No. 24-43

In the Supreme Court of the United States

STATE OF WEST VIRGINIA, ET AL.,

v.

B.P.J., BY NEXT FRIEND AND MOTHER,
HEATHER JACKSON,

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

JOINT APPENDIX (VOLUME VII OF X)

(Pages 2521-3027)

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(continued from front cover)

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

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

vs. Case No. 2:21-CV-00316

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

REMOTE VIDEOTAPED DEPOSITION OF
CHAD T. CARLSON, M.D., FACSM
Monday, March 28, 2022
Volume I

***

[12] CHAD T. CARLSON, M.D., FACSM, having been administered an oath, was examined and testified as follows:

[13] EXAMINATION BY MR. BLOCK:

Q Good morning, Dr. Carlson. My name is Josh Block from the ACLU. I'll be taking your deposition today.

Could you state your whole name for the record.

A My name is Chad Thomas Carlson.

Q Have you ever had your deposition taken before?

A In a couple of local cases, yes.

Q All right. What were those?

A I can't recall. One was -- I -- I was retained as a witness in a traffic case and can't recall the -- and that never went to trial. And then I was retained as a witness in an injury case in a gym, and that also never went to trial. I was deposed in a local case once. I can't remember the circumstance. It was over ten years ago.

Q Do you remember if those cases were -- if any of those were in federal court?

A No, never --

Q Okay.

A -- in federal court.

Q Okay. So maybe you'll remember some of this **[14]** discussion from ten years ago, but if not, here's a refresher. I just want to go over ground rules for -- for the deposition, and I have -- I have three main ground rules.

The first is that, you know, although we have the video, the court reporter is also trying to write down everything we say, so it's important that your responses be verbal, by

saying "yes" or "no" instead of nodding or shaking your head.

Is that okay with you?

A I understand that, and that's fine.

Q Great. And -- and you didn't nod your head, which is what some people do in response to that first ground rule, so you're already off to a good start.

The second is, again, related to the transcript, that the court reporter can't write down when two people are talking at the same time, so it's important that you wait until I finish the question before you answer, and in return, I'll wait for you to finish your answer before I ask another question.

Does that sound fair?

A I appreciate that, and yes.

Q Okay. And the third is that, you know, it's **[15]** my job to ask questions that you understand and that you can provide an answer to. So if anything in my question is unclear, I'm asking you to let me know, and I will rephrase it, okay?

A Okay.

Q And if you do answer the question, I'm going to take that to mean that you understood it.

Does that sound okay to you?

A That's reasonable, yes.

Q Okay. How did you prepare for this deposition?

MR. FRAMPTON: Josh, real quick, before we do that, this seems like a good time to memorialize our typical understanding that all objections except to form and scope are reserved; is that fair?

MR. BLOCK: Yes. And we will agree again that although any defendant can object, an objection by one defendant preserves the objection for all of them.

MR. FRAMPTON: Okay. Thank you.

MR. TRYON: This is Dave Tryon. I agree with that.

MR. BLOCK: Okay. And unless another party speaks up, we'll take that as agreement for everyone.

[16]

BY MR. BLOCK:

Q Okay. How did you prepare for this deposition?

A I reread through my statement, I read through the Safer rebuttal, and I met with counsel several times and reviewed some of the citations in the paper.

Q In which paper?

A In my white paper, sorry.

Q When you say your white paper, are you referring to your expert report submitted in February of 2022?

A Yes.

Q Okay. Did you review any other -- any documents to prepare for this deposition besides your report and Dr. Safer's report?

A As I said, I reviewed some relevant papers, yes.

Q Did you review anything that wasn't already cited in your expert report?

A I -- I reviewed the FIMS paper from 2021. I reviewed a paper by Klaver. I reviewed some data on (technical difficulty) by Tomkinson.

Q I'm sorry, the audio cut out.

A I said, I reviewed some data on youth [17] performance by Tomkinson.

I reviewed Gregg Brown's report.

Q Did you review a transcript of Dr. Brown's deposition?

Q Yeah. Did you -- so Dr. Brown had a deposition on Friday.

Have you reviewed a transcript of that deposition?

A No.

Q Okay. Is there any other additional research you conducted?

A Not that I can think of offhand.

Q Okay. So you -- you mentioned before, in response to my questions about whether you've had a deposition, some cases in which you had been a witness.

In which of those cases were you retained as an expert witness?

A I believe the -- well, I was -- none of these -- when -- when I was retained as -- I was retained in a witness in all of them, I believe.

Q Okay. So you weren't -- you weren't like a -- a firsthand witness to a traffic accident?

A No. No. I -- no. It had to do with the [18] nature of the injuries.

Q I see. So other than those three cases we discussed, is there any other case in which you've been retained as an expert witness?

A Oh. I'm sorry, yes, I have been retained by the State of Florida in a case similar to this. I'm sorry.

Q And have you submitted an expert report in that Florida case?

A I've submitted a different version of a white paper -- of the white paper that I submitted to the State of West Virginia.

Q And have you been deposed in that case?

A No.

Q Is there any other case in which you've been retained as an expert, even in a nontestifying role?

A Not that I can recall, no.

Q Okay. If -- if you recall over the course of this deposition, can you please bring that to my attention?

A Absolutely.

Q Okay. What -- what was your -- what is your hourly rate as an expert witness in this case?

A I'm being paid $650 an hour for review and $800 an hour for deposition time. **[19]**

Q And is that the hourly rate you use in the Florida case as well?

A Yes.

Q Is that your standard hourly rate for -- for whenever you appear as an expert witness?

A For local cases, no.

Q What's your hourly rate for local cases?

A I'd have to go back and look, but I believe it's somewhere around $500 an hour.

Q And -- and how did you determine that as your hourly rate?

A How did I determine what?

Q Sorry, the $650 an hour, how did you determine that as your hourly rate?

A I can't speak to that. I -- it's the -- it's -- I was -- I tried to -- to be consistent with each state that is talking to me, and that's the rate we came down on.

Q Okay. So I have some questions for you just about terminology so we can make sure we're understanding each other.

Do you know what the term "cisgender" means?

MR. FRAMPTON: Object to the form.

And, Josh, can we do our standing objection as to terminology?

[20]

MR. BLOCK: Yes, absolutely.

MR. FRAMPTON: Thank you.

BY MR. BLOCK:

Q But you can answer. Do you know what the term --

MR. FRAMPTON: Yes, go ahead and answer.

THE WITNESS: I'm familiar with the term, yes.

BY MR. BLOCK:

Q Okay. What -- what do you understand the term to mean?

A Well, the terminology is not what I use, but what I understand a cisgender individual to be is an individual who, for example, is a biologically born male who identifies as a male.

Q So if -- if I use the term "cisgender" in my questions, you can understand what I'm talking about?

A I can understand what you're talking about. I would prefer the term "natal male," but...

A I can understand what you're talking about.

Q Okay. So -- so to you -- well --

A Or "biological male."

Q But to the extent that I want to distinguish **[21]** between someone who is transgender and someone who is not, I -- I may ask you questions that -- that use the term "cisgender."

So just to confirm, I want to -- you will understand what I'm referring to when I say "cisgender"; correct?

A Yes, I will understand what you're referring to.

Q Okay. And do you know what the term "transgender" means?

A I believe I understand what you're saying, yes.

Q What -- what does it mean?

A I believe a transgender male, most likely by your definition, would be an individual that is born a certain sex but identifies as the opposite sex.

Q Okay. So if I use the word "transgender," you'll know what I'm talking about?

A Yes, if you use the word "transgender," I will know what you're talking about.

Q Do you have any objection to using the word "transgender" yourself?

A I -- I choose to use the -- the term "biological male" and "biological female." I believe that that's an

appropriate designator, but I **[22]** have -- I can understand your terminology, and I'm comfortable using it.

Q So -- so how -- so, in your words, if -- if you want -- you wanted to, you know, describe, you know, a -- a transgender woman and to distinguish between a transgender woman and a cisgender man, how would you -- how would you explain the difference between a transgender woman and a cisgender man, using your preferred terminology?

MR. FRAMPTON: Object to the form.

Go ahead and answer.

THE WITNESS: I would probably use the descriptor and just say a biological male identifying as female.

And, I'm sorry, you said cisgender what?

BY MR. BLOCK:

Q Man.

A Again, I would use the descriptor and say a biological male identifying as male.

Q Do you -- do you think that -- do you think that being transgender is a real thing?

MR. FRAMPTON: Object to the form.

THE WITNESS: Define what you mean by "real thing."

[23]

BY MR. BLOCK:

Q Well, do you think that -- do -- do you -- I think, you know -- well, what do you understand gender identity to be?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Well, I was retained in this case as a witness for sports safety, so I don't know that I was really retained to provide an opinion here, but to the extent that I understand it, I understand gender identity to mean the extent to which a person perceives themselves as being a certain sex.

BY MR. BLOCK:

Q Did you receive any -- as part of your -- well, actually, I'll come back to that. I'm sorry for jumping ahead a little bit.

What -- you've been using the phrase "biological sex." What -- what's your understanding of what that term means?

A I would look to the -- the common parlance of that, which is the biological characteristics that a person is born with that -- that identify them as male or female. And if you want to extend it to chromosomal analysis, the great majority of people **[24]** that subcategorize into XY or XX.

Q And how would you refer to the biological sex for the minority of people that don't subcategorize into XY or XX?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I'm a board-certified sports medicine physician. I'm not an endocrinologist. And even though I've studied endocrinology to some extent in my training, I -- I wasn't really retained to offer an opinion on that.

BY MR. BLOCK:

Q Okay. So you're not offering an opinion today on -- on -- an expert opinion today on -- on the definition of biological sex?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I was -- I was retained today to offer an opinion on the issue of sports safety as pertains to biological males crossing over into female sports.

BY MR. BLOCK:

Q So do you -- are you offering an expert opinion on the safety of people with DSDs, **[25]** differences of sexual development, participating in women's sports?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: My report does not speak to that specifically, no.

BY MR. BLOCK:

Q Okay. So do you know what complete androgen insensitivity syndrome is?

A I'm familiar with it, yes.

Q Okay. So you're not offering an expert opinion on the safety implications of allowing someone with complete androgen insensitivity syndrome to participate in women's sports; right?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Well, first of all, my report speaks to safety issues and whether there are risks for (technical difficulty) faster individuals to participate in pools of

athletes who don't share those same traits. It's not my job to create policy or decide which groups are more appropriate.

BY MR. BLOCK:

Q I understand that. I'm just trying to determine whether you're offering an expert opinion **[26]** on whether someone with complete androgen insensitivity syndrome, who has XY chromosomes, can safely participate in women's sports; right? You're not offering that opinion today?

A I am not.

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I -- I'm not offering that opinion, no.

BY MR. BLOCK:

Q Okay. Do you know what the term "sex assigned at birth" is?

A Do I know what the term -- can you --

Q Do you understand --

A I believe I do, yes.

Q Sure, sure.

What -- what do you understand the -- the term "sex assigned at birth" to refer to?

A I would bring that back to common parlance and just say that it's -- it's the determination that's made based on visual evidence at the time that the baby is born.

Q Okay. Thank you.

All right. Now we get to look at some documents. So if you can get your Exhibit Share **[27]** ready, I'm going to mark the first document for you, and it will, hopefully, appear in your -- your folder as Exhibit 80. Let's see if that actually works.

(Exhibit 80 was marked for identification by the court reporter and is attached hereto.)

THE WITNESS: Do I need to hit refresh on this computer?

BY MR. BLOCK:

Q You -- you might. Actually --

MR. FRAMPTON: I'll jump in. Yeah, as he adds exhibits, we're going to have to refresh for the exhibit to pop up in your folder.

Right?

MR. BLOCK: Yes.

And could we go off the record for a second? I have a question for the concierge, just about the -- the --

MR. FRAMPTON: Sure. That's fine with me.

THE VIDEOGRAPHER: We're off the record at 9:24 a.m.

(Recess.)

THE VIDEOGRAPHER: We are on the record at 9:24 a.m.

[28]

BY MR. BLOCK:

Q All right. So if you can let me know when Exhibit 80 appears in your folder.

A Okay. I see it. I'm pulling it up.

Q Great. Do you recognize this document?

A Yes. I believe that this is the declaration I signed with the State of West Virginia.

Q Great. And what's the date on the document?

A February 23rd, 2022.

Q And that's your signature along with it?

A That is my signature, yes.

Q Okay. And have you filed any other reports or declarations in this case?

A I filed a copy of a white paper that speaks to sports safety.

MR. BLOCK: So I'm going to introduce Exhibit 81, which should appear in your -- in your folder in one second.

(Exhibit 81 was marked for identification by the court reporter and is attached hereto.)

THE WITNESS: Let me figure out how to close out of this.

So is it Exhibit G?

BY MR. BLOCK:

Q Yeah. So if you --

[29]

A Yeah.

Q So if you look at the second page --

A Yes.

Q -- is that your -- your signature again, Dr. Chad T. Carlson, M.D.?

A It is, yes.

Q Okay. And is this the -- the declaration and copy of the white paper that you're referring to?

A This was executed June 22nd, 2021, so I believe that this was prior to a preliminary injunction.

Q So it's submitted in connection with opposing the motion for preliminary injunction in this case?

A Correct, yes.

Q Okay. And if you go to the next page, it -- it says, "White Paper by Dr. Chad Thomas Carlson, MD."

Do you see that?

A I do, yes.

Q And the date of that white paper is June 22nd, 2021; correct?

A Correct.

Q So that's the same day as your declaration is dated; correct?

A I'd have to -- I can look, but I -- yes, it **[30]** is.

Q Have -- are there any earlier versions of this white paper that you've authored?

A Earlier than the June 22nd version that you have here?

Q Yes.

A No.

Q Okay. So you -- did you author this white paper specifically for purposes of this litigation?

A When you say "this litigation," do you mean West Virginia's suit?

Q Yes.

A No. It just -- the -- the timing of completion of it coincided with the -- the deadline for the case.

Q Who retained you to write this white paper?

MR. FRAMPTON: Objection to form.

Go ahead.

THE WITNESS: Alliance Defending Freedom.

BY MR. BLOCK:

Q And when did they retain you to write the white paper?

A I was contacted by ADF in, I believe, February of 2020, at a time that I was president of our national academy.

[31]

Q What national academy?

A The American Medical Society for Sports Medicine.

It was, I believe, Christiana Holcomb, and she said that they had interest in retaining an expert to speak on sports safety with transgender sports for a pending litigation.

Q And you said this was in February 2020?

A Yes.

Q So about a year and a half before this white paper was finalized?

A Correct.

Q Okay. And did you -- so were you actually retained in February 2020?

A No.

Q Okay. When were you actually retained?

A It would have been towards the end of 2020.

Q And without --

A I had -- sorry.

Q No, you go ahead.

A I had made initial contact with Roger Brooks, following their -- their initial contact, and we had been scheduled to meet sometime the second week of March, and that was right when COVID exploded. I own a private practice, and our -- our volume went **[32]** to about 15 percent of year before, and so we had other concerns, so... It deferred conversation of this for a while.

Q Are things looking better now?

A Yes.

Q Good. I'm glad to hear that.

So you -- so when -- you -- you say the initial contact was from ADF to you, not you to ADF; correct?

A Correct.

Q Okay. And without revealing any contents of your communications with ADF, do you have any independent understanding of why you might have been seen as a potential expert as opposed to some other person who does sports medicine?

MR. FRAMPTON: And just quickly, as -- as -- as Mr. Block instructed you, don't reveal the substance of your conversations with folks at ADF, but to the extent you can answer the question without doing that, please do so.

THE WITNESS: Well, I can't speak to what people at ADF were thinking. I should say that I -- I believe that the introduction was made through a third party, and I -- I

believe that they probably got my name from Christian Medical/Dental **[33]** Association and their policy person, and I can't recall his name. And I think that the fact that I was head of our national organization at the time probably played into it.

BY MR. BLOCK:

Q What -- what is the Christian Medical/Dental Association?

A It's just an organization of Christian physicians and dentists. I have very little involvement with them. I pay dues periodically.

Q So you are a member of the Christian/Medical Dental Association?

A I might be. I honestly don't recall whether I'm current on my dues or not.

Q Okay. Have you read -- are you aware of the Christian Medical/Dental Association's policies with respect to transgender people?

A No, I'm not.

MR. BLOCK: Hold on. I'm going to -- if you give me half a second, I will show something to you.

This is going to pop up in your -- your folder as Exhibit 82, I believe. Let me know when you see it.

(Exhibit 82 was marked for identification by the court reporter and is attached hereto.)

[34]

THE WITNESS: It's refreshing. Hold on.

Okay. I see it.

BY MR. BLOCK:

Q Okay. Have you ever seen this document before?

A I don't believe so, no.

Q Okay. If you look at the -- the document -- here, I -- I want to give you, you know, the time, whatever time you need, to look at it, but I would like to just direct your -- your attention to -- let me scroll down myself.

So if you go to page 2 of that document, near the end, it says "Accordingly" -- do you see the -- the line that begins "Accordingly"?

A I do, yes.

Q Okay. And it says (as read):

"Accordingly, CMDA opposes medical assistance with gender transitions (sic) on the following grounds."

Do you see that?

A Yes.

Q Okay. And do you -- do you also oppose medical assistance with gender transition on biblical grounds?

[35]

MR. FRAMPTON: Object to the form and scope.

THE WITNESS: Can you clarify that question?

BY MR. BLOCK:

Q Sure. It says (as read):

"CMDA opposes medical assistance with gender transition on the following grounds."

And then it's -- there's a capital letter A, and it says "Biblical." And there's about seven different entries under -- biblical reasons for opposing medical assistance with gender transition.

And -- and my question is, do you agree with this part of this CMDA statement?

A Are you asking me to read --

MR. FRAMPTON: Objection --

THE WITNESS: -- all of this?

MR. FRAMPTON: -- to form and scope.

THE WITNESS: Because I can right now.

BY MR. BLOCK:

Q Yeah, sure.

A Okay. Give me some time.

I just want to clarify. Are you asking me if I agree with A, B, C, D, E -- and E?

Q I asked -- I'm asking you if you agree with A.

[36]

A Okay. So I've -- I've read through that.

Q Okay. And do you agree with it?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: There's a lot in there to unpack, so I -- I can't say I agree with all of that. And I was retained as a witness in this case to speak to sports safety. I wasn't retained to provide an opinion in this regard.

And again, I had no interaction, really, with CMDA as an organization.

BY MR. BLOCK:

Q Do you have any religious views about transgender people that will have informed your expert opinion in this case?

MR. FRAMPTON: Objection; form and scope.

You can answer.

THE WITNESS: I would say that my opinions in this case are informed, just like UK Sport, entirely on the science. I don't believe my religious opinions really play into this. I would view my role as providing a scientific opinion.

BY MR. BLOCK:

Q Okay. Does -- if you recall earlier, we -- we just had a discussion about, like, using the -- the word "transgender."

[37]

Do you have any religious beliefs that would preclude you from using the word "transgender"?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: No. I just -- I believe that it's best to speak with clarity, and I believe that in many circles of discussion with people who aren't familiar with these types of terms, it gets very confusing to people to keep track of what a transgender woman is or what a transgender man is. I have found that it's easier to refer to biological males and females and then refer to their gender identity.

THE REPORTER: I'm so sorry to interrupt. Mr. Frampton, I hear some background noise in your room. I don't know if there's a door you can shut.

MR. FRAMPTON: I'm sorry. This is Hal Frampton. It's -- it's -- I'm with the witness, and it's not in our room.

THE REPORTER: Okay. Kimberlee, do you know where it's coming from?

THE VIDEOGRAPHER: It looked like it was his mic.

But could we go off the record real quick? Off the record, is that all right?

MR. FRAMPTON: Sure.

[38]

MR. BLOCK: Yes.

THE VIDEOGRAPHER: Off the record at 9:41 a.m.

(Recess.)

THE VIDEOGRAPHER: We are on the record at 9:42 a.m.

MR. BLOCK: Thanks.

BY MR. BLOCK:

Q If you go to the -- the last page of this document --

A Sorry, I got to go back.

Q Actually, page 14 of the document.

A They aren't numbered, so --

Q Which --

A The last page -- the last page of text.

Q This -- no, this should be the -- it's -- it's page 14 of the PDF. If you click on the PDF with the --

A Oh, I see. Yeah. I -- I'm there.

Q Okay. So at the bottom, it says "A final comment on language."

Do you see that?

A Yes.

Q Okay. I'm just going to read this into the record. It says (as read): **[39]**

"Terms should be as descriptively accurate as possible while avoiding ideological programming. For instance, because an individual's intrinsic sex cannot be changed, and gender is essentially a biologically meaningless term or concept aside from biological sex, terms such as 'transgender identity,' as if it were an objective reality, should be replaced by 'transgender-identified, -identifying, or -identification,' which are descriptively accurate. Similarly, because 'gender transition' is not ontologically or biologically possible, more descriptively accurate terms, such as, 'attempted transition efforts,' or 'attempted transition-affirming treatments or procedures,' are more accurate and preferred."

Did I read that correctly?

A You read it correctory -- correctly, yes.

Q Okay. Thanks.

Do you think that using the term **[40]** "transgender" amounts to ideological programming?

MR. TRYON: Objection.

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: You cut out. I didn't hear the question. I'm sorry.

BY MR. BLOCK:

Q Sorry. Sorry.

Do you think that the term "transgender" is a form -- is ideological -- I'll rephrase it.

Do you think that using the term "transgender" is ideological programming?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: Again, I was consulted into this case as a board-certified physician to provide an opinion on sports safety. To the extent that I have an opinion on gender terminology, you know, I've never thought of it in that way, no.

BY MR. BLOCK:

Q Okay. And do you --

A I've never even heard that description.

Q Okay. And do you think that -- that transgender identity is not an objective reality?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: I don't believe I'm rendering an opinion on that.

[41]

BY MR. BLOCK:

Q And you're not qualified to render an opinion on that; correct?

A On whether transgender -- what was the -- restate it.

Q Transgender identity is an objective reality.

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: I don't believe I am -- I've been retained to provide an opinion on that statement, no.

BY MR. BLOCK:

Q Do you have a personal opinion on that statement?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: Define what -- what's -- define an objective reality when it comes to gender identification. Can you tell me that?

BY MR. BLOCK:

Q Well, I'm just referring to the phrasing in this document. So do you not -- do you have an --

A Restate your question one more time.

Q Sure. Do you have any personal opinions on whether transgender identity is an objective reality?

MR. FRAMPTON: Objection; form and scope.

[42]

THE WITNESS: I don't know what it means to say that -- I don't know what objective reality with respect to transgender identification even is, so I don't think I can answer that question.

BY MR. BLOCK:

Q You're not offering any expert opinions in this case on whether gender identity has any biological underpinnings, are you?

A No, I'm not. Again, I've been retained in this case as a physician to provide on safety issues with respect to individuals who have transgender identification that are crossing over into other sports.

Q So -- so in that sentence, you use the term "individuals who have transgender identification" instead of "transgender individuals," which is similar to what this document says people should use in terms of language. So I'm just trying to explore why you're using the word "transgender identification" instead of "transgender individuals."

So why are you using the term "transgender identification" instead of "transgender individuals"?

MR. FRAMPTON: Objection; form and scope. **[43]**

THE WITNESS: I -- I don't know that I can speak to that. I mean, it -- it relates, in a sense, to the term "gender identity," does it not?

BY MR. BLOCK:

Q How so?

A Well, transgender identification speaks to identification. Identification is analogous to gender identity. I'm just trying to avoid confusing terms.

Q And you think saying "transgender individuals" is a confusing term?

A I didn't --

MR. FRAMPTON: Objection --

THE WITNESS: -- say that.

MR. FRAMPTON: -- form and scope.

THE WITNESS: You did.

BY MR. BLOCK:

Q I'm sorry, you and your counsel were talking over each other.

Do you think "transgender individuals" is a confusing term?

MR. FRAMPTON: Objection; form and scope.

Go ahead.

THE WITNESS: I -- I didn't say that it's a confusing term. I don't think it's confusing. I [44] don't have a problem using it. I'm just -- I don't know.

BY MR. BLOCK:

Q So -- so I'll ask, again, an earlier question. Why do you use the phrase "transgender identification" instead of "transgender individuals"?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: I can't speak to that. I – I can't tell you why I chose that term.

BY MR. BLOCK:

Q Okay. You don't know why?

A No.

Q Okay. Have you -- have you written anything else on the topic of transgender people?

A Written?

Q Yes. Besides this white paper and this expert report.

A Are you talking about -- define "written" for me.

Q Well, I guess I'll go through different types of writing.

Have you -- have you written any articles in professional journals about transgender people or the -- touching on the topic of transgender people? **[45]**

A No.

Q Have you written anything in popular media touching on the topic of transgender people?

A No.

Q Have you given any conference presentations or talks on the topic of -- touching on the topic of transgender people?

A No.

Q Have you disseminated any written document, in any way, authored by you on the -- touching on the topic of transgender people.

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Are you speaking to e-mail?

BY MR. BLOCK:

Q Sure. Have -- have you written -- have you written e-mails on the -- touching on the topic of transgender people?

A Yes.

Q Are these e-mails to -- to Listservs?

A No.

Q Who are these e-mails to?

A So in my role as president of AMSSM and on my time on the executive committee, occasionally this issue would -- would crop up, and there were **[46]** discussions about it.

Q So I'd like, to the best of your ability, for you to recall the specific occasions on which this issue cropped up.

Can you remember any of them?

A Yep. The first time that I can recall it -- let me back up and just say that we have --

MR. BLOCK: The witness's video froze for me.

THE VIDEOGRAPHER: Yeah, he looks frozen.

Let's go off the record.

BY MR. BLOCK:

Q Sorry, you're -- you froze for -- for that answer, so I think you were just telling me the -- the first occasion of the list in which this issue cropped up.

A So I said that I was going to back up for a second and just say that our academy hosts several meetings each year, one of which is the annual meeting, and it's usually about five days long, and it's -- it's structured with different symposia that are themed. And periodically, particularly since, I don't know, 2016, maybe, when I was -- I don't -- I'd have to think what year I went on to exec, maybe it was 2017, but there had been, once in a while, inquiries by members about whether there would be a **[47]** transgender medicine symposium at the annual meeting, because there had never been one before. And so in 2018, as we were -- as my program chair and I were putting together content for the meeting, this issue briefly came up around that.

Q Was there a transgender medicine component to that symposium?

A That was -- that was for the annual meeting we had in Houston in 2019, and, no, we did not include that.

Q Why not?

A Well, there were lots of reasons, but we had a budget that we had to work from, and we already had a pretty strong sense of what we were wanting to pay for to bring in other speakers to that meeting, and I felt like if we were going to have a symposium on transgender -- on the transgender athlete, that it ought to be something that was structured with a point/counterpoint format and that we would probably want to bring in outside academicians to help create that dialogue.

Q Do most of -- do other components of the symposia have point/counterpoint formats to them?

A Often, yes.

Q What are some examples of -- of other [48] portions of the symposia that have had point and counterpoint formats?

A There's many examples, but one would be youth sport specialization versus having your child play in multiple different sports, point or counterpoint.

Q So you said there were several reasons why you didn't include a transgender medicine component of the symposium. What are some others?

A As I said, we were -- we already had a sense of what we wanted included in that meeting, and there's always topics that need to be left for future meetings, and that was --

Q Was -- sorry. Did you have a transgender medicine component of a future meeting?

A We haven't had an insight future meeting since that Houston meeting because of COVID, so -- the 2020 meeting and the 2021 meeting were canceled.

Well, actually, I want to clarify.

The 2021 meeting was done virtually, and there was a transgender component to that meeting, yes.

Q What was the transgender component?

A I can't speak to it. I -- I wasn't part of it.

Q What do you mean you weren't part of it?

[49] A I mean I didn't have anything to do with organizing it.

Q Did you attend it?

A No.

Q Why not?

A Because the meeting was virtual, and I was down in Florida with my family at the time, and we were, I believe, at a park that day.

Q Which one?

A Which park?

Q Yeah.

A I don't remember which park we were at that day, but it was -- it was either Hollywood Studios or EPCOT or Magic Kingdom. I don't know.

Q Is there a way to watch the transgender component of the virtual symposium after the fact?

A I believe for a time there is. I don't know if I -- I don't know if it's still accessible, but...

Q Do you know who the speakers were at that symposium -- at that transgender component of the symposium?

A No, I don't recall.

Q Do you recall the topic?

A You mean the specific topics within sports **[50]** and transgenderism?

Q Yeah. At that symposium.

A No.

Q Now, by the time this symposium -- this portion of the symposium occurred -- well, actually, let me step back.

Around when did this 2021 virtual symposium occur?

A In April of 2021.

Q In that -- by the time it occurred, had you already been retained by ADF?

A Yes.

Q So did you think that the content of the symposium might relate to any of the topics on which you would be opining for ADF?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I can't speak to that. I was already well into my work on the paper.

BY MR. BLOCK:

Q Did you think that the contents of the symposium might be helpful in providing you additional relevant information for you paper?

MR. FRAMPTON: Same objection.

THE WITNESS: I -- I feel like the process **[51]** that we went through to create that paper, that I went through to create that paper, was thorough, and I'm confident that we canvassed most of the available literature on the subject prior to the date of the paper being submitted.

BY MR. BLOCK:

Q You said "we canvassed." Who do you -- who do you mean by "we"?

MR. FRAMPTON: Object to the form.

THE WITNESS: I mean Alliance Defending Freedom and myself.

BY MR. BLOCK:

Q Did Alliance Defending Freedom help provide you with papers to review?

MR. FRAMPTON: Objection to the form.

THE WITNESS: When we first sat down to flesh through what this paper might look like, I met with one of the attorneys from Alliance Defending Freedom, I outlined with him what we thought might be an appropriate take on this paper, and then both of us did literature searches. I compiled what I thought was relevant for the paper.

The paper is entirely mine.

BY MR. BLOCK:

Q What do you mean by that?

[52] A That every line in that paper is my own words and thought.

Q Is every line of the February 23rd, 2022, paper also your own words and thought?

A I've reviewed every line in -- in both papers, made extensive edits through it, and it represents my own thought completely, yes.

Q All right. Well, first you said every line was your own words and thought, and then you said it represents your thoughts completely, and so I just want to get clarity.

Is every line of the February 23rd paper your own words and thought?

MR. TRYON: I'm just going to object and make sure the witness understands that any communications between him and either this office or ADF is covered by the attorney-client privilege.

MR. FRAMPTON: Yes, same -- same objection.

So we're not to discuss the substance of those communications.

Go ahead.

THE WITNESS: Can you repeat the question?

BY MR. BLOCK:

Q Yeah. Is every line of the February 23rd, 2022, paper your own words and thought?

[53] MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: The additions that were made to that paper are my additions, yes.

BY MR. BLOCK:

Q When did you first become interested on the topic of transgender women competing in women's sports?

A I -- I would say that I first became aware of it around the time that Joanna Harper had released her paper.

Q Which paper by Joanna Harper are you referring to?

A The -- the one where she published race times of transgender athletes that transitioned and -- and was comparing them to both their biological competitors and then -- and then their transgender -- was comparing race times and how they stratified both and after transition.

Q So this is her first paper?

A I -- yes. It was the first paper she published, yes.

Q And when did you read that paper first?

A I couldn't tell you. Years ago.

Q So you read it close to the time that it **[54]** first came out?

A I don't know if I -- I don't recall if I read it or if I was reading reference to it, but it would have been around that time.

Q What other reading on the topic of transgender women competing in women's sports had you done before you were first contacted by Alliance Defending Freedom?

A I don't know if it's -- it's not specific to transgenderism and sport, but McHugh's paper in the New Atlantis had come up around the issue, again, when I was at AMSSM, so that -- that had led to discussions about transgenderism.

Q It led to discussions at ASSM (sic)?

A Yeah, just with other -- other people there.

Q And what were those discussions?

A It -- well, the -- the paper had to do with the biological underpinnings of -- of gender identity.

Q How --

A But --

Q How did -- I didn't mean to cut you off. Go on.

A So to your point, it's not directly related to transgenderism and sport.

[55] Q So in what context did it arise for discussion at AMSSM, then?

A There was discussion about a paper in a non-published newsletter on transgenderism in sports, and there was discussion about the way that that paper was being presented and whether it was contextually sound.

Q So the paper was sent in a newsletter?

A The paper was submitted for publication in a newsletter.

Q In what newsletter?

A It's called The Sideline Report.

Q And who publishes The Sideline Report?

A The American Medical Society for Sports Medicine.

Q And -- and who presented the paper for -- for submission?

A I don't recall his name.

Q Do you remember what the paper said, generally?

A It was -- it was a -- again, I -- it's been years since I've read that paper, but my recollection of it is that it was somewhat skewed in terms of its ideology.

Q Skewed --

[56] A That it was -- it -- that it was not a balanced discussion of the pros and cons of transgender participation in sport.

Q So in which direction was it skewed?

A It was skewed towards more affirmative participation.

Q And so who -- who reviews the submissions to The Sideline Report?

A At the time, people on the executive committee. It was shared with them.

Q And were you on the executive committee at that time?

A Yes.

Q And who raised concerns that it was not a balanced discussion?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: As I recall, I and some others on the committee raised concerns.

BY MR. BLOCK:

Q Did you say you and some others on the committee?

A Correct.

Q And who is the person that brought the McHugh article to folks' attention?

[57] A I did.

MR. FRAMPTON: Same objection.

BY MR. BLOCK:

Q Go ahead.

A I did.

Q So had you already read the McHugh article before -- before this incident arose?

A Well, I hadn't read the entire article, because it's extremely long, but going back to what we were talking about earlier, trying to decide what a transgender symposium what point and counterpoint might look like, one of the considerations at the time was whether to bring one of those authors to, you know, what would be the 2019 meeting to provide input against -- to provide input in -- in context of that issue.

Q So around when was this discussion about The Sideline Report article? What time?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I believe it would have been sometime in early 2020.

BY MR. BLOCK:

Q All right. So -- so I have --

A I don't recall that -- I -- I don't want to [58] say that. I don't recall that offhand. I'd have to go back and look.

Q Okay. So I want to make sure I just have a complete list of incidents in which this came -- this topic related to transgender people came up for discussion.

So I have, from you, this discussion about the submission to The Sideline Report. I have, from you, this discussion in 2018 about whether or not to have a transgender medicine component to the upcoming symposium.

Are there any other times in which topics related to transgender people came up at ASSM -- or AMSSM?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I can't recall that issue coming up in others, no.

BY MR. BLOCK:

Q And so how did you become aware of McHugh's paper?

A It was all over the news at the time that it came out.

Q Where in the news?

MR. FRAMPTON: Objection to the form.

[59] Go ahead.

THE WITNESS: I can't tell you that. I get my news from lots of sources, so I can't tell you where I first heard of it.

BY MR. BLOCK:

Q Do you get your news from Ben Shapiro at all?

A No.

Q Do you view Ben Shapiro to be a reliable source of information?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I was not retained to provide an opinion there, but -- again, I was retained to provide an opinion as to the sports safety implications for transgender athletes crossing over into cisgender sporting events.

But to your point -- what -- what was your question?

BY MR. BLOCK:

Q Would -- would you view Ben Shapiro to be a reliable source of information on these matters?

A I have no --

MR. FRAMPTON: Objection --

THE WITNESS: -- opinion on that.

MR. FRAMPTON: -- to the form.

[60] BY MR. BLOCK:

Q I'm -- I'm sorry, can you -- can you say it again? Counsel and you were cross talking.

So I'll ask it again and wait for your counsel to object, and then you can answer, okay?

Do you view Ben Shapiro to be a reliable source of information on medical topics concerning transgender people?

MR. FRAMPTON: Objection to the form and scope.

Go ahead.

THE WITNESS: I have no opinion on that.

BY MR. BLOCK:

Q Well, you don't have any -- I -- I need an answer to the -- to the question. So if you can answer to the best of your ability --

A I don't know enough about Ben Shapiro's opinions to be able to state one way or the other what I think of them.

Q Okay. Do you know who Ben Shapiro is?

A Yes, I've heard of him.

Q Okay. Do you -- do you listen to him or -- or watch his shows?

A No.

Q Would you ever rely on Ben Shapiro in **[61]** providing an expert opinion?

MR. FRAMPTON: Objection to the form and scope.

THE WITNESS: Are you asking if I would rely on Ben Shapiro to provide an expert medical opinion?

BY MR. BLOCK:

Q Yes.

A Of course not.

Q So at the time that you first talked with ADF about, you know, what a white paper would look like, had you already formed an opinion on the issue?

MR. FRAMPTON: Objection; form and scope.

Go ahead.

THE WITNESS: So, you know, I -- I've been practicing sports medicine for 20-plus years now, and I have lots of experience taking care of injured athletes. And so understanding that there was perhaps the possibility of larger individuals crossing over into sports where there were smaller individuals and, you know, participating in contact sports, I had concerns, but I hadn't really fully fleshed out an opinion, no. I believed that I went into the process of data review with open eyes.

Q What does that mean, you went into the process of data review with open eyes?

[62] A That I went to the data that was culled, looking to see what the data spoke to in terms of sports safety. I didn't have a predetermined bias or view. Well, I didn't have a predetermined answer to that question, that's what I would say.

Q Now, did -- were you -- when you discussed being retained to provide this white paper to ADF, were -- were you -- did you discuss compensation at the same time?

A I don't -- I don't recall -- I don't believe compensation came up until later.

Q Do you know if you had arrived at the conclusion that it was safe for transgender women to participate, would you have received compensation from ADF for -- for work done in reaching that opinion?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: There's a lot in that question. Can you restate it, please?

BY MR. BLOCK:

Q Sure. You said that when you began your writing process, after being retained from ADF, you didn't have a predetermined view of what the question would be, and so my question is whether your compensation was in any way related to whether **[63]** your ultimate answer was that it would be safe or unsafe for transgender women to participate.

A No, the --

MR. FRAMPTON: Objection.

I'm sorry, let me do my objection.

Objection.

Answer his question.

THE WITNESS: No, to the best of my knowledge, my compensation was not tied to the determination of literature review around this subject.

BY MR. BLOCK:

Q So when you did a literature review, are you confident that you searched for everything that would support or oppose the position you're advocating for in your report?

MR. FRAMPTON: Objection; form and scope.

THE WITNESS: I'm confident that available literature, pro and con, was accessed and reviewed.

BY MR. BLOCK:

Q And are you confident that your report adequately discusses the available literature, pro and con?

A Again --

MR. FRAMPTON: Objection; form and scope.

[64] Go ahead.

THE WITNESS: -- the -- the white paper is not a comprehensive literature review on the subject. It is an assessment of how the literature speaks to the issue of sports safety, particularly. I included what I thought was relevant to that discussion.

BY MR. BLOCK:

Q So -- but in -- in your -- in deciding what to include in your white paper, understanding that you can find it specifically to the topic of safety, did you include in the white paper everything that -- you know, pro and con to your argument, or did you just quote things that -- that you thought supported your contention that it would be unsafe for transgender women to participate?

MR. FRAMPTON: Objection; form, scope.

THE WITNESS: Well, obviously I can't speak to how successful I was at -- while the final reflects that, but I believe that it was fair consideration given to what ought to go into that paper and that the appropriate relevant things that needed to be in there were in there.

BY MR. BLOCK:

Q Did you view the purpose of the white paper **[65]** to provide an overview of -- overview of both sides of the argument, or did you view the purpose of the white paper to be, you know, making a specific argument that it was unsafe and -- and just providing, you know, citations to materials that supported that argument?

MR. FRAMPTON: Objection; form and scope.

Go ahead.

THE WITNESS: I wouldn't say that the point of the argument was to argue -- or the paper was to argue that it was unsafe. It was to -- it was to lay out the evidence that says whether it was safe or not and what -- and lay out the thought process that would go into making that determination.

BY MR. BLOCK:

Q If you could go to --

A I think the underpinning of the whole thing is my background as a physician and just the thought processes that go into the practice of medicine on a daily basis when you're looking at injury risk and what -- what sorts of things factor into that. So that -- that underpins the paper before we even start.

Q And before starting on the paper, did you have any experience in working with sports injuries **[66]** related to the participation of transgender people?

MR. FRAMPTON: Objection; form and scope.

Go ahead.

THE WITNESS: Possibly. I -- I see men and women, boys and girls, every day in the office. I don't make a habit of asking them what their gender identity is. I take care of them all as well as I possibly can.

BY MR. BLOCK:

Q To the best of your knowledge, did you ever treat a sports injury for a transgender patient?

A Again, I don't make a habit of asking that question of my patients. So whether I've seen a transgender individual or not, I couldn't speak to that.

Q So you -- you have no idea one way or another whether you've treated a transgender patient?

MR. TRYON: Objection.

MR. FRAMPTON: Same objection; form and scope.

Go ahead.

THE WITNESS: I -- I may have seen and treated one or I -- I may not have. I don't ask that question of people. And I see men and women, boys and girls, in the office every day.

[67] BY MR. BLOCK:

Q Well, so, I guess, if a -- if a transgender -- if you saw a transgender patient, you wouldn't be able to tell from their physiology what their -- what their, as you say, biological sex is?

MR. TRYON: Objection.

MR. FRAMPTON: Objection; form.

Go ahead.

THE WITNESS: What do you mean by physiological form?

BY MR. BLOCK:

Q Let's say your -- a transgender -- let's say a woman comes into your office with a -- you know, a knee injury. Would -- by inspecting their knee, would you be able to tell whether or not this was a cisgender woman or a transgender woman?

MR. FRAMPTON: Objection; form and scope.

Go ahead.

THE WITNESS: Not necessarily, no.

BY MR. BLOCK:

Q Why not?

A A knee doesn't have sex-identifying characteristics to it.

Q You wouldn't be able to tell from muscle mass on the -- the patient's, you know, legs whether or **[68]** not that patient was a transgender woman or a cisgender woman?

MR. FRAMPTON: Objection; form.

THE WITNESS: I'm not sure where you're going with this. I'm not sure I understand the question.

BY MR. BLOCK:

Q Well -- well -- well, these -- so you've talked, in your paper, about physiological differences between people with male sex assigned at birth and female sex assigned at birth and about, you know, how -- you know, how stark those differences are and that they're not affected by hormone therapy, and so I guess my question is, in light of that, I find it a little surprising that -- that you would then say that you could examine or treat a sports injury and not know whether the person you're treating had a female sex assigned at birth or a male sex assigned at birth. So that's the context for my question.

A Well, I think the -- the initial --

MR. FRAMPTON: Hold on.

Objection to the form.

MR. TRYON: Objection.

MR. FRAMPTON: Go ahead.

THE WITNESS: The initial question was **[69]** whether I had ever treated transgender individuals, and what I told you was that I try to view my patients as

the individual in front of me. I don't routinely ask them what their gender identity is.

If you're asking me if anecdotally I could identify a, to use your language, trans woman if I was doing a knee exam, I suppose I could, but I can't speak to that, and it's far afield of why I was retained in this case.

BY MR. BLOCK:

Q So -- but to the best of your knowledge, you don't know one way or another whether or not you've ever treated a transgender patient?

MR. FRAMPTON: Objection; form.

Go ahead.

THE WITNESS: To the best of my knowledge, I don't know whether I've treated a transgender patient, no.

BY MR. BLOCK:

Q Did you have any interactions with ADF before you were first contacted as potentially being retained as an expert?

A No.

Q Have you provided any testimony in support of any legislation related to transgender people?

[70] A No.

Q Have you provided any testimony in support of legislation similar to the legislation challenged in this case?

A What are you asking?

Q Well, yeah, I -- I -- I'm just trying to make sure I cover all the bases of my question.

And so I've -- I've -- it has been argued in this case that the statute at issue here, H.B. 3293, is not about transgender people, and so I -- I didn't want you to answer my question based on a similar type of distinction.

So -- so my question is, did you ever testify in support of any legislation that would have the affect of precluding transgender people from participating on sports teams consistent with their sex assigned -- with their gender identity?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I don't believe that I have ever provided testimony to any legislative committee, pending -- or pending legislation around issues similar to what we're talking about today.

BY MR. BLOCK:

Q Thank you.

[71] MR. BLOCK: I -- I'm okay continuing, but do you need a break?

MR. FRAMPTON: We're at about an hour and a half. It's -- it's up to you, if you want five minutes or if you want to go for another half hour or whatever.

THE WITNESS: Is this a good break point for you, or do you --

MR. BLOCK: Either way. I can break in half an hour or I can keep going.

THE WITNESS: I can use the restroom.

MR. BLOCK: Okay. So --

MR. FRAMPTON: Then let's do five minutes.

MR. BLOCK: Great. See you in five.

MR. FRAMPTON: All right. Thank --

THE VIDEOGRAPHER: We're off -- off the record at 10:27 a.m.

(Recess.)

THE VIDEOGRAPHER: We are on the record at 10:34 a.m.

BY MR. BLOCK:

Q Good morning again. I just have some questions about your -- your training as related to transgender people.

To the best of your recollection, as part of **[72]** your formal education for your undergraduate degree, did you ever take any courses regarding transgender people?

MR. FRAMPTON: Objection; form.

Go ahead.

THE WITNESS: To the best of my recollection, I never took a course in trans- -- affecting -- or reflecting transgender people in undergraduate, no.

BY MR. BLOCK:

Q And did you ever conduct any research concerning transgender people as an undergrad?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: No, I never conducted research as an undergraduate on transgender people.

BY MR. BLOCK:

Q And then as part of your formal education for your M.D., did you ever take any courses regarding transgender people?

MR. FRAMPTON: Object to the form.

THE WITNESS: No. There were no courses on transgender people offered during my training in medical school.

BY MR. BLOCK:

Q And did you -- did you ever conduct any [73] research concerning transgender people in medical school?

MR. FRAMPTON: Object to the form.

THE WITNESS: No, I never conducted research on transgender people in medical school.

BY MR. BLOCK:

Q Okay. And in -- in your residency, did you receive any training related to transgender people?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I can't recall offhand if there were lectures on that subject during the time that I was there.

To the best of my recollection, the answer to that is no.

BY MR. BLOCK:

Q And in your fellowship, did you receive any training related to transgender people?

MR. FRAMPTON: Same objection.

THE WITNESS: Again, to the best of my recollection, I do not recall specific training on the transgender athlete during my fellowship.

BY MR. BLOCK:

Q So you're not -- you're not an expert in the treatment of transgender people; correct?

[74] MR. FRAMPTON: Object to the form, scope.

Go ahead.

THE WITNESS: As I said, I'm a board-certified sports medicine physician. I've been retained in this case to offer an opinion on sports safety. I'm not a board-certified endocrinologist.

BY MR. BLOCK:

Q Okay. So I -- I just asked -- I need to define the scope of the opinions you're offering.

So you're not -- you -- you are not an expert in the treatment of transgender people; correct?

MR. FRAMPTON: Object to the form.

THE WITNESS: I do not treat transgender -- I -- I do not have training in the treatment of transgender people. I am not a board-certified endocrinologist.

BY MR. BLOCK:

Q And -- and you are not an expert in the treatment of transgender people; correct?

A Define --

MR. FRAMPTON: Sam objection.

THE WITNESS: Define "treatment" for me.

BY MR. BLOCK:

Q Medical care for transgender people.

[75] MR. FRAMPTON: Same objection to the form.

Go ahead.

THE WITNESS: I would be considered an expert for the sports medicine care of an injured athlete who happens to be transgender.

BY MR. BLOCK:

Q Okay. So --

A I'm not an -- I am not a board-certified endocrinologist. So if your speaking to hormonal manipulation, then no.

Q And you're not -- you're not an expert in mental healthcare for transgender people; correct?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Well, in the context of the work that we do with patients every day, we have to take into consideration mental health, so it touches on what I do every day.

BY MR. BLOCK:

Q How so?

A The -- I treat the person in front of me and whatever they're bringing into the room.

Q So you're -- you're not an expert in the treatment of gender dysphoria, in particular, are you?

[76] A Define "gender dysphoria."

Q It's the medical condition recognized in the DSM-V.

Do you -- do you know what the DSM-V is?

A I'm familiar with it, yes.

Q Okay. So are -- are -- are you a -- an expert in mental healthcare for treating the condition of gender dysphoria as defined in the DSM-V?

A I am a board-certified sports physician who has been retained to provide information on safety in athletes, some of whom may be transgender.

Q Okay. But you are not -- you have not been retained to provide an expert opinion on the treatment of gender dysphoria; correct?

A Correct.

Q Okay. If we go down to -- if you would look at Exhibit 80, please. That's your expert report.

A Exhibit 80, you said?

Q Yeah.

A Okay.

Q And if you go to your abbreviated CV, which is, you know, the last three pages.

A Okay.

Q And if you go to -- it's the paginated page [77] 73 at the bottom. There's a section of your CV that says "Special Qualifications."

Do you see that?

A I do.

Q Okay. I just have a couple of questions about -- about this.

The -- the first entry under "Special Qualifications" is "Prior legal consulting work in cases with both local and national reach."

Do you see that?

A Yes.

Q Okay. What are the cases with national reach that you're referring to?

A This one.

Q Any others?

A The -- as I said, I've been retained in the Florida case.

Q Okay. So further down, it says -- this is about, like, the seventh bullet point -- it says (as read):

"Extensive experience speaking to large national groups on issues pertaining to sports medicine, including but not limited to:"

And then there's a list of things.

[78] Do you -- do any of the topics you've spoken on include anything about transgender people?

A No, I have never --

MR. FRAMPTON: Objection to form.

Go ahead.

THE WITNESS: In my role as a sports physician, I have not spoken on the topic of transgenderism in sports.

BY MR. BLOCK:

Q In -- in any other role, have you spoken on the topic of transgendered people in sports?

A No.

Q Now, the -- the second to last sub-bullet point of the things you've spoken of says "Advocacy in Sports Medicine."

Do you see that?

A Yes, I do.

Q When you give speeches on the topic of advocacy in sports medicine, what do you talk about?

A So prior to being on executive, I was -- I served two terms on the AMSSM's board of directors, and I became noted as somebody who was involved in public policy. And I guess I'd define that by advocating for sports medicine issues in the -- in the public sphere.

[79] So during the time that I was on executive, we interviewed and hired our first lobbyist. We developed a state by state network of physician members who would inform us of legislative issues going on around the United States. We were involved in some creation of legislation. That's -- that's the sort of advocacy that I'm talking about.

So -- so the advocacy would be teaching other physicians how to advocate for sports medicine issues in the legislative arena.

Q So what's an example of advocating for sports medicine issues?

A I helped Tom Latham write a bill that would -- that clarified legal questions about physicians who took care of teams across state lines and didn't have licensure in the state that they were traveling into, and that bill passed the U.S. Congress and was signed by President Trump.

Q Does AMSSM have any official position on the participation of transgender athletes in sports?

A I don't believe they do.

Q Does AMSSM issue official positions on -- on topics?

A Occasionally, yes.

Q Do you know whether AMSSM ever had any **[80]** discussions or debates about whether to form an

official position on the topic of transgender athletes participating in sports?

A To the best of my recollection, not that specifically, no.

Q Anything -- to the best of your knowledge, has AMSSM taken -- had any discussions about taking an official position in any other topic related to transgender people?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: There was a position statement several years ago on mental health issues in athletes, and I can't recall offhand whether the transgender athlete was referenced to in that paper, but I think it was, possibly. I'm not sure.

BY MR. BLOCK:

Q And were you involved in those discussions at all?

A No. I was on executive at the time, so drafts of those always came across for us to review, but I don't recall the specifics of that paper.

Q Going back to the -- the 2021 AMSSM conference, why is it that you didn't have any involvement in planning for the sessions related to [81] transgender medicine?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: Because the -- the format on executive is that you're elected to a four-year term. And your first year, you're the second vice president. Your second year, you're the first vice president. Your third year, you're the president. The fourth year, you're the

immediate past president. All four years, you're a voting member of executive. The second vice president is responsible for planning an upcoming annual meeting.

So those conversations that I was telling you about occurred at the time that I was second vice president and working on formulating what would be the Houston meeting.

BY MR. BLOCK:

Q And so other -- so you didn't have discussions about the meetings other than that year when you were the second vice president, is that what you said?

MR. FRAMPTON: Objection to form.

THE WITNESS: My responsibility was for the 2019 annual meeting.

///

[82] BY MR. BLOCK:

Q Okay. And so you weren't involved in discussions for planning for the 2021 meeting?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: No, I was not.

BY MR. BLOCK:

Q Okay. So the 2021 -- actually, let me just introduce another exhibit. Actually, I'll do it later.

Let's go to your -- Exhibit 81, which is your June 22nd, 2021, report and white paper.

A Did you say 81?

Q Yes. It's the document that says "Exhibit G" at the top, and then it is your declaration from June 22nd, 2021.

A Okay.

Q Do you have that in front of you?

A I do.

Q Okay. So in this June 2021 white paper, do you express any opinions about whether prepubertal boys have an athletic advantage over prepubertal girls?

A I don't want to overstate. I can't recall offhand, but I -- I don't think the focus of that [83] paper included prepubertal girls or boys.

Q Were they discussed at all?

A I can't recall.

Q If you can turn to, you know, page 7, just referring to the -- the document's pagination, not the -- not the PDF pagination, in -- in -- at the very top of page 7. Let me know when you get there.

A Okay. I'm there.

Q Okay. So there's sub -- subparagraph D.

Do you see that?

A Yes.

Q Okay. Subparagraph D says (as read):

"Current research supports the conclusion that suppression of testosterone levels by males who have already begun puberty will not fully reverse the effects of testosterone on skeletal size, strength, or muscle hypertrophy, leading to persistence of sex-based differences in power, speed, and force generating capacity."

Did I read that right?

A It's "hypertrophy," but yes.

Q All right. Good. My second question would [84] be did I pronounce that word right.

A Close.

Q "Hypertrophy"?

A "Hypertrophy."

Q Okay. Does that -- in this paragraph, do you say anything about athletes before puberty?

A That paragraph references males who have already begun puberty.

Q And there's no reference there to males before puberty, is there?

A No.

Q Okay.

A There is not.

Q And now if we go to paragraph -- if we go to page 18 -- I'm sorry -- paragraph 18, page 11, of the same document.

A Same pagination?

Q Yeah. So -- yeah. So paragraph 18. That's the paragraph that begins with "External risk factors."

A Yes, I see.

Q And if you go five lines from the bottom, there's a sentence that begins with "To the latter point."

A Uh-huh.

[85] Q Okay. It says (as read):

"To the latter point, children don't play contact sports with adults and, as has already been discussed, after the onset of puberty, men and women compete in categories specific to their own biological sex."

Do you see that?

A Yes, I do.

Q And I've read that correctly?

A You did.

Q Okay. And so this sentence also refers to men and women competing in -- I'll say this again.

You don't discuss anything about people before puberty in this sentence, do you?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: No, I don't.

BY MR. BLOCK:

Q Okay. Why did you say "after the onset of puberty, men and women compete in categories specific to their own biological sex"?

A Well, that was probably overstated. It -- those categories clearly exist prior to puberty as well.

[86] Q Why -- why did you include the words "after the onset of puberty"?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I believe because the divisions are consistent -- are most consistent after puberty.

BY MR. BLOCK:

Q And every line of this paper is your own words and thought, right?

A Correct.

Q Okay. And so you thought it was relevant to include the words "after the onset of puberty" in this sentence; correct?

MR. FRAMPTON: Objection; form.

Go ahead.

THE WITNESS: Yes. For example, six-year-olds will often play soccer together, boys and girls.

BY MR. BLOCK:

Q And do you think that that is a threat to the safety of the girls?

MR. FRAMPTON: Objection to the form.

THE WITNESS: I didn't say that.

BY MR. BLOCK:

Q Well, I'm -- I'm asking you.

[87] Is -- are six -- when six-year-old boys and six-year-old girls play soccer together, is that a threat to the safety of those six-year-old girls?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: Generally, when six-year-olds play soccer together, there is not high risk to --

BY MR. BLOCK:

Q I'm sorry, I -- I didn't hear the end of your sentence.

A I said --

MR. FRAMPTON: Well, let me -- objection to the form.

Go ahead and answer the question.

THE WITNESS: Six-year-olds play soccer together. Their risks are -- the risk of injury, as a group, is less.

BY MR. BLOCK:

Q Do you think the -- the risk is increased when boys play?

A To the extent that boys are faster than girls, there could be increased risk. The overall speed and mass of six-year-olds is such that the absolute risks are minuscule.

Q Okay. Are you providing an expert opinion [88] today on the safety implications of allowing prepubertal boys and prepubertal girls to play sports together on the same team?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I'm providing an opinion on the safety issues of boys and girls playing together on the same team, including prepube- -- the prepube- -- the prepubertal population.

BY MR. BLOCK:

Q So -- so you are -- you are also offering testimony today on the safety of prepubertal boys and prepubertal girls playing on the same team?

A I'm offering an opinion on safety as it -- when -- particularly when boys cross over into girls' sports, play on teams that are designated as girls' teams, and those -- and the issues there have to do with retained differences.

Q Okay. So just focusing on prepubertal population -- okay, so nothing about after puberty, just focusing on prepubertal population -- are -- you are offering testimony that it -- there are safety risks of -- well, I'll take that back.

Just focusing on the prepubertal population, are you offering testimony that it is not safe for **[89]** prepubertal boys to play on -- on teams designated for prepubertal girls?

MR. FRAMPTON: Objection to the form.

THE WITNESS: I believe that there is a safety risk when -- that there can be a safety risk when prepubertal boys cross over and play onto girls' teams, yes.

BY MR. BLOCK:

Q Is there a safety risk when prepubertal boys and prepubertal girls play on coed teams?

A Define a -- well, what coed team are you talking about?

Q Well, a team that --

A Talking about -- are you talking about recreational teams or competitive leagues? What are you talking about?

Q Do you -- do you see a distinction between the two?

A Yes, I do.

Q Okay. So do you think -- are you testifying that there's a safety risk when prepubertal boys and prepubertal girls play on coed recreational teams?

MR. FRAMPTON: Objection to the form.

THE WITNESS: So recreational teams are unique in that they're primarily designed for **[90]** enjoyment. They're not primarily stratified for purpose of

competition. So oftentimes the rules in these leagues are altered to promote safety.

MR. BLOCK: So can you --

Can the court reporter read back my question?

THE REPORTER: Yes.

(Record read.)

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: There -- there could be safety risks with coed participation, yes.

BY MR. BLOCK:

Q On recreational teams?

A It depends on how the sport is structured, but yes.

Q So you're comfortable saying when six-year-olds play soccer together, the safety risks are minuscule. Is that true when seven-year-olds play -- prepubertal boys and girls play soccer together?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I couldn't speak to that.

BY MR. BLOCK:

Q But you can speak to six-year-olds?

[91] MR. FRAMPTON: Same objection.

THE WITNESS: I have.

I thought I answered that question.

BY MR. BLOCK:

Q Why -- why can you speak to the safety implications of six-year-olds, but not seven-year-olds?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: As boys age, they develop skill sets, and those evolve year to year.

BY MR. BLOCK:

Q So --

A I -- I cannot speak to a peer-reviewed study that designates age six from age seven, no.

Q So the difference between, you know, six and seven or, you know, six and eight is that the boys are developing skill sets that they didn't have when they were younger?

A In part.

MR. FRAMPTON: Objection to the form.

BY MR. BLOCK:

Q Can you repeat your answer?

MR. FRAMPTON: Yeah, my objection is noted.

Go ahead and repeat your answer.

[92] THE WITNESS: In part.

BY MR. BLOCK:

Q Why -- what's the other part?

A Well, there are retained -- there are biological differences from the beginning, and then those biological differences start to combine with additional distincters that begin to lead to additive risk.

Q All right. But -- but those additional distincters are a result of them acquiring additional skills?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: Well, define "skills." If by "skills" you mean they're becoming faster, they're starting to become stronger, then yes.

BY MR. BLOCK:

Q Well, you know, I'm trying to -- what did you mean when you said develop additional skills a couple of questions ago?

A Well, if you look at data on youth, in elementary-aged youth, there's several studies out there looking at population data, and they -- they come to pretty consistent findings, which is that boys outperform girls in measures of strength and **[93]** speed and girls are generally more flexible. And the findings --

Q Why --

A -- are pretty consistent from region to region and from investigator to investigator.

Q And why didn't you include a discussion of that in -- in this June 2021 paper?

A I referenced Dr. Brown's paper, and he goes through that fairly extensively.

Q Well, do you reference Dr. Brown in this June 2021 paper?

A No.

Q Okay. So why didn't you discuss prepubertal boys and girls in this June 2021 paper?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: That wasn't the focus of -- of the paper. The focus of that paper was primarily the effect of testosterone on athletic development.

BY MR. BLOCK:

Q Why did you make that the focus of your June 2021 paper?

MR. FRAMPTON: Object to the form.

THE WITNESS: I don't recall offhand what specifically went into that decision.

[94] BY MR. BLOCK:

Q Can you recall what generally went into that decision?

MR. FRAMPTON: Same objection.

THE WITNESS: I would say the same thing.

BY MR. BLOCK:

Q So you -- you don't know why you decided to focus on testosterone, you know, beginning with the onset of puberty for your June 2021 paper?

MR. TRYON: Objection.

MR. FRAMPTON: Same objection.

THE WITNESS: I -- I -- I can't recall specifically why I excluded the prepubertal population from that -- that paper.

BY MR. BLOCK:

Q If we go to page -- to paragraph 40, on page 21 of the same document.

THE WITNESS: Let me know when you're there.

MR. FRAMPTON: Sorry, Josh, you said page 40?

MR. BLOCK: Paragraph 40, page --

MR. FRAMPTON: Paragraph 40. Thank you. I'm so sorry.

THE WITNESS: I think he did say page 40.

Hold on.

Okay.

[95] BY MR. BLOCK:

Q If you go -- one, two, three, four, five -- seven -- seven or eight lines down, there's a sentence that begins with "All of us."

A Okay.

Q That sentence says (as read):

"All of us are familiar with basic objective physiological differences between the sexes which become apparent after the onset of puberty, and persist throughout adulthood."

Did I read that right?

A You did.

Q And this sentence, again, is talking about things that happen after the onset of puberty; correct?

A Correct.

Q And there's nothing in this sentence referring to prepubertal kids; correct?

A That wasn't the focus of this paper, so yes.

Q Okay. Now let's actually go to page 40, paragraph 79. Let me know when you're there.

A I'm there.

Q So after -- in the middle of the paragraph, after the parenthetical, that cites to Hilton, **[96]** DeVarona, and Harper, there's a sentence that begins with "As a medical doctor."

Do you see that?

A I do.

Q Okay. So the -- it says (as read):

"As a medical doctor, I will focus on those" --

I'll read this again, sorry. (As read):

"As a medical doctor, I will focus on those specific sex-based characteristics of males who have undergone normal sex-determined pubertal skeletal growth and maturation that are relevant to the safety of female athletes."

Did I read that right?

A Yes.

Q Okay. And so -- so this June 2021 paper is focusing on sex-based characteristics of males who have undergone normal sex-determined prepubertal skeletal growth and maturation?

A Correct.

Q Why did you focus on people who have undergone normal sex-determined prepubertal skeletal growth and maturation?

[97] A Well, I --

MR. FRAMPTON: Objection to form.

Go ahead.

THE WITNESS: I thought you asked me that already, and I thought I answered that I -- I can't recall what the

reason was for specifically focusing on adolescent, postadolescent, over prepubertal.

BY MR. BLOCK:

Q You don't -- do you have -- you didn't have any background, medical training, that would, you know, provide you information on why focusing on changes that occur during puberty would be important?

MR. TRYON: Objection.

MR. FRAMPTON: Objection to the form. 11:08:40

THE WITNESS: I already answered that question. I think my last answer was best -- or my first answer was best, but if you want me to answer again, I will tell you again that I don't remember why postadolescent or prepubertal -- or the pubertal phase was focused on exclusively.

BY MR. BLOCK:

Q All right. Now let's turn to your expert report dated February 23rd, 2022. So that's Exhibit 80.

[98] A Okay. I've got it.

Q So if you go to paragraph -- so page 9, paragraph 11 C.

A Okay.

Q And in the middle of paragraph 11 C, the -- there's a sentence that begins with "Even before."

A Correct.

Q So there you say (as read):

"Even before puberty, males have a performance advantage over females in most athletic events."

Correct?

A That is correct.

Q And that sentence wasn't contained in your first version of your white paper from June 2021; right?

A As I said, that was not the focus of that paper, so that's correct.

Q Okay. Why did you decide to include it in this paper? 11:10:48

A When --

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: When I was retained by West Virginia in this case, discussions between **[99]** attorneys at ADF and attorneys at West Virginia --

MR. TRYON: I just want to insert here, please don't -- again, this is attorney-client -- don't get into attorney-client protected information. So discussions with counsel are protected.

MR. FRAMPTON: Right.

MR. TRYON: But to the extent that you can answer that without disclosing that – those communications, you may do so.

MR. FRAMPTON: Yeah, same – same instruction.

THE WITNESS: Okay. So I -- I -- I guess what I would say is that the initial report was filed -- was created prior to being retained by the State of West Virginia and the updated paper that you have was updated to include the prepubertal population because my understanding is that the defendant in this case is -- is young.

BY MR. BLOCK:

Q Before you were asked to update the white paper, did you have an expert opinion regarding the safety implications of prepubertal boys and girls playing together?

MR. FRAMPTON: Objection to the form.

[100] THE WITNESS: Many of the considerations that exist in that first paper are relevant to the prepubertal group. I suspected that they would probably hold, and I do believe that they hold.

BY MR. BLOCK:

Q So -- so before you were asked to update your paper, you had an expert opinion that it would be unsafe for prepubertal girls and play -- and boys to play together?

MR. FRAMPTON: Objection to the form.

THE WITNESS: As I said, I suspected that there was probably risk in that population as well.

BY MR. BLOCK:

Q Now, you talked about the literature review you conducted for creating your white paper. What sort of literature review did you conduct for the process of updating the right -- the white paper to discuss prepubertal kids?

A I went more into the picture on population testing, looking at what differences in performance were between boys and girls. I looked at international and national performance records, databases. I looked at ratified standards for -- that had been determined through, for instance, the presidential physical fitness test.

[101] Q How did you identify what sources to look at?

A PubMed. I own -- well, PubMed.

Q Did you review any sources that were not included in Dr. Brown's 2022 expert report?

MR. FRAMPTON: Objection to the form.

THE WITNESS: I couldn't speak to that because I haven't cross-referenced his bibliography to mine.

BY MR. BLOCK:

Q In paragraph 16, page 12 of your report, could you turn to that?

A Yes, I'm there.

Q So -- so right before paragraph 17, the -- the final sentence in paragraph 16, it says (as read):

"Although most easily documented in athletes who have gone through puberty, these differences are not exclusively limited to post-pubescent athletes either."

Did I read that right?

A You did.

Q Okay. And how -- can you explain to me how these differences are most easily documented in athletes who have gone through puberty?

[102] A Of course.

The differences between men and women with regards to strength and -- both upper and lower body -- and muscle mass and power increase, there's -- there's greater separation between the sexes after puberty has occurred. That doesn't mean that there's no difference prior.

Q But you -- you say it's most easily documented. What did you mean by "most easily documented"?

MR. FRAMPTON: Object to the form.

MR. BLOCK: I'm sorry, what's the -- what's the form objection to that?

MR. FRAMPTON: The objection is I – I don't -- I don't think you've properly stated what he said.

BY MR. BLOCK:

Q What -- what did you mean when you said "most easily documented"?

A Meaning that the -- that wider differences are more apparent than narrow differences.

Q So paragraph 17 says (as read):

"I have reviewed the expert declaration of Gregory A. Brown, Ph.D., FACM of February 23, 2022, **[103]** provided in this case..."

Correct?

A Correct.

Q Okay. And the date of this document that we're reading from is also February 23rd, 2022; correct?

A Correct.

Q Okay. So how did you read Dr. Brown's expert declaration dated the same day as your declaration?

A That was provided to me by attorneys at ADF.

Q Did you read Dr. Brown's declaration after it had already been signed?

A I can't speak to when he signed that, so I don't know the answer to that question.

Q Did you review Dr. Brown's declaration on February 23rd, 2022?

A I don't recall when I reviewed it.

Q Now, the sentence continues -- I'll just read it from the beginning again.

(As read):

"I have reviewed the expert declaration of Gregory A. Brown, Ph.D., FACM of February 23, 2022, provided in this case, which includes evidence from a wide [**104**] variety of sources, including population-based mass testing data, as well as age-stratified competition results, all of which support the idea that prepubertal males run faster, jump higher and farther, exhibit higher aerobic power output, and have greater upper body strength (evidenced by stronger hand grip and better performance with chin-ups or bent arm hang) than comparably aged females."

Did I read that right?

A You did.

Q Okay. And then you go on to say that this is documented in Presidential Fitness Test, Euro Fitness Test and additional mass testing data from the UK and Australia; correct?

A Correct.

Q Now, are those fitness tests what you were referring to earlier when you were discussing additional research you had done to update your white paper?

A Yes.

Q Okay. Do you actually cite to those fitness [**105**] test results in the bibliography of this white paper?

A I don't believe that that's in there.

Q Okay. So does this refresh your recollection about whether you -- about how -- I'll take this -- I'll -- strike that. I'll ask again.

Do you -- did you become aware of these differences in test results from reading Dr. Brown's declaration?

A No. I had been familiar with some of those papers prior.

Q When did you become familiar with them?

A In the course of -- likely in the course of initial review, on -- on PubMed searches.

Q Can you turn to page 61 of the document? That's your bibliography.

A Okay.

Q Can you point out to me the sources in the bibliography addressing performance differences between -- or -- or differences in body composition between prepubertal girls and prepubertal boys?

A We're speaking to performance differences; correct?

Q Or physiological differences.

A Papers that I referenced are not in there.

[106] Q Okay. Why not?

A I reviewed -- papers that I had reviewed beforehand were referenced within Dr. Brown's report.

Q On the -- if -- going back to paragraph 17, which is -- well, if you could go back to paragraph 17. So that's pages 12 and 13.

12 and 13. Hopefully, I said that correctly.

If you could go to the end of paragraph 17, which is on page 13.

A Okay.

Q Let me know when you're there.

A I'm there.

Q Okay. It says (as read):

In sum, a large and unbridgeable performance gap exists between the" -- "exists" -- Let me try that again. I need another cup of coffee.

It says (as read): "In sum, a large and unbridgeable performance gap between the sexes is well-studied and equally well-documented, beginning in many cases before puberty."

[107] Do you see that sentence?

A I do.

Q Okay. Is -- do you believe that the performance gap before puberty is unbridgeable?

A No, that's not what I said.

Q That's why I'm asking the question.

A No.

Q Do -- do you --

A What -- what it says is large and unbridgeable performance gap between the sexes is well-studied beginning in many cases before puberty.

Q Okay. In -- in many cases, is there an unbridgeable performance gap before puberty?

A I believe, based on the -- I believe if you look at the -- of how sex-based records break down, that we're talking about upper-end performance that it reflects, in -- as I said, in many cases, an unbridgeable gap.

Q How about average differences between boys and girls before puberty, is the gap so large to be unbridgeable?

A Not in all cases, no.

Q In which case is -- is it large enough to be 24 unbreakable?

A Well, for example, boys can outperform girls **[108]** as early as age seven and ups at between 100 and 1200 percent improved.

Q And do you have an expert opinion on whether or not those differences are attributable to innate physiological characteristics?

A As -- as a physician who works with athletes of all ages, every day, I do have an opinion that biology plays a role in the measured performance differences that exist in the literature with respect to prepubertal children, yes.

Q So you said biology plays a role.

Is biology the exclusive thing that plays a role?

A I'm not aware of any peer-reviewed study that looks at the exact contribution of biology versus other causes when it comes to performance in prepubertal children.

Q Are you -- are you aware of any data measuring the performance of transgender girls before puberty in -- in athletic contests or physical fitness studies?

A I'm not aware of any literature looking specifically at prepubertal transgender girls in -- in their performance of sport, no.

Q Just to clarify the scope of your expert **[109]** opinions in this case, are you providing an expert opinion in this

case regarding athletic advantages between males and females?

MR. FRAMPTON: Objection; form.

Go ahead.

THE WITNESS: I am providing an opinion in this case on the safety issues that exist when those of one sex cross over and participate in sports.

BY MR. BLOCK:

Q So -- so your expert opinion in this case is exclusively about the safety issues; correct?

THE VIDEOGRAPHER: I believe Dr. Carlson's Internet might have been having a problem. You might need to repeat your question.

MR. BLOCK: Sure.

BY MR. BLOCK:

Q So your expert testimony in this case is exclusively about the safety issues involved when males and females play together; right?

MR. FRAMPTON: Objection; form.

Go ahead.

THE WITNESS: It is about the safety issues that are involved when males and -- when males cross over into women's sports particularly, and some of that opinion relates to differences in certain **[110]** variables, such as speed.

BY MR. BLOCK:

Q You're not providing an expert opinion on the fairness of allowing transgender girls to participate on girls' teams; right?

A I'm not providing an opinion on fairness as relates to transgender participation, no.

Q If you could go to paragraph 21 of your report -- it's on page 15. So about four lines from the top -- there's a sentence that begins with "To the latter point."

A "To the latter point, children don't play contact sports..."?

Q Yeah. So it says (as read):

"To the latter point, children don't play contact sports with adults and, in a great majority of cases, men and women compete in categories specific to their own biological sex."

Do you see that?

A I do.

Q Okay. And so that sentence has been changed from the version of that sentence that appeared in your June 2021 report; correct?

[111] A I can't recall. I'd have to go back and look at that report.

Q Okay. Let's go back and look at it. It's on page 11 of your earlier report.

A Okay.

Q All right. So on page 11 of your report, paragraph 18, a couple lines from the bottom, it says (as read):

"To the latter point, children don't play contact sports with adults and, as has already been discussed, after the onset of puberty, men and women compete in categories specific to their own biological sex."

Do you see that?

A I do.

Q Okay. And so then in your February report, the -- the words after "the onset of puberty" are taken out, and the words "in the great majority of cases" are -- are put in; is that right?

A Correct.

Q Okay. And so why did you make that change?

A Well, I believe, as we had discussed, the focus on the first draft was primarily in the adolescent age and later, and the second draft was **[112]** expanded slightly to include consideration of the prepubertal athlete. And since sport -- gender -- or sex stratification in youth teams is still widely prevalent, they altered those words.

Q Are you providing an expert opinion in this case about transgender girls and women who never go through endogenous puberty as a result of puberty blockers followed by gender-affirming hormones?

MR. FRAMPTON: Objection; form.

THE WITNESS: Can you -- you ask that one more time?

BY MR. BLOCK:

Q Yeah. So are you providing an expert report -- excuse me, I'll say it again.

Are you providing an expert opinion in this case about transgender girls and women who never go through endogenous puberty as a result of taking puberty blockers followed by gender-affirming hormones?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: So to the extent that they are prepubertal biological males, yes.

BY MR. BLOCK:

Q How about to the extent that they have **[113]** received puberty blockers followed by gender-affirming hormones to stimulate the equivalent of a typically female puberty?

MR. FRAMPTON: Objection; form.

THE WITNESS: My opinion in this case extends to sports safety issues in both the prepubertal and the pubertal population.

BY MR. BLOCK:

Q Okay. Does it address safety issues of the participation of transgender girls and women who receive puberty blockers and then receive gender-affirming hormone therapy that has effects on bone and muscle structure and causes them to develop, you know, typically female hips and -- and things like that?

MR. FRAMPTON: Objection to form.

MR. TRYON: Objection; form.

THE WITNESS: That's -- that's a complex question. Can you unpack that a little bit?

BY MR. BLOCK:

Q Sure. So you, so far -- in response to my questions about people who have blockers, you've equated transgender girls who have blockers to prepubertal boys and someone who has -- a transgender girl who has puberty blockers and then **[114]** receives gender-affirming hormones, you know, stimulates a lot of other changes that prepubertal boys don't have; correct?

MR. FRAMPTON: Objection to form.

THE WITNESS: I don't --

MR. FRAMPTON: Go ahead.

THE WITNESS: I don't think that that's been widely looked at. I know that there's -- I – I don't think that that's been widely looked at or extensively looked at, as to what the effects of that treatment would be on athletic performance.

BY MR. BLOCK:

Q Are you providing an expert opinion on what the effects of that treatment would be on safety?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I'm providing an opinion on the potential effects on safety of a biological male, even at age 10 or 11, pick your age, of crossing over into a woman's sport and participating in contact and collision sports.

BY MR. BLOCK:

Q All right. That's not the answer to my question. I -- I asked are you providing an expert opinion on the safety of -- of some -- a transgender **[115]** girl who has received blockers and then gender-affirming hormones participating on girls' sports teams.

A Am I -- I -- I am providing an opinion on the potential safety issues of a hypothetical individual like this participating on girls' sport team -- girls' sports teams, yes.

Q What -- what's your basis for providing an expert opinion regarding a transgender girl who has received

blockers and then gone on to receive gender-affirming hormones?

A That would have to do with whether or not there are differences between the sexes at the time of puberty.

Q Well, I'm talking about someone who has received blockers but then received gender-affirming hormones to stimulate the equivalent of a typically female puberty.

Are you -- what's your basis for providing an expert opinion on the safety risks of that person participating on girls' sports?

MR. TRYON: Objection.

THE WITNESS: To my --

MR. FRAMPTON: Objection to form.

///

[116] BY MR. BLOCK:

Q You can answer.

A There's not extensive research looking at the situation that you're talking about.

Q So --

A The effect of sports -- of gender-affirming hormones on sports participation.

Q So if there's not a lot of research, do you have a basis for offering an expert opinion about it?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: My opinion is grounded in an understanding of what plays into injury risk and differences that exist between the sexes.

BY MR. BLOCK:

Q Do you know what differences exist for -- between a cisgender woman and a transgender woman who received puberty blockers followed by gender-affirming hormones?

MR. TRYON: Objection to form.

THE WITNESS: My -- my understanding is there is retained differences in lean body mass between them.

///

[117] BY MR. BLOCK:

Q What's that understanding based on?

A The one study I'm familiar with that looked at that, which was authored by Klaver.

Q And that's a study that you didn't cite in your report; correct?

A Correct.

Q You only looked at that study for the first time in preparing for this deposition; correct?

MR. FRAMPTON: Objection to the form.

BY MR. BLOCK:

Q You can answer.

A I looked at it in preparation for this deposition, yes.

Q So you looked at it for the first time after you had already submitted your report; correct?

A Correct.

Q And is it your understanding that the people in that study received puberty blockers at the beginning of Tanner II?

A Around -- I believe around age 13, 14.

Q And as a medical doctor, what's your understanding of when Tanner II typically begins for boys?

A Again, I'm a sports medicine physician. I'm [118] not an endocrinologist.

Q Well --

MR. FRAMPTON: Did it not pick up his answer? I thought he answered the -- there was no reaction when he said an age, so I just wanted to make sure it was picked up.

MR. BLOCK: It was not.

MR. FRAMPTON: Okay.

THE WITNESS: I said age 12.

BY MR. BLOCK:

Q Age 12.

Have you done any modeling of the safety risks associated with prepubertal boys playing on sports teams with prepubertal girls?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: Define what you mean by "modeling."

BY MR. BLOCK:

Q You discuss modeling of safety risks in your report, don't you?

A Correct.

Q So that's what I mean by "modeling."

Have you conducted any modeling of the safety risks of prepubertal boys playing on teams with **[119]** prepubertal girls?

A I'm not sure what you mean by modeling these risks. The -- the extent to which prepubertal kids do or don't fit into that model depends on whether there are measurable differences between the sexes in terms of things like speed or strength.

Q And so --

A To the extent that there are measurable differences noted between them, then, yes, the model applies.

Q But you haven't actually done that modeling, have you?

MR. FRAMPTON: Objection to the form.

THE WITNESS: I thought I answered that question. I'm not sure -- do you mean have I published data on that?

BY MR. BLOCK:

Q Not have you published it. Have you done it yourself? Have you plugged the values into equations and -- and come up with a model similar to, you know, rugby's model?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: Have I taken a calculator and calculated this out with prepubertals? I'm not sure **[120]** I understand why that's necessary.

If -- if -- there either are or there aren't differences between the sexes in terms of variables that equate to athletic performance or -- or lead to athletic performance, and if there are, then absolute injury risk can be increased.

BY MR. BLOCK:

Q So you don't -- no -- no matter how small a difference is, you don't think that's relevant to assessing, you know, safety risks?

MR. FRAMPTON: Object to the form.

THE WITNESS: I'm not sure what you're asking there, but -- but measurable differences can lead to increased safety risk, yes.

BY MR. BLOCK:

Q World Rugby actually calculated a -- a model of the safety risks of an average man playing rugby with an average woman; correct?

A Correct. That was part of their process.

Q Okay. And so they went through the steps of actually calculating it; correct?

A They did.

Q Okay. And -- but you did not go through those steps for purposes of calculating a safety risk of an -- prepubertal boys playing on teams with **[121]** prepubertal girls; right?

MR. FRAMPTON: Same objection.

THE WITNESS: Well, I think I speak to the -- in the paper as to how that risk might be calculated.

BY MR. BLOCK:

Q Yeah, you -- you spoke to how it might be calculated, but you didn't actually calculate it; correct?

A I'm not -- I'm not sure where you're going with that, but --

Q I just need a "yes" or "no" answer whether you did it or not.

MR. FRAMPTON: Object to the form.

Go ahead.

BY MR. BLOCK:

Q You did not actually go through the steps of calculating the model of the safety risk for prepubertal boys playing with prepubertal girls?

A I did not take, for example, an eight-year-old male and -- his mass and speed into a force equation and then compare it to another eight-year-old female. I'm not sure what that was -- would accomplish.

Q Okay. So how -- so you don't have the -- the **[122]** modeling data to compare the relative risk for prepubertal kids to the relative risk for men and women after puberty, do you?

A I do not have a database to present to you, no.

Q Is it your understanding that the risk is smaller for prepubertal kids than for people after puberty?

MR. TRYON: Objection; form of the question.

MR. FRAMPTON: Same objection.

THE WITNESS: Do you want to rephrase?

BY MR. BLOCK:

Q Is -- is it your understanding that the increased risk is smaller with respect to prepubertal boys and girls than adult men and women?

MR. TRYON: Objection to form.

THE WITNESS: I'm asked -- I'm retained to look to -- to weigh in on whether or not a risk exists, and based on

differences between the sexes, even at a prepubertal age, a heightened risk exists.

BY MR. BLOCK:

Q So -- wait, so -- so your expert opinion is only whether or not there is exists -- a risk exists, not on how great the risk is?

MR. FRAMPTON: Object to the form.

[123] THE WITNESS: I can -- I can speak to the fact that the risk is going to be greater with a larger, faster, more powerful individual than it would be with somebody who is less so, but as long as there are retained differences, there's still risk.

BY MR. BLOCK:

Q Have you calculated the difference in risk from a woman with PCOS participating in women's sports?

A I'm not -- I haven't been retained to weigh in on individuals with disorders of sexual development.

Q Okay. So do you -- you don't know one way or another whether or not there's an increased risk when a woman with PCOS plays with other women in -- in female sports?

MR. TRYON: Objection to form.

MR. FRAMPTON: Object to the form.

THE WITNESS: I have not looked at that specifically.

BY MR. BLOCK:

Q So --

A To my knowledge, there is not a peer-reviewed study looking at individuals who have PCOS and their **[124]** imparted risk on an athletic field.

Q And there's no peer-reviewed study looking at prepubertal kids and their -- boys and their imparted risk on an athletic field, is there?

A That's why I was retained.

Q Okay. And there's no peer-reviewed study looking at transgender women and their risk to other women from participating in an athletic field; right?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: There are multiple studies that show retention of significant differences in the types of things that would lead to disparities in strength, power, speed, etcetera, all of which can contribute to heightened injury risk, which was the underpinning of World Rugby's finding.

BY MR. BLOCK:

Q Right. But --

MR. BLOCK: Can you read back my question, Court Reporter.

(Record read.)

MR. FRAMPTON: Same objection.

MR. TRYON: Objection; form.

THE WITNESS: To my knowledge, there has been **[125]** no peer-reviewed study looking at the injury risk that exists to cisgender women when transgender women cross over and play. That issue is, to my knowledge, not often tracked.

BY MR. BLOCK:

Q Can we look at page 2 of your report.

A Which report are you talking about?

Q Your -- your February report.

MR. FRAMPTON: I'm sorry, Josh, what -- what page did you tell him to go to?

MR. BLOCK: Page 2. Exhibit --

MR. TRYON: Which exhibit is this, please?

MR. BLOCK: 80. Exhibit 80.

THE WITNESS: Okay.

BY MR. BLOCK:

Q If you look at the -- the final sentence, at the bottom, that begins with "As a medical doctor."

A Okay.

Q It says (as read):

"As a medical doctor who has spent my career in sports medicine, it is my opinion that World Rugby's assessment of the evidence is scientifically sound, and that injury modeling meaningfully **[126]** predicts that biologically male transgender athletes do constitute a safety risk for the biologically female athlete in women's sports."

Did I read that right?

A Yes.

Q And so you think that World Rugby did a thorough job; correct?

A I think that their approach, as they've described it, was sound. I wouldn't say that they did a thorough job, no.

Q Why wouldn't you?

A Because the research database that they published relates completely to adult athletes or postpubescent athletes.

Q How do you know that?

A Because I've looked at it.

Q When did you look at it to determine whether it relates solely to adult athletes?

MR. FRAMPTON: Object to the form. Go ahead.

THE WITNESS: I -- I can't tell you that exactly. It would have been around the time that I was reformatting this report.

[127]

BY MR. BLOCK:

Q So you looked more closely at that issue, you know, after the first version of your report was filed; right?

A Yes.

Q What is World Rugby's policy with respect to the participation of transgender women who have had puberty blockers followed by gender-affirming hormones?

A By understanding is that they, in their policy statement, have stated that those individuals are not subject to the same exclusions.

Q When did you become aware that World Rugby allows those individuals to participate?

MR. FRAMPTON: Object to the form.

THE WITNESS: Well, it's -- it's in their report. So I don't recall. I mean, at -- again, at the point in time that I was reviewing their data. I can't tell you when that was.

BY MR. BLOCK:

Q When -- when you submitted your June 2021 report, were you aware that World Rugby allowed transgender women to participate if they had received blockers and never gone through endogenous puberty?

[128]

MR. FRAMPTON: Objection; form. Go ahead.

THE WITNESS: I can't -- I can't recall. I can't speak to that. Again, it wasn't really the focus of that report.

BY MR. BLOCK:

Q So do -- do you think that you know better than World Rugby about the safety risks of allowing a transgender woman to play if she's received blockers followed by gender-affirming care?

MR. FRAMPTON: Objection to form.

MR. TRYON: Objection to form.

MR. FRAMPTON: Go ahead.

THE WITNESS: I think with any set of guidelines, clinicians particularity, since these types of things bear relevance on what we do, we have to kind of look at everything and make determinations based on what we know and what's being said.

And so I -- I can agree with the bulk of the findings of World Rugby, particularly with regards to the type of athlete that's reflected in the literature review that they've provided, and still take exception with the idea that there isn't risk -- that there isn't a risk consideration with **[129]** prepubertal athletes.

BY MR. BLOCK:

Q Do -- you don't -- do you think that the degree of -- of risk is relevant in determining whether it justifies an exclusion?

A That's a policy --

MR. FRAMPTON: Objection to form and scope. Go ahead.

THE WITNESS: That's a policy issue. That's not my job. My job is just to say is there a risk.

BY MR. BLOCK:

Q All right. Well, there's increased risk from the participation of a taller cisgender woman; correct?

A That's a vague question. Can you restate it?

Q Yeah. So the taller -- so when -- the taller a female athlete is, the more she increases the risk of injury for other female athletes; correct?

A Again, I don't feel like I can answer that question. You're not providing me with enough context.

Q Well, you said as long as there's a difference, that that can create risk. So doesn't height affect the safety risks for other athletes?

[130]

A Height in the context of what? Give me context.

Q How about volleyball.

A Okay. So ask it in -- in the context of volleyball.

Q So the taller a female athlete is, the greater risk she poses to other female athletes in volleyball; correct?

A So we're talking about biological females playing with each other? Is that what we're talking about?

Q Yes.

A I -- I think with -- when it comes to biological females playing together, they tend to -- there are outliers, of course, but they're outliers within a relatively defined biological pool.

To your question, if you have a really tall athlete in volleyball, at the net, they're going to be able to spike the ball vertically, theoretically, or forcefully, but it's not just height that plays into that. It's leg strength. It's jumping ability. It's arm extension. So you've got a convergence of factors that are going to play into it.

But -- but within the sexes, yeah, you can **[131]** have some individuals that provide -- who -- who are larger and taller, stronger than others.

But that's not the same thing as blending sexes.

Q So -- but you're not -- you're not providing an expert opinion on the degree of risks; correct? You're just providing an expert opinion on whether a risk of any amount exists?

MR. FRAMPTON: Objection to the form.

THE WITNESS: I was retained in this case to provide an opinion on whether there -- there's a safety risk associated with gender crossover in interscholastic sports.

BY MR. BLOCK:

Q So --

A And it's not my role to determine the relevance of absolute risk; it's just to say whether a risk exists.

Q Okay. So you're not providing an expert opinion comparing the degree of risk from allowing a transgender

woman to compete to the degree of risk from allowing any particular cisgender woman to compete?

A Well, I didn't say that.

MR. FRAMPTON: Objection to the form.

[132]

BY MR. BLOCK:

Q That's my question. So -- so you're -- are you -- are you -- are you providing an opinion that allowing a transgender woman who's received blockers to compete with other women provides a greater safety risk than allowing certain cisgender women to compete on the team?

MR. FRAMPTON: Objection to the form.

THE WITNESS: I am arguing that allowing a transgender -- a biologically born male who transitions to a female and plays on a female sports team, I am arguing that there are safety risks associated with that, yes.

BY MR. BLOCK:

Q So -- so I'm focusing now --

A That have the potential to exceed that of overall risks when cisgender athletes are playing together.

Q So I'm -- I'm focusing specifically on a transgender woman who has received blockers followed by gender-affirming care. So I want to focus your attention on that specific fact pattern.

The only physiological difference that has been identified in your report, you know, for that population of people, is potentially 10 percent **[133]** greater lean body mass.

And my question is, are you providing an expert opinion on whether there's a greater risk for allowing that person to participate on a woman's team than allowing a cisgender woman with 10 percent greater body mass than the average woman participate on a woman's team?

MR. FRAMPTON: Objection to the form. Go ahead.

THE WITNESS: You're comparing apples and oranges because you're talking about a biological male that brings a certain -- that can bring certain characteristics to puberty with him.

BY MR. BLOCK:

Q Well, the only characteristic identified is 10 percent difference in body mass.

A That's the only characteristic you identified.

Q What -- what other physiological characteristic, you know, exists?

A Again, going back to published data on performance in the elementary school population, there are consistent findings of greater strength and speed in preadolescent boys than preadolescent girls.

[134]

Q But those -- those aren't -- those aren't discussions of physiological -- innate physiological characteristics, are they?

A We don't know that.

MR. FRAMPTON: Object to the form.

THE WITNESS: We -- we -- I -- in fact, I suspect that there's a significant biological contribution to that.

BY MR. BLOCK:

Q So what -- what -- what study have you done on physiological differences between prepubertal boys and girls?

A What study have I done?

MR. FRAMPTON: Objection to the form.

THE WITNESS: Is that what you said?

BY MR. BLOCK:

Q Yeah.

MR. FRAMPTON: Objection to the form. Answer the question.

THE WITNESS: I have not conducted a study on physiological differences between preadolescent boys and girls.

BY MR. BLOCK:

Q All right. Are there -- are there differences in bone structure between preadolescent **[135]** boys and girls, you know, relevant to athletic performance?

A I believe that the differences that exist between boys and girls are performance based. There is a biological difference in lean body mass between boys and girls that manifest at a very early age. There are other performance-based measures that contribute to risk that are well defined.

Q So focusing on 10 percent difference in lean body mass that -- on average, are you providing an opinion on whether -- if the only physiological difference is 10 percent lean body mass -- let me phra that -- phrase that again.

Are you providing an expert opinion comparing the risk associated with allowing a transgender woman who has been on blockers and hormones and has 10 percent

greater lean body mass than a cisgender woman to the risk of allowing a cisgender woman with 10 percent greater lean body mass than an average cisgender woman to participate in women's sports?

MR. TRYON: Objection to form.

MR. FRAMPTON: Objection to form and scope.

THE WITNESS: That question has assumptions in it that I think keep me from answering it.

[136]

BY MR. BLOCK:

Q The --

A You're -- you're -- you're equating the two without acknowledging that there are sex-based differences in performance that play into injury risk that are brought to that point.

So I don't know how to answer your question.

Q You -- you know, are -- you've said repeatedly you're not providing an opinion quantifying the amount of risk; you're just providing an opinion that some quantum of increased risk exists; correct?

A Correct.

MR. FRAMPTON: Object to the form.

BY MR. BLOCK:

Q I didn't hear the answer.

A I'm providing an opinion as to the fact that there is risk.

Q And there is also increased risk when a cisgender woman with 10 percent greater lean body mass than an

average cisgender woman participates in women's sports; correct?

MR. TRYON: Objection to form.

MR. FRAMPTON: Same objection.

THE WITNESS: Repeat that question.

[137]

MR. BLOCK:

Q There is an increased risk to safety when a cisgender woman with 10 percent greater lean body mass than an average cisgender woman participates in women's sports; correct?

MR. TRYON: Objection.

MR. FRAMPTON: Objection.

THE WITNESS: I didn't say that.

BY MR. BLOCK:

Q Is there or is there not?

A There's more than just that variable that play into injury risk with --

Q There might be -- there might -- I'm sorry, I said I wouldn't cut you off. Go ahead and answer.

A If the question was is a cisgender woman with 10 percent increased lean body mass, in part, higher injury risk to other female cisgender athletes, the answer is you can't answer that question because there are other things that play in.

Q I don't --

A I'm saying is the -- you're phrasing this question as if the only difference between an individual who comes to

the point of going onto puberty blockers is a 10 percent difference in lean body mass, and I'm telling you that there are **[138]** population-based performance differences between the sexes that exist prior to that.

Q All right. So --

A I'm not sure how to answer that question.

Q Are there any differences in the Klaver study identified between cisgender women and the transgender women in the study other than the 10 percent greater lean body mass?

A Some differences in fat distribution.

Q There are differences in -- in fat distribution at the end of the period?

A There are.

Q You know what? I'll come back to that. I don't want to waste my time.

I'm still struggling with your -- your answer to whether or not you're capable of providing an expert opinion comparing the risks of allowing a transgender woman to participate to the risks of allowing an unusually tall or an unusually strong cisgender woman to participate. So I --

MR. FRAMPTON: Object --

MR. BLOCK: I -- I haven't finished my question yet. You can object --

MR. FRAMPTON: I'm sorry. My apologies.

MR. BLOCK: Yeah. Okay.

[139]

BY MR. BLOCK:

Q So I'm -- I'm still struggling with that. So are you -- are you or are you not providing an expert opinion comparing the relative risks between transgender women participating and between unusually strong or tall cisgender women participating in women's sports?

A Yes.

MR. FRAMPTON: Object to form.

BY MR. BLOCK:

Q Yes, you are?

A Yes.

Q How -- okay. How are you able to provide that opinion if you are unable to quantify the amount of increased risk for -- when transgender women participate?

MR. FRAMPTON: Same objection. Go ahead.

THE WITNESS: You don't need to quantify risk in a -- in a modeling scenario to know that risk is increased. The model -- going back to World Rugby, to just consideration of issues like speed, power, mass.

BY MR. BLOCK:

Q How are you able to compare two things **[140]** without quantifying them?

A Well, I don't think either side has been quantified, has it?

Q Well, no. So how do you know that the risks of allowing a transgender woman who's been on blockers and gender-affirming hormones to participate is greater or less than the risk of allowing an unusually strong or tall cisgender woman to participate on women's sports?

MR. TRYON: Objection --

THE WITNESS: I think that goes --

MR. TRYON: -- to the form of the question.

THE WITNESS: -- to the whole -- the whole heart of this case, which is that when you bring biological males into a pool of biological females, that you're bringing not just in body mass, but -- but a other list of -- of retained differences that have the potential to be greater than -- than anything that you're going to see in that second pool of -- of athletes.

And -- and so normal variation between the sexes and what that means for injury doesn't look the same as what it -- what that risk would look like if you're bringing somebody who isn't in that **[141]** category and placing them in that second group.

That was the whole point of World Rugby's assertions.

BY MR. BLOCK:

Q The differences between cisgender men and cisgender women are far greater than a 10 percent difference in lean body mass; correct?

A 10 percent -- say that one more time.

Q The differences between cisgender men and cisgender women that were analyzed by World Rugby were far greater than a difference in 10 percent lean body mass; correct?

MR. FRAMPTON: Objection to the form. Go ahead.

THE WITNESS: I believe that's accurate. I'm -- I would have to go back and look at the report.

BY MR. BLOCK:

Q So, in fact, the differences between adult cisgender mean and adult cisgender women are far greater than the

differences between prepubertal boys and prepubertal girls; correct?

MR. FRAMPTON: Objection to the form.

THE WITNESS: There is a -- are you talking about lean body mass?

[142]

BY MR. BLOCK:

Q I'm talking about across the board.

MR. FRAMPTON: Same objection.

THE WITNESS: The -- the differences are greater between adult men and women than prepubertal boys and girls, yes.

BY MR. BLOCK:

Q They're -- they're far greater; correct?

A That's a subjective term, but I'll -- I'll say they're greater.

Q In fact, the differences is, between cisgender men and cisgender women -- actually -- actually, let me -- let me quote the language from your report.

Let's go to page 9, paragraph 11 C.

Are you there?

A I'm there.

Q You are?

A I -- I am there.

Q Yeah. So it says (as read):

"Males exhibit large average advantages in size, weight, and physical capacity over females——often falling far outside female ranges."

[143]

Do you see that?

A I do see that.

Q Okay. So the differences in things before puberty, do the -- do the size, weight and physical capacity of prepubertal boys fall far outside the -- the range of prepubertal girls?

A Well, I would say that the physical capacity of boys consistently is shown to exceed that of girls in many different ways of looking at it, yes.

Q It falls far outside the female range?

A Male -- males consistently exceed female performance in the preadolescent population in measurements such as upper body strength, speed, etcetera.

Q Does it fall outside the female range?

MR. FRAMPTON: Objection to form.

THE WITNESS: To some degree, when you look at individual records in age-based categories, you would have to say that they do.

BY MR. BLOCK:

Q Are you thinking of anything in particular?

A I'm thinking of categories in, for instance, track and field and weight lifting records.

Q There's weight lifting records for prepubertal boys and girls?

[144]

A There are.

Q Like -- like, taking weights and -- and -- and doing competition in weight lifting?

A There are.

Q Where? Where -- where are those records? Are they published anywhere?

A I believe they are. I'd have to -- I'd have to find them.

MR. FRAMPTON: Josh, we're -- we're over 90 minutes. I don't want to cut you off, if you want to finish something, but I think it is an appropriate time for a break sometime in the near future.

MR. BLOCK: Yeah, sure, we can take a break. Do you want to come back at -- how much time do you need? Half an hour or 45 minutes?

THE VIDEOGRAPHER: Can we go off the record?

MR. FRAMPTON: Yeah, let's go off the record. Let's not do lunch at --

THE VIDEOGRAPHER: Hold on. Hold on. Hold on.

MR. FRAMPTON: Oh, I'm sorry.

THE VIDEOGRAPHER: Off the record at 12:18 p.m.

(Recess.)

[145]

THE VIDEOGRAPHER: We are on the record at 12:28, Central Time.

BY MR. BLOCK:

Q Dr. Carlson, we've previously discussed that you're not an endocrinologist; right?

A Correct. I'm a board-certified sports medicine physician.

Q And you're not an expert in transgender medicine; right?

A I do not care for -- I do not run a clinic for transgender people, no.

Q Do you -- do you have any expertise in -- in the physiological changes that occur to a transgender person's body if they have puberty blockers followed by gender-affirming hormones?

MR. FRAMPTON: Object to the form. Go ahead.

THE WITNESS: I'm not a board-certified endocrinologist. I know what I know based on review of the literature.

BY MR. BLOCK:

Q All right. So do you have any expertise to be an expert witness and offer an expert opinion on the physiological changes that occur when a transgender person has puberty blockers followed by **[146]** gender-affirming hormones?

MR. FRAMPTON: Object to the form.

THE WITNESS: As that touches on participation in sports, I am offering an opinion on the safety profile of transgender athletes crossing over into other -- to -- to a cisgender sport that they're -- into cisgender sports.

BY MR. BLOCK:

Q That wasn't my question. Do you have any expert -- do you have any reasons for offering an expert opinion on what physiological changes occur to a person's body if they have puberty blockers followed by gender-affirming hormones?

MR. FRAMPTON: Object to the form.

THE WITNESS: If you're asking if I can speak to the one study that I'm aware of that looks at that, then, yes, I -- I suppose I can speak to it.

BY MR. BLOCK:

Q No. So you're only aware of one study that -- that speaks to the physiological changes that occur when you have puberty blockers followed by gender-affirming hormones?

A In -- I've -- I've told you the study that I'm familiar with.

[147]

Q All right. So -- so you -- you've read a study by Klaver to prepare for this deposition. And other than that, do you have any knowledge of the physiological changes that occur when someone has puberty blockers followed by gender-affirming hormones?

A I'm not aware of other studies looking at what you're referencing.

Q Do you have any other form of knowledge about it?

A About it being the physiologic changes associated with the use of puberty blockers?

Q Followed by gender-affirming hormones.

A I'm going to be careful what I say here because much of what I've written in that white paper speaks to the effect of gender-affirming hormone therapy. So I want to parse that out from the issue of puberty blocker administration.

Q Are you still thinking about it?

A I thought I answered the question.

Q No, I'm sorry, if you did, it didn't come out. So I -- are you still thinking about it? What -- what was the answer to your question -- to my question?

A I said that I want to be careful how I parse **[148]** that because a lot of my -- the information in my white paper speaks to the impact on athletic performance of gender-affirming hormones, and I want to make sure that you're only speaking to puberty blockers specifically.

Q I'm speaking to puberty blockers followed by gender-affirming hormones, which is different from taking gender-affirming hormones after having already undergone puberty.

And so my question, do you have any basis of knowledge, other than this paper that you recently read, about the physiological changes that occur when someone has puberty blockers followed by gender-affirming hormones?

MR. TRYON: Objection to form.

THE WITNESS: That presupposes that, you know, the individuals that have transitioned, you know, in mid adolescence or what have you, weren't on pubertal blockers either.

So I don't -- I -- I -- I'm not -- I'm not trying to be evasive. I'm just trying to understand your question. Because what I'm telling you is that -- that I believe that there's basis on -- in the literature that's available to say that individuals that get to the cusp of puberty have -- **[149]** that there are measurable differences in performance that they bring with them and -- and that those differences are going to, in some way, equate to heightened risk.

BY MR. BLOCK:

Q And I'm asking you to --

A So -- and I get that you're -- you're trying to limit this conversation to the effect of pubertal blockers, and what I'm telling you is that if -- if you're going to -- you can't talk about that in a vacuum. There's other differences once that individual jumps over into sports play with the opposite sex will come into view.

Q Do you have any expert basis -- do you have any basis for offering an expert opinion on what physiological differences are carried forward from having puberty blockers followed by gender-affirming hormones other than this article that you read recently?

A I don't believe that --

MR. FRAMPTON: Objection --

THE WITNESS: -- that there are --

MR. FRAMPTON: -- to the form. Go ahead. Go ahead.

THE WITNESS: To my knowledge, there are not **[150]** peer-reviewed studies looking at the effect of puberty blockers on performance. So I don't -- I don't believe that that question can be answered.

BY MR. BLOCK:

Q So you -- you've made an assertion about physiological differences being carried forward. My question is whether you have any expert basis, of any kind, other than this article that you recently read, to testify about the effects of gen- -- of having puberty blockers followed by gender-affirming hormones on someone's physiology.

A You said --

MR. TRYON: Objection as to form.

THE WITNESS: -- performance.

MR. TRYON: Dr. Carlson -- Dr. Carlson, can you please just let me object first? Thanks. Objection as to form. Go ahead.

THE WITNESS: You're using two different terms. You -- you said performance earlier.

BY MR. BLOCK:

Q Physiology. Do you have any expert basis of any kind to **[151]** offer an opinion on what physiological characteristics exist for someone who has had puberty blockers followed by gender-affirming hormones?

MR. TRYON: Same objection.

MR. FRAMPTON: Same objection.

THE WITNESS: My opinion on physiology for puberty-blocking hormones would be limited to that paper, but my opinion with respect to performance, I believe, carries more weight because, to my knowledge, there aren't studies looking at that question.

BY MR. BLOCK:

Q But you don't have any basis for offering an expert opinion on performance of people who have had puberty blockers followed by gender-affirming hormones either because there's no studies of that; correct?

MR. FRAMPTON: Objection --

THE WITNESS: It cuts both ways.

MR. FRAMPTON: -- to form.

BY MR. BLOCK:

Q So -- but you don't have a -- fine. But answer my question. You don't have an expert basis for offering **[152]** an opinion on it one way or another; correct?

MR. FRAMPTON: Objection to the form.

THE WITNESS: The opinion on safety in athletes who are crossing over into other gender sports takes into account considerations that go well beyond what you're talking about, so I don't -- I don't accept the assumptions of the question.

BY MR. BLOCK:

Q My -- my question was do you have any basis for offering an expert opinion on performance advantages for people who have had puberty blockers followed by gender-affirming hormones since there's no studies of that one way or the other.

MR. FRAMPTON: Objection to the form.

THE WITNESS: And what I have told you -- Sorry. And what I have told you, I -- I thought, several times, is that those individuals come into puberty carrying categorical distinctions that are sex based that contribute to risk, regardless of whether or not they transition.

BY MR. BLOCK:

Q But you have no expert basis for saying that they carry it through puberty and transition. You -- you're are offering an opinion about what **[153]** happens before puberty and transition, but there's no studies at all about, you know, what happens after transition. That's just something that you're saying, but there's no studies about it; correct?

A Well, again --

MR. FRAMPTON: Objection to the form. Go ahead and answer.

THE WITNESS: Again, I've said many times that there are not published studies looking at performance in the individuals that you're describing once they've transitioned through puberty.

BY MR. BLOCK:

Q Does sex-determined pubertal skeletal growth and maturation have an effect on -- on the safety of allowing an athlete to compete?

A In the assumptions I'm making, it's not key.

Q It's not. Well, let's go to -- to page -- I'll come back to it. Do -- does bone length have a -- does bone size have an effect on muscle size?

A Does bone size have an effect on muscle size?

Q Yes. Does the -- does the size of someone's bones affect how, like, much muscle mass they can **[154]** put on those bones?

A There is an association there.

Q It's just an association?

A They play against each other. Large muscle mass creates greater bone mineralization too, just from the tug of the muscles on bones. So there's an association, yes.

Q Let's go to page? Page 1 of your report.

A Which report are we talking about?

Q Your -- your February report.

A Okay.

Q The final sentence of this first paragraph, you say (as read):

"And in fact, biologically male transgender athletes have competed in a wide range of high school, collegiate, and professional girls' or women's sports, including, at least, basketball, soccer, volleyball, softball, lacrosse, and even women's tackle football."

Correct?

A That's what that says.

Q Okay. Are you aware of any injuries resulting from their participation in those sports?

[155]

A I'm not -- I'm not --

MR. BLOCK: I think Mr. Carlson froze.

THE VIDEOGRAPHER: Yeah, just -- we should pause a sec.

(Technical issues.)

THE WITNESS: Because it's not adequately -- Sorry, I don't know if it's when I go to look at the document or what, but -- can you see me now?

BY MR. BLOCK:

Q You'll have to answer that again. So are you aware of any injuries that have resulted from the participation of those transgender athletes?

A This issue is inadequately tracked, so no, I'm not aware.

Q Okay.

A Well, actually, that's not true. Rephrase your question. I want to make sure I'm understanding it.

Q You wrote that (as read):

"In fact, biologically male transgender athletes have competed in a wide range of high school, collegiate, and professional girls' or women's sports, including, at **[156]** least, basketball, soccer, volleyball, softball, lacrosse, and even women's tackle football."

And my question is, are you aware of any injuries that resulted from the participation of transgender girls and women in those sports?

A And so my answer would be that's not adequately tracked, and so no, I'm not familiar.

Q Are you aware of any evidence that the participation of transgender women in these events actually has increased the frequency and severity of injury suffered by such gender female athletes?

A You're speaking to those sports listed?

Q Yes.

A Again, it's inadequately tracked, so I'm not familiar.

Q And let's go to paragraph 47 of that document, the same document. Page 27, paragraph 47.

A Page 27, you said?

Q Yeah. In paragraph 47, at the bottom.

A Okay.

Q It says (as read):

"In 2014, a male mixed-martial art fighter identifying as female and fighting under the name Fallon Fox **[157]** fought a woman named Tamikka Brents, and caused significant facial injuries in the course of their bout."

And then if you continue going -- this -- this quote that you have in, you know, indentation has a footnote 15. Do you see that?

A I do.

Q Okay. And the -- the website that that quotes to -- that that footnote goes to is bjj-world.com/transgender.mma-fighter-fallon-fox-breaks-skull-of-her-female-opponent; is that right?

A That's what I see, yes.

Q Okay. Did Fallon Fox actually break the skull of her opponent?

A Well, I don't believe that -- I don't believe that he did, no.

Q What -- what -- what --

A I didn't make that claim. That's a link to a website page that just references to the event, so...

Q Right. So what -- actually, the -- the injury that actually was sustained was an orbital fracture; correct?

[158]

A Yeah, it was a facial fracture.

Q Okay. And do you know how common orbital fractures are in MMA events?

A I -- I couldn't give you a specific -- incidents, no.

Q No. So -- so you don't know the rates of -- of orbital fractures, you know, among cisgender MMA competitors fighting each other; correct?

A No, I could give not give you that statistic. I -- I -- I don't recall it.

Q Do you know who the plaintiff is in this case?

A I -- I do not know who the plaintiff is. I know of -- the initials of the plaintiff.

Q Okay. Do you know how old the plaintiff is?

A I -- I actually couldn't tell you that.

Q Okay. Do you know what sports the plaintiff plays?

A I believe the plaintiff is a runner, but I'm not sure.

Q Do you know how the plain- -- do you know how the plaintiff has scored in physical fitness tests?

A No. I have no idea about the specifics of this case.

[159]

Q Okay. Do you know if, you know, whatever things you were referring to before, about, you know, skills, you know, acquired of preper -- prepubertal boys, do you -- do you know anything about whether the plaintiff, you know, has any of those skills?

A I don't. And I believe that -- I told you that I -- I don't -- I'm not familiar with the particulars of your plaintiff. And to the extent that -- you know, this -- this is a -- I'm familiar with the -- I -- I'm under the impression that the law that's being challenged -- I'm -- I'm not familiar with the particulars of this case.

Q Do you know how much lean body mass the plaintiff has?

A I do not know how much lean body mass the plaintiff has.

Q Do you know if the plaintiff in this case has any physiological characteristics that would impact safety that are different than the physiological characteristics of a cisgender girl?

A I do not.

MR. FRAMPTON: Object to the form.

BY MR. BLOCK:

Q Sorry, could -- could I hear the answer --

[160]

MR. FRAMPTON: That was probably garbled, but I object to the form. Go ahead and answer the question.

THE WITNESS: I do not.

BY MR. BLOCK:

Q Do you know whether the participation of this plaintiff in sports would pose any more of a safety risk than the participation of any other cisgender girl in sports?

MR. FRAMPTON: Object to the form.

THE WITNESS: Because I don't know the particulars of this person, I certainly could not speak to that.

BY MR. BLOCK:

Q Are you providing an -- expert testimony at all regarding safety risks from cross-country?

A I was asked to provide a report on safety risks as relates to participation in -- of athletes in contact in collision sports, but that's defined -- the -- the nature of that is defined within my paper.

Q Okay. So it does not -- so contact and collision sports does not include cross-country; correct?

A That's correct.

[161]

Q And contact and collision sports doesn't include track and field; correct?

A Correct.

Q Okay. Do you -- would it be fair to say that the effects of male-to-female hormones on important determinants of athletic performance still remain largely unknown?

A I -- I -- I didn't hear -- the effects of male and female hormones on what?

Q On determinants of athletic performance remain largely unknown.

MR. FRAMPTON: Object to the form. Go ahead.

THE WITNESS: What do you mean by "largely unknown"?

BY MR. BLOCK:

Q I don't know. Do you think it's a fair statement, that they remain largely unknown?

MR. FRAMPTON: Object to the form.

THE WITNESS: I think that there's good evidence that testosterone has a significant impact on performance.

BY MR. BLOCK:

Q But do you think the effects of lowering circulating testosterone on athletic performance **[162]** remains largely unknown?

MR. FRAMPTON: Same objection.

THE WITNESS: I wouldn't say largely unknown. I'd say it's evolving and we've learned a lot over the last few years.

BY MR. BLOCK:

Q Has there been any controlled research evaluating how lowering circulating testosterone influences aerobic or resistance training?

A There is -- there is a study on Air Force cadets answering that question.

Q Has there been any study of the effects of lowering circulating testosterone on bench presses or leg presses or squats or dead lifts?

MR. FRAMPTON: Object to form.

THE WITNESS: I believe that those studies -- there are studies looking at the effect of testosterone on things like punching power and...

BY MR. BLOCK:

Q Anything else?

A There -- there are -- there are studies looking at -- I'm sorry, say the question one more time.

Q Sure. Are there studies looking at the effects of lowering circulating testosterone on **[163]** muscle strength in standard lifts, like bench press, leg press, squats, dead lifts?

MR. FRAMPTON: Objection to the form. Go ahead.

THE WITNESS: I believe that there are studies looking at the effect of testosterone reduction on...

BY MR. BLOCK:

Q I'm sorry, did you finish answering the question?

A Are you talking about in transgender athletes, or are you talking about transgender individuals as a whole?

Q Either one.

A There -- there are -- there are studies looking at the effect of transition on loss of muscle mass, and there are studies looking at proxies for upper body strength, like

grip strength, and there are studies looking at proxies for punching power.

Q But their -- their studies are looking at proxies for those things as opposed to measuring muscle -- muscle strength, you know, through bench presses, leg presses, squats or other traditional measurements of strength; correct?

[164]

MR. FRAMPTON: Objection to the form.

THE WITNESS: Well, you -- I mean, you -- you began this by speaking of -- well, I told you that there was a study on Air Force cadets and part of that was push-up. So that's a -- and -- and these are -- these proxies are accepted proxies for what we're talking about, so...

BY MR. BLOCK:

Q So I -- just the answer to my question --

A The answer to your question is -- is that there have been studies looking at the effect of testosterone suppression in transgender individuals on measures of strength and power, lean mass.

Q On -- on proxies for those things; correct?

A Yes. Accepted proxies. Noncontroversial proxies.

Q So in -- let's look at paragraph 90 of your report.

A Okay.

Q Paragraph 90 says (as read):

"In addition, multiple studies have found that testosterone suppression may modestly reduce, but not does not come close to eliminating the male advantage in muscle mass and **[165]** lean body mass, which together contribute to the greater average male weight.

Researches looking at transitioning adolescents found that the weight of biological male subjects increased rather than decreased after treatment with an antiandrogen testosterone suppressor."

Did I read that right?

A Yes.

Q Okay. So -- and then you cite to a study by Tack in 2018; correct?

A Correct.

Q Okay. So did the Tack study find that after taking antiandrogen testosterone suppressor, the transgender subjects's muscle mass and lean body mass increased?

A I believe that the Tack study looked at several things, one of which was grip strength, and found that grip strength did not decrease.

Q So that's not my question. My question is, did the Tack study find that muscle mass and lean body mass increased?

A I believe that muscle mass helps stabl- -- **[166]** I'd have to go back and look at that. Can I see my report?

Q Your report is there --

A I'm sorry, I -- I'd have to go back and -- and -- and reference that, but --

Q Okay. Well --

A I can't recall.

Q Okay. So this first sentence in paragraph 90 talks about how testosterone suppression doesn't come close to eliminating the male advantage in muscle mass and lean body mass; correct? That's what the first sentence talks about?

A Correct.

Q All right. And the second sentence says that the Tack study found that the weight of biological male subjects increased rather than decreased; correct?

A Correct.

Q So is it a fair inference from the first sentence, followed by the second sentence, that you're implying here that what increases was muscle mass and lean body mass?

MR. FRAMPTON: Objection --

THE WITNESS: No --

MR. FRAMPTON: -- to the form.

[167] Go ahead.

THE WITNESS: No, I'm not trying to imply that.

BY MR. BLOCK:

Q You're not trying to imply that. So then why is it relevant that the weight increased?

A Well, lean body mass -- where lean body mass settles is relevant. That's one thing. But overall weight of the individual, again, within an injury model, matters, too.

Q Sure. But in this paragraph -- so the first sentence discusses muscle mass and lean body mass; correct?

A Correct.

Q And then the second sentence mentions the Tack study; correct?

A Well, I -- I would say that the first sentence speaks to the advantage in muscle mass and lean body mass, and then it references to average male weight. So all three are referenced there.

Q Okay. And the second sentence talks about the Tack study; correct?

A Correct.

Q And then the third sentence talks about a **[168]** Harper study and talks about their lean body mass and muscle area; correct?

A That -- that is a -- the Harper references to a -- a review paper.

Q Okay. But the --

A So -- yeah, so I'd have to go back and look at that review paper to see what the original citation is that that's referencing.

Q Sure. But in your paragraph 90, the first sentence, the third sentence and the fourth sentence refer to muscle mass or muscle area or lean body mass; right?

MR. FRAMPTON: Objection to the form. Go ahead.

THE WITNESS: Which sentences again?

BY MR. BLOCK:

Q The first, the third and the fourth.

A The first sentence refers to muscle mass, lean body mass and -- and average weight. The third references lean body mass and muscle area. And you said the fourth?

Q Yep.

A References muscle area.

Q Do any of those sentences reference fat?

A Well, they do indirectly, when you're **[169]** referring to lean body mass and shifts in lean body mass.

Q Do they do -- do they do directly, reference fat?

MR. FRAMPTON: Object to the form. Go ahead.

THE WITNESS: They do not directly. They do indirectly.

MR. BLOCK: So if you look in your exhibit folder, I'm going to mark this Exhibit 83. It should soon appear.

(Exhibit 83 was marked for identification by the court reporter and is attached hereto.)

BY MR. BLOCK:

Q Let me know when it's up.

A It's up. I'm just looking to see if I can zoom this. Right here. Okay.

Q Is -- is this the Tack study that you're referring to?

A Yes.

Q Okay. If you can turn to page 2151 of the study.

A Okay.

Q Okay. If you look in the second -- in the **[170]** right column, you know, the first full paragraph, it -- it says (as read):

"Trans girls treated with CA showed a significant increase in fat mass (Figure 1D) and decrease in lean mass (Figure 1C), resulting in an increased body fat percentage, without changes in total mass."

Did I read that right?

A Yes.

Q Okay. So according to the summary, was there actually an increase in -- in total mass for these trans girls?

MR. FRAMPTON: Object to the form. Go ahead.

THE WITNESS: Can I have a minute to look at this paper?

BY MR. BLOCK:

Q Yeah, sure.

A Thanks. Reference weight before hormonal therapy averaged 63.7 kilograms; afterwards, averaged 66.3 kilograms.

Q So what do you interpret to be the -- what -- what do you think -- what do you interpret the **[171]** sentence we just read to refer to when it says "without changes in total mass"?

A That's speaking to a shift in -- you -- you are correct that there is no change in body weight associated with that statement.

Q Okay. And so this -- did this study find that -- that muscle mass in the transgender girls actually increased?

A Well, one of the -- the changes in lean body mass in this study were negative.

Q Okay. The study --

A But we don't know where they settled compared to a cisgender population because it wasn't analyzed.

Q Okay.

A We do know that grip strength didn't change.

Q How -- is increase in fat generally associated with enhanced athletic performance?

A In the conte- -- it can be with -- as a -- energy stored, but in the context of this, no.

Q Okay. On grip strength -- let's look further down in that paragraph we were reading from, on page 2151.

A Uh-huh.

Q So this is the -- the beginning of the final **[172]** sentence. Do you see that?

A Yes, I do.

Q So it says (as read):

"No significant changes in grip strength were observed in trans girls during the study period, resulting in decreased Z scores compared with the -- compared with age-matched peers of the same gender recorded at birth."

Do you see that?

A I do.

Q What does that mean, by negative Z scores?

A That's a comparison of your score to age-matched norms.

Q Okay. So in -- in context, does this mean that compared to -- that the cisgender boys that these subjects are being compared to continue to increase their grip strength while the grip strength of the transgender girls remained flat?

A Yes, that's accurate.

Q Okay. So the -- the use -- suppressing testosterone had an effect on the ability to increase grip strength; correct?

[173]

MR. FRAMPTON: Object to the form.

THE WITNESS: In this case, yes.

BY MR. BLOCK:

Q Okay. If we can go to page 55, bottom of paragraph 95.

A Are we back on my report?

Q Yeah, we are. Thanks.

A Page 55, paragraph what?

Q 95. So the -- the -- the bottom half of the paragraph that's, you know, continuing.

A Okay.

Q So -- so let's go just from the middle of that paragraph. Do you see "the important point to make"? Do you see where you write that?

A I do.

Q Okay. So you write (as read):

"The important point to make is that the only effect strength training could have on these athletes is to counteract and reduce the limited loss of muscle mass and strength that does otherwise occur to some extent over time with testosterone blockade. There has been at least **[174]** one study that illustrates this, although only over a short period, measuring strength during a twelve-week period where testosterone was suppressed to levels of 2 nmol/L. During that time, subjects actually increased leg lean mass by 4% and total lean mass by 2%, and subject performance on the 10 rep max leg press improved by 32%, while their bench press performance improved by 17%."

And you cite to -- to Kvorning, K-V-O-R-N-I-N-G, 2006; right?

A Correct.

Q Okay. So do you -- do you recall what this study -- this Kvorning study was analyzing?

A I believe that it was analyzing non-transgender subjects who were -- (technical difficulty).

MR. FRAMPTON: Sorry, he did answer --

THE WITNESS: Did you hear me?

MR. FRAMPTON: -- the question. Did it not come through?

MR. BLOCK: It didn't come through.

[175] MR. FRAMPTON: I'm sorry.

Answer it again.

THE WITNESS: I -- I said I believed that it refers to non-transgender subjects who underwent hormonal suppression.

BY MR. BLOCK:

Q Okay. And are -- does it -- are those non-tran- -- are those non-transgender subjects compared to a -- a different group, a control group of any kind?

A I -- I don't recall. I'd have to go back and look.

Q Okay. Let's do that. I -- I have it already for you.

MR. FRAMPTON: Sorry, I'm just going to tilt his screen a little bit. It looks like his chin is getting cut off. I can't tell if that's just on my screen or -- or not.

MR. BLOCK: No, it's -- it's on -- it's on mine, too.

MR. FRAMPTON: Okay.

MR. BLOCK: Thank you.

(Exhibit 84 was marked for identification by the court reporter and is attached hereto.)

MR. BLOCK: So popping up in your exhibit **[176]** files should be a -- a document marked Exhibit 84.

THE WITNESS: Okay.

BY MR. BLOCK:

Q Let me know when it's there.

A I have it.

Q Okay. Okay. And so this document is titled "Suppression of endogenous testosterone production attenuates the response to strength training: a randomized, placebo-controlled, and blinded intervention study."

Did I read that right?

A You did.

Q And this is the study you were citing to; correct?

A Correct.

Q And, you know, randomized, placebo-controlled, and blinded is pretty much the -- the best a study can be, right? That's, you know, the gold standard, isn't it?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Well, yeah, double blinded would be the gold standard, but yes.

BY MR. BLOCK:

Q Good point.

[177]

And so just reading from the -- the abstract a little bit, if you go, you know, five lines down from the abstract, it says (as read):

"We hypothesized that suppression of endogenous testosterone would inhibit the adaptations to strength training in otherwise healthy men."

Right?

A Right.

Q And so tell me if my description of what happened is right. You know, they -- they took two groups of, you know, cisgender men, and for one group, they suppressed their testosterone, and then they had both groups undergo a strength-training period of eight weeks; is that right?

A Correct.

Q Okay. And then they compared the two groups; right?

Is that right?

A I -- I want to make sure I'm answering you correctly, so give me a minute.

Q Fair. I just wanted to make sure.

A Yeah, so -- just so that I'm clear, can you restate your question again?

Q Yeah. So, you know, after having the two **[178]** groups undergo this period of strength training, they then compared the results of the two groups; right?

A Yes.

Q Okay. If we can just look at -- if we can just look at page E1329. Let me know when you're there.

A Go ahead.

Q Okay. So if you look at the paragraph beginning -- so the final paragraph on this page, on 1329, it says (as read):

"The placebo group adapted to the strength training period by significantly larger increases in both lean leg mass and isometric strength. Although those in the goserelin group were able to have the same progression in training load as those in the placebo group, they did not gain muscle mass or increased isometric strength in the laboratory test."

Right?

A That's what that says.

Q Okay. And then if we can just go to the -- **[179]** well, let's just -- I'll ask you questions about that.

So the -- the -- tell me if I'm wrong about this, but the study, you know, seems to support an argument that reducing circulating testosterone affects a biological male's ability to increase muscle mass and strength. Is that a fair -- in response to training. Is that a fair statement?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I would say that it -- it does show that the effects -- that it does affect the ability to improve strength training, yes.

BY MR. BLOCK:

Q And so when -- when athletes --

A I would say affects, not eliminate, but...

Q Okay. When -- when athletes train for athletic competitions, they engage in new strength training; right?

A Depending on the sport, yes.

Q Okay. So is it -- so -- yeah, I understand that -- you know, that your report talks about the ability of

suppressing testosterone to reduce muscle and strength that's already been acquired, but does your report address the effects of lowering **[180]** testosterone on the ability of someone to build new strength and muscle?

MR. FRAMPTON: Object to the form.

THE WITNESS: Yeah, can I go back to my report to answer that?

BY MR. BLOCK:

Q Yes, sure.

A I'm back on page 55, if you want to go there.

Q Of your report?

A Yes. Where -- where you started.

Q Yeah.

A So -- and I'm sorry, restate your question one more time.

Q Sure. Does your report address the effects of suppressing testosterone on an -- on an athlete's ability to -- to acquire new increases in mass and strength?

MR. FRAMPTON: Objection to the form.

Go ahead.

THE WITNESS: I think it speaks to it here. It doesn't speak to the degree to which it affects it, but it -- what this study says is that gains are feasible.

BY MR. BLOCK:

Q Sure. Does -- does this study compare the **[181]** amount of gains that a cisgender man who's lowered testosterone would have to the gains that a cisgender woman would have?

A No, the study looked at men.

Q All right. So we -- we don't really have a basis to -- to know one way or the other whether a cisgender woman receiving the same strength training would have increases in -- in muscle mass that are greater or less than the increases that the cisgender men who lowered testosterone had; right?

A Well, I think what's relevant to the discussion is that a cisgender male can enter into a strength training program at the time that hormonal therapy has started.

That male, in many cases, will already have retained differences in lean muscle mass and strength when comparing to a cisgender female population.

And rather than come in -- (technical difficulty) -- they have the capability of coming in higher.

So I think that's the relevant comparison.

Q And you said in many cases they would have muscle mass that's greater than the cisgender female, but if they don't already have that muscle **[182]** mass, then they will have a harder time acquiring it than they otherwise would have had; right?

MR. FRAMPTON: Objection --

THE WITNESS: I didn't say that.

MR. FRAMPTON: -- to the form.

Go ahead.

BY MR. BLOCK:

Q I'm saying that. I'm asking that.

You know, you said that in many cases, a -- a cisgen- -- a transgender girl will have entered into a tournament already having acquired certain muscle mass.

And so my question is about, you know, people who lowered testosterone, you know, before, you know, acquiring any muscle mass and the effects that lowering testosterone would have on their ability to acquire it.

A That doesn't --

MR. FRAMPTON: Objection to the form.

THE WITNESS: -- have anything to do with what we're talking about. We're talking about -- you brought up the issue of whether or not individuals who enter into a strength-training program at the time that they are starting hormonal therapy gain ground or not.

[183]

And that study showed that -- that you can gain ground, and it was done in a male population, the applicably of -- applicability of which, to this conversation, is that those males can then, in turn, cross over into a female sport when they now have greater lean muscle mass than they had before they started, and they already had a retained advantage.

I'm not sure --

BY MR. BLOCK:

Q The study is about cisgender men who have already completed puberty; right?

A Again, I would have to go back and look at the age range of the study, but I believe that that's true.

Q All right. So transgender girls who transition before completing puberty will not have the same amount of muscle mass as a cisgender man who has completed puberty; right?

MR. FRAMPTON: Object to the form.

THE WITNESS: Say -- say that one more time.

BY MR. BLOCK:

Q Do people --

A Transgender girls who have not -- what did you say?

Q Who have not completed puberty do not have [184] the same amount of muscle mass as cisgender men who have completed puberty; right?

A I'll grant you that. Yes, that's true.

Q Okay. So lowering testosterone, according to the study, has an effect on their ability to accumulate new muscle mass; right?

A Well, you -- you left that study. We're no longer talking about that study. I can't speak to the applicability of that study on the scenario that you just gave. They're two different things.

Q Okay. So you -- you can't -- you can't speak to the applicability of studies on the effects of lowering circulating testos- -- circulating testosterone on transgender girls who have not completed puberty?

A That's not what I said. I said I can't speak to the applicability of the study you raised to the scenario that you then went to.

Q Why not?

A Because this study is looking at the effects of strength training in men who are transitioning.

Q So why is it relevant to this report?

A This report, what do you mean?

MR. FRAMPTON: Object to the form.

[185]

BY MR. BLOCK:

Q I mean, you're -- you're discussing the study because it has -- you think it has some relevance to the participation of transgender women; right?

A Yes. I spoke to that already.

Q Okay. Do you think it has relevance only to the participation of transgender women who have completed puberty, or does it also have relevance to the participation of transgender women who received puberty blockers or hormones before completing puberty?

MR. FRAMPTON: Object to the form.

THE WITNESS: The -- the study wasn't designed to look to that group, so I have no way to speak to that. And that study hasn't -- and that has not been looked at.

BY MR. BLOCK:

Q So -- so you don't think it's relevant to the participation of transgender girls and women who have not completed puberty; right?

MR. FRAMPTON: Object to the form.

THE WITNESS: I didn't say that. You did.

BY MR. BLOCK:

Q So -- so is it -- is it relevant or isn't it, to -- to girls -- participation of girls and women **[186]** who are transgender who have not completed puberty?

A So --

MR. FRAMPTON: Same objection.

THE WITNESS: -- I'm a little bit uncomfortable with the assumptions that I've got to make to answer that question, but to step out of what you're saying and say in

theory, is this study applicable to prepubertal kids who are entered into a strength-training program at the time that they start hormonal manipulation, possibly.

MR. FRAMPTON: We're at -- we're at 1:30 here. I think that we probably would like to do a lunch break sometime soon, but I'm not -- I'm not telling you you've got to do that now, by any stretch, if you were trying to complete a line of questioning or something.

MR. BLOCK: Yeah -- yeah, I would. Just give me ten more minutes, and then we can take a break.

MR. FRAMPTON: Yeah.

MR. BLOCK: Is that okay with you, Dr. Carlson?

THE WITNESS: Yeah, that's fine.

Can I have 30 seconds just to pop some food in my mouth? Is that all right?

MR. BLOCK: Sure. Can we go off the record **[187]** for 30 seconds?

THE VIDEOGRAPHER: We are off the record at 1:31 p.m.

(Recess.)

THE VIDEOGRAPHER: We are on the record at 1:32 p.m.

MR. BLOCK: Great. Thank you.

THE VIDEOGRAPHER: Central Time. Sorry, Central Time.

BY MR. BLOCK:

Q If you go to page 54, near the end of paragraph 93.

A Back on my report?

Q Yeah.

A 54, paragraph what?

Q 93. So at the very end, paragraph 93.

When you're discussing this Lapauw 2008 and Hilton 2021 study, you say -- this is like five paragraphs from the bottom -- (as read):

"The authors also noted that since males who identify as women often have lower baseline (i.e., before hormone treatment) muscle mass than the general population of males..."

And then it continues, but I --

[188]

A Sorry, I was -- I was trying to find my place when you started reading, so I'm -- I'm on that page now.

Q Sure. Do you -- okay.

So about five lines from the bottom of paragraph 93, you say -- in -- when discussing this Hilton study, you say (as read):

"The authors also noted that since males who identify as women often have lower baseline (i.e., before hormone treatment) muscle mass than the general population of males..."

And then the sentence continues, but I just want to ask you a question about this part where you say that the authors of the study noted that males who identify as women often have lower baseline muscle mass than the general population of males.

So do you -- do you have any reason to disagree with them, that -- that transgender women often have lower

baseline muscle mass than the population of cisgender males?

A No. I think there are -- a fair read of studies that do exist says that in many cases transgender -- I'm going to use your term -- transgender females come into baseline with some **[189]** lower measures of lean muscle mass and -- but the relevant -- and so the relevant question is where do they fall related to cisgender females, but to your point.

Q So the -- so my -- so my question is, do -- so by lowering their levels of circulating testosterone, that would affect their ability to acquire new muscle mass like at the same rate as a cisgender male; correct?

MR. FRAMPTON: Objection to the form.

THE WITNESS: Their -- their ability to acquire lean muscle mass at the same rate as a representative cisgender male population would be -- studies show that it would show less, yes.

Is that what you were asking?

BY MR. BLOCK:

Q Yeah, I was asking whether or not lowering their circulating testosterone would impair their ability to increa- -- to develop new muscle mass at the same rate as a cisgender male who is -- has regular levels of circulating testosterone.

A At the same rate, yes.

Q And do you know how -- whether -- do you know what the effects of lowering testosterone has on a -- a transgender woman's ability to acquire new **[190]** muscle mass compared to how quickly a cisgender woman can acquire new muscle mass?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Restate that question.

BY MR. BLOCK:

Q Yeah, sure. So I -- do you -- do you -- are you aware of any data comparing the ability of a transgender woman who's lowered circulating testosterone to acquire new muscle mass against the ability of a cisgender woman to acquire new muscle mass?

MR. FRAMPTON: Same objection.

Go ahead and answer.

THE WITNESS: This comparison to cisgender women, trying to think of a specific study. Wiik.

I'd have to look at -- I'd have to go back and look at my references.

Q Sure.

MR. BLOCK: Okay. We can take a break for -- for lunch now. Let's go off the record.

THE VIDEOGRAPHER: We are off the record at 1:37 p.m., Central Time.

(Lunch recess.)

THE VIDEOGRAPHER: We are on the record at **[191]** 2:16 p.m., Central Time.

BY MR. BLOCK:

Q Good afternoon, Dr. Carlson.

A Hello.

Q I'd like to direct your attention to Exhibit 80, so your February 2022 report, on page 15. Let me know when you're there.

A Okay. I am on page 15.

Q Okay. And if you can look at footnote 10.

A Okay.

Q Are you there?

A I -- I said, "Okay." I'm sorry.

Q Okay. So in the footnote, you know, it says (as read):

In some cases, safety requires even further division or exclusion. A welterweight boxer would not compete against a heavyweight, nor a heavyweight wrestle against smaller -- a smaller athlete. In the case of youth sports, when children are at an age where growth rates can vary widely, leagues will accommodate for naturally-occurring large discrepancies in body size by **[192]** limiting larger athletes from playing positions where their size and strength is likely to result in injury to smaller players. Thus, in youth football, players exceeding a certain weight threshold may be temporarily restricted to playing on the line and disallowed from carrying the ball, or playing in the defensive secondary, where they could impose high-velocity hits on smaller players.

Did I read that correctly?

A Yes, you did.

Q Okay. Great. So, you know -- so my question is, this is an example of a way to improve safety even within a team solely consisting of boys or solely consisting of girls; correct?

A Correct.

Q Okay.

A I mean, it doesn't all speak to team sports, but yes.

Q Okay. Now, would this also be a way to increase safety in a coed team?

A That does occur in some coed rec sports, yes.

[193]

Q Okay. So there are ways to make rule modifications to account for safety concerns without completely excluding certain members of the team?

MR. FRAMPTON: Object to the form.

THE WITNESS: The way that you -- the -- the type of changes that we're talking about can be made, but they alter the nature of the sport itself, so... You -- you cannot do it without changing the essence of what the sport is.

BY MR. BLOCK:

Q So if --

A Whether that's acceptable or not acceptable, that's not really what I was retained for.

Q Okay. So if we could go to paragraph 42.

A Okay.

Q All right. So if you go to the second sentence, where it says "this is one reason."

Do you see that?

A I'm reading the first, so just give me a second.

I see it.

Q Okay. So you see "This is one reason that rule modifications often exist in leagues where coed participation occurs." And then for footnote 14, you say, "For example, see" this website "(detailing **[194]** variety of rule modifications applied in co-ed basketball)." And then you say, "Similarly, coed soccer leagues often

prohibit so-called 'slide tackles,' which are not prohibited in either men's or women's soccer."

Do you see those sentences?

A I do.

Q Okay. And so, again, would it be possible to make similar rule modifications if a transgender participant is playing?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Can -- you can change a sport -- you can change the rules of the sport any way you want, but you can't do that without changing the essence of the sport.

BY MR. BLOCK:

Q Okay. But are these rule changes for these coed participation sports adequate, in your opinion, to minimize safety concerns?

MR. FRAMPTON: Object to the form.

THE WITNESS: I'm not sure I can speak to adequate or not. That implies that safety guardrails can -- that there's an end to it, but -- restate your question, I'm sorry.

[195]

BY MR. BLOCK:

Q I said, are these rule changes that you discuss in footnote 14, in your opinion, adequate -- adequate to minimize safety risks from coed participation?

MR. FRAMPTON: Object to the form.

THE WITNESS: I believe that they -- I -- I would assume that in the leagues that use them, that they serve

the purpose of risk reduction in those leagues. Not total risk reduction, relative risk reduction.

BY MR. BLOCK:

Q Is it ever possible to totally eliminate risk from participating in contact or collision sports?

A No, of course not.

Q But --

A Well, yes. By not playing.

Q Okay. So -- but -- so do you think sports should be eliminated to eliminate the possibility of risk?

MR. FRAMPTON: Object to the form.

THE WITNESS: Well, that's -- that's a societal -- that's not why I was retained for this. I was retained to speak to safety issues as exist in sport, not whether a sport ought to continue.

[196]

BY MR. BLOCK:

Q What -- do you think there's safety risks involved when a -- a cisgender high school girl competes at -- competes on a football team with cisgender boys?

A Do I think that there are risks? Is that what you said?

Q Are there risks to that cisgender girl.

A Well, if -- if -- if we're going to say that there -- sports is not a zero sum risk, then any participation involves some risk.

Q Okay. Well, do you think it's safe for a high school girl to play tackle football with a high school boy?

MR. FRAMPTON: Object to the form.

THE WITNESS: You want to specify that question more or just leave it the way it is?

BY MR

BY MR. BLOCK:

Q I want -- do you think it's safe for a high school girl to play tackle football with a high school boy?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: I think that there is heightened risk for a high school girl to play **[197]** football with a high school boy; however, there's a couple of things to say about that.

First of all, that individual can select certain positions that are going to reduce the risk more than others. So, for instance, you might have somebody who kicks the ball off, who -- (technical difficulty).

Second, in that case, it's an individual choosing to participate and assuming that risk.

But as to whether there is risk, yeah, there's risk.

BY MR. BLOCK:

Q Are you able to compare that risk to the risk of 11-year-old boys and girls playing soccer together?

MR. FRAMPTON: Object to the form.

THE WITNESS: Am I able to compare the risk of a high school female playing football on a men's team with 11-year-old boy and girls playing soccer together? Is that what you're asking?

BY MR. BLOCK:

Q That's what I'm asking.

MR. FRAMPTON: Same objection.

THE WITNESS: That's not something that's been looked at. **[198]**

If you're asking me whether there's a general increase in risk, I would say yes.

BY MR. BLOCK:

Q An increase in risk for the football fact pattern?

MR. FRAMPTON: Object to the form.

THE WITNESS: That's not what you asked.

BY MR. BLOCK:

Q Well, I'm just trying to understand what you said at the end.

You said, If you're asking if it's a general increase in risk, I'd say yes.

I just wanted to just clarify what you were referring to at the end.

A I'm not sure what you were asking. So you were asking whether --

Q What's -- what's -- sorry, I -- I can clarify my question. Would that help?

A Yes, I think so.

Q Yeah, what's riskier, an 11-year-old girl playing soccer with an 11-year-old boy or a 17-year-old girl playing football with a 17-year-old boy?

A Well, that's anecdote and --

MR. TRYON: Objection.

[199]

BY MR. BLOCK:

Q Go on.

MR. TRYON: Go ahead.

THE WITNESS: Me? Okay.

That's anecdote. And it's obviously going to depend on this situation.

If you're comparing a high school placekicker and that's all she does to two 11-year-olds where there's wide discrepancy between a larger, faster male and a smaller, slower female, then there's going to be more risk in the soccer side of it. If you're comparing a high school female who's playing linebacker, the risk might fall to the other side.

But those are hypotheticals around, again, anecdotes, so...

BY MR. BLOCK:

Q Isn't this whole -- isn't your expert report all about hypotheticals and anecdotes?

MR. FRAMPTON: Object to the form.

THE WITNESS: I wouldn't say that they're about anecdotes. I would say that it's based on modeling assumptions that -- informed by research that speaks to a sex-based difference.

BY MR. BLOCK:

Q And those same modeling assumptions would **[200]** allow you to compare the risks of 11-year-olds playing soccer together to 17-year-olds playing football together; right?

MR. FRAMPTON: Object to the form.

THE WITNESS: To your point, I look at -- yes, the -- the -- the modeling risks apply to many different age categories.

BY MR. BLOCK:

Q Is there any data at all on injuries to cisgender prepubertal girls from playing with cisgender prepubertal boys?

A I'm not aware of that specifically, no.

Q On page -- paragraph 78. Let me know when you're at paragraph 78.

A Okay.

Q Okay. Paragraph 78, you say (as read):

"Of course there exists variation in all these factors within a given group of males or females. However, it is also true that within sex-specific pools, size differential is somewhat predictable and bounded, even considering outliers."

Did I read that right?

[201]

A Yes.

Q Okay. So I think this goes back a little bit to our discussion from -- from before, having a larger cisgender woman on a girls' -- a woman's sports team is riskier to the other participants than having a smaller cisgender woman on that team; correct?

A I don't -- you're equating size to risk in a way that make it hard to answer that question. You haven't told me the sport. You haven't told me the other characteristics of the athletes. So it could run either way.

Injury risk is a net effect. You could have a -- well, I'll just leave it at that.

Q Okay. So you say size differential here, so that's why I talked about size.

When you -- when you said it's also true that within sex-specific pools, size differential is somewhat predictable.

What point were you making when you said that?

A I -- I -- I suppose a more artful way to say that would be physical attributes are somewhat -- or -- or performance-based attributes -- physical and performance attributes are somewhat predictable **[202]** and bounded.

Q And so your concern about allowing transgender women to participate on women's teams is that you would be introducing athletes into the pool that fall outside of the outer bounds that would exist if it were just limited to cisgender women athletes?

MR. FRAMPTON: Objection --

THE WITNESS: It --

MR. FRAMPTON: -- to form.

BY MR. BLOCK:

Q Go ahead.

A My concern would be that in -- in the aggregate, there are more than any one -- there's more than any one attribute that makes up a male, and that taken as a whole, those attributes fall outside the bounds of -- into the other pool.

Q And is that going to be true for every transgender woman?

A I can't speak to how that would apply to any given -- (technical difficulty) -- but from a population standpoint, it would certainly hold true.

Q So what if eligibility were limited to transgender women whose physical attributes fell within the -- the predictable and bounded range of **[203]** physical attributes for cisgender women, would that raise safety concerns?

MR. FRAMPTON: Object to the form.

THE WITNESS: There's problems, first of all, with measurement validity when we're talking about an unlimited -- kind of an unbounded list of biological categories. So that's a problem.

So I -- I don't -- I think there's an assumption underneath all of that that says that you can kind of boil down a transgender and cisgender female into the exact same categories, and I -- I don't know that that's true.

BY MR. BLOCK:

Q Do you know the effects of lowering testosterone to levels of circulating testosterone typical of women on all the various physiological attributes that would play into the analysis of safety?

A That's an evolving area of study, and it hasn't been completely studied yet, but the -- but the -- the net effect of the studies that we do have seem to tilt in the same direction, which is that there is retained difference.

Q In your report, you talk about internal risk factors and external risk factors; correct?

[204]

A Correct.

Q Okay. And if you look at your report on -- go to section -- on page 33, section VI.

A Are you talking about paragraph 57?

Q Yeah, yeah. But I'm focusing on the headline "Enhanced Female Vulnerability to Certain Injuries," right? Do you see that?

A I see that.

Q Okay. And then there's -- there's a subsection A on concussions and a subsection B on ACL tears.

Are the things discussed in this section an example of internal risk factors?

A Well, I -- you know, when you go back and you look at the discussion around injury epidemiology, I -- I think I make it clear that -- that those are often blended.

And so in the case of both concussion and ACL risk, there are -- there are innate things about the female that seem to predispose them to those injuries, but at the same time, those injuries can be imparted by being struck, so...

Q And are -- is there any data on the susceptibility of transgender girls and women to those injuries, you know, if they have had puberty **[205]** blockers followed by gender-affirming hormones?

MR. FRAMPTON: Object to the form.

THE WITNESS: I'm not aware of research specifically looking at the risk of a transgender female who's prepubertal to ACL risk or concussion risk.

Did I say transgender prepu- -- pre- -- prepubertal females?

BY MR. BLOCK:

Q I thought you did. Or at least that's what I understood.

A I just wanted to clarify.

Q So if you -- turn to page 4 in your report.

A Okay.

Q On the second -- the -- the -- you know, actually, let's go to Exhibit 81. So this is the first white paper you -- you -- you made. Page 3. It's page 3 of Exhibit 81, on the -- the internal pagination.

A Okay. I'm -- I'm there.

Q Okay. So this paragraph, it says (as read):

"Unfortunately, apart from World Rugby's careful review, the public discourse is lacking any careful consideration of the **[206]** question of safety. As a physician who has spent my career caring for athletes, I find this silence about safety both surprising and concerning. It is my hope through this white paper to equip and motivate sports leagues and policy makers to give adequate attention to the issue of safety for female athletes."

Did I read that right?

A Yes, you did.

Q Okay. And does this white paper disclose anywhere that you were hired to write it by ADF?

MR. FRAMPTON: Object to the form.

THE WITNESS: I don't think that that's in there, no.

BY MR. BLOCK:

Q Okay. When -- when you say in the white paper that you find the silence about safety both surprising and concerning, when did you acquire that opinion?

A I imagine in the context of culling together this material.

Q So you didn't mean to say that you were just **[207]** a doctor listening to the discourse and just spurred into action organically by your surprising concern about the lack of discussion of safety?

MR. FRAMPTON: Object to the form.

THE WITNESS: Well, I think going back to what we were talking about earlier, I -- I -- you know, this -- this issue has become more prominent on the public radar, particularly over the last five years, and -- you know, so from the beginning, when I was with AMSSM, you know, those conversations were cropping up.

And as I said earlier, I had some concerns about the issue of safety when it came to size differential, but those concerns -- I -- I believe that those concerns have been validated by review of the available evidence in conjunction with my experience as a physician.

BY MR. BLOCK:

Q Going back to your -- your February 2022 report, on page 7.

A Okay.

Q So in this paragraph, you discuss various sports that fall within your definition of contact or collision, and I wanted to --

A What -- what page are you on?

[208]

Q Page 7 of your February 22 report, Exhibit 80.

Oh, no, I'm sorry --

A I'm not seeing that.

Q No, no, no, no. I was looking at the wrong one, I apologize. It was my -- my fault.

This would then be page -- page 9 of your -- of that one.

A Okay.

Q So you're -- you're discussing here -- you're listing various sports that fall within your definition of collision and contact.

A Uh-huh.

Q And we have boxing, wrestling, rugby, ice hockey, football, basketball. And then we also have mixed martial arts, field hockey, soccer, rugby, lacrosse, volleyball, baseball and softball.

Do you think that the increased risk that you talk about is equally present to the same degree in all of these sports that you list?

A No, I wouldn't say that.

Q Okay. So there's some contact in collision sports where there's a greater increased risk than another contact in collision sports; right?

A That's correct.

[209]

Q Which of these contact and collision sports do you think have the least degree of increased risk?

A Of the sports listed there, I would -- I -- I would qualify this and say -- you know, I would need to rely on

epidemiological statistics, but I would guess that in terms of traumatic injury, volleyball is probably near the bottom.

MR. BLOCK: If you could just give me another five minutes, I'll -- I'll just come back with any remaining questions I have.

Can -- can we go off the record?

THE VIDEOGRAPHER: We are off the record at 2:46 p.m., Central Time.

(Recess.)

THE VIDEOGRAPHER: We are on the record at 2:56 p.m., Central Time.

BY MR. BLOCK:

Q Okay. So just a few more questions, Dr. Carlson, but I won't keep you too much longer.

If you could go to -- oh, jeez. I thought I had the paper -- page -- this is it. Page 28 of your -- of Exhibit 80, your February 2022 report.

A Page 28?

Q Yeah. Paragraph 49.

[210]

A Okay.

Q Just four lines down, you -- you say, in a parenthetical, that prime athletic years are ages 18 to 29.

Do you see that?

A Yes.

Q Could you explain why those are the prime athletic years?

A Well, it's -- I don't recall offhand how I came to include that in, so... But looking at it, it's roughly from the age of the end of puberty through your third decade. That makes sense to me.

Q Why does it make sense to you that the prime athletic years would begin roughly at the age of the end of puberty?

A We -- we've already spoken somewhat to the effect of puberty on performance.

Q So the -- the further along on -- you are on puberty, the greater effect it will have on your performance?

A I -- I think that that term -- or that -- that phrase could be rephrased in -- in other ways. Because obviously it depends on the sport; right? So take gymnastics, for example, the prime years for an Olympic gymnast are not going to fall in that **[211]** range.

Q Do you think that a trans girl has an athletic advantage over a cisgender girl in girls' gymnastics?

A I have never --

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: I have never considered that.

BY MR. BLOCK:

Q Well, sitting here, considering it now, can you -- what's your opinion?

A Do I think a trans girl has an advantage over a cis girl in women's gymnastics?

Q Yes.

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: It would depend on the apparatus that you're talking about, I suppose. For instance, assuming that that individual may have an advantage in vault. But again, you're -- we're talking about anecdotal hypothesis about individuals and not population, so -- you know, I -- I don't know that I can really answer that question.

BY MR. BLOCK:

Q Well, at a population level, do you think **[212]** transgender girls have an athletic advantage over cisgender girls in girls gymnastics?

MR. FRAMPTON: Same objection, form and scope.

Go ahead.

THE WITNESS: Certainly not all the way around, but there may be aspects of different events in gymnastics that they -- they may have a -- they may have some advantage within.

BY MR. BLOCK:

Q So are you -- would you -- do you feel confident in that answer? I know I just asked you to give it off the top of your head, so is that, you know, an answer that you -- you feel sure about or --

A Well, that study -- that -- that has never been looked at, as far as I'm aware, in a peer-reviewed study, but to the extent that you're making me answer it, I think I've given you an answer.

Q Okay. If you could go to --

A Sorry, I didn't hear you.

Q No, sorry, I -- I -- I stopped my sentence halfway through.

If you can go to page 59.

[213]

A Okay.

Q Okay. So in the second sentence of that paragraph, you say (as read):

"While, as I have noted, some biological males have indeed competed in a variety of girls' and women's contact sports, the numbers up till now have been small."

Excuse me.

"But recent studies have reported very large increases in the number of children and young people identifying as transgender compared to historical experience. For example, an extensive survey of 9th and 11th graders in Minnesota found that 2.7% identified as transgender or gender-nonconforming—— well over 100 times historical rates..."

And you cite that to Rider 2018 for that.

Did I read that right?

A I believe so.

Q Okay. Well, first of all, are you aware of any statistics about the number of people identifying as transgender in West Virginia?

[214]

A I believe I have read at some point in time that the percentage of transgender-identifying people in West Virginia is high to the national average.

Q Okay. How about transgender youth?

A I -- I can't remember if what I read was specific to transgender youth or not.

Q And do you know whether any transgender girl besides the plaintiff in this case has ever competed in girls or women's sports in West Virginia?

A Again, I couldn't speak to that.

Q Okay. So --

A I was -- I wasn't retained for that, so I don't know.

Q So this -- this study by Rider 2018, in Minnesota, do you know what percentage of the 2.7 percent of students in that study identified as transgender as opposed to gender nonconforming?

A I don't recall that, no.

Q Okay. Do you recall ever looking it up?

A I'm sure at -- at some point I did look it up, but I don't recall what the number is.

MR. BLOCK: Okay. So if you could check your inbox -- I mean, exhibit box, Exhibit 85. We can look at it together. Let me know when you see it.

[215]

(Exhibit 85 was marked for identification by the court reporter and is attached hereto.)

THE WITNESS: I said I have it up.

BY MR. BLOCK:

Q Okay. Great. Could you go to page 2.

A I'm there.

Q Okay. So if you -- just scroll down to -- just -- actually, you don't even have to scroll down. The second sentence

on page 2, where it describes -- it begins with "gender nonconforming."

A Yes.

Q Okay. So page -- so this sentence says (as read):

"Gender nonconforming describes individuals whose gender expression does not follow stereotypical conventions of masculinity and femininity and who may or may not identify as transgender."

Do you see that?

A Yes, I see that.

Q Okay. Do you think that -- to the extent that the study is talking about gender nonconforming people, do you think it's still relevant to assessing an increase in transgender people **[216]** participating in girls and women's sports?

MR. FRAMPTON: Object to the form.

THE WITNESS: I -- the definition that you just read for me is not the same thing as a transgender individual as you've defined it.

BY MR. BLOCK:

Q Okay. Now, if you go to -- if you go to the first page of the study, for the abstract, if you go to "Results."

A Yes, I see that.

Q So it says (as read):

"We found that students who are TGNC reported significantly poorer health, lower rates of preventative health checkups, and more nurse office visits than cisgender youth.

Do you see that?

A I do see that.

Q All right. As a general matter, at a population level, if a group of folks reports significantly poorer health than a control group, is that usually a sign of athletic advantage?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: That's so far removed from **[217]** specifics of athletic advantage that I don't know that I can answer that, what -- what -- what plays into poorer health.

BY MR. BLOCK:

Q Okay. Well, do -- do you think that having a poor -- poorer health -- well, what connection do you have -- do you see, if any, between, you know, someone having poorer health and being a good athlete?

MR. FRAMPTON: Object to the form.

THE WITNESS: Again, I -- I think without knowing how poorer health is defined here, I hesitate to answer that question.

BY MR. BLOCK:

Q Okay. Well, is it fair to say that there are a variety of ways in which, at a population level, the -- the health of transgender girls and women may be different than the health of cisgender boys and men?

MR. FRAMPTON: Same objection.

THE WITNESS: Again, I'm a board-certified sports medicine physician, I'm not an endocrinologist, and you're asking questions about population distinctions between transgender and cisgender individuals. I don't know that I was **[218]** retained to ask -- answer those questions.

BY MR. BLOCK:

Q So -- so you can't offer an expert opinion on how similar or dissimilar transgender girls and women are to cisgender boys and men --

MR. FRAMPTON: Object to --

THE WITNESS: I didn't --

MR. FRAMPTON: -- the form.

THE WITNESS: -- say that. You were asking me about their population -- the reflection of overall health on that population versus cisgender. Is that what you're asking me?

BY MR. BLOCK:

Q Well, I asked you that, and then I asked you another question, which is, you know, the basis for your expert opinion opining on the similarities between cisgender girls and women -- excuse me. I was asking the basis for your expert opinion opining on the similarities between transgender girls and women and cisgender boys and men.

A Between trans- --

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Between transgender boys and women, is that what you said?

[219]

BY MR. BLOCK:

Q Transgender girls and women compared to cisgender boys and men. What's the basis of your

expertise in drawing a comparison between those two groups of people?

A So you're talking about trans women --

Q Yes.

A -- or trans men?

Q Sorry, I'm talking about trans girls and women and cis --

A Can you rephrase --

Q -- boys and men --

A -- the question because I'm not sure -- I want to understand what you're saying.

Q Yeah. People assigned a male sex assigned at birth who have female gender identities are the people I'm referring to as trans girls and women.

A Okay.

Q And my question is, do you have any expert basis to opine on how similar that group of people are to cisgender boys and men?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Yes, I do.

[220]

BY MR. BLOCK:

Q And what -- what is that expert basis? What is the basis for that expert opinion?

A I'm a board-certified sports medicine physician, and I can speak to the safety issues involved with these two populations.

Q But are you -- you don't -- what information do you have about the -- you know, the -- the health and physical profile of transgender girls and women?

MR. FRAMPTON: Object to the form.

THE WITNESS: I think I told you that, A, I was retained to speak to the issues around these populations that deal with sports safety.

BY MR. BLOCK:

Q And -- okay. So what's the basis of your ability to render an expert opinion, though?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Sure, I understand the question. I'm sorry.

I -- I'm not sure how that relates to what we're looking at here.

BY MR. BLOCK:

Q Sure. Sure. And I -- I -- I won't keep you too much longer.

[221]

I understand everything you've opined on in your report about cisgender boys and men and their differences between cisgender girls and women. You know, this case is about transgender girls and women and that population, you would agree, is different in some ways, at least, from cisgender boys and men; right?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: There aren't population-level studies that have really looked at that. You can -- so I don't know that we can say that.

BY MR. BLOCK:

Q So without population studies that have looked at transgender girls and women, we can't say whether they are the same as cisgender boys and men; right?

MR. FRAMPTON: Object to the form.

THE WITNESS: Are you saying that -- are you asking if there are baseline characteristic differences between transgender women and cisgender women?

BY MR. BLOCK:

Q Sure. That's one of them. Sure, yes. No, no, no, no. No. I'm asking between transgender **[222]** women and cisgender men.

Are there baseline differences between transgender women and cisgender men?

A We don't have good studies that were designed to look at large populations to answer baseline questions. We have inferences we can make about certain studies. That's it.

Q Okay.

MR. BLOCK: All right. Thank you, Dr. Carlson. That's all the questions I have.

THE WITNESS: Thank you.

THE VIDEOGRAPHER: Any other questions?

MR. TRYON: This is Dave --

THE VIDEOGRAPHER: Okay.

MR. TRYON: This is Dave Tryon from the State of West Virginia. I -- I have no questions for the witness.

MR. CROPP: This is Jeffrey Cropp for the defendants Harrison County Board of Education and Superintendent Dora Stutler. I have no questions.

MS. MORGAN: This is Kelly Morgan on behalf of the West Virginia Board of Education and Superintendent Burch. I have no questions. Thank you very much.

MS. GREEN: This is Roberta Green on behalf **[223]** of WVSSAC. I have no questions. Thank you.

THE VIDEOGRAPHER: We are off the record at --

MR. FRAMPTON: Hang on. Hang on. Hang on. Hang on.

I have -- I think I've got probably one just to follow-up on Mr. Block's last question.

Dr. Carlson, do we have information on whether there are retained physical advantages when people undergo a transition from -- undergo a transition from male to female?

MR. BLOCK: Objection to form.

THE WITNESS: Yes.

MR. FRAMPTON: Okay. That's all I had.

MR. BLOCK: All right. So I have another question.

BY MR. BLOCK:

Q What -- can you please describe the studies that we have that provide information that form the basis of your answer to counsel's question?

A Retained differences in -- well, the Roberts study, for one. The Roberts study showed retained differences in speed.

Q Are there any others?

[224]

A There are -- there are studies that look at retained differences in -- in muscle mass and -- so the Wiik study.

Q And we don't --

A Many of these are cited in my report.

Q And -- and we don't have any studies on the differences between transgender girls and women and cisgender boys and men before transition, do we?

MR. FRAMPTON: Object to the form.

Go ahead.

THE WITNESS: Say that one more time.

BY MR. BLOCK:

Q We don't have any studies on the differences between transgender girls and women and cisgender boys and men before transition, do we?

MR. FRAMPTON: Same objection.

Go ahead.

THE WITNESS: I don't believe -- again, I can't recall if the Klaver study made that comparison, so I'd have to go back and look at it.

MR. BLOCK: No further questions.

THE VIDEOGRAPHER: Anyone else?

MR. FRAMPTON: I don't have anything further.

THE VIDEOGRAPHER: We are off the record at 3:19 p.m., Central Time. This completes today's **[225]** deposition of Dr. Chad Carlson. The total number of media units used was eight and will be retained by Veritext Legal Solutions.

(TIME NOTED: 3:19 p.m.)

I, CHAD T. CARLSON, M.D., FACSM, do hereby declare under penalty of perjury that I have read the foregoing transcript; that I have made any corrections as appear noted, in ink, initialed by me, or attached hereto; that my testimony as contained herein, as corrected, is true and correct.

EXECUTED this **_11 __** day of **May_____** , 20**22__**, at **West Des Moines_____** , **Iowa_____**.
(City)
(State)

/s/ Chad T. Carlson M.D.
Chad T. Carlson, M.D., FACSM

Volume I

CASE: B.P.J. vs. WEST VIRGINIA STATE BOARD OF EDUCATION

WITNESS: CHAD T. CARLSON, M.D., (#JOB NO 5122881)

ERRATA SHEET

PAGE 25 LINE 19 CHANGE should read "categorically stronger and faster" REASON replacing technical difficulty

PAGE 41 LINE 8 CHANGE should read "I don't believe I've been retained to provide" REASON more accurately reflects what was said

PAGE 41 LINE 15-17 CHANGE I believe some of this text was Mr. Block REASON more accurately reflects what was said

PAGE 8 LINE 15 CHANGE should read "on site" not "insight" REASON more accurately reflects what was said

PAGE 53 LINE 19 CHANGE Should read "both before and after transition" REASON more accurately reflects what was said

PAGE 112 LINE 4 CHANGE "they" should be "I" REASON more accurately reflects what was said

/s/ Chad T. Carlson M.D. — May 11, 2022
WITNESS — Date

CASE: B.P.J. vs. WEST VIRGINIA STATE BOARD OF EDUCATION

WITNESS: CHAD T. CARLSON, M.D., (#JOB NO 5122881)

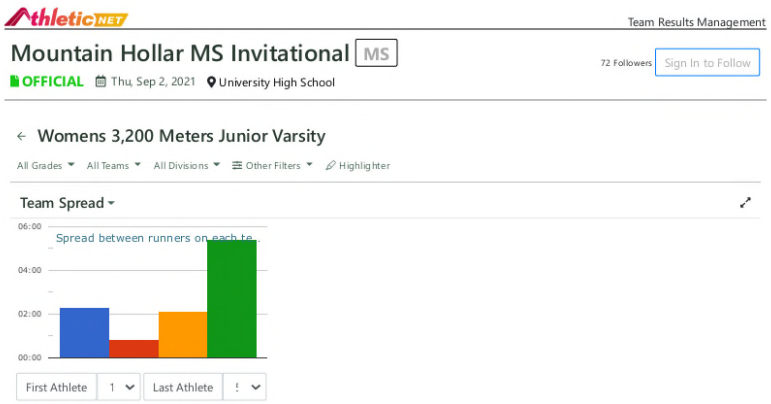
ERRATA SHEET

PAGE 149 LINE 11 CHANGE "There's" should be "Those" REASON more accurately reflects what was said

PAGE 202 LINE 21 CHANGE replace (technical difficulty) with "individual" REASON filling in testimony missed because of technical difficulty

PAGE 18 LINE 5 CHANGE I was also retained by the State of Arkansas, but I have not performed any work for that engagement because the law has not been challenged REASON remembered additional engagemenet

/s/ Chad T. Carlson M.D. May 11, 2022
WITNESS Date



Official Team Scores

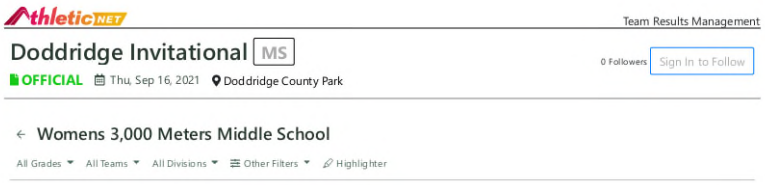
1. Suncrest	29
2. South (Morgantown)	39
3. Mountaineer (Morgantown)	78
4. Bridgeport	99

1.	8 Stella Bleech	15:54.3 South (Morgantown)
2.	8 Chloe Sickles	16:00.4 South (Morgantown)
3.	6 Emma Zhou	16:12.8 Suncrest
4.	7 Janie Gilchrest	16:14.5 Suncrest
5.	8 Mia McCutcheon	16:19.7 Suncrest
6.	7 Linsey Kramer	16:41.3 East Fairmont
7.	8 Maliah Dalton	16:41.8 South (Morgantown)
8.	7 Maddie Fritsch	16:48.6 Mountaineer (Morgantown)
9.	6 JJ Monroy	16:53.8 Suncrest
10.	7 Paige Snyder	16:55.4 East Fairmont
11.	7 Olivia Lupo	17:00.9 Suncrest

12.	6 Chelsea Payne	17:02.9	Braxton County
13.	7 Graylee Linville	17:09.8	Bridgeport
14.	7 Lauren Krantz	17:10.6	Suncrest
15.	7 Elizabeth Esposito	17:11.9	Suncrest
16.	7 Ayla McCasi	17:13.9	South (Morgantown)
17.	7 Kylie Cline	17:20.7	Covenant Christian
18.	8 Miley Dong	17:21.8	Suncrest
19.	8 Adrienne Reger	17:25.3	Mountaineer (Morgantown)
20.	7 Grayson Martucci	17:27.8	Suncrest
21.	6 Anna Houde	17:32.8	Suncrest
22.	6 Emma Kniceley-See	17:34.4	Bridgeport
23.	6 Kelea Anderson	17:38.3	Suncrest
24.	6 Maria Strager	17:41.9	Mountaineer (Morgantown)
25.	7 A. Monroe	17:49.4	Suncrest
26.	8 Allie Myers	17:49.6	Suncrest
27.	8 Brynn Lewis	18:01.1	Suncrest
28.	8 Emily McDonald	18:12.6	South (Morgantown)
29.	8 Samantha Zizzi	18:16.1	South (Morgantown)
30.	6 Arianna Howell	18:17.7	South (Morgantown)
31.	8 Anna McBee	18:25.3	Mountaineer (Morgantown)
32.	6 Maggie Bailey	18:30.3	Suncrest
33.	8 Avery Dickerson	18:33.8	South (Morgantown)
34.	6 Elaina Beard	18:42.9	South (Morgantown)
35.	8 Nataline Wolfe	18:54.2	Mountaineer (Morgantown)
36.	6 Braydan Whitesel	18:59.8	Braxton County
37.	8 Maya Ramsey-Murry	19:06.3	Suncrest
38.	7 Hannah Staley	19:28.2	Suncrest
39.	6 Emily Liu	19:53.9	Suncrest
40.	7 Maria Abelsayed	20:00.9	Suncrest

41. 7 Zuzanna Michalski	20:14.3 Mountaineer (Morgantown)
42. 7 Addison Berg	20:28.6 Covenant Christian
43. 8 Payton Janssen	20:43.7 Bridgeport
44. 6 Rylee Lemley	20:52.8 Mountaineer (Morgantown)
45. 6 Sara Minchau	20:54.5 Mountaineer (Morgantown)
46. 0 Brigid Wilson	20:56.9 Suncrest
47. 7 Ashlyn Poac	21:42.5 St. Francis Central Catholic
48. 6 Margaret (Maggie) Cable	21:46.1 Bridgeport
49. 6 Claire Jones	22:02.3 South (Morgantown)
50. 6 Alden Owen	22:24.4 St. Francis Central Catholic
51. 6 Becky Pepper-Jackson	22:33.9 Bridgeport
52. 8 Faith Noss	22:42.7 Central Preston
53. 7 Caitlin Murray	22:55.7 Bridgeport
54. 7 Alexis Thomas	22:55.9 South (Morgantown)
55. 7 Elsa Meyer	23:48.1 Suncrest
56. 8 Shea Lingo	23:52.8 Suncrest
57. 8 Macy Giles	24:12.1 South (Morgantown)
58. 7 Lilah Allison	24:23.5 Suncrest
59. 6 Peyton Ice	24:34.7 East Fairmont
60. 7 Elizaveta Abbitt	24:51.2 St. Francis Central Catholic
61. 8 Keirston Pugh	24:55.9 Bridgeport

62. 7 Olivia Markley	25:03.8 East Fairmont
63. 7 Baylee Yost	25:29.2 Suncrest
64. 7 Amelia Fisher	26:47.8 Mountaineer (Morgantown)
65. 6 Emma Sherwin	26:50.2 Mountaineer (Morgantown)
66. 6 Havanna Davis	30:26.8 Suncrest



Official Team Scores

1.	Pleasants County	61
2.	Braxton County	76
3.	East Fairmont	110
4.	Tyler Consolidated	122
5.	Warren Local	138
6.	Mountaineer (Clarksburg)	166
7.	Taylor County	197
8.	West Fairmont	210
9.	Bridgeport	213
10.	Wirt County	273
11.	Buckhannon-Upshur	281
12.	Ritchie County	286
13.	Washington Irving	320
14.	Lincoln	385
15.	Westwood	427

1.	7 Anna Bennett	12:00.24 Pleasants County
2.	8 Kailee Haymond	12:31.40 East Fairmont
3.	8 Addison Lloyd	12:59.85 Braxton County
4.	7 Makenna Martin	13:13.89 Tyler Consolidated
5.	8 Tillie Cinalli	13:20.28 West Fairmont
6.	8 Bailey Pritt	13:25.51 Braxton County
7.	7 Marley Sias	13:25.77 Doddridge County
8.	7 Maddie Smith	13:33.78 Pleasants County
9.	6 Annabelle Skidmore	13:34.41 East Fairmont
10.	7 Julia Angiulli	13:37.77 Mountaineer (Clarksburg)
11.	8 Bentlee Williams	13:39.15 Ritchie County
12.	6 Avry Bennett	13:41.59 Pleasants County
13.	8 Kaitlyn Key	13:45.11 Mountaineer (Clarksburg)
14.	7 Mackinzey Budner	13:46.29 Braxton County
15.	7 Maddy Cox	13:47.57 Tyler Consolidated
16.	7 Ella Egidi	13:50.85 West Fairmont
17.	8 Sophia Austin	14:03.10 Taylor County
18.	8 Kaelyn Robinson	14:04.38 Wirt County
19.	6 Mariah Whitlock	14:06.40 Pleasants County
20.	8 Hollyn Reed	14:07.19 Warren Local
21.	8 Sophie Stuck	14:10.78 East Fairmont
22.	6 Hayden Henderson	14:13.00 Bridgeport
23.	8 Payton Trent	14:14.16 Doddridge County
24.	8 Ashley McBrayer	14:25.36 Bridgeport
25.	7 Leah Payne	14:29.83 Braxton County
26.	7 Savana Burd	14:33.84 Pleasants County
27.	8 Abby Whited	14:40.57 Warren Local
28.	7 Aslee Pate	14:43.89 Warren Local
29.	7 Madison Altman	14:52.44 Washington Irving
30.	7 Lily Dillaman	15:05.31 Tyler Consolidated
31.	8 Brea Lathon	15:15.32 Mountaineer (Clarksburg)
32.	7 Camryn Westbrook	15:16.49 Tyler Consolidated
33.	6 Reece Carpenter	15:17.18 Braxton County
34.	8 Natalee Cartwright	15:18.76 Taylor County
35.	7 Suzanna Whipkey	15:19.69 Warren Local
36.	7 Kylie Cline	15:20.97 Covenant Christian
37.	6 Madison Knabenshue	15:21.68 Buckhannon-Upshur

38.	8 Cate Edgell	15:25.72 Warren Local
39.	8 Cassidy McCarthy	15:29.05 Warren Local
40.	7 Avery Moore	15:30.57 West Fairmont
41.	7 Paige Snyder	15:31.35 East Fairmont
42.	6 Natalie Beltner	15:36.94 Taylor County
43.	8 Annika Shuman	15:39.36 Mountaineer (Clarksburg)
44.	7 Nevaeh Bolin	15:40.56 Ritchie County
45.	7 Piper Woofter	15:41.55 East Fairmont
46.	6 Liza Saas	15:43.62 Washington Irving
47.	8 Absidee Carpenter	15:45.71 East Fairmont
48.	7 Ryleigh Bills	15:46.26 East Fairmont
49.	6 Andi Fiber	15:49.01 Tyler Consolidated
50.	6 Addison Sole	15:52.64 Taylor County
51.	6 Addi McGrady	15:53.95 Pleasants County
52.	8 Lauren Pritt	15:54.66 Braxton County
53.	7 Audrey Duckworth	15:57.28 Braxton County
54.	7 Savannah Holden	15:58.87 South Harrison
55.	8 Chloe Marsh	15:59.26 Bridgeport
56.	8 Issabella Speece	16:00.13 Wirt County
57.	6 Haley Woody	16:12.03 Buckhannon-Upshur
58.	7 Jenna Willey	16:12.53 Lincoln
59.	8 Lilly Haught	16:18.77 Tyler Consolidated
60.	6 LenaRose Walker	16:21.19 Buckhannon-Upshur
61.	8 Olivia Pursley	16:24.74 Wirt County
62.	7 Linsey Kramer	16:27.30 East Fairmont
63.	6 Destinee Gray	16:31.57 Pleasants County
64.	6 Olivia Kimball	16:32.52 Pleasants County
65.	7 Jordyn McIntyre	16:40.49 Bridgeport
66.	6 Emma Kniceley-See	16:40.90 Bridgeport
67.	8 Grace Dearth	16:46.01 Warren Local

68.	7 Adalyn Moreland	16:47.91 Warren Local
69.	6 Emma Ahmed	16:50.77 Bridgeport
70.	7 Peyton Stevens	16:51.80 Taylor County
71.	8 Lily Cross	16:52.96 Wirt County
72.	6 Chelsea Payne	16:56.79 Braxton County
73.	6 Isabella Eddy	16:58.08 Lincoln
74.	7 Jahna Brown	16:59.20 Tyler Consolidated
75.	7 Anya Morehead	17:02.83 Buckhannon-Upshur
76.	7 Rania Singh	17:03.24 Warren Local
77.	6 Anna Wycoff	17:05.47 East Fairmont
78.	7 Avery Kessler	17:13.69 South Harrison
79.	7 Zoey Bunner	17:20.92 Ritchie County
80.	8 Kenna Keener	17:25.26 Taylor County
81.	7 Lauren Brown	17:25.54 South Harrison
82.	6 MillieCate Currey	17:25.73 Bridgeport
83.	6 Chloe Lewis	17:25.91 Buckhannon-Upshur
84.	8 Kamryn Watkins	17:26.10 Westwood
85.	7 Brooklyn Davis	17:26.62 Pleasants County
86.	7 Ayla Lilly	17:36.60 West Fairmont
87.	7 Graylee Linville	17:39.26 Bridgeport
88.	6 Colleen Freed	17:41.70 Ritchie County
89.	6 Isabella Bowers	17:48.16 Buckhannon-Upshur
90.	7 Rayonna Cain	17:50.94 Mountaineer (Clarksburg)
91.	7 Autumn Cecil	17:52.63 Pleasants County
92.	6 Ciarra Spring	17:53.10 Taylor County
93.	7 Adreona Moore	17:55.20 Washington Irving
94.	7 Annelise Mace	18:01.32 Bridgeport
95.	8 Paiton Thompson	18:05.51 Bridgeport
96.	8 Novalee Bennett	18:06.60 Braxton County
97.	8 Bella Casto	18:11.22 Westwood

98.	6	Alexis Buffey	18:15.84 West Fairmont
99.	6	Lyla Garcia	18:30.05 West Fairmont
100.	6	Reagan Sturgeon	18:41.15 Pleasants County
101.	7	Olivia Roberts	18:44.28 Tyler Consolidated
102.	7	Sophia Fox	18:47.12 Buckhannon-Upshur
103.	8	Cynthia Wigel	19:10.95 Wirt County
104.	7	Emily Brackman	19:15.00 Washington Irving
105.	7	Addison Berg	19:27.35 Covenant Christian
106.	8	Payton Janssen	19:35.99 Bridgeport
107.	7	Kate Urso	19:37.61 Notre Dame
108.	8	Regan Hardway	19:42.54 West Fairmont
109.	6	Katrina Guthrie	19:46.20 Lincoln
110.	6	Margaret (Maggie) Cable	19:49.23 Bridgeport
111.	6	Ainsley Alexander	19:54.42 Taylor County
112.	6	Alyena McIe	19:57.22 Buckhannon-Upshur
113.	6	Kaitlin Davis	19:57.95 Buckhannon-Upshur
114.	8	Jacelyn Niethamer	20:19.84 Westwood
115.	8	Ava Scolapio	20:34.53 Washington Irving
116.	8	Erika Church	20:35.32 Lincoln
117.	8	Giana Armistead	20:39.78 West Fairmont
118.	6	Amelia Weekley	20:44.27 Pleasants County
119.	7	Marley Rider	21:00.11 West Fairmont
120.	8	Natalie Klemm	21:03.86 Warren Local
121.	7	Bella Allen	21:10.10 Pleasants County
122.	8	Breanna Cutright	21:14.63 Mountaineer (Clarksburg)
123.	6	Becky Pepper-Jackson	21:50.47 Bridgeport

124.	7	Olivia Markley	21:57.35 East Fairmont
125.	7	Claire McElwayne	22:01.21 Notre Dame
126.	7	Mercy Frase	22:02.14 South Harrison
127.	6	Makinsey Jeffers	22:02.35 Pleasants County
128.	8	Keirsten Pugh	22:06.93 Bridgeport
129.	6	Heaven Pittman	22:09.28 Tyler Consolidated
130.	6	Annaleigh Pierce	22:10.80 Lincoln
131.	7	Caitlin Murray	22:25.51 Bridgeport
132.	8	Ali Wilfong	22:27.85 Taylor County
133.	6	Raley Cochran	22:42.76 Lincoln
134.	6	Peyton Ice	22:46.22 East Fairmont
135.	6	Taylor Krolick	23:11.16 Ritchie County
136.	8	Autumn Wolfe	23:18.39 Westwood
137.	8	Kate Gaines	23:26.56 Westwood
138.	6	MaraBeth Hines	23:49.05 Buckhannon-Upshur
139.	6	Jordan Cox	23:55.91 Taylor County
140.	6	Arabella Jones	24:06.51 Taylor County
141.	7	Cailee Singh	24:24.88 Lincoln
142.	6	Haley Cross	24:54.03 Wirt County
143.	8	Elizabeth Conley	25:08.96 Washington Irving
144.	8	Andrea Huffman	25:16.94 Ritchie County
145.	6	Skylar Hayes	25:36.46 Lincoln
146.	8	Aaliyah Dodrill	25:40.69 Lincoln
147.	6	Lillie Nardella	27:40.92 Notre Dame
148.	6	Bella Yates	28:48.53 Bridgeport
149.	6	Zoe Fisher	29:16.46 Tyler Consolidated
150.	6	Sierra Perdue	30:00.69 Wirt County

From: Melissa White <Melissa.White@wvhouse.gov>

Sent: Monday, March 15, 2021 9:44 AM

To: Sarah Stewart <sarah.a.stewart@k12.wv.us>

Subject: FW: Transgender participation in secondary schools bill

Sarah,

Per our discussion.

Thank you,
Melissa

Melissa J. White

Chief Counsel

Committee on Education

West Virginia House of Delegates

Room 432M

1900 Kanawha Boulevard, East

Charleston, WV 25305

From: Melissa White

Sent: Thursday, March 11, 2021 9:53 AM

To: Bernie Dolan <bernie.dolan@wvssac.org>; Bernie Dolan <bdolan@k12.wv.us>

Subject: Transgender participation in secondary schools bill

Bernie,

Attached is a draft of an originating bill regarding transgender participation in sports. I kept it short: There are obviously certain things that would need to be handled in a rule, unless you have language that you would like to see in the bill. Please let me know your thoughts and if there are any unintended consequences. The Chairman does not want to keep girls from participating in boys sports when there are not girls teams.

Thanks,
Melissa

Melissa J. White

Chief Counsel

Committee on Education

West Virginia House of Delegates

Room 432M

1900 Kanawha Boulevard, East

Charleston, WV 25305

From: Melissa White <Melissa.White@wvhouse.gov>

Sent: Monday, March 15, 2021 9:44 AM

To: Sarah Stewart <sarah.a.stewart@k12.wv.us>

Subject: FW: Transgender participation in secondary schools bill

Sarah,

Per our discussion.

Thank you,
Melissa

Melissa J. White

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Committee on Education

West Virginia House of Delegates

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2021 Green Book

Summary of Public Education Bills Enacted During the 2021 Regular Session

West Virginia Board of Education

202I-2022

Miller L. Hall, President
Thomas W. Campbell, CPA, Vice President
F. Scott Rotruck, Financial Officer

Robert W. Dunlevy, Member
A. Stanley Maynard, Ph.D., Member
Daniel D. Snavely, M.D., Member
Debra K. Sullivan, Member
Nancy J. White, Member
James S. Wilson, D.D.S., Member

Sarah Armstrong Tucker, Ph.D., Ex Officio Chancellor
West Virginia Higher Education Policy Commission
West Virginia Council for Community and Technical College Education

W. Clayton Burch, Ex Officio
State Superintendent of Schools
West Virginia Department of Education

CODE CHANGES

Code	Bill	Code	Bill	Code	Bill	Code	Bill
§3-8-12	HB 2009	§18-5-16	SB 375	§18-9B-8	HB 3177	§18-31-4	HB 2013
§5-10-19	HB 3191	§18-5-18e	HB 3177	§18-9B-9	HB 3177	§18-31-5	HB 2013
§11-1C-10	HB 2581	§18-5-43	HB 3177	§18-9B-10	HB 3177	§18-31-6	HB 2013
§11-3-15c	HB 2581	§18-5-45a	SB 11	§18-9B-11a	HB 3177	§18-31-7	HB 2013
§11-3-15f	HB 2581	§18-5G-1	HB 2012	§18-9B-12	HB 3177	§18-31-8	HB 2013
§11-3-15h	HB 2581	§18-5G-2	HB 2012	§18-9B-13	HB 3177	§18-31-9	HB 2013
§11-3-151	HB 2581	§18-5G-4	HB 2012	§18-9B-14	HB 3177	§18-31-10	HB 2013
§11-3-23	HB 2581	§18-5G-5	HB 2012	§18-9B-15	HB 3177	§18-31-11	HB 2013
§11-3-23a	HB 2581	§18-5G-6	HB 2012	§18-9B-17	HB 3177	§18-31-12	HB 2013
§11-3-24	HB 2581	§18-5G-9	HB 2012	§18-913-18	HB 3177	§18-31-13	HB 2013
§11-3-24a	HB 2581	§18-5G-10	HB 2012	§18-9B-19	HB 3177	§18A-2-16	HB 2267
§11-3-24b	HB 2581	§18-5G-11	HB 2012	§18-9B-20	HB 3177	§18A-2-25	HB 3293
§11-3-25	HB 2581	§18-5G-13	HB 2012	§18-9B-21	HB 3177	§18A-3-1	HB 2029
§11-3-25a	HB 2581	§18-5G-14	HB 2012	§18-9D-15	HB 2906	§18A-3-2a	SB 14
§11-3-32	HB 2581	§18-5G-15	HB 2012	§18-10H-4	HB 3177	§18A-3-2a	HB2029
§11-10A-1	HB 2581	§18-7A-13a	HB 3191	§18-30A-1	HB 2001	§18A-4-2	SB 680
§11-10A-7	HB 2581	§18-7A-36	HB 3177	§18-30A-2	HB 2001	§18A-4-8	HB 2145
§11-10A-8	HB 2581	§18-8-1	HB 2013	§18-30A-3	HB 2001	§18A-4-8a	HB 2145
§11-10A-10	HB 2581	§18-8-1a	HB 2785	§18-30A-4	HB 2001	§18A-4-16	HB 3266

§11-10A-19	HB 2581	§18-8-11	SB 431	§18-30A-5	HB 2001	§21-1A-4	HB 2009
§11-21-12m	HB 2001	§18-9-3a	SB 651	§18-30A-6	HB 2001	§21-5-1	HB 2009
§11-21-25	HB 2001	§18-9A-6a	HB 3177	§18-30A-7	HB 2001	§21-6-3	SB 435
§11-24-10a	HB 2001	§18-9A-7	HB 3177	§18-30A-8	HB 2001	§21-6-4	SB 435
§17B-2-7	SB 356	§18-9A-8a	HB 3177	§18-30A-9	HB 2001	§21-6-5	SB 435
§18-2-5c	HB 3293	§18-9A-15	HB 2852	§18-30A-10	HB 2001	§21-6-10	SB 435
§18-2-5d	HB 3177	§18-9A-16	HB 3177	§18-30A-11	HB 2001	§49-2-113	SB 89
§18-2-9	SB 636	§18-9A-25	HB 2013	§18-30A-12	HB 2001	§55-19-1	SB 277
§18-2-13b	HB 3177	§18-9B-1	HB 3177	§18-30A-13	HB 2001	§55-19-2	SB 277
§18-2-24	H B 3177	§18-9B-2	H B 3177	§18-30A-14	HB 2001	§55-19-3	SB 277
§18-2-29	HB 3177	§18-9B-3	HB 3177	§18-30A-15	HB 2001	§55-19-4	SB 277
§18-2-35	HB 3177	§18-9B-4	HB 3177	§18-30A-16	HB 2001	§55-19-5	SB 277
§18-2E-4a	HB 3177	§18-9B-5	HB 3177	§18-31-1	HB 2013	§55-19-6	SB 277
§18-3-9b	HB 3177	§18-9B-6	HB 3177	§18-31-2	HB 2013	§55-19-7	SB 277
§18-4-12	HB 3177	§18-9B-6a	HB 3177	§18-31-3	HB 2013	§55-19-8	SB 277
§18-5-15g	HB 2791	§18-9B-7	HB 3177			§55-19-9	SB 277

Legend for this page:

- **Black** designates amended code.
- **Red** designates stricken code.
- **Green** designates new code.

TABLE OF CONTENTS

2021 Regular Legislative Session

Senate Bill 11: Declaring work stoppage or strike by public employees to be unlawful

Effective Date: June 2, 2021

Code Reference: Adds: §18-5-45a

WVDE Contact: Heather Hutchens, General Counsel, Office of Legal Services

Bill Summary: The bill confirms that a work stoppage or strike by public employees, and specifically employees of a county board of education, is both unlawful and disruptive to the delivery of the constitutionally required thorough and efficient education. The bill outlines when an employee is participating in a concerted work stoppage, strike, or interruption of operations. This bill clarifies that an employee may not take personal leave to participate in a work stoppage/strike and clarifies that a county board may not utilize accrued or equivalent instruction time or alternate delivery models to cancel or make up lost days. The bill clarifies that the West Virginia Board of Education (WVBE) waiver process cannot be utilized to waive the employment term or minimum instructional term if the noncompliance is because of a work stoppage or strike. This bill clarifies participation is a ground for termination, but if the county does not terminate the employee, the employee's salary should be prorated to account for the absence.

Senate Bill 14: Providing for additional options for alternative certification for teachers

Effective Date: May 27, 2021

Code Reference: Amends: §18A-3-2a

WVDE Contact: Carla Warren, Director, Educator Development and Support

Bill Summary: The bill proposes an alternative certification pathway for individuals to obtain a professional teaching certificate. The bill sets forth four requirements that on individual must obtain to be eligible to receive a professional teaching certificate: (1) hold a bachelor's degree; (2) submit to a criminal history check; (3) successfully complete pedagogical training or pedagogical course(s) that are in substantive alignment with nationally recognized pedagogical standards, or approved/established by the state board; and (4) pass the same subject matter and competency tests required of traditional program applicants for licensure.

Senate Bill 89: Exempting certain kindergarten and preschool programs offered by private schools from registration requirements.

Effective Date: July 4, 2021

Code Reference: Amends: §49-2-113

WVDE Contact: Monica DellaMea, Director, Early and Elementary Learning Services

Bill Summary: The passage of this bill no longer requires certain early childhood programs to obtain approval of its operations from the secretary of the West Virginia Department of Health and Human Resources through the child care licensure process. This includes kindergarten, preschool, or school education programs operated by a public school or which is accredited by the West Virginia Department of Education or any other kindergarten, preschool, or school programs which operates with sessions not exceeding four hours per day for any child pre-k and kindergarten programs. Any

kindergarten, preschool, or school education program operated by a private, parochial, or church school recognized by the West Virginia Department of Education under Policy 2330 are also not required to obtain approval of its operations.

Senate Bill 277: Creating COVID-19 Jobs Protection Act

Effective Date: March 11, 2021

Code Reference: Adds: §55-19-1; §55-19-2; §55-19-3; §55-19-4; §55-19-5; §55-19-6; §55-19-7; §55-19-8; §55-19-9

WVDE Contact: Legal Services

Bill Summary: The bill provides immunity to county boards of education, among other, to claims arising from the COVID-19 pandemic, provided the county board (or any of its employees or agents) did not intentionally engage in conduct with actual malice to cause injury.

Senate Bill 356: Allowing for written part of drivers' exam given in high school drivers' education course.

Effective Date: June 24, 2021

Code Reference: Amends: §17B-2-7

WVDE Contact: Joey Wiseman, Director, Middle and Secondary Learning Services

Bill Summary: The bill allows for West Virginia Driver Education Instructors to administer a knowledge test developed by the Division of Motor Vehicles. Any person who successfully completes a test administered by a driver education instructor is exempt from the proof of school enrollment requirements.

Senate Bill 375: Relating to county boards of education policies for open enrollment.

Effective Date: July 6, 2021

Code Reference: Amends: §18-5-16

WVDE Contact: Legal Services

Bill Summary: The bill makes a few changes to the modifications that were made in the 2019 education omnibus bill relating to intercounty transfers (where a student seeks to attend school in a county other than the one where he or she resides) and reinserts funding language that was inadvertently omitted in the 2019 bill. Substantively, the bill says that an intercounty transfer application may only be denied by a county board of education if there is no classroom space available. If an intercounty transfer request is denied, the denial must be in writing and sent to both the parents of the student and the West Virginia Department of Education (WVDE), with explanation of denial and notification of appeal rights, within three business days.

Senate Bill 431: Relating to school attendance notification requirements to DMV.

Effective Date: June 24, 2021

Code Reference: Amends: §18-8-11

WVDE Contact: Charlene Coburn, Officer, Support and Accountability Services

Bill Summary: The bill authorizes DMV to accept electronic verification of a student's attendance and

satisfactory academic progress from a county board of education. Verification of these two items is statutorily required prior to issuance of a driver's license or learner's permit.

Senate Bill 435: Requiring county superintendents to authorize certain school principals or administrators at nonpublic schools to issue work permits for enrolled students.

Effective Date: June 24,2021

Code Reference: Amends: §21-6-3; §21-6-4; §21-6-5; §21-6-10

WVDE Contact: Legal Services

Bill Summary: The bill permits individuals that are authorized to issue graduation credentials (nonpublic school administrators and homeschool parents) to issue a work permit to children 14 or 15 years of age provided the current statutory requirements for issuing a work permit are satisfied (i.e., written statement from prospective employer that they intend to employ the child; brief description of job child will perform; review of birth certificate verifying child's age; for children attending a nonpublic schools, a certificate showing school attendance). The bill imposes the same responsibilities and penalties for improper issuance of a work permit on nonpublic school administrators and home school parents that are currently imposed upon county superintendents issuing work permits.

Senate Bill 636: Requiring certain history and civics courses be taught in schools.

Effective Date: July 9,2021

Code Reference: Amends: §18-2-9

WVDE *Contact:* Sonya White, Officer, Office of Teaching and Learning Joey Wiseman, Director, Middle and Secondary Learning Services, Office of Teaching and Learning

Bill Summary: The bill adds the following topics/areas that must be taught in all public, private, parochial, and denominational schools in West Virginia:

- Institutions and structure of American government, such as the separation of powers, the Electoral College, and federalism.
- American political philosophy and history utilizing writings from prominent figures in Western civilization, such as Aristotle, Thomas Hobbes, John Locke, and Thomas Jefferson.
- Objective and critical analysis of ideologies throughout history, including capitalism, republicanism, democracy, socialism, communism, and fascism.

In providing this instruction, the bill directs that teachers use primary sources and interactive learning techniques, such as mock scenarios, debates, and open and impartial discussions.

The WVBE is directed to develop academic standards for middle and high school students that cover the required instruction and publish a list of approved instructional resources pursuant to 18-2A1, et seq. The WVBE is required to consult with "other entities" prior to adopting standards; the bill lists the following entities as

possible entities to consult: Florida Joint Center for Citizenship, College Board, Bill of Rights Institute, Hillsdale College, Gilder Lehrman Institute of American History, Constitutional Sources Projects, educators, school administrators, postsecondary education representatives, elected officials, business and industry leaders, parents, and the public.

The WVBE is also required to provide a testing/assessment for the history and civics courses required. Such assessments must measure a students' factual and conceptual knowledge including how facts interrelate and the reasons behind historical documents and events. All students in public, private, parochial, and denominational schools are required to take these assessments.

Senate Bill 651: Allowing county boards of education to publish financial statements on website.

Effective Date: *July* 6,2021

Code Reference: Amends: §18-9-3a

WVDE Contact: Amy Willard, School Operations Officer, Office of School Operations and Finance

Bill *Summary:* Starting with financial statements to be published in the fall of 2024, the bill extends the time for county boards of education (CBOE) to annually publish their financial statement in the newspaper from 90 days to 120 days.

Also starting in 2024, the bill provides an electronic option in place of posting the financial statement in the newspaper if certain conditions were met. After conducting a properly noticed public hearing at which interested persons could express their views electronic

publication, a CBOE could post its financial statement on the CBOE's website. The first year the CBOE utilizes the electronic option it is required to publish in the newspaper for two consecutive weeks the availability of the financial statement on the CBOE's website.

In addition to all financial information currently required to be included in the CBOE's financial statement, if the CBOE utilizes the electronic option to post financial statement it must also include the following information: (1) all persons having a contract with the county board (all professional and service personnel, including substitutes) and the amount paid to each; (2) budget estimates; and (3) list of names of each entity receiving less than $250 from any fund showing the amount paid and purpose for which it was paid. Financial statements posted on the CBOE website must remain posted until the posting of the following year's financial statement.

Senate Bill 680: Allowing State Superintendent of Schools define classroom teachers certified in special education.

Effective Date: July 5, 2021

Code Reference: Amends: §18A-4-2

WVDE Contact: Amy Willard, School Operations Officer, Office of School Operations and Finance

Bill Summary: This is a 'clean-up' bill to a provision included in HB206 (passed in 2019) that provides a three step pay bump to special education classroom teachers.

House Bill 2001: Relating generally to creating the West Virginia Jumpstart Savings Program

Effective Date: June 9, 2021

Code Reference: Adds: §11-21-12m; §11-21-25; §11-24-10a; §18-30A-1; §18-30A-2; §18-30A-3; §1830A-4; §18-30A-5; §18-30A-6; §18-30A-7; §18-30A-8; §18-30A-9; §18-30A-10; §18-30A-11; §18-30A-12; §18-30A-13; §18-30A-14; §18-30A-15; §18-30A-16

WVDE Contact: Amy Willard, School Operations Officer, Office of School Operations & Finance

Phillip Uy, Financial Officer

Bill Summary: The bill establishes the West Virginia Jumpstart Savings Program as a result of the Legislature recognizing the importance of cultivating an environment in West Virginia where tradespersons and entrepreneurs can be successful in their careers and remain in their home state. The program is to be operable on or before July 1, 2022.

- The bill indicates that the program shall be administered by the West Virginia Jumpstart Savings Board (Board) and outlines the seven members who serve on the Board. The bill outlines the powers and authority of the Board to successfully administer the program.

- The bill also outlines the duties and responsibilities of the Treasurer, who is also the chairman and presiding officer of the Board.

- The bill further establishes the Jumpstart Savings Trust Fund and Jumpstart Savings Expense Fund for the administration of the program and outlines the process for selecting financial organizations to act as depositories and managers for the programs.

- The bill defines the eligibility criteria for opening a Jumpstart Savings Account and for when the Treasurer will deposit $100 into a newly opened account.

- The bill defines qualifying expenses, which include:
    - The purchase of tools, equipment, or supplies by the beneficiary to be used exclusively in an occupation or professional for which the beneficiary is required to:
    - Complete an apprenticeship program through the United States Department of Labor
- Complete an apprenticeship program required by state or legislative rule
- Earn a license or certification from an Advanced Career Education (ACE) career center; or
- Earn an associate degree or certification from a community and technical college.
- Fees for required certification or licensure for the beneficiary to practice a trade or occupation in the state as described above.
- Costs incurred by the beneficiary that are necessary to establish a business in this state in which the beneficiary will practice an occupation or profession as described above, when the costs are exclusively incurred and paid for the purpose of establishing and operating such business.
- The bill provides for certain tax benefits for contributors to a Jumpstart Savings Account. For West Virginia personal income tax purposes, a taxpayer's adjusted gross income is reduced by an amount equal to the taxpayer's contribution to a Jumpstart Savings Account, up to $25,000 in a single taxable year, with a carryforward provision not to exceed five taxable years. A similar modification is allowed in an amount equal to a distribution received from a Jumpstart Savings Accounts

that is used to pay for qualified expenses, not to exceed $25,000 for the taxable year.

• The bill provides for certain nonrefundable tax credits against West Virginia personal income tax and corporate net income tax for a matching contribution made by a qualified employer into a Jumpstart Savings Account if the beneficiary of the account is an employee of the taxpaying employer and if the beneficiary is a West Virginia resident. The tax credit allowed may not exceed $5,000 per employee per taxable year and an employer may not claim a credit against more than one type of tax for a single contribution to a Jumpstart Savings Account.

• The bill requires the Board to promulgate legislative, procedural, or emergency rules that outline specific requirements related to the program.

House Bill 2009: Relating to limitations on the use of wages and agency shop fees by employers and labor organizations for political activities.

Effective Date: June 17, 2021

Code Reference: Add: §7-5-25

Amends: §8-5-12; §12-3-13b; §18A-4-9; §21-5-1; §21-5-3; §45A-2-116

WVDE Contact: Legal Services

Bill Summary: Relating to limitations on the use of wages and agency shop fees by employers and labor organizations for political activities. House Bill 2009 prohibits the deduction or assignment of union, labor organization or club dues or fees from the earnings of county board of education employees. As for wage assignments for permissible purposes, the bill also removes the requirement that assignments of an

employee's future wages must be notarized. It will now be sufficient if the assignment is in writing.

House Bill 2012: Relating to Public Charter Schools

Effective Date: June 1,2021

Code Reference: Amends: §18-5G-1; §18-5G-2; §18-5G-4; §18-5G-5; §18-5G-6; §18-5G-9; §18-5G-10; §18-5G-11

Adds: §18-5G-13; §18-5G-14; §18-5G-15

WVDE Contact: Legal Services

Bill Summary: The bill makes the following changes to the existing public charter school law:

- Increases the cap on charter schools from 3 to 10 every three

[End of Exhibit]

Sarah Stewart

From: Heather Hutchens

Sent: Monday, March 15, 2021 10:53 AM

To: Mary Catherine Tuckwiller; Sarah Stewart; Stephanie Abraham

Subject: RE: Transgender participation in secondary schools bill

It seems like much ado about nothing. I don't think any of it is necessary.

Heather L. Hutchins

From: Mary Catherine Tuckwiller

Sent: Monday, March 15, 2021 10:31 AM

To: Sarah Stewart <sarah.a.stewart@k12.wv.us>; Heather Hutchens <hhutchens@k12.wv.us>; Stephanie Abraham <stephanie.abraham@k12.wv.us>

Subject: RE: Transgender participation in secondary schools bill

At line 65, they convolute gender and sex when the focus throughout the bill seems to be sex — I realize the issue is when someone is transitioning genders but there is no prior reference in the bill to gender or sex — and the question, I suppose, is how will this issue arise?

Also will every student athlete produce a birth certificate now, and then they will call any suspect birth certificates into question, or will they only request from those who assert a transition? It says birth certificate that doesn't appear to be original — a child who is adopted by a step-parent won't have their original birth certificate. **I** would think for equitable application purposes everyone might need to produce one. Who is making the judgment call on the veracity of the birth certificate and who is evaluating the evidence? SSAC or the high school or the county board? I looked up some similar legislation in other states and it seems to dictate the student must obtain medical exam/confirmation based on these factors:

http://billstatus.ls.state.ms.us/ciocuments/2021/html/SB/2500-2599/SB2536IN.htm

(3) If disputed, a student may establish his or her sex by presenting a signed physician's statement which shall indicate the student's sex based solely upon:

(a) The student's internal and external reproductive anatomy;

(b) The student's normal endogenously produced levels of testosterone; and

(c) An analysis of the student's genetic makeup.

Mary Catherine Tuckwiller

Attorney

West Virginia Department of Education

From: Sarah Stewart

Sent: Monday, March 15, 2021 9:49 AM

To: Heather Hutchens <hhutchens@k12.wv.us>; Stephanie Abraham <stephanie.abraham@k12.wv.us>; Mary Catherine Tuckwiller <mctuckwiller@k12.wv.us>

Subject: FW: Transgender participation in secondary schools bill

Happy Monday!

Would you all care to take a look at this one and provide feedback (preferably in writing)? Not necessarily on the substance, but modifications we would suggest. I have to leave for a funeral soon and not sure when will be back this afternoon.

Thanks,
Sarah

Sarah Stewart
Government Affairs Counsel
Superintendent's Office

West Virginia Department of Education

Sarah,

Per our discussion.

Thank you,

Melissa

Melissa J. White
Chief Counsel
Committee on Education
West Virginia House of Delegates
Room 432M
1900 Kanawha Boulevard, East
Charleston, WV 25305

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Thanks,
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Committee on Education
West Virginia House of Delegates
Room 432M
1900 Kanawha Boulevard, East
Charleston, WV 25305

Sarah Stewart

From: Melissa White <Melissa.White@wvhouse.gov>

Sent: Monday, March 15, 2021 9:44 AM

To: Sarah Stewart

Subject: FW: Transgender participation in secondary schools bill

Attachments: Transgender orginating bill.docx

Sarah,

Per our discussion.

Thank you,

Melissa

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Chief Counsel
Committee on Education
West Virginia House of Delegates
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Melissa J. White
Chief Counsel
Committee on Education
West Virginia House of Delegates
Room 432M

Enrolled Bill Review Form
2021 Regular Session

Confidential - Internal & Deliberative

1. **Bill No:** HB3293 **Same as / Similar to:**

2. **Section Check:** §§18-2-5c, 18A-2-25 (amends)

3. **Effective Date:** ( ) Passage (X) 90 Days ( ) July 1, 2021 ( ) Other

4. **Please note if a Governor's Bill ( ) or an Agency Bill ( )**

5. **Sponsor(s):** Delegates Hanna, Bridges, Clark, Ellington, Horst, Jennings, Longanacre, Mazzocchi, Tully, Phillips, Burkhammer

6. **Yeas and Nays:**

   Senate: 18 Yeas 15 Nays 1 Absent & Not Voting

   House: 80 Yeas 20 Nays 0 Absent & Not Voting

7. **Legislators voting against the Bill:**

   Senate: Baldwin, Beach, Caputo, Ihlenfeld, Jeffries, Lindsay, Maroney, Nelson, Plymale, Romano, Stollings, Swope, Takubo, Unger, Weld

   House: Barach, Diserio, Doyle, Evans, Fleischauer, Fluharty, Garcia, Griffith, Hansen, Higginbotham, Hornbuckle, Lovejoy, Pushkin, Rowe, Skaff, Thompson, Walker, Williams, Young, Zukoff

8. **Describe the purpose of the bill and explain the relevant changes to current law:**

The bill requires interscholastic, intercollegiate, intramural, or club athletic teams that are sponsored by any public secondary school or state institution of higher education to be expressly designated as either (1) male; (2) female; or (3) coed. Male is defined in the bill as an individual whose biological sex determined at birth is male and female is defined as an individual whose biological sex determined at birth is female. Teams that are designated for females cannot be open to male students when selection of the team is based on competitive skill or the team activity involves a contact sport. Teams that are designated at male or coed do not have eligibility restrictions. The bill provides a private cause of action for any student that is aggrieved by a violation of the language in the bill. The WVBE is charged with adopting a policy to implement the provisions of the bill.

9. Unless otherwise noted, the agency has reviewed the technical sufficiency of the bill and finds as follows:

a. All code sections in the body of the bill are in the title and enacting section. Yes

b. Bill title complies with Section 30, Article VI of the WV Constitution. Yes

c. All cross references and citations to federal and state law are correct. Yes

d. The numbering of sections, subsections, subdivisions, paragraphs, subparagraphs, clauses and any consecutive similar designation is correct. Yes

e. Dates, numbers, and punctuation are sufficiently plain and clear to ascertain what the law is and to give effect to it. Yes

f. Effective date of the bill and internal effective dates are not in conflict. Yes

g. No other technical errors were identified for which the agency would recommend a technical veto.

10. Agency Rule Making:

a. Does the bill require a legislative rule? WVBE Policy

b. Does the agency currently have sufficient rule-making authority regarding the subject matter of the bill? n/a

c. Are emergency rules mandated? Permitted? Does the bill provide for emergency rule authorization status? If not, does the agency need emergency rule making authorization status? n/a

11. Identify whether the bill creates any new funds or accounts or mandates the agency to transfer or distribute monies from accounts under agency control: None

12. Describe any changes to fees, taxes, rates, or revenues: None

13. Agency comments (This may include whether the agency supports, opposes or is neutral about the bill. If the agency questions the constitutionality of the bill, if the bill conflicts with other provisions of state code or federal law, if the agency substantially disagrees with the public policy of the bill, or the agency will suffer undue hardship to make the bill effective, please explain)

14. Is a Governor's veto recommended? If yes, please explain. The WVDE does not support this bill.

15. Please identify whether any other state agency should also provide a bill review: HEPC

16. Preparer's name and title: Sarah Stewart, Government Affairs Counsel **Date:** April 19, 2021

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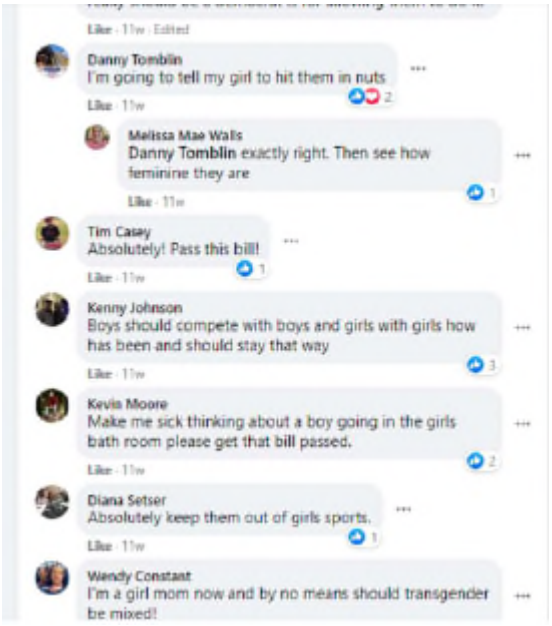

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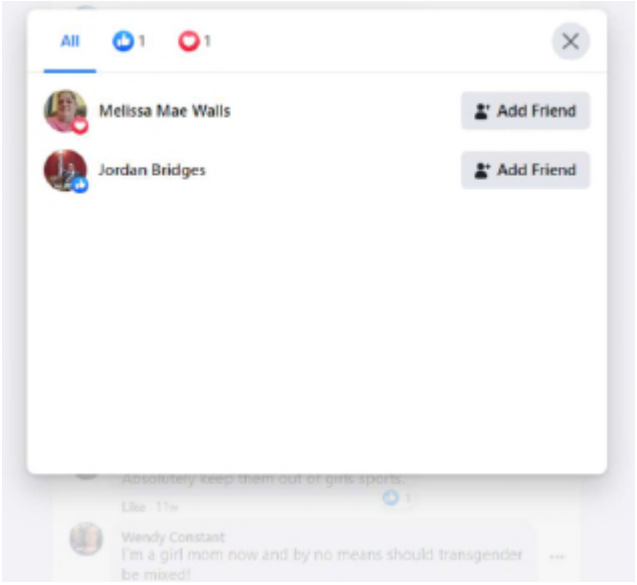

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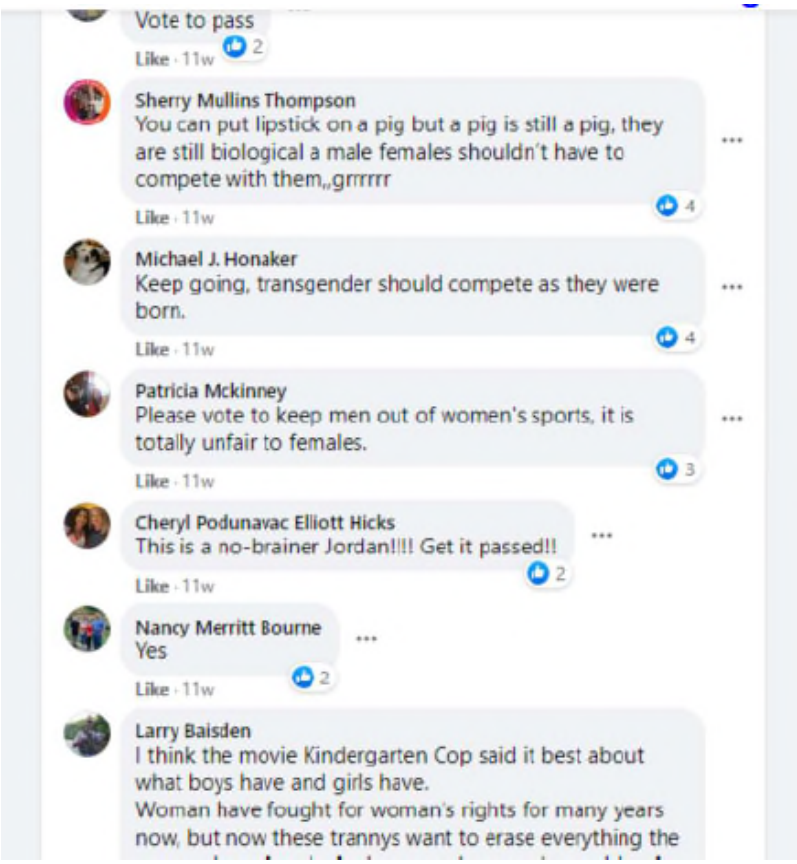
Vote to pass
Like · 11w 2
Sherry Mullins Thompson
You can put lipstick on a pig but a pig is still a pig, they are still biological a male females shouldn't have to compete with them,,grrrrrr
Like · 11w 4
Michael J. Honaker
Keep going, transgender should compete as they were born.
Like · 11w 4
Patricia Mckinney
Please vote to keep men out of women's sports, it is totally unfair to females.
Like · 11w 3
Cheryl Podunavac Elliott Hicks
This is a no-brainer Jordan!!!! Get it passed!!
Like · 11w 2
Nancy Merritt Bourne
Yes
Like · 11w 2
Larry Baisden
I think the movie Kindergarten Cop said it best about what boys have and girls have.
Woman have fought for woman's rights for many years now, but now these trannys want to erase everything the

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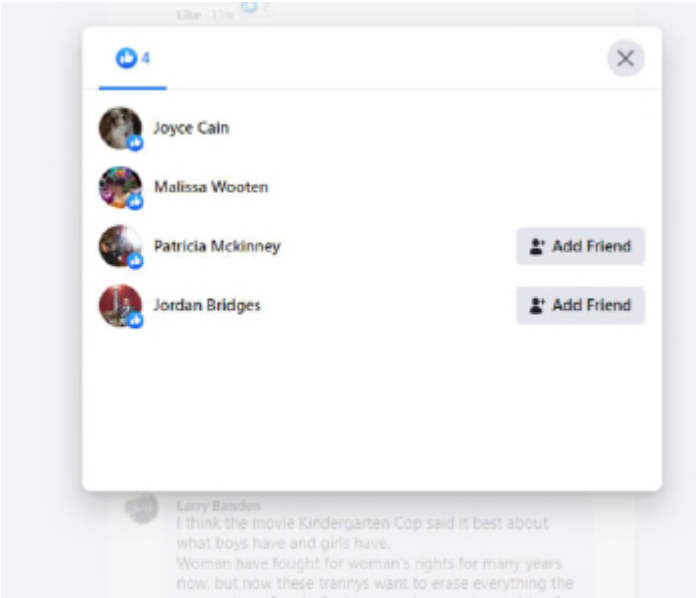

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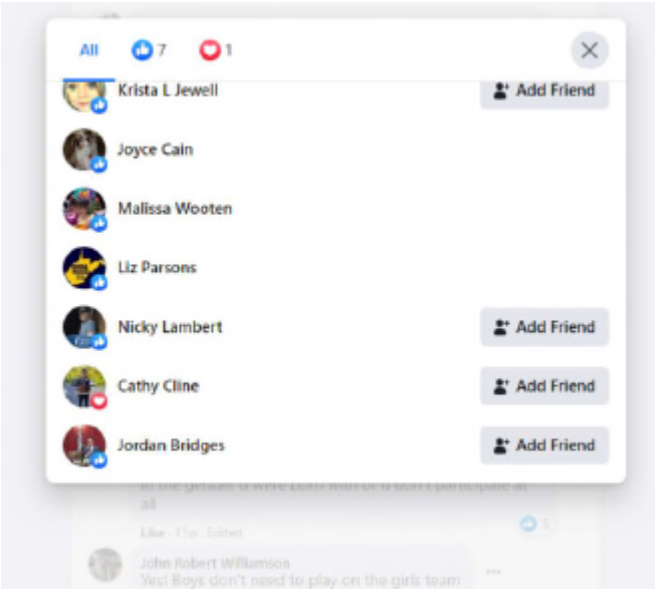

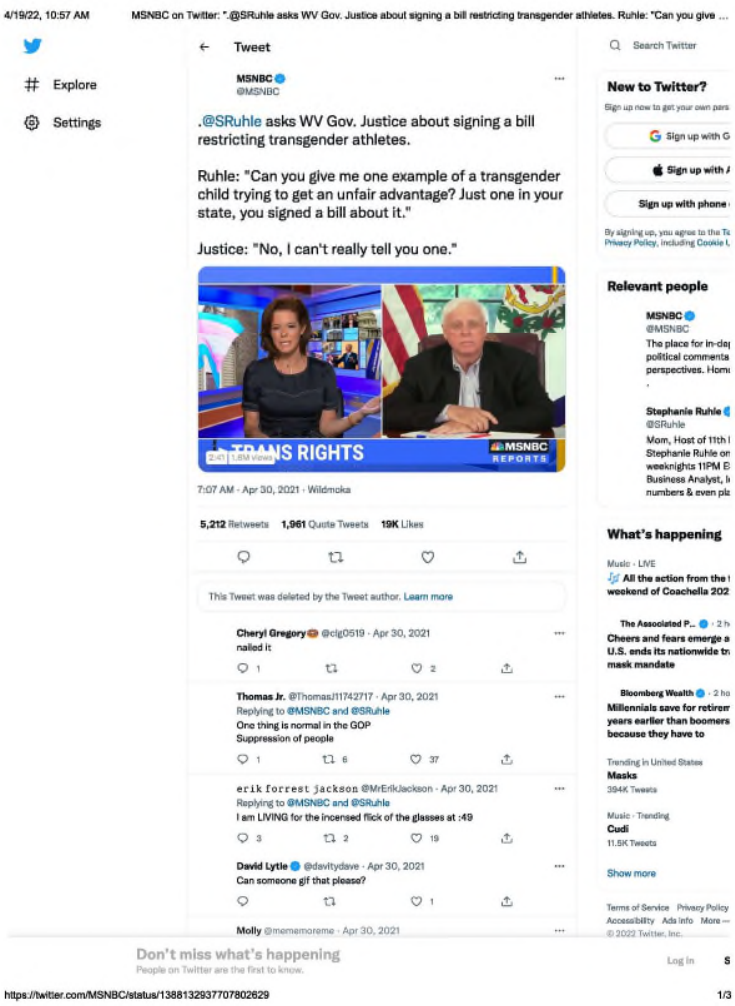
4/19/22, 10:57 AM MSNBC on Twitter: ".@SRuhle asks WV Gov. Justice about signing a bill restricting transgender athletes. Ruhle: "Can you give ...
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.@SRuhle asks WV Gov. Justice about signing a bill restricting transgender athletes.
Ruhle: "Can you give me one example of a transgender child trying to get an unfair advantage? Just one in your state, you signed a bill about it."
Justice: "No, I can't really tell you one."
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One thing is normal in the GOP
Suppression of people
erik forrest jackson @MrErikJackson · Apr 30, 2021
Replying to @MSNBC and @SRuhle
I am LIVING for the incensed flick of the glasses at :49
David Lytle @davitydave · Apr 30, 2021
Can someone gif that please?
Molly @mememoreme · Apr 30, 2021
Search Twitter
New to Twitter?
Sign up with G
Sign up with
Sign up with phone
Relevant people
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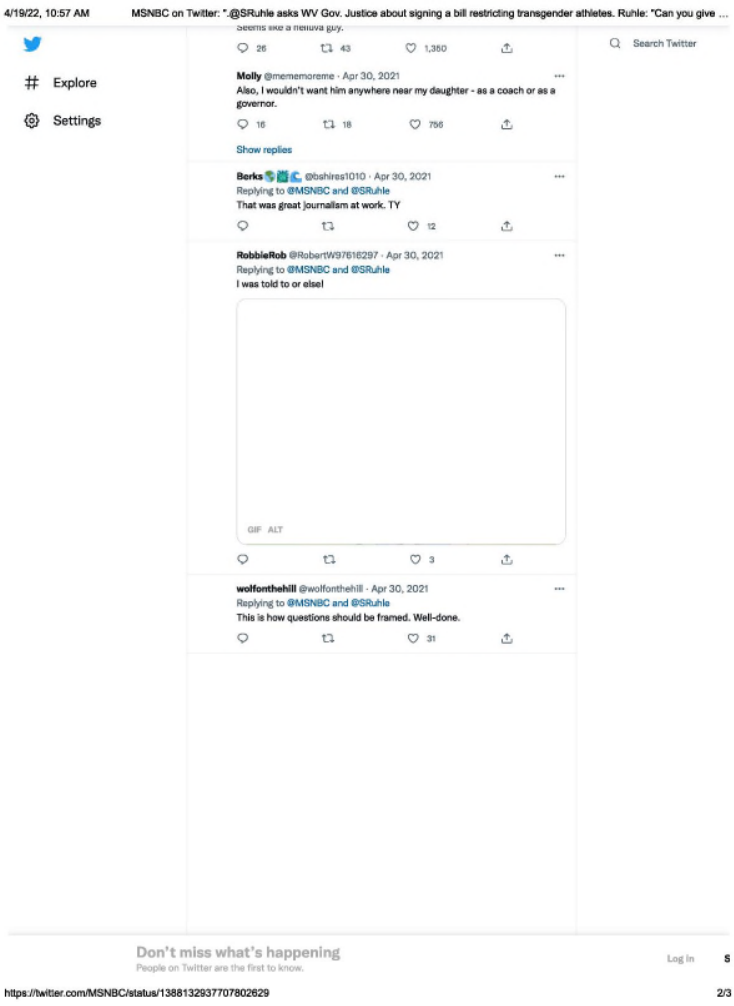
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26 43 1,350
Molly @mememoreme · Apr 30, 2021
Also, I wouldn't want him anywhere near my daughter - as a coach or as a governor.
16 18 756
Show replies
Berks @bshires1010 · Apr 30, 2021
Replying to @MSNBC and @SRuhle
That was great journalism at work. TY
12
RobbieRob @RobertW97616297 · Apr 30, 2021
Replying to @MSNBC and @SRuhle
I was told to or else!
GIF ALT
3
wolfonthehill @wolfonthehill · Apr 30, 2021
Replying to @MSNBC and @SRuhle
This is how questions should be framed. Well-done.
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NCAA.org

Board of Governors updates transgender participation policy

Policy will take effect immediately, and impacted athletes can regain eligibility later if approved by divisions

Media Center

Posted: 1/19/2022 8:41:00 PM

The NCAA Board of Governors on Wednesday voted in support of a sport-by-sport approach to transgender participation that preserves opportunity for transgender student-athletes while balancing fairness, inclusion and safety for all who compete. The new policy, effective immediately, aligns transgender student-athlete participation for college sports with recent policy changes

from the United States Olympic and Paralympic Committee and International Olympic Committee.

Like the Olympics, the updated NCAA policy calls for transgender participation for each sport to be determined by the policy for the national governing body of that sport, subject to ongoing review and recommendation by the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports to the Board of Governors. If there is no NOB policy for a sport, that sport's international federation policy would be followed. If there is no international federation policy, previously established IOC policy criteria would be followed.

The Board of Governors urged the divisions to provide flexibility to allow for additional eligibility if a transgender student-athlete loses eligibility based on the policy change provided they meet the newly adopted standards.

The policy is effective starting with the 2022 winter championships. Transgender student-athletes will need to document sport-specific testosterone levels beginning four weeks before their sport's championship selections. Starting with the 2022-23 academic year, transgender student-athletes will need documented levels at the beginning of their season and a second documentation six months after the first. They will also need documented testosterone levels four weeks before championship selections. Full implementation would begin with the 2023-24 academic year.

"We are steadfast in our support of transgender student-athletes and the fostering of fairness across college sports," said John DeGioia, chair of the board and Georgetown president. "It is important that NCAA member schools, conferences and college athletes compete in an inclusive, fair, safe and respectful

environment and can move forward with a clear understanding of the new policy."

"Approximately 80% of U.S. Olympians are either current or former college athletes," said Mark Emmert, NCAA president. "This policy alignment provides consistency and further strengthens the relationship between college sports and the U.S. Olympics."

Additionally, the NCAA's Office of Inclusion and the Sport Science Institute released the Gender Identity and Student-Athlete Participation Summit Final Report. The report assists ongoing membership efforts to support inclusion, fairness, and the mental and physical health of transgender and non-binary student-athletes in collegiate sport.

The Board of Governors met Wednesday in Indianapolis as part of the 2022 NCAA Convention. For more on key topics from the 2022 NCAA Convention, visit ncaa.org/convention.

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

CHARLESTON DIVISION

B. P. J., et al.,

Plaintiffs,

v. CIVIL ACTION NO. 2:21-cv-00316

WEST VIRGINIA STATE BOARD OF EDUCATION, et al.,

Defendants,

and

LAINEY ARMISTEAD,

Defendant-Intervenor.

Plaintiff's Statement Of Undisputed Material Facts

I. B.P.J. Is A Girl Who Is Transgender.

1. B.P.J. is an eleven-year-old girl who is also transgender. (Ex. 2[1] (Declaration of B.P.J.) ¶ 2; Ex. 12 (Deposition Transcript of B.P.J.) at 25:3-5, 25:11-14, 25:23-

[1] "Ex." refers to an exhibit attached to the April 21, 2022, declaration of Loree Stark submitted in support of Plaintiff B.P.J.'s motion for summary judgment.

26:3; Ex. 13 (Deposition Transcript of Heather Jackson, Jan. 19) at 59:5-6; Ex. 15 (Deposition Transcript of Wesley Scott Pepper) at 46:16-20; Dkt. No. 252 (Stipulation of Uncontested Facts Agreed to by Harrison County Board of Education, County Superintendent Dora Stutler, and Plaintiff) ("County Stip.") ¶ 1; Dkt. No. 270 (Stipulation of Uncontested Facts Agreed to by West Virginia State Board of Education, State Superintendent W. Clayton Burch, and Plaintiff) (WVBOE Stip.) ¶ 1; Dkt. No. 158 (WVSSAC's Answer to Plaintiff's First Amended Complaint ("WVSSAC Ans.") ¶¶ 1, 6, 30.) B.P.J. was designated male at birth and has a female gender identity. (Ex. 1-A (Declaration of Heather Jackson) at 1; Ex. 1-B at 2.)

2. B.P.J. is fiercely protected by her mother, Heather Jackson; unconditionally loved by her father, Wesley Pepper; and has the support of her older brothers and grandparents. (Ex. 1 ¶¶ 4, 22–23; Ex. 2 ¶ 5; Ex. 15 at 165:21-166:1, 185:5-16.)

3. When B.P.J. was in third grade, she socially transitioned at school to living and presenting in accordance with her identity as a girl. (Ex. 1 ¶ 11; Ex. 12 at 39:6-39:24.) "Social transition" means allowing a transgender child to live and be socially recognized in accordance with their gender identity. (Ex. 22 (Declaration and Expert Report of Deanna Adkins, M.D.) ¶ 27.)

4. B.P.J.'s elementary school and middle school have both acknowledged and respect that B.P.J.'s gender identity is female. (Dkt. No. 252 (County Stip.) ¶ 1.)

5. When B.P.J. was in elementary school, her school created a gender support plan designed to help "account[]" for and "support[]" B.P.J.'s "authentic

gender" at school. (Ex. 1-A at 1; Ex. 2 ¶ 6; Dkt. No. 252 (County Stip.) ¶ 1.)

6. Under this plan, school staff were informed that B.P.J.'s authentic gender is female, and were instructed to refer to her with her female name and using female pronouns. (Ex. 1-A at 2–3.)

7. Under the gender support plan, school staff were also informed on how to support B.P.J. if she faced problems from others at school because of her gender. (Ex. 1-A at 2–3.)

8. B.P.J.'s middle school created a similar plan. (Ex. 1-B.)

9. Like the elementary school plan, B.P.J.'s middle school gender support plan confirmed that B.P.J.'s parents are aware of and supportive of her gender identity and that B.P.J. "is comfortable with others knowing her gender identity and transition," and provided that "all teachers," students, and multiple administrators and county staff would be made aware of her gender identity. (Ex. 1-B at 2.)

10. Under the elementary and middle school gender support plans, if anyone has questions about B.P.J.'s identity, teachers and staff should "[b]e open and honest" and respond, "[s]he is [B.P.J.]; and that makes her happy." (Ex. 1-A at 2; Ex. 1-B at 3.)

11. B.P.J. feels supported by her school given its commitment to treating her as the girl she is. (Ex. 2 ¶ 6; Ex. 12 at 130:3-132:13.)

12. In 2019, B.P.J. was diagnosed with gender dysphoria by Dr. Gerald Montano, a pediatrician at the University of Pittsburgh Medical Center Children's Hospital of Pittsburgh's Gender and Sexuality

Development Program. (Ex. 1 ¶ 13; Ex. 2 ¶ 7; Ex. 20 (Deposition Transcript of Gerald Montano, D.O.) at 93:17-19; Ex. 5 (State of West Virginia's Response to Plaintiff's Second Set of Requests for Admission) No. 5; Ex. 6 (Superintendent Dora Stutler's Responses and Objections to Plaintiff's Second Set of Requests for Admission) No. 5; Ex. 7 (Harrison County Board of Education's Responses and Objections to Plaintiff's Second Set of Requests for Admission) No. 5.)

13. On June 15, 2020, at the first signs of puberty—known as the "Tanner 2" stage of pubertal development—B.P.J. began receiving puberty delaying (or "blocking") treatment, in accordance with the Endocrine Society's clinical guidelines for treating gender dysphoria. (Ex. 1 ¶ 14.)

14. B.P.J. has been on puberty delaying treatment for nearly two years. (Ex. 1 ¶ 14; Ex. 2 ¶ 8; Ex. 20 at 115:22-116:4; Ex. 19 (Deposition Transcript of Kacie Kidd, M.D.) at 89:2290:18.)

15. "Puberty blocking treatment works by pausing endogenous puberty at whatever stage it is at when the treatment begins." (Ex. 22 ¶ 30.)

16. When administered to transgender girls at the beginning of the "Tanner 2" stage of sexual maturity, puberty-blocking medication prevents transgender girls from experiencing levels of circulating testosterone above what is typical for non-transgender girls and women. (Ex. 24 (Expert Report and Declaration of Joshua D. Safer, M.D., F.A.C.P., F.A.C.E.) ¶ 50; Ex. 25 (Rebuttal Expert Report and Declaration of Joshua D. Safer, M.D., F.A.C.P., F.A.C.E.) ¶ 17; Ex. 22 ¶ 31.)

17. As a result of receiving puberty-delaying medication at the beginning of the "Tanner 2" stage of

pubertal development, B.P.J. has not gone through her endogenous puberty and has not experienced the effects of testosterone that would be typical if she underwent her full endogenous puberty. (Ex. 22 ¶¶ 30–31; Ex. 19 at 119:22-120:15.) Specifically, she has never experienced levels of circulating testosterone above what is typical for non-transgender girls and women. (Ex. 24 ¶ 50; Ex. 25 ¶ 17; Ex. 22 ¶ 31.)

18. If B.P.J. goes on to receive gender-affirming hormone therapy, she will receive the same amount of estrogen during puberty that non-transgender girls generate endogenously and will develop the same changes to bone size, skeletal structure, pelvis shape, fat distribution, and secondary sex characteristics that are typically experienced by non-transgender girls who go through a typically female puberty. (Ex. 25 ¶ 17; Ex. 22 ¶ 43.)

II. B.P.J.'s Wishes To Participate In And Experience The Benefits Of School Sports.

19. B.P.J. has always liked running and loves playing team sports. (Ex. 2 ¶¶ 3, 13; Ex. 12 at 65:2-4, 145:15-18, 67:21-68:6.)

20. While in elementary school, she enjoyed participating in a recreational cheerleading team with other girls. (Ex. 1 ¶¶ 16–18; Ex. 2 ¶¶ 9–11; Ex. 12 at 72:21-72:22.)

21. As someone who comes from a family of runners, B.P.J. also grew up running and watching her older brothers and mother run competitively and as part of a team. (Ex. 1 ¶ 20; Ex. 2 ¶ 13.)

22. School-sponsored athletics offer a range of educational and social benefits for children and young

adults, including camaraderie, cooperation, leadership, teamwork, watching out for fellow players, trust, physical fitness, perseverance, sportsmanship, and discipline. (Dkt. No. 78 (State of West Virginia's Answer to Plaintiff's First Amendment Complaint) ("State Ans.") ¶ 38; Dkt. No. 131 (Lainey Armistead's Answer to Plaintiff's First Amended Complaint) ("Armistead Ans.") ¶ 38; Dkt. No. 156 (West Virginia State Board of Education's Answer to Plaintiff's First Amendment Complaint) ("WVBOE Ans.") ¶ 38; Dkt. No. 157 (Harrison County Board of Education's Answer to Plaintiff's First Amendment Complaint) ("County Ans.") ¶ 38; Dkt. No. 158 (WVSSAC Ans.) ¶ 38; Ex. 27 (Expert Report and Declaration of Mary D. Fry, Ph.D.) ¶¶ 18, 37; Ex. 16 (Deposition Transcript of Harrison County Board of Education 30(b)(6) Designees) at 106:22-106:24, 222:9-17; Ex. 8 (West Virginia State Board of Education's Responses to Plaintiff's Second Set of Requests for Admission) Nos. 45–47; Ex. 17 (Deposition Transcript of WVSSAC 30(b)(6) Designee) at 113:8-11; Ex. 21 (Deposition of Lainey Armistead) at 156:17-25; Dkt. No. 95-1 (Declaration of Lainey Armistead) ¶ 27; Ex. 11 (Lainey Armistead's Responses and Objections to Plaintiff's Second Set of Requests for Admission) Nos. 44–45.)

23. The benefits from school athletics can contribute to greater success in college and throughout life. (Ex. 27 ¶¶ 18, 37.)

24. These benefits exist regardless of whether a student wins or loses. (Ex. 5 No. 47; Ex. 6 No. 47; Ex. 8 No. 47; Ex. 9 (State Superintendent W. Clayton Burch's Responses to Plaintiff's Second Set of Requests for Admission) No. 47; Ex. 10 (WVSSAC's Responses to Plaintiff's Second Set of Requests for Admission) No. 47; Ex. 11 No. 47; Ex. 27 ¶ 35).

25. These benefits are advanced when all athletes have the opportunity to play the sport they love. (Ex. 27 ¶ 18.)

26. Encouraging student-athletes to focus on improving their own performance and cooperation with teammates maximizes the benefits of athletics for all participants. (Ex. 27 ¶¶ 28–30, 35.)

27. Where coaches create an environment in which student-athletes feel safe, valued, and respected, performance is improved and the benefits of sport are maximized. (Ex. 27 ¶¶ 26, 34.)

28. Excluding students for no other reason than because they are transgender eliminates the benefits of sports for them and diminishes those benefits for all participants. (Ex. 27 ¶¶ 37– 41.)

29. B.P.J. has experienced benefits from participating in cheerleading in the past and from participating in cross-country in the 2021-22 school year. (Ex. 1 ¶¶ 17–18, 28; Ex. 2 ¶¶ 10– 11, 16–18.)

30. B.P.J. hopes to continue to experience such benefits from playing on girls' teams in the future. (Ex. 2 ¶ 21.)

III. Prior To H.B. 3293, West Virginia Had A Longstanding Policy Of Sex Separation In School Sport And Did Not Categorically Bar Transgender Students From Participating.

31. Before it passed H.B. 3293, West Virginia had a general, longstanding, and unchallenged policy establishing separate school sports teams for boys and girls. *See* W. Va. Code R. § 127.

32. Almost all sports in West Virginia at the public secondary school level are separated into boys' and girls' teams. (Ex. 17 109:24-110:4.) The exceptions are

cheerleading, football, baseball, wrestling, and golf. (Ex. 10 Nos. 29–30; Ex. 17 at 109:24-110:4.)

33. Cheer teams are always designated as "coed" or "mixed," whereas football, baseball, wrestling, and golf teams are boys' teams that permit girls to play if they so desire because no separate girls' teams exist, and so are considered "mixed . . . to respond to demand." (Ex. 17 at 104:2-105:6.)

34. In practice, cheer "almost always has boy [and girl] members," but baseball and football are "very seldom" actually mixed. (Ex. 17 at 104:17-20.)

35. There are no co-ed teams for cross-country or track at Bridgeport Middle School or at any other public secondary school in West Virginia. (Ex. 10 Nos. 30–31.)

36. Under rules established by the West Virginia Secondary School Activities Commission ("WVSSAC")—which were already in existence when H.B. 3293 was enacted—cisgender boys are prohibited from playing on girls' teams at the public secondary school level. (Ex. 17 at 105:4-105:16; Ex. 39 (WVSSAC000148) at § 127-2-3.8; Ex. 7 Nos. 38–39; Ex. 8 Nos. 38–39; Ex. 10 Nos. 38–39; Ex. 11 Nos. 38–39.)

37. By contrast, girls may choose to play on a boys' team if they wish to do so and no girls' team exists, as is the case with football, baseball, wrestling, and golf. (Ex. 17 104:2-105:6.)

38. West Virginia did not have a law or policy prohibiting girls who are transgender from playing on girls' teams before it passed H.B. 3293.

39. Before H.B. 3293, the WVSSAC Board of Directors had an internal policy that allowed students who are transgender to participate on teams consistent with their

gender identity if the transgender student's school allowed them to participate, based on its considerations of whether that specific student's participation would impact "fair competition among high school teams." (Ex. 37 (WVSSAC000008).) Under the internal policy, if another school contested the transgender student's eligibility to play, then the Board of Directors would determine whether the student's participation threatened "competitive equity or the safety of teammates and opposing players." (*Id.*)

40. The WVSSAC received no complaints about this internal policy, and the WVSSAC is not aware of any instances of a transgender student attempting to participate under this policy. (Ex. 17 at 118:23-119:16.)

41. Since 2011, the National College Athletics Association ("NCAA") has allowed women who are transgender to participate on women's teams after completing one year of testosterone suppression. (Ex. 24 ¶ 38.)

42. In 2022, the NCAA announced that it had revised its policy to adopt a "sport-by-sport approach" that "calls for transgender participation for each sport to be determined by the policy for the national governing body of that sport, subject to ongoing review and recommendation by the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports to the Board of Governors." (Ex. 24 ¶ 39.)

IV. H.B. 3293 Categorically Bans Transgender Girls And Women From Participating On Girls' And Women's Sports Teams.

43. On April 9, 2021, West Virginia passed H.B. 3293. W. Va. Code § 18-2-25d. H.B. 3293 went into effect 90 days later. *Id.*

44. H.B. 3293 categorically bans all girls who are transgender from participating in school sports from middle school through college. W. Va. Code § 18-2-25d.

45. H.B. 3293 requires that all public secondary school or college sports in West Virginia be "expressly designated" as either "males," "females," or "co-ed" based solely on a student's "biological sex." W. Va. Code §§ 18-2-25d(b), (c).

46. H.B. 3293 defines "[b]iological sex" as "an individual's physical form as a male or female based solely on the individual's reproductive biology and genetics at birth." W. Va. Code § 18-2-25d(b)(1).

47. H.B. 3293 further provides that "[a]thletic teams or sports designated for females, women, or girls shall not be open to students of the male sex where selection for such teams is based upon competitive skill or the activity involved is a contact sport." W. Va. Code § 18-2-25d(c)(2). There is no parallel provision for boys' teams.

48. The legislative findings for H.B. 3293 reject the notion of allowing students to play on sports teams consistent with their "gender identity," asserting that "gender identity is separate and distinct from biological sex" and that "[c]lassifications based on gender identity serve no legitimate relationship to the State of West Virginia's interest in promoting equal athletic opportunities for the female sex." W. Va. Code § 18-2-25d(a)(4).

49. H.B. 3293's definition of "biological sex" categorically excludes B.P.J. and any other transgender girl from playing sports at the middle school, high school, and collegiate levels. (Ex. 5 Nos. 24 (admitting "that H.B. 3293 prohibits Plaintiff B.P.J. from participating on girls' athletic teams at all public secondary schools located in

West Virginia"), 36–37; Ex. 6 Nos. 36–37; Ex. 7 Nos. 20–22, 36–37; Ex. 8 Nos. 36–37; Ex. 9 Nos. 20–22, 36–37; Ex. 10 Nos. 36–37; Ex. 11 Nos. 36–37; Dkt. No. 252 (County Stip.) ¶ 2; Dkt. No. 270 (WVBOE Stip.) ¶ 2; Ex. 16 at 100:21-101:4; Ex. 17 at 113:16-20; Ex. 28 (Deposition Transcript of Mary D. Fry, Ph.D.) 180:18-20 (Q. [from Attorney David Tryon] Well, right now the rule is HB-3293, which says that [a] transgender girl must participate on the boys['] team.).)

50. H.B. 3293 does not prohibit a cisgender girl at any public secondary school in West Virginia from joining a girls' athletic team. (Ex. 5 Nos. 34–35; Ex. 6 Nos. 34–35; Ex. 7 Nos. 34–35; Ex. 8 Nos. 34–35; Ex. 9 Nos. 34–35; Ex. 10 Nos. 34–35; Ex. 11 Nos. 34–35; Ex. 16 at 100:2-101:4; Ex. 18 (Deposition Transcript of State Board of Education 30(b)(6) Designee) at 124:11-25, 125:3-19.)

51. Melissa White, counsel for the House of Delegates Education Committee, referred to H.B. 3293 as a "[t]ransgender participation in secondary schools bill" (Ex. 40 (WVSBOE 000008).)

52. Melissa White also described the bill as a "[t]ransgender originating bill" (Ex. 40 (WVSBOE000039)) and a "bill regarding transgender participation in sports" (Ex. 40 (WVSBOE000009).)

53. During debates over the bill, when asked how H.B. 3293 would change the status quo in West Virginia, the counsel representing the bill replied that the bill "would affect those that changed their sex after birth" and further explained that H.B. 3293 "would not affect" a man who was assigned a male sex at birth. (Ex. 35 (West Virginia House of Delegates Education Committee Testimony, Mar. 18, 2021) at 9.)

54. A member of the West Virginia House of Delegates and Chairman of the Education Committee, Joe Ellington, described the "issue" that H.B. 3923 was designed to address as "two transgender girls" who "were allowed to compete in state track and field meetings in Connecticut." (Dkt. No. 1-1 (Declaration of Loree Stark) Ex. D (West Virginia House of Delegates, Mar. 25, 2021) at 3; Dkt. No 25 (Supplemental Declaration of Katelyn Kang) Ex. C at 37–38.)

55. During the debate in the Senate, one senator, Michael J. Maroney, expressly noted that "the bill" is "about transgenders." (Dkt. No. 1-1 (Declaration of Loree Stark) Ex. E (West Virginia Senate, Apr. 8, 2021) at 2; Dkt. No. 25 (Supplemental Declaration of Katelyn Kang) Ex. F at 32.)

56. Another senator, Rollan Roberts, shared a constituent letter stating that the "trans movement is an attack upon womanhood." (Dkt. No. 1-1 (Declaration of Loree Stark) Ex. E (West Virginia Senate, Apr. 8, 2021) at 3; Dkt. No. 25 (Supplemental Declaration of Katelyn Kang) Ex. F at 32.)

57. On March 16, 2021, Delegate Jordan Bridges announced on Facebook that he was cosponsoring H.B. 3293 and then "liked" comments on his post that advocated for physical violence against girls who are transgender, compared girls who are transgender to pigs, and called girls who are transgender by a pejorative term ("tranny"). (Ex. 42 (Jordan Bridges, "Update: The bill passed out of committee," Facebook, https://perma.cc/HA5C-VJ4N (March 16, 2021)).)

58. The sole justification for H.B. 3293 offered in the legislative text is "promot[ing] equal athletic opportunities for the female sex." W. Va. Code § 18-2-

25d(a)(5). The law discusses equal athletic opportunities only in terms of the "substantial" displacement of female athletes. *Id.* § 18-2-25d(a)(3)-(4).

59. During the discovery period, the State identified additional rationalizations that it claims are advanced by H.B. 3293: (1) "[t]o [p]rotect [w]omen's [s]ports," (2) "[t]o follow Title IX," and (3) "[t]o protect women's safety in female athletic sports." (Ex. 4 (State of West Virginia's Responses to Plaintiff's First Set of Interrogatories) No. 6.)

60. During a House committee hearing of the bill, Sarah Stewart from the West Virginia Department of Education testified that her office had never received any calls or complaints about transgender students participating in athletics. (Ex. 35 at 11.)

61. The bill's sponsors also acknowledged that they were not aware of a single instance of a transgender athlete having ever competed on a secondary school or higher education sports team in West Virginia, let alone any "problem" from such participation. (Dkt. No. 1-1 (Declaration of Loree Stark) Ex. B (West Virginia House of Delegates Education Committee, Mar. 18, 2021) at 1–2, Ex. C (West Virginia House of Delegates Judiciary Committee, Mar. 18, 2021) at 1, Ex. D (West Virginia House of Delegates, Mar. 25, 2021) at 1.)

62. When Governor Justice was asked after signing the bill whether he could give "one example of a transgender child trying to get an unfair advantage," he responded, "No, I can't really tell you one." Ex. 43 (MSNBC on Twitter, https://twitter.com/MSNBC/status/1388132937707802629 [https://perma.cc/G8VM-QGYU] (April 30, 2021).) He further indicated that the issue purportedly addressed by H.B. 3293 was not a priority for

him, stating, "I didn't make it a priority. It wasn't my bill. . . . This is not like it's a big priority to me. . . . I think we only have 12 kids maybe in our state that are transgender-type kids. I mean, for crying out loud . . . I sign hundreds of bills, hundreds of bills. This is not a priority to me." (*Id.*)

63. Defendants were not aware of any transgender student athletes participating on an athletic team offered by a public secondary school in West Virginia when H.B. 3293 was passed. (Defendants' Responses to Plaintiff's Second Set of Requests for Admission Nos. 40–41.)

64. Defendants are not currently aware of a transgender student athlete other than B.P.J. participating on an athletic team offered by Bridgeport Middle School or any other public secondary school in West Virginia. (Ex. 5 Nos. 42–43; Ex. 6 Nos. 42–43; Ex. 7 Nos. 42– 43; Ex. 8 Nos. 42–43; Ex. 9 Nos. 42–43; Ex. 10 Nos. 42–43; Ex. 11 Nos. 42–43; Ex. 17 at 119:13-16.)

65. WVSSAC has not received any complaints about transgender students participating in school sports in West Virginia. (Ex. 17 at 120:9-15.)

66. The West Virginia Department of Education's General Counsel described H.B. 3293 as "much ado about nothing." (Ex. 40 (WVSBOE000006).)

67. The West Virginia Department of Education did not support H.B. 3293 when it was passed. (Ex. 41 (WVSBOE000038).)

68. The State Board's 30(b)(6) witness testified that the Board had "not had an issue" and "didn't see an issue" regarding the participation of transgender girls in school sports, and that the Department of Education, State Board, and State Superintendent have never received any complaints regarding students who are transgender

participating in school sports. (Ex. 18 at 67:3-10, 101:15-17, 102:12-13, 113:19-114:16, 125:24-126:2, 135:24136:19).

69. The West Virginia Department of Education and the State Superintendent still do not support H.B. 3293. (Dkt. No. 270 (WVBOE Stip.) ¶ 5.)

V. H.B. 3293's Exclusive Reliance On "Biological Sex" And Categorical Bar To The Participation Of Transgender Women And Girls Is A Stark Departure From The Inclusive Policies Of Major Sporting Associations.

70. H.B. 3293 classifies school sports teams "according to biological sex" and defines "biological sex" as "an individual's physical form as male or female based solely on the individual's reproductive biology and genetics at birth." W. Va. Code § 18-2-25d(a)(5), (b)(1).

71. Scientists recognize that a person's sex encompasses different biological components, including sex chromosomes, certain genes, gonads, exposure to sex hormone, internal and external genitalia, and other secondary sex characteristics, which are not always aligned in the same direction. (Ex. 25 ¶¶ 5–6 (and sources cited therein)); Ex. 23 (Exhibit 4 to Deposition Transcript of Deanna Adkins, M.D. (Hembree WC, et al. Endocrine Treatment of Gender Dysphoria/Gender Incongruent Persons: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab 2017; 102:3869-3903 ("Endocrine Society Guidelines 2017") at 3875)).)

72. Although the precise biological causes of gender identity are unknown, gender identity itself has biological underpinnings, possibly as a result of variations in prenatal exposure to sex hormones, gene sequences, epigenetics, or a combination of factors. (Ex. 25 ¶ 6 (and

sources cited therein); Ex. 23 (Endocrine Society Guidelines 2017 at 3874–75).)

73. H.B. 3293's requirement that teams be separated "based solely on the individual's reproductive biology and genetics at birth" is a stark departure from the prior policy in West Virginia and is not the rule used by elite sporting organizations.

74. The NCAA, World Athletics, and the International Olympic Committee ("IOC") all permit transgender girls and women to compete in women's sport events after suppressing their levels of testosterone for particular periods of time or below particular thresholds. (Dkt. No. 78 (State Ans.) ¶ 42; Dkt. No. 131 (Armistead Ans.) ¶ 42; Dkt. No. 156 (WVBOE Ans.) ¶ 42; Dkt. No. 157 (County Ans.) ¶ 42; Dkt. No. 158 (WVSSAC Ans.) ¶ 42; Ex. 24 ¶¶ 27–39.)

75. The NCAA's policy is described above. *See supra* ¶¶ 41–42. The NCAA policy aims to "preserve[] opportunity for transgender-student athletes." (Ex. 45 (NCAA, *Board of Governors updates transgender participation policy* (Jan. 19, 2022), https://www.ncaa.org/news/2022/1/19/media-center-board-of-governors-updates-transgender-participation-policy.aspx).)

76. Since 2011, World Athletics, the international governing body for track-and-field athletics, has required that women with elevated levels of circulating testosterone lower their levels of testosterone below a threshold amount in order to compete in elite international women's sports competitions. (Ex. 24 ¶ 27.)

77. In 2019, World Athletics adopted regulations allowing women who are transgender to participate in elite international women's sports competitions if their

total testosterone level in serum is beneath a particular threshold—5 nmol/L—for at least one year before competition. (Ex. 24 ¶ 29.)

78. The IOC published formal eligibility rules for the participation of transgender women in 2003. Those rules required that transgender women athletes could compete in women's events only if they had genital surgery, a gonadectomy (*i.e.*, removal of the testes), and legal documentation of female sex. (Ex. 24 ¶ 31.)

79. In 2015, the IOC adopted new policies allowing women who are transgender to participate on women's teams if they demonstrated that their total testosterone level in serum was below 10 nmol/L for at least one year prior to competition. (Ex. 24 ¶ 33.)

80. In 2021, the IOC adopted a new "Framework on Fairness, Inclusion, and Non-Discrimination on the Basis of Gender Identity and Sex Variations," which replaces the 2015 guidance. (Ex. 24 ¶ 34.)

81. Unlike the IOC's 2003 and 2015 policies, the IOC's 2021 framework does not attempt to adopt a single set of eligibility standards for the participation of transgender athletes that would apply universally to every IOC sport. Instead, the 2021 framework provides a set of governing principles for sporting bodies to follow when adopting eligibility rules for their particular sport. (Ex. 24 ¶ 35.)

82. Under the 2021 framework, "[n]o athlete should be precluded from competing or excluded from competition on the exclusive ground of an unverified, alleged or perceived unfair competitive advantage due to their sex variations, physical appearance and/or transgender status." (Ex. 24 ¶ 36.) "Until evidence . . . determines otherwise, athletes should not be deemed to have an unfair or disproportionate competitive advantage due to their

sex variations, physical appearance and/or transgender status." (Ex. 24 ¶ 36.)

83. The 2021 framework further provides that "[a]ny restrictions arising from eligibility criteria should be based on robust and peer reviewed research that: (a) demonstrates a consistent, unfair, disproportionate competitive advantage in performance and/or an unpreventable risk to the physical safety of other athletes; (b) is largely based on data collected from a demographic group that is consistent in gender and athletic engagement with the group that the eligibility criteria aim to regulate; and (c) demonstrates that such disproportionate competitive advantage and/or unpreventable risk exists for the specific sport, discipline and event that the eligibility criteria aim to regulate." (Ex. 24 ¶ 37.)

84. USA Swimming recently adopted a policy allowing girls and women who are transgender to apply to compete in elite events if they demonstrate that their "prior physical development . . . as mitigated by any medical intervention, does not give the athlete a competitive advantage over the athlete's cisgender [f]emale competitors" and they "demonstrate[] that the concentration of testosterone in the athlete's serum has been less than 5 nmol/L . . . continuously for a period of at least thirty-six (36) months before the date of the Application." (Ex. 29 (Declaration of Gregory A. Brown, P.H.D., F.A.C.S.M.) ¶ 177.)

85. A person's genetic makeup and internal and external reproductive anatomy are not useful indicators of athletic performance and have not been used in elite competition for decades. (Ex. 24 ¶ 49.)

86. Some people with 46,XY chromosomes may have inactive testosterone receptors (a syndrome called "complete androgen insensitivity syndrome, CAIS") which means they do not respond to testosterone despite very high levels. (Ex. 24 ¶ 26(b).)

87. Usually, people with CAIS have female gender identity and have external genitalia that are typically female. They do not develop the physical characteristics associated with typical male puberty. (Ex. 24 ¶ 26(b).)

88. It has long been recognized that women with CAIS do not have an athletic advantage over other women simply by virtue of having XY chromosomes. (Ex. 24 ¶ 59.)

89. There is a medical consensus that the largest known biological cause of average differences in athletic performance between non-transgender men as a group and non-transgender women as a group is circulating testosterone beginning with puberty. (Ex. 24 ¶ 25; Ex. 25 ¶ 8; Ex. 29 ¶ 114 ("While boys exhibit some performance advantage even before puberty, it is both true and well known to common experience that the male advantage increases rapidly, and becomes much larger, as boys undergo puberty and become men.").)

90. Before puberty, boys and girls typically have the same levels of circulating testosterone, and age-grade competitive sports records show only modest differences in athletic performance between non-transgender boys and non-transgender girls. (Ex. 24 ¶¶ 24–25; Ex. 26 (Exhibit 4 to Deposition Transcript of Joshua D. Safer (Handelsman 2018 ("Age-grade competitive sports records show minimal or no female disadvantage prior to puberty[.]"))); Ex. 26 ¶ 114 (describing differences as "modest").)

91. There have been no studies purporting to establish that any modest differences in athletic performance between pre-pubertal cisgender boys and pre-pubertal cisgender girls are attributable to innate physiology as opposed to social factors. (Ex. 30 (Deposition Transcript of Gregory A. Brown) at 94:19-23; Ex. 25 ¶ 9.)

92. H.B. 3293 does not provide for any consideration of circulating testosterone levels. W. Va. Code § 18-2-25d.

VI. H.B. 3293 Harms B.P.J.

93. Under H.B. 3293, B.P.J. is forbidden from playing on a girls' team at Bridgeport Middle School, or on a girls' athletic team at any public secondary school in West Virginia. (Ex. 5 Nos. 20-24; Ex. 6 Nos. 20-24; Ex. 7 Nos. 20-24; Ex. 8 Nos. 20-24; Ex. 9 Nos. 20-24; Ex. 10 Nos. 20-24; Ex. 11 Nos. 20-24; Dkt. No. 252 (County Stip.) ¶ 2; Dkt. No. 270 (WVBOE Stip.) ¶ 2.)

94. In May 2021, B.P.J.'s mother, Heather Jackson, met with B.P.J.'s new Principal at Bridgeport Middle School, David Mazza, regarding a gender support plan for B.P.J., which specified the ways the school would support B.P.J. as a girl. (Ex. 1 ¶ 23; Ex. 16 at 95:2596:6).

95. At that same meeting, Ms. Jackson informed Principal Mazza that B.P.J. wanted to participate on the girls' cross-country team. (Ex. 1 ¶ 24; Ex. 1-B at 5; Ex. 14 (Deposition Transcript of Heather Jackson (Jan. 20, 2022)) at 250:14-252:7; Ex. 16 at 220:2-16.) In response to Ms. Jackson's statement, Principal Mazza communicated to Ms. Jackson that B.P.J. would not be able to run on the girls' cross-country team because of H.B. 3293. (Ex. 1 ¶ 24; Ex. 12 at 129:21-130:2, 106:16-21, 107:3-11; Ex. 13 at 21:22-22:16; Ex. 14 at 250:8-251:12; Ex. 16 at 220:19-22; Dkt. No. 157 (County Ans.) ¶¶ 63–65.)

96. B.P.J. "just want[s] the opportunity to participate in school sports like any other girl." (Ex. 2 ¶ 21.)

97. Forcing B.P.J. to run on the boys' team would be stigmatizing, isolating, hurtful, and devastating for her. (Ex. 1 ¶¶ 30–31; Ex. 2 ¶¶ 14–16, 21.)

98. According to B.P.J., "[Being a girl] means—it means everything." (Ex. 12 29:24-30:5.) "I am not a boy. I do not want to run with the boys when there is a girls' team and I should not have to run with the boys when there is a girls' team." (Ex. 2 ¶ 15; *see also* Ex. 12 at 120:24-121:4.)

99. According to B.P.J., "[r]unning with the girls means a lot to me because I am a girl, and I should be treated like a girl, just like all my friends who are girls. If I did not get to participate in cross-country or track, I would have missed out on the opportunity to spend time with my friends and grow with a new team." (Ex. 2 ¶ 16.) "It is so upsetting and hurtful that some people want to take that chance away from me and treat me differently from everyone else just because I am transgender." (Ex. 2 ¶ 21.)

100. According to B.P.J.'s mother, "[i]t is wrong and senseless to try to make [B.P.J.] participate on boys' teams when there are girls' teams available. Forcing B.P.J. to compete on the boys' cross-country or track teams when girls' teams are available would completely erase who she is, and it would devastate her because she is a girl." (Ex. 1 ¶ 30.) "Forcing her to run with the boys is a clear sign to her and others that the state refuses to see her and accept her for the girl that she is." (Ex. 1 ¶ 31.)

101. B.P.J. does not have the option of running on a co-ed team, as there is no co-ed cross-country or track team at Bridgeport Middle School or at any other public secondary school in West Virginia. (Ex. 10 Nos. 30–31.)

102. Preventing B.P.J. from playing sports with other girls will deprive B.P.J. of experiences of competition, friendship, and responsibility that come from participation in school sports. (Ex. 1 ¶¶ 28, 31; Ex. 2 ¶¶ 10–11, 14, 16–18.)

103. It is hurtful and frustrating for B.P.J. to be denied the opportunity to play on girls' sports teams, and to be treated differently because she is transgender. (Ex. 2 ¶¶ 14, 21.)

104. Allowing Defendants to enforce H.B. 3293 against B.P.J. would send a signal to B.P.J. that her state refuses to see her for the girl that she is. (Ex. 1 ¶ 31.)

VII. B.P.J.'s Lawsuit Challenges Her Exclusion From Girls' Sports Under H.B. 3293.

105. B.P.J. filed this lawsuit on May 26, 2021, arguing that H.B. 3293 as applied to her violates Title IX of the Education Amendments of 1972, 20 U.S.C. § 1681, and the Equal Protection Clause of the United States Constitution. (Dkt. No. 1 (Complaint).)

106. B.P.J.'s Title IX claim is pleaded against the State of West Virginia, the State Board of Education, the County Board of Education, and the WVSSAC. (Dkt. No. 64 (First Amended Complaint) at 20.)

107. B.P.J.'s Equal Protection Clause claim is pleaded against State Superintendent W. Clayton Burch, County Superintendent Dora Stutler, and the WVSSAC. (Dkt. No. 64 (First Amended Complaint) at 22; Dkt. No. 127 (Order dismissing without prejudice B.P.J.'s equal protection claim against the Attorney General in his official capacity).)

108. The Harrison County Board of Education is the governing body of Harrison County's public education

system. W. Va. Code § 18-5-1. The County Superintendent is responsible for executing educational policies under the direction of the State Board and County Board, including interscholastic athletics. W. Va. Code § 18-4-10.

109. "[A]bsent an injunction, the County Board and County Superintendent would be compelled and required to enforce H.B. 3293 against B.P.J." (Dkt. No. 252 (County Stip.) at ¶¶ 3–4.) The County Board and County Superintendent's role in enforcing the law is "mandatory, not merely optional." (Dkt. No. 73 (Harrison County Board of Education's Memo in Support of Motion to Dismiss First Amended Complaint) at 2, 6; *see also* Ex. 16 at 44:1545:12, 145:1-145:5.)

110. "Absent an injunction by a court," the State Board and Superintendent Burch "would be compelled and required to follow H.B. 3293" and the State Board "would be compelled and required to promulgate rules implementing H.B. 3293." (Dkt. No. 270 (WVBOE Stip.) ¶¶ 3–4; *see also* Ex. 18 at 118:1-3.)

111. Without an injunction, the WVSSAC "cannot adopt or enforce any policy" allowing girls who are transgender to participate on girls' sports teams that "conflicts with state law." (Ex. 10 No. 50.)

112. The State Board is federally funded. (Dkt. No. 156 (WVBOE Ans.) ¶ 90; *see also* Ex. 18 at 39:19-40:3.)

113. The County Board is federally funded. (Dkt. No. 157 (County Ans.) ¶ 90; *see also* (Dkt. No. 252 (County Stip.) ¶ 8); Ex. 7 No. 66).)

114. The State Board has a duty to control, supervise, regulate, and/or enforce rules related to interscholastic athletic events in West Virginia. *See* W. Va. Code § 18-2-25; (Ex. 18 at 35:22-24.)

115. The County Board has a duty to control, supervise, regulate, and/or enforce rules related to interscholastic athletic events in West Virginia. *See* W. Va. Code §§ 18-2-25, 18-5-13; (Ex. 16 at 53:24-54:10.)

116. WVSSAC was given controlling authority over federally funded secondary school athletic programs by the State and County Boards. W. Va. Code § 18-2-25; (Ex. 39 (WVSSAC000133-38) (outlining the WVSSAC's powers over secondary schools and their athletics)).

117. WVSSAC member schools must follow WVSSAC's rules and regulations when "conducting interscholastic athletic[s]" (Ex. 39 (WVSSAC0000134)) and when determining whether a student is eligible to play secondary school sports. (Ex. 17 at 73:473:8.)

118. WVSSAC's Board of Directors has "the power to decide all cases of eligibility of students and participants in interscholastic athletic[s]." (Ex. 39 (WVSSAC000138); *see also* Ex. 17 at 61:25-62:13.)

119. WVSSAC's athletic handbook provides that it must comply with Title IX. (Ex. 38 (WVSSAC000017).)

VIII. This Court's Preliminary Injunction Allowed B.P.J. To Participate On Her School's Girls' Cross-Country And Track Teams, All Without Incident.

120. After this Court issued its preliminary injunction on July 21, 2021, B.P.J. was permitted to participate on Bridgeport Middle School's girls' cross-country team. (Ex. 5 No. 6; Ex. 6 No. 6; Ex. 7 No. 6; Ex. 8 No. 6; Ex. 9 No. 6; Ex. 10 No. 6; Ex. 11 No. 6.)

121. B.P.J. participated in the Mountain Hollar MS Invitational meet and the Doddridge Invitational meet while she was on the cross-country team. (Ex. 1 ¶ 27.)

122. In the Mountain Hollar Invitational, B.P.J. placed 51 out of 66 participants. (Ex. 1 ¶ 27; Ex. 33 (Mountain Hollar Invitational Stats).)

123. In the Doddridge Invitational meet, B.P.J. placed 123 out of 150 participants. (Ex. 1 ¶ 27; Ex. 34 (Doddridge Invitational Stats, HCBOE_1167-HCBOE_1168).)

124. According to B.P.J: "My first cross-country season was awesome, and I felt supported by my coaches and the other girls on the team. I made so many new friends and loved competing with and supporting my teammates. We learned about teamwork, having a positive attitude, and how to have fun while being competitive." (Ex. 2 ¶ 18.)

125. In Spring 2022, B.P.J. tried out for, made, and began running on the girls' track team at Bridgeport Middle School. (Ex. 3 (Plaintiff's Second Set of Supplemental Responses and Objections to State of West Virginia's First Set of Interrogatories and Requests for Production) No. 9.)

126. B.P.J. was "ecstatic" to learn she qualified for the track team and "look[s] forward to many more years of running with [her] peers." (Ex. 2 ¶¶ 20–21.)

127. There were no complaints associated with B.P.J.'s participation on Bridgeport Middle School's girls' cross-country team. (Dkt. No. 252 (County Stip.) ¶ 5; Ex. 5 No. 9; Ex. 6 No. 9; Ex. 7 No. 9; Ex. 8 No. 9; Ex. 9 No. 9; Ex. 10 No. 9; Ex. 11 No. 9.)

128. No student was cut from or otherwise not permitted to participate on the cross-country team as a result of B.P.J.'s participation. (Dkt. No. 252 (County Stip.) ¶ 6.)

129. Defendant-Intervenor could not identify "any specific fairness issue" related to B.P.J.'s participation in girls' cross-country at her middle school. (Ex. 21 at 143:14-20.)

130. Defendant-Intervenor responded, "I don't know," when asked whether she "object[ed] to B.P.J. playing on the Bridgeport Middle School girls' cross-country team." (Ex. 21 170:13170:22.)

131. Girls and women who are transgender have competed in a wide range of contact and collision sports in high school and college, including basketball, soccer, volleyball, softball, lacrosse, and women's tackle football, without any reported injuries to cisgender girls. (Ex. 31 (Declaration of Dr. Chad T. Carlson, M.D., F.A.C.S.M.) at 1; Ex. 32 (Deposition Transcript of Dr. Chad T. Carlson) at 124:6-125:4, 154:12-156:16.)

132. There are significant variations in height, weight, and muscle mass within the population of cisgender girls, and within the population of cisgender boys, such that student athletes all the time play with or compete against students who are bigger, faster, and/or stronger than them, whether they are participating in single sex or co-ed teams. (Ex. 25 at 12 ¶ 27; Ex. 28 at 49:19-50:5, 51:18-22, 52:16-24, 189:13-19.)

133. Any safety considerations attendant to differences in height, weight, and muscle mass are already addressed in West Virginia secondary schools through even-handed rules and the use of proper equipment. (Ex. 16 at 164:3-14, 228:14-22.)

134. Any actual safety concerns attendant to girls who are transgender playing on girls' sports teams "can be addressed through even-handed rules instead of

discriminating based on transgender status." (Ex. 25 at ¶ 4(d).)

135. Defendant-Intervenor could not identify any safety concern resulting from B.P.J.'s participation on her middle school girls' cross-country team. (Ex. 21 at 139:25-140:4, "Q: . . . What is the safety concern for middle school cross-country and B.P.J. participating on the girls' team? . . . THE WITNESS: I don't know.")

136. The State does not know of any middle school girl who was physically harmed by B.P.J.'s participation on the Bridgeport Middle School girls' cross-country team. (Ex. 5 No. 10.)

IX. Lainey Armistead Will Graduate West Virginia State University In May 2022.

137. Defendant-Intervenor Lainey Armistead will graduate from West Virginia State University in May 2022. (Ex. 22 at 67:21-25.)

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

CHARLESTON DIVISION

B. P. J., et al.,

Plaintiffs,

v. CIVIL ACTION NO. 2:21-cv-00316

WEST VIRGINIA STATE BOARD OF EDUCATION, et al.,

Defendants,

and

LAINEY ARMISTEAD,

Defendant-Intervenor.

INTERVENOR LAINEY ARMISTEAD'S FIRST SUPPLEMENTAL DISCLOSURES PURSUANT TO RULE 26(A)(1)

Pursuant to Fed. R. Civ. P. 26(a)(1), Intervenor Lainey Armistead submits her first supplemental disclosures.

I. Individuals likely to have discoverable information.

Armistead discloses the following individuals likely to have discoverable information that may be used to support her claims.

1. Lainey Armistead
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600 Washington, DC 20001
(202) 393-8690

Lainey Armistead may have discoverable information pertaining to the facts and issues set forth within Intervenor Lainey Armistead's Memorandum in Support of Her Motion for Intervene, including, but not limited to, Armistead's experiences playing soccer growing up, the several benefits of participating in a team sport, her experience in competing at the collegiate level against female athletes, and the expected impact competing against males would have, on her and others.

2. B.P.J.
c/o Loree Stark
American Civil Liberties Union of West Virginia Foundation
P.O. Box 3952
Charleston, WV 25339-3952
(914) 393-4614

B.P.J. is likely to have discoverable information pertaining to this case, including, but not limited to the allegations within Plaintiff's First Amended Complaint.

3. Heather Jackson
c/o Loree Stark
American Civil Liberties Union of West Virginia Foundation
405 Capitol Street
Suite 507
Charleston, WV 25301
(914) 393-4614

Heather Jackson is likely to have discoverable information pertaining to this case, including, but not limited to the allegations within Plaintiff's First Amended Complaint.

4. Person Most Knowledgeable
West Virginia State Board of Education
c/o Kelly C. Morgan
c/o Kristen Vickers Hammond
c/p Michael W. Taylor
Bailey & Wyant
P.O. Box 3710
Charleston, WV 25337-3710

The person most knowledgeable of the West Virginia State Board of Education is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of West Virginia Code § 18-2-25d ("the Sports Act"), and policies of West Virginia State Board of Education.

5. Person Most Knowledgeable
Harrison County Board of Education
do Susah L. Deniker

Steptoe & Johnson
400 White Oaks Blvd.
Bridgeport, WV 26330

The person most knowledgeable of the Harrison County Board of Education is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of the Sports Act, and policies of Harrison County Board of Education.

6. Person Most Knowledgeable
West Virginia Secondary School Activities Commission
c/o Anthony E. Nortz
Shuman McCusky & Slicer
P.O. Box 3952
Charleston, WV 25339

The person most knowledgeable of the West Virginia Secondary School Activities Commission is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of the Sports Act, and policies of West Virginia Secondary School Activities Commission.

7. W. Clayton Burch, in his capacity of State Superintendent
c/o Kelly C. Morgan
do Kristen Vickers Hammond
c/o Michael W. Taylor
Bailey & Wyant
P.O. Box 3710
Charleston, WV 25337-3710

Mr. Burch is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of the Sports Act, and policies of and as State Superintendent.

8. Dora Stutler, in her official capacity as Harrison County Superintendent

c/o Susah L. Deniker
Steptoe & Johnson
400 White Oaks Blvd.
Bridgeport, WV 26330

Dora Stutler is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of the Sports Act, and policies of and as Harrison County Superintendent.

9. Patrick Morrissey, in his official capacity as Attorney General

c/o Curtis R. Capehart
WV Attorney General's Office
Building 1, Room 26e
1900 Kanawa Boulevard, East
Charleston, WV 25305

Mr. Morrissey is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of the Sports Act, and policies of and as Attorney General.

10. Person Most Knowledgeable

The State of West Virginia
c/o Curtis R. Capehart
WV Attorney General's Office
Building 1, Room 26e
1900 Kanawa Boulevard, East
Charleston, WV 25305

The person most knowledgeable of the State of West Virginia is likely to have discoverable information pertaining to general matters relating to this case, including the adoption of the Sports Act, and policies of the State of West Virginia.

11. Selina Soule
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690

Selina Soule may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, the experience of competing against two male athletes in girls' high school track and field, and the impact it had on her and other female competitors.

12. Chelsea Mitchell
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690

Chelsea Mitchell may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, the experience of competing against two male athletes in girls' high school track and field, and the impact it had on her and other female competitors.

13. Christina Mitchell
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690

Christina Mitchell may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, her daughter's experience competing against male athletes in girls' high school track and field, and the impact it had on her and other female competitors.

14. Alanna Smith
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690

Alanna Smith may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports,

the experience of competing against a male athlete in girls' high school track and field, and the impact it had on her and other female competitors.

15. Linnea Saltz
4114 Davis Place, Northwest, Unit 207
Washington DC 20007
(702) 523-0545

Linnea Saltz may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, the experience of competing against a male athlete in girls' college track and field, and the impact it had on her, and other female competitors.

16. Margaret O'Neal
917 Kana Place
Lahaina, Hawaii 96761
(808) 280-4423

Margaret O'Neal may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, the deflating experience of competing against a male athlete in girls' high school track and field, and the impact it had on her and other female competitors.

17. Cynthia Monteleone
917 Kana Place
Lahaina, Hawaii 96761
(808) 280-4423

Cynthia Monteleone may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, her daughter's experience of competing against a male athlete in girls' high school track and field, and the impact it had on her and other female competitors.

18. Madison Kenyon
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690

Madison Keyon may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, the experience of competing against a male athlete in women's college track and field and cross-country and the impact it had on her, and other female competitors.

19. Mary Kate Marshall
c/o Christiana Holcomb
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690

Mary Kate Marshall may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports,

the experience of competing against a male athlete in women's college track and field and cross-country and the impact it had on her, and other female competitors.

20. Darcy Aschoff
540 W. 700 South,
Lehi Utah, 84043
(702) 769-4287

Darcy Aschoff may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, her daughters' experience competing against a male athlete in girls' high school volleyball and the impact it had on her daughters and other female competitors.

21. Female athletes on the University of Pennsylvania women's swimming and diving team
University of Pennsylvania Philadelphia, PA 19104
215-898-5000

Female swimmers on the University of Pennsylvania swimming and diving team may have discoverable information pertaining to the facts issues set forth in this case, including the benefits of competing in girls-only sports, the experience of competing against a male athlete in women's collegiate swimming and the impact it had on them and other female competitors.

22. Haley Tanne
current address unknown
(801) 796-3235

Haley Tanne may have discoverable information pertaining to the facts and issues set forth in this case, including the benefits of competing in girls-only sports, the experience of competing against a male athlete in women's college track and field and cross-country and the impact it had on her, and other female competitors.

23. The following girls and women may have discoverable information pertaining to the facts issues set forth in this case, including the benefits of competing in female-only sports, the experience of competing against a male athlete in women's sports and the impact it had on them and other female competitors. The contact information for these girls and women is unknown.

- Anna Cameron, College of Siskiyous in 2012
- Shyanna Ashworth, College of the Siskiyous in 2012
- Brianne Burnside, College of the Siskiyous in 2012
- Carrie Watson, College of the Siskiyous in 2012
- Hailey Wales, College of the Siskiyous in 2012
- Mariia Rachiteleva, Los Angeles THC Women in 2022
- Katiana Sladanha, Los Angeles THC Women in 2022
- Patricia Fernandez, Los Angeles THC Women in 2022
- Sabrina Mcgauran, Los Angeles THC Women in 2022

- Natallia Zhelnova, Los Angeles THC Women in 2022
- Robyn Hargrove, competed in 2011 Border States Classic
- Maikayla Malaspina, Northern AZ women's track & field team in 2020
- Malaina Thacker, Idaho State women's track & field team in 2020
- Molly Olsen, Idