | 7.3 (5.0–10.6) | 2.5 (2.0–3.0) | 2.9 (1.9–4.5) | 2.8 (1.8–4.3) | 3.1 (1.9–5.0) | 1.9 (0.7–5.0) |
| Death by suicide | 10/5 | 2.7 (1.5–5.0) | 0.1 (0.1–0.3) | 19.1 (6.5–55.9) | 19.1 (5.8–62.9) | N/A | N/A |
| Death by cardiovascular disease | 9/42 | 2.4 (1.3–4.7) | 1.1 (0.8–1.4) | 2.6 (1.2–5.4) | 2.5 (1.2–5.3) | N/A | N/A |
| Death by neoplasm | 8/38 | 2.2 (1.1–4.3) | 1.0 (0.7–1.3) | 2.1 (1.0–4.6) | 2.1 (1.0–4.6) | N/A | N/A |
| Any psychiatric hospitalisation‡ | 64/173 | 19.0 (14.8–24.2) | 4.2 (3.6–4.9) | 4.2 (3.1–5.6) | 2.8 (2.0–3.9) | 3.0 (1.9–4.6) | 2.5 (1.4–4.2) |
| Substance misuse | 22/78 | 5.9 (3.9–8.9) | 1.8 (1.5–2.3) | 3.0 (1.9–4.9) | 1.7 (1.0–3.1) | N/A | N/A |
| Suicide attempt | 29/44 | 7.9 (5.5–11.4) | 1.0 (0.8–1.4) | 7.6 (4.7–12.4) | 4.9 (2.9–8.5) | 7.9 (4.1–15.3) | 2.0 (0.7–5.3) |
| Any accident | 32/233 | 9.0 (6.3–12.7) | 5.7 (5.0–6.5) | 1.6 (1.1–2.3) | 1.4 (1.0–2.1) | 1.6 (1.0–2.5) | 1.1 (0.5–2.2) |
| Any crime | 60/350 | 18.5 (14.3–23.8) | 9.0 (8.1–10.0) | 1.9 (1.4–2.5) | 1.3 (1.0–1.8) | 1.6 (1.1–2.4) | 0.9 (0.6–1.5) |
| Violent crime | 14/61 | 3.6 (2.1–6.1) | 1.4 (1.1–1.8) | 2.7 (1.5–4.9) | 1.5 (0.8–3.0) | N/A | N/A |

**Notes:**
*Adjusted for psychiatric morbidity prior to baseline and immigrant status.
‡Hospitalisations for gender identity disorder were excluded.
N/A Not applicable due to sparse data.
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separately lists the outcomes depending on when sex reassignment was performed: during the period 1973-1988 or 1989–2003. Even though the overall mortality was increased across both time periods, it did not reach statistical significance for the period 1989–2003. The Kaplan-Meier curve (Figure 1) suggests that survival of transsexual persons started to diverge from that of matched controls after about 10 years of follow-up. The cause-specific mortality from suicide was much higher in sex-reassigned persons, compared to matched controls. Mortality due to cardiovascular disease was moderately increased among the sex-reassigned, whereas the numerically increased risk for malignancies was borderline statistically significant. The malignancies were lung cancer (N = 3), tongue cancer (N = 1), pharyngeal cancer (N = 1), pancreas cancer (N = 1), liver cancer (N = 1), and unknown origin (N = 1).

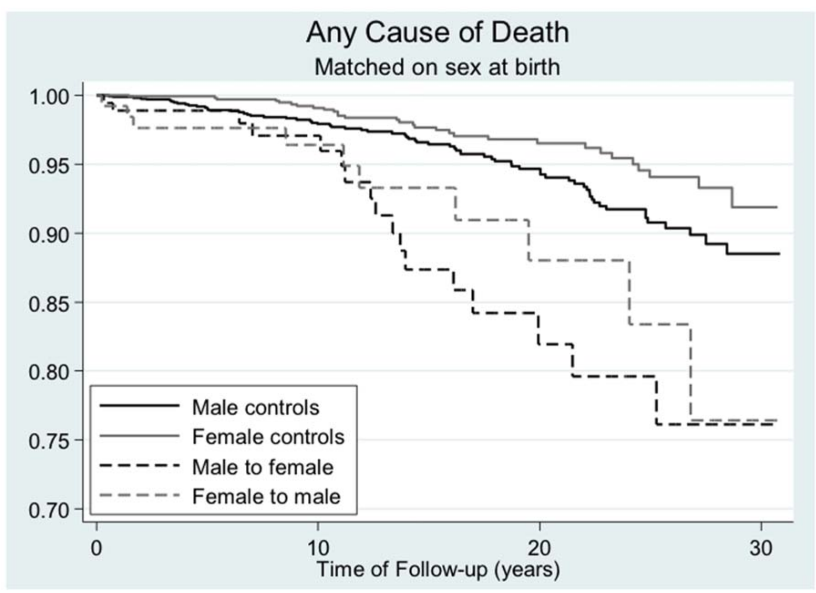


**Figure 1. Death from any cause as a function of time after sex reassignment among 324 transsexual persons in Sweden (male-to-female: N = 191, female-to-male: N = 133), and population controls matched on birth year.**
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### Psychiatric morbidity, substance misuse, and accidents

Sex-reassigned persons had a higher risk of inpatient care for a psychiatric disorder other than gender identity disorder than controls matched on birth year and birth sex (Table 2). This held after adjustment for prior psychiatric morbidity, and was true regardless of whether sex reassignment occurred before or after 1989. In line with the increased mortality from suicide, sex-reassigned individuals were also at a higher risk for suicide attempts, though this was not statistically significant for the time period 1989–2003. The risks of being hospitalised for substance misuse or accidents were not significantly increased after adjusting for covariates (Table 2).

### Crime rate

Transsexual individuals were at increased risk of being convicted for any crime or violent crime after sex reassignment (Table 2); this was, however, only significant in the group who underwent sex reassignment before 1989.

### Gender differences

Comparisons of female-to-males and male-to-females, although hampered by low statistical power and associated wide confidence intervals, suggested mostly similar risks for adverse outcomes (Tables S1 and S2). However, violence against self (suicidal behaviour) and others ([violent] crime) constituted important exceptions. First, male-to-females had significantly increased risks for suicide attempts compared to both female (aHR 9.3; 95% CI 4.4–19.9) and male (aHR 10.4; 95% CI 4.9–22.1) controls. By contrast, female-to-males had significantly increased risk of suicide attempts only compared to male controls (aHR 6.8; 95% CI 2.1–21.6) but not compared to female controls (aHR 1.9; 95% CI 0.7–4.8). This suggests that male-to-females are at higher risk for suicide attempts after sex reassignment, whereas female-to-males maintain a female pattern of suicide attempts after sex reassignment (Tables S1 and S2).

Second, regarding any crime, male-to-females had a significantly increased risk for crime compared to female controls (aHR 6.6; 95% CI 4.1–10.8) but not compared to males (aHR 0.8; 95% CI 0.5–1.2). This indicates that they retained a male pattern regarding criminality. The same was true regarding violent crime. By contrast, female-to-males had higher crime rates than female controls (aHR 4.1; 95% CI 2.5–6.9) but did not differ from male controls. This indicates a shift to a male pattern regarding criminality and that sex reassignment is coupled to increased crime rate in female-to-males. The same was true regarding violent crime.

## Discussion

### Principal findings and comparison with previous research

We report on the first nationwide population-based, long-term follow-up of sex-reassigned transsexual persons. We compared our cohort with randomly selected population controls matched for age and gender. The most striking result was the high mortality rate in both male-to-females and female-to males, compared to the general population. This contrasts with previous reports (with one exception[8]) that did not find an increased mortality rate after sex reassignment, or only noted an increased risk in certain subgroups.[7,9,10,11] Previous clinical studies might have been biased since people who regard their sex reassignment as a failure are more likely to be lost to follow-up. Likewise, it is cumbersome to track deceased persons in clinical follow-up studies. Hence, population-based register studies like the present are needed to improve representativity.[19,34]

The poorer outcome in the present study might also be explained by longer follow-up period (median >10 years) compared to previous studies. In support of this notion, the survival curve (Figure 1) suggests increased mortality from ten years after sex reassignment and onwards. In accordance, the overall mortality rate was only significantly increased for the group operated before 1989. However, the latter might also be explained by improved health care for transsexual persons during 1990s, along with altered societal attitudes towards persons with different gender expressions.[35]

Mortality due to cardiovascular disease was significantly increased among sex reassigned individuals, albeit these results should be interpreted with caution due to the low number of events. This contrasts, however, a Dutch follow-up study that reported no increased risk for cardiovascular events.[10,11] A recent meta-analysis concluded, however, that data on cardiovascular outcome after cross-sex steroid use are sparse, inconclusive, and of very low quality.[34]

With respect to neoplasms, prolonged hormonal treatment might increase the risk for malignancies,[36] but no previous study has tested this possibility. Our data suggested that the cause-specific risk of death from neoplasms was increased about twice (borderline statistical significance). These malignancies (see Results), however, are unlikely to be related to cross-hormonal treatment.

There might be other explanations to increased cardiovascular death and malignancies. Smoking was in one study reported in almost 50% by the male-to females and almost 20% by female-to-males.[9] It is also possible that transsexual persons avoid the health care system due to a presumed risk of being discriminated.

Mortality from suicide was strikingly high among sex-reassigned persons, also after adjustment for prior psychiatric morbidity. In line with this, sex-reassigned persons were at increased risk for suicide attempts. Previous reports [6,8,10,11] suggest that transsexualism is a strong risk factor for suicide, also after sex reassignment, and our long-term findings support the need for continued psychiatric follow-up for persons at risk to prevent this.

Inpatient care for psychiatric disorders was significantly more common among sex-reassigned persons than among matched controls, both before and after sex reassignment. It is generally accepted that transsexuals have more psychiatric ill-health than the general population prior to the sex reassignment.[18,21,22,33] It should therefore come as no surprise that studies have found high rates of depression,[9] and low quality of life[16,25] also after sex reassignment. Notably, however, in this study the increased risk for psychiatric hospitalisation persisted even after adjusting for psychiatric hospitalisation prior to sex reassignment. This suggests that even though sex reassignment alleviates gender dysphoria, there is a need to identify and treat co-occurring psychiatric morbidity in transsexual persons not only before but also after sex reassignment.

Criminal activity, particularly violent crime, is much more common among men than women in the general population. A previous study of all applications for sex reassignment in Sweden up to 1992 found that 9.7% of male-to-female and 6.1% of female-to-male applicants had been prosecuted for a crime.[33] Crime after sex reassignment, however, has not previously been studied. In this study, male-to-female individuals had a higher risk for criminal convictions compared to female controls but not compared to male controls. This suggests that the sex reassignment procedure neither increased nor decreased the risk for criminal offending in male-to-females. By contrast, female-to-males were at a higher risk for criminal convictions compared to female controls and did not differ from male controls, which suggests increased crime proneness in female-to-males after sex reassignment.

### Strengths and limitations of the study

Strengths of this study include nationwide representativity over more than 30 years, extensive follow-up time, and minimal loss to follow-up. Many previous studies suffer from low outcome ascertainment,[6,9,21,29] whereas this study has captured almost the entire population of sex-reassigned transsexual individuals in Sweden from 1973–2003. Moreover, previous outcome studies have mixed pre-operative and post-operative transsexual persons,[22,37] while we included only post-operative transsexual persons that also legally changed sex. Finally, whereas previous studies either lack a control group or use standardised mortality rates or standardised incidence rates as comparisons,[9,10,11] we selected random population controls matched by birth year, and either birth or final sex.

Given the nature of sex reassignment, a double blind randomized controlled study of the result after sex reassignment is not feasible. We therefore have to rely on other study designs. For the purpose of evaluating whether sex reassignment is an effective treatment for gender dysphoria, it is reasonable to compare reported gender dysphoria pre and post treatment. Such studies have been conducted either prospectively[7,12] or retrospectively,[5,6,9,22,25,26,29,38] and suggest that sex reassignment of transsexual persons improves quality of life and gender dysphoria. The limitation is of course that the treatment has not been assigned randomly and has not been carried out blindly.

For the purpose of evaluating the safety of sex reassignment in terms of morbidity and mortality, however, it is reasonable to compare sex reassigned persons with matched population controls. The caveat with this design is that transsexual persons before sex reassignment might differ from healthy controls (although this bias can be statistically corrected for by adjusting for baseline differences). It is therefore important to note that the current study is only informative with respect to transsexuals persons health after sex reassignment; no inferences can be drawn as to the effectiveness of sex reassignment as a treatment for transsexualism. In other words, the results should not be interpreted such as sex reassignment *per se* increases morbidity and mortality. Things might have been even worse without sex reassignment. As an analogy, similar studies have found increased somatic morbidity, suicide rate, and overall mortality for patients treated for bipolar disorder and schizophrenia.[39,40] This is important information, but it does not follow that mood stabilizing treatment or antipsychotic treatment is the culprit.

Other facets to consider are first that this study reflects the outcome of psychiatric and somatic treatment for transsexualism provided in Sweden during the 1970s and 1980s. Since then, treatment has evolved with improved sex reassignment surgery, refined hormonal treatment,[11,41] and more attention to psychosocial care that might have improved the outcome. Second, transsexualism is a rare condition and Sweden is a small country (9.2 million inhabitants in 2008). Hence, despite being based on a comparatively large national cohort and long-term follow-up, the statistical power was limited. Third, regarding psychiatric morbidity after sex reassignment, we assessed inpatient psychiatric care. Since most psychiatric care is provided in outpatient settings (for which no reliable data were available), underestimation of the *absolute* prevalences was inevitable. However, there is no reason to believe that this would change the *relative risks* for psychiatric morbidity unless sex-reassigned transsexual individuals were more likely than matched controls to be admitted to hospital for any given psychiatric condition.

Finally, to estimate start of follow-up, we prioritized using the date of a gender identity disorder diagnosis *after* changed sex status over *before* changed sex status, in order to avoid overestimating person-years at risk after sex-reassignment. This means that adverse outcomes might have been underestimated. However, given that the median time lag between the hospitalization before and after change of sex status was less than a year (see Methods), this maneuver is unlikely to have influenced the results significantly. Moreover, all deaths will be recorded regardless of this exercise and mortality hence correctly estimated.

### Conclusion

This study found substantially higher rates of overall mortality, death from cardiovascular disease and suicide, suicide attempts, and psychiatric hospitalisations in sex-reassigned transsexual individuals compared to a healthy control population. This highlights that post surgical transsexuals are a risk group that need long-term psychiatric and somatic follow-up. Even though surgery and hormonal therapy alleviates gender dysphoria, it is apparently not sufficient to remedy the high rates of morbidity and mortality found among transsexual persons. Improved care for the transsexual group after the sex reassignment should therefore be considered.

## Supporting Information

**Table S1 Risk of various outcomes in sex-reassigned persons in Sweden compared to population controls matched for birth year and *birth sex*.**
(DOCX)

**Table S2 Risk of various outcomes in sex-reassigned persons in Sweden compared to controls matched for birth year and *final sex*.**
(DOCX)

## Author Contributions

Conceived and designed the experiments: CD PL AJ NL ML. Performed the experiments: MB AJ. Analyzed the data: CD PL MB AJ NL ML. Contributed reagents/materials/analysis tools: PL NL AJ. Wrote the paper: CD PL MB AJ NL ML.

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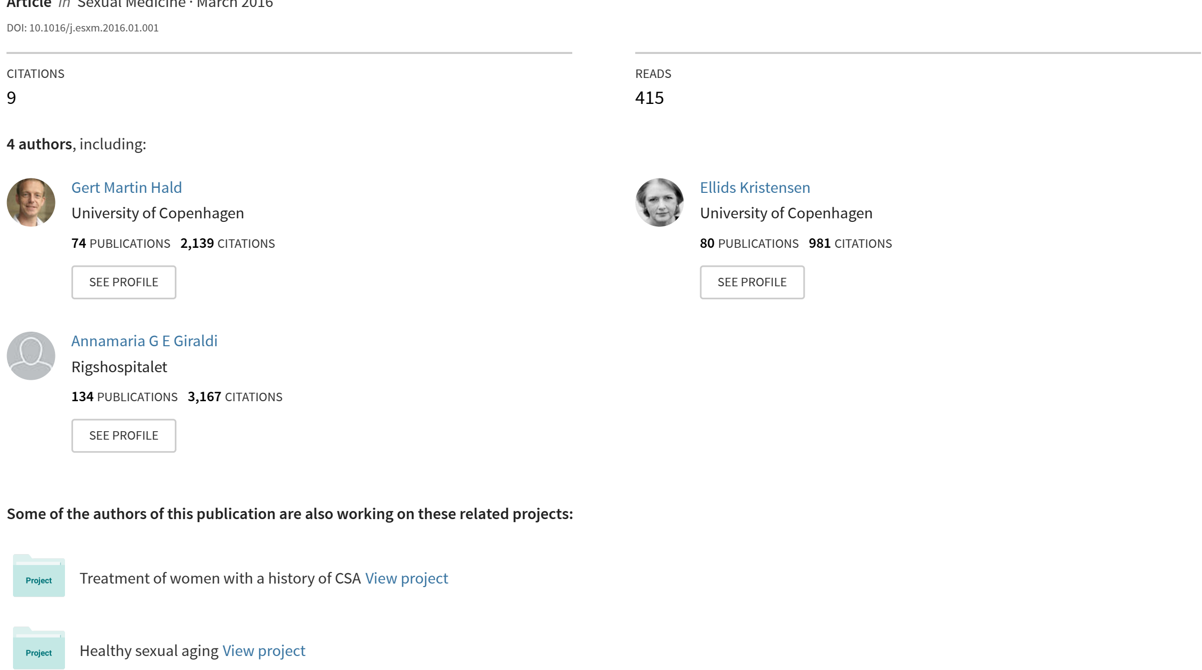

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# Long-Term Follow-Up of Individuals Undergoing Sex-Reassignment Surgery: Somatic Morbidity and Cause of Death

Rikke Kildevæld Simonsen, MA,[1] Gert Martin Hald, PhD,[2] Ellids Kristensen, MD, FECSM,[3] and Annamaria Giraldi, PhD, MD, FECSM[3]

## ABSTRACT

**Introduction:** Studies of mortality and somatic well-being after sex-reassignment surgery (SRS) of transsexual individuals are equivocal. Accordingly, the present study investigated mortality and somatic morbidity using a sample of transsexual individuals who comprised 98% (n = 104) of all surgically reassigned transsexual individuals in Denmark.

**Aims:** To investigate somatic morbidity before and after SRS and cause of death and its relation to somatic morbidity after SRS in Danish individuals who underwent SRS from 1978 through 2010.

**Methods:** Somatic morbidity and mortality in 104 sex-reassigned individuals were identified retrospectively by data from the Danish National Health Register and the Cause of Death Register.

**Main Outcome Measures:** Somatic morbidity and cause of death.

**Results:** Overall, 19.2% of the sample were registered with somatic morbidity before SRS and 23.1% after SRS ($P =$ not significant). In total, 8.6% had somatic morbidity before and after SRS. The most common diagnostic category was cardiovascular disease, affecting 18 individuals, 9 before and 14 after SRS, and 5 of those 14 who were affected after SRS had cardiovascular disease before and after SRS. Ten individuals died after SRS at an average age of 53.5 ± 7.9 years (male to female) and 53.5 ± 7.3 years (female to male).

**Conclusion:** Of 98% of all Danish transsexuals who officially underwent SRS from 1978 through 2010, one in three had somatic morbidity and approximately 1 in 10 had died. No significant differences in somatic morbidity or mortality were found between male-to-female and female-to-male individuals. Despite the young average age at death and the relatively larger number of individuals with somatic morbidity, the present study design does not allow for determination of casual relations between, for example, specific types of hormonal or surgical treatment received and somatic morbidity and mortality.

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**Key Words:** Follow-Up; Gender Identity Disorder; Somatic Morbidity; Sex-Reassignment Surgery; Transsexualism

## INTRODUCTION

Transsexualism refers to a condition in which the core characteristic is an individual's experience of profound incongruence between assigned sex at birth and the experienced gender.[1] According to the *International Statistical Classification of Diseases and Related Health Problems, 10th Edition* (*ICD-10*),[2] the diagnostic criteria of transsexualism are (i) the desire to live and be accepted as the opposite sex, (ii) usually a sense of discomfort with or inappropriateness of one's anatomic sex, and (iii) a wish to have surgery and/or hormonal treatment (HT) to make the body as congruent as possible with the preferred sex. To develop characteristics of the opposite sex, treatment with cross-sex hormones (HT), castration, and genital reconstructive surgery (sex-reassignment surgery [SRS]) might be conducted.

The parent category of transsexualism in the *ICD-10* is gender identity disorder (GID).[2] In Denmark, individuals with GID are referred to the Gender Identity Unit, University of Copenhagen (GIUUC) under *ICD-8*[3] code 302.39 and 1993 *ICD-10*[2] codes DF64.0 to DF64.9 by a general practitioner or psychiatrist. Assessment, in accordance with Danish Health Authority

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guidelines,[4] includes blood sample analyses for chromosomal and hormonal abnormalities, screening for psychiatric and somatic morbidities, psychological testing, and sessions with a psychologist or psychiatrist.

If SRS is desired by the individual diagnosed with transsexualism, an observational period of at least 1 year 6 months (in the study period, 2 years), including 1 year of HT and living in the gender role as the opposite sex, is obligatory before applying for SRS to the Danish Health Authority. The Danish legal criteria for SRS and castration are an *ICD-10* diagnosis of transsexualism (F64.0), persistent wish for and understanding of the consequences of castration, and a minimum age of 18 years (during the study period, ie,1978–2010, the minimum age was 21 years).[5] All treatment is paid for by the public Danish medical system. Treatment with cross-sex hormones and genital reconstructive surgery has existed for more than 60 years, but findings on mortality and somatic well-being after SRS in long-term follow-up studies are equivocal.[6] For possible somatic consequences of HT, the following outcomes have been studied the most: cardiovascular disease (CVD), bone growth, and hormone-sensitive cancer malignancies.

A review and meta-analysis of 16 studies, including 1,471 male-to-female (MtF) and 651 female-to-male (FtM) individuals, found no overall significant effect of HT on CVD.[7] However, the type of HT (ethinyl estradiol) and the manner in which HT (oral estrogens) was administered in MtF patients were significantly associated with CVD.[8,9] Further, in a Swedish study, increased CVD mortality in FtM and MtF individuals at least 10 years after HT was found,[6] indicating a possible delay of adverse somatic consequences from HT on cardiovascular pathology.[10]

Studies of muscle and musculoskeletal diseases, bone growth, and bone deficiencies overall did not show an increased risk of osteoporosis in FtM individuals.[11–16] However, in MtF individuals, lower bone mass density, possibly from androgen deprivation, was found after treatment compared with before treatment with HT.[17–19] However, because of increased bone density before treatment and no loss of bone density from menopause, MtF individuals maintain a lower risk of osteoporosis than assigned women.[20]

In cancer studies involving transsexuals receptive of SRS and/or HT, the focus has been on breast cancer, although the overall number of studies in relation to this issue is limited. The conclusions emerging from these studies suggest that for MtF individuals[20–23] the risk of breast cancer is lower than the expected risk of breast cancer in assigned women but similar to that expected in assigned men. For FtM individuals, male sex hormones might have an antiproliferative effect on breast cancer cell lines.[24,25] Thus, few cases of breast cancer in FtM individuals have been reported,[26,27] indicating FtM individuals have similar risk as expected for male breast cancer.

Concerning cancer malignancies, a Belgian study, in which the average time of HT was 6 years (FtM) or 7 years (MtF), found no increase in cancer malignancies among included transsexuals compared with controls randomly selected from the population.[28] In contrast, a Swedish study found borderline significant risk of death from neoplasms compared with controls.[6] Lifestyle habits such as smoking and avoidance of the health care system were suggested as possible mediating mechanisms.

When studying increased and decreased risks of cancer in transsexuals receiving HT, it is important to note that HT has been used for 60 years in some transsexual individuals. Accordingly, the duration of exposure to HT might not be long enough for tumors to manifest and the number of individuals exposed is small.[29] Further, it has been suggested that inconsistency in reporting cancer incidents among transsexuals might lead to an underreporting of cancer in this cohort,[21,30] likely affecting prevalence and incidence rates.

Studies of mortality in transsexuals have suggested an increased mortality risk compared with controls.[6,10] For example, a Swedish study of 324 MtF and FtM individuals after SRS (follow-up = 11.4 years) found that the all-cause mortality rate was three times higher in this cohort compared with controls.[6] Similarly, in a Dutch long-term follow-up study of 966 MtF and 365 FtM individuals (follow-up = 18.5 years), a 51% higher mortality rate was found in MtF subjects compared with the general population.[10] For FtM subjects, no increased mortality was found compared with the general population. A Dutch study of 1,109 individuals receiving HT found no increased mortality overall, but in MtF subjects 25 to 39 years old, mortality was significantly increased because of suicide, acquired immune deficiency syndrome, CVD, drug abuse, and unknown causes.[31] The only Danish study on transsexualism conducted thus far, which included 37 individuals, reported three deaths of 29 reassigned MtF individuals and no deaths of 8 FtM individuals studied from 1956 through 1978.[32]

Somatic morbidity after alcohol abuse has not been investigated previously, although studies of substance abuse in individuals with transsexualism have been conducted. A Belgian study (N = 35) conducted at the University Hospital of Gent found alcohol and drug abuse in 50% of MtF and 61.5% of FtM individuals.[33] A Spanish study (N = 230) of individuals with complaints of GID seen at the Hospital Clinic (Barcelona, Spain) found current alcohol- and substance-related disorders in 11% MtF and 1.4% of FtM subjects.[34] A Swiss study found that 45% of 31 GID individuals diagnosed by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*[35] had lifetime substance abuse (MtF = 50%, FtM = 36.4%).[36] A Swedish study of 233 individuals found substance abuse in 18.2% of FtM and 11.9% MtF individuals.[37] However, in a different Swedish study of 324 MtF and FtM transsexual individuals, no significant risk of being hospitalized for substance abuse was found compared with the general Swedish population.[6] Lung diseases related to or caused by smoking have not been investigated previously in persons with transsexualism, although lesbian, gay, bisexual, and transgender persons have a higher incidence of smoking.[38,39] Accordingly, this was included as an outcome in the present study.

For many of the studies that have focused on somatic morbidity and mortality, including those reviewed earlier, the following methodologic shortcomings apply: small sample, recruitment and diagnostic biases and inconsistencies (eg, place of participant recruitment and differences in diagnostic criteria), heterogeneity of treatment regimens, and varied duration of follow-up periods.[6]

The aim of the present study was to (re)investigate somatic morbidity and mortality using registry data in a cohort including 98% of all Danish individuals referred to a public GID clinic in Denmark who underwent SRS from 1978 through 2010 after a diagnosis of transsexualism.

## AIMS

The specific aims of the study were to investigate (i) somatic morbidity before and after SRS and (ii) cause of death and its relation to somatic morbidity.

## METHODS

### Procedure

The study was approved by the Danish Data Protection Agency and the Danish Health Authority. Permission was obtained from the Civil Law Board to identify names and social security numbers of individuals who underwent SRS from 1978 through 2010 and who were treated at the GIUUC.

### National Registers

The Danish National Health Register (LPR) was used to draw data on somatic morbidity. The LPR contains diagnoses and dates of onset and end of treatment of all somatic episodes at hospitals from 1977 (inpatients) and from 1995 (outpatients). In the LPR, diagnoses are coded according to the *ICD-8* (1969—1993) or *ICD-10* (1994—).[2,3] Data from the LPR from 1977 to January 2013 were included in the study.

The Cause of Death Register has recorded all deaths and causes of death in Denmark since 1970. Death events occurring up to April 2014 were included in the study.

### Study Population

Included in the study were 104 individuals (56 MtF and 48 FtM) diagnosed with transsexualism according to the *ICD-8*[3] or *ICD-10*[2] at the GIUUC. All participants underwent castration with permission from the Danish Health Authority from 1978 through 2010. Verification that an individual had undergone SRS was accomplished using social security numbers (ie, Danish Cause of Death Register numbers); numbers ending in even numbers indicate female-assigned sex and those ending with odd numbers indicate male-assigned sex. Accordingly, changes in this number from even to odd or vice versa indicate the official change of assigned sex (ie, successful completion of SRS). Baseline data (Table 1) were obtained from medical records.

**Table 1.** Baseline Data

| Variables | Male to female (n = 56) | Female to male (n = 48) |
|---|---|---|
| Mean age at referral (y), mean (SD) | 30.3 (9.8) | 27.0 (8.7) |
| Mean age at permission for SRS (y), mean (SD) | 37.1 (9.7) | 32.6 (8.0) |
| Mean age at initiating cross-sex hormones (y), mean (SD) | 32.0 (9.9) | 29.8 (8.4) |
| Mean length of follow-up (y), mean (SD) | 16.38 (7.1) | 10.21 (6.1) |

SRS = sex-reassignment surgery.

Sociodemographic data (Table 2) were obtained from medical records and are further described by Simonsen et al.[40]

Because of the lack of a specific code for SRS, the date of start of follow-up was defined as the date of permission to undergo SRS.

### Measures

Baseline data (Table 1) were obtained from medical records based on interviews performed by specialized psychiatrists, psychologists, and medical doctors at the GIUUC during the treatment period.

Using the LPR and death registers, we obtained information pertaining to somatic morbidity before and after permission to undergo SRS and time and cause of death after obtaining this permission. More specifically, somatic diagnoses given to the patient from 1977 to January 2013 were investigated. Accordingly, each individual could present with different diagnoses, but multiple contacts with the somatic care system with the same diagnosis only had one outcome before SRS and one outcome after SRS. In addition, data on time and cause of death after permission to undergo SRS were drawn from the death registers until April 2014.

For each diagnosis, specifically chronic heart disease (*ICD-10* diagnoses F400—490), chronic lung disease (*ICD-10* diagnoses J40—47, *ICD-8* diagnoses 490—493), cancer (*ICD-10* diagnoses C00—C97.9, D00—D10.9, *ICD-8* diagnoses 140—209), alcohol-related liver morbidity (*ICD-10* K70—77, *ICD-8* 303—304), or muscle and musculoskeletal diseases (*ICD-10* M80—85, *ICD-8* 720—729), individuals were stratified by diagnostic group membership (ie, had received the diagnosis or had not received the diagnosis) and assigned sex (ie, MtF or FtM).

Mortality was determined by the cause-of-death certificate. Hence, each individual was dead or alive. For death, data related to cause of death were drawn from the death certificate.

### Statistics

Statistical analyses were conducted in SPSS 19.0 (SPSS, Inc, Chicago, IL, USA). Clinical variables were analyzed using descriptive statistics. Means and SDs were calculated for

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**Table 2.** Sociodemographics by Male to Female and Female to Male*

| | Male to female (n = 58) | Female to male (n = 50) |
|---|---|---|
| Primary and secondary education (y), n (%) | | |
| ≤11 | 40 (69.0) | 38 (76.0) |
| 12–13 (completion of high school) | 16 (27.6) | 12 (24.0) |
| Missing information | 2 (3.4) | 0 |
| Education beyond primary and secondary school at time of referral, n (%) | | |
| None | 29 (50.0) | 30 (60.0) |
| ≤3 y or apprenticeship | 21 (36.2) | 8 (16.0) |
| ≥4 y | 5 (8.6) | 10 (20.0) |
| Unknown | 3 (5.2) | 2 (4.0) |
| Education beyond primary and secondary school when permission for SRS was granted, n (%) | | |
| None | 25 (43.1) | 25 (50.0) |
| ≤3 y or apprenticeship | 21 (36.2) | 13 (26.0) |
| ≥4 y | 8 (13.8) | 10 (20.0) |
| Unknown | 4 (6.9) | 2 (4.0) |
| Employment at time of referral, n (%) | | |
| Employed | 36 (62.1) | 31 (62.0) |
| Unemployed | | |
| Sickness or unemployment benefits | 12 (20.7) | 7 (14.0) |
| Social welfare or pension | 10 (17.3) | 12 (24.0) |
| Employment when permission for SRS was granted, n (%) | | |
| Employed | 32 (55.2) | 27 (54.0) |
| Unemployed | | |
| Sickness or unemployment benefits | 5 (8.6) | 11 (22.0) |
| Social welfare or pension | 20 (34.5) | 11 (22.0) |
| Unknown | 1 (1.7) | 1 (2.0) |

From Simonsen et al.[40]
SRS = sex-reassignment surgery.
*The $\chi^2$ and Fisher exact tests were conducted but showed no significance ($P < 0.05$).

continuous variables. Frequencies and percentages were generated for nominal and categorical variables. Between-group differences were analyzed using $\chi^2$ test, t-test, and Fisher exact test.

No missing values were found for somatic outcome variables because they were obtained from the register data, where values are present (affected) or absent (unaffected).

## RESULTS

Baseline data related to age at referral, permission for SRS, cross-sex hormonal initiation, and years of follow-up after SRS are presented in Table 1.

To investigate the first study aim concerning somatic morbidity before and after SRS, the total number of included individuals who received a somatic diagnosis was identified (Table 3). As presented in Table 3, 20 FtM and MtF individuals (19.2%) before SRS and 24 FtM and MtF individuals (23.1%) after SRS had somatic morbidity, with no significant difference. Nine individuals (eight MtF and one FtM) had somatic morbidity before and after SRS, resulting in 35 individuals (33.7%) overall who had somatic morbidity. Table 4 lists the specific diagnoses of somatic morbidity.

As presented in Table 4, 25 somatic diagnoses were reported before SRS and 27 diagnoses after SRS from a total of 20 individuals before SRS and 24 individuals after SRS. Nine of the 24 individuals had somatic morbidity before and after SRS. The most common diagnostic category was CVD, affecting a total of 18 individuals, 9 before and 14 after (23 diagnoses) SRS, and 5 of the 14 individuals had CVD before and after SRS. The second most common diagnostic category was muscle and musculoskeletal diseases, with 12 diagnoses, six before and six after SRS, affecting a total of 11 individuals, with only one individual having muscle and musculoskeletal disease before and after SRS.

To investigate differences in somatic morbidity between MtF and FtM individuals, $\chi^2$ test, Fisher exact, and t-test were used. Across diagnostic categories, no significant differences in somatic morbidity between MtF and FtM individuals were found. When comparing somatic diagnoses using $\chi^2$ test, no significant differences between the number of somatic diagnoses given before and after SRS were found.

Concerning the second study aim, cause of death and its relation to somatic morbidity was investigated from after SRS until April 2014. Ten individuals (9.6%; six MtF [10.7%] and four FtM [8.3%]) died from after SRS to April 2014. Mean age at death was 53.5 ± 7.9 years (median = 55.5) for MtF individuals and 53.5 ± 7.3 years (median = 52.5) for FtM individuals ($P > .05$ by t-test). Somatic morbidity (ie, official cause of death) included two suicides (19 and 26 years after SRS, respectively), heart disease (n = 2), cancer (n = 1), ulcer (n = 1), and smoking- and alcohol-related diseases (n = 4).

Because the results might be influenced by changes in clinical procedures and guidelines over time and the cultural acceptance of transsexualism, data were checked for systematic differences in permission to undergo SRS from the first 16 years (1978–1994) to the next 16 years (1994–2010). Significantly ($P < .05$) more individuals with transsexualism received permission to undergo SRS from 1995 through 2010 (28 individuals in 1978–1994 and 76 individuals in 1995–2010).

## DISCUSSION

We report the first nationwide register-based SRS follow-up study in Denmark of 98% of individuals who officially underwent SRS from 1978 through 2010.

For the first study aim (ie, investigation of somatic morbidity before and after SRS), we found that 19.2% of the cohort had a somatic diagnosis before and 23.1% after SRS. This difference

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**Table 3.** Individuals with Somatic Morbidity Before and After SRS*

| Diagnosis, n (%) | Before SRS<br>Male to female (n = 56) | Before SRS<br>Female to male (n = 48) | After SRS<br>Male to female (n = 56) | After SRS<br>Female to male (n = 48) | Before and after SRS<br>Male to female (n = 56) | Before and after SRS<br>Female to male (n = 48) |
|---|---|---|---|---|---|---|
| Cancer | 0 | 3 | 2 | 1 | 0 | 1 |
| CVD | 5 | 4 | 6 | 8 | 5 | 0 |
| Musculoskeletal | 3 | 3 | 3 | 3 | 1 | 0 |
| Lung | 2 | 1 | 3 | 1 | 2 | 0 |
| Alcoholic liver | 1 | 3 | 0 | 0 | 0 | 0 |
| Individuals with somatic diagnosis | | | | | | |
| Yes | 8 (14.3) | 12 (25.0) | 12 (21.4) | 12 (25.0) | 8 (14.3) | 1 (2.1) |
| No | 48 (85.7) | 36 (75.0) | 44 (78.6) | 36 (75.0) | 48 (85.7) | 47 (97.9) |

CVD = cardiovascular disease; SRS = sex-reassignment surgery.
*The $\chi^2$ and Fisher exact tests were conducted but showed no significance ($P < 0.05$).

was found not to be statically significant. Further, no significant difference in somatic morbidity between FtM and MtF cohorts was found. For the second study aim (ie, investigation of mortality), no significant difference in mortality between MtF and FtM cohorts was found. Average age at death was 53.5 years, and 10 individuals died after SRS.

For somatic morbidity, CVD was found in 6 MtF individuals (10.7%) and 12 FtM individuals (25.0%). In comparison, 4.4% of assigned men and 3.6% of assigned women older than 35 years in the general Danish population were found to have CVD.[41] In the present study, CVD might have been due to long-term follow-up after HT (16.3 years for MtF cohort, 10.8 years for FtM cohort) as reported by other studies,[6,10] or the observed prevalence of CVD might be explained by a correlation between depression and anxiety and CVD as suggested by previous research.[42,43] Socioeconomic status and CVD are related,[44,45] and the present study group was characterized not only by anxiety and depression[46] but also by social marginalization[47] and difficulties in school, education, and employment.[40] Hence, these factors could be important underlying mediating and/or moderating mechanisms driving or affecting prevalence rates of CVD in transsexuals, although the design of this study did not enable us to explore this further.

Muscle and musculoskeletal morbidity was found in 11 individuals (10.5%). From 1997 through 2002, 13.9% of the general Danish population was diagnosed with muscle and

**Table 4.** Number of Somatic Diagnoses*

| Diagnosis, n (%) | Before SRS<br>Male to female (n = 56) | Before SRS<br>Female to male (n = 48) | After SRS<br>Male to female (n = 56) | After SRS<br>Female to male (n = 48) |
|---|---|---|---|---|
| Alcohol related | | | | |
| Yes | 1 (1.8) | 3 (6.2) | 0 | 0 |
| No | 55 (98.2) | 45 (93.8) | 56 (100.0) | 48 (100.0) |
| Cancer | | | | |
| Yes | 0 | 3 (6.3) | 2 (3.8) | 1 (2.0) |
| No | 56 (100.0) | 45 (93.8) | 55 (98.2) | 47 (97.9) |
| Heart | | | | |
| Yes | 5 (8.9) | 4 (8.3) | 6 (10.7) | 8 (16.7) |
| No | 51 (91.1) | 44 (91.7) | 50 (89.3) | 40 (83.3) |
| Lung | | | | |
| Yes | 2 (1.8) | 1 (2.1) | 3 (5.4) | 1 (2.1) |
| No | 54 (96.4) | 47 (97.9) | 53 (94.6) | 47 (97.9) |
| Musculoskeletal | | | | |
| Yes | 3 (5.4) | 3 (6.3) | 3 (5.4) | 3 (6.3) |
| No | 53 (94.6) | 45 (93.8) | 53 (94.6) | 45 (93.7) |
| Positive somatic diagnosis | 11 | 14 | 14 | 13 |

SRS = sex-reassignment surgery.
*The $\chi^2$ and Fisher exact tests were conducted but showed no significance ($P < 0.05$).

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musculoskeletal disease by hospital care.[48] Smoking and excessive alcohol consumption have been linked to low bone mass and increased fracture risk in MtF and FtM individuals,[49,50] and such lifestyle issues might characterize the present cohort.[6,46,51,52] However, given the limited number of individuals presenting with skeletal morbidity in this study, more comparable studies are needed to confirm the possible increased risk of skeletal morbidity in this cohort.

Concerning cancer malignancies, five individuals (6.2% of FtM and 3.6% of MtF) were found to have a diagnosis of cancer compared with 2.4% of assigned women and 1.56% of assigned men older than 15 years in the Danish general population.[53] Previous studies involving transsexual individuals have found hormone-sensitive tumors.[16,20,54] Further, in the present study, two deaths were caused by cancer and by leukemia and lung cancer, respectively. However, as in the present study, small samples and the sample design preclude causal inferences regarding relations between treatment of SRS individuals and cancer or cancer-related deaths.

In Denmark, alcohol-related diseases cause 5% of the total number of deaths,[55] with more alcohol and substance abuse in sexual minority groups.[51,52,56–58] Four individuals had a diagnosis of alcohol-related diseases before SRS with none after SRS. Further, in the present cohort, two individuals died of the effects of alcohol abuse after SRS. In a previous study on psychiatric morbidity of the present cohort, four diagnoses indicative of alcohol abuse after SRS were found.[46] Alcohol-related diseases are often the consequence of long-lasting alcohol abuse. Therefore, the actual number of individuals in the present cohort with alcohol abuse could be larger.

Four individuals had a diagnosis indicative of chronic lung disease (3.8%). In comparison, 1.3% of individuals older than 35 years in the in the general Danish population had a diagnosis of severe chronic lung disease.[59] Lung diseases have, to our knowledge, not been investigated previously in individuals with transsexualism, and therefore we lack and call for comparable studies in which to situate our findings.

Somatic morbidity in the present study group could be due to long-term HT and/or, as suggested by numerous previous studies, influenced by poor mental health, low economic status, social exclusion,[60] harassment, negative experiences with school[61] and the employment system,[34,37,62] and discrimination in the health care system.[46,63,64] Thus, previous studies of the present group have found that 50% of the cohort did not complete further education beyond primary and secondary school. Also, at the time of SRS, only 55% were employed[40] and 25% presented with psychiatric morbidity before and after SRS.[46]

For the second study aim (ie, cause of death and its relation to somatic morbidity), the study found that 9.6% of the cohort had died at an average age of 53.5 years, with the main cause of death related to smoking and alcohol abuse. The life expectancy of assigned women and men in Denmark is 81.9 and 78.0 years, respectively. Previous studies of mortality in transsexual individuals in countries comparable to Denmark[6,10] have found an increased risk of death in transsexual individuals. The present study had a lack of statistical power, and further long-term studies are needed to draw firm conclusions about transsexualism and increased risk of death.

Two individuals in the study group committed suicide 19 and 26 years after SRS, respectively. A Swedish study of SRS individuals (N = 324) found significantly increased mortality from suicide and significantly higher risk for suicide attempts compared with the general Swedish population.[6] A Dutch study (N = 1,109) of SRS and non-SRS individuals found a high incidence of attempted suicide and completed suicide in the study cohort compared with the general Dutch population.[31] An Italian study of 163 SRS MtF individuals found that four had attempted suicide before SRS and one had attempted suicide 12 to 18 months after SRS.[65] A Danish study reported death from suicide in 3 of 29 SRS MtF individuals (follow-up = 6 years).[32] Many explanations can be considered for suicide and attempted suicide. One might be regret for undergoing SRS,[32] but in the present study suicide occurred more than 19 years after SRS and therefore does not seem to be an immediate consequence of SRS. Because reasons for suicide attempts and manifest suicide often are multifactorial and because of the low incidence in the present study, further research is needed to contextualize these results further.

### Limitations

The strength of this study is the unique cohort studied. Thus, on a national basis and over a 30-year period, 98% of all SRS individuals were included. This provides a unique opportunity to assess differences between MtF and FtM individuals on variables for somatic morbidity and mortality. The cohort included only individuals who received permission to undergo SRS during a period with strict criteria for obtaining permission to undergo SRS. Accordingly, the group is highly selected and might not reflect transsexuals per se in Denmark. Although we had a very large cohort for this type of study, some of our statistics had small cell sizes, limited numbers, and thus low statistical power, increasing the chances for type II errors. Because most somatic care in Denmark is provided by general practitioners, an underestimation of the prevalence of somatic morbidity in the study is plausible. Thus, somatic morbidity as presented in this study might be substantially higher.

## CONCLUSION

Using a sample comprised of 98% of all individuals who underwent SRS in Denmark from 1978 through 2010, this study found somatic morbidity in 19.1% of the study group before and 23.2% after SRS. Mortality rates were 9.6%, with an average age at death of 53.5 years. No significant differences in somatic morbidity or mortality were found between MtF and FtM individuals. No firm conclusions can be drawn from the

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present study, because the present study design does not allow for determination of causal relations between HT or SRS and somatic morbidity or mortality. One can speculate as to whether the increased risk of psychiatric problems and lifestyle issues in sexual minority groups influenced the risk of mortality and CVD in the present study. The findings underline the importance of supporting individuals with transsexualism to contact and be treated in the public health care system and to pay more attention to lifestyle issues in general.

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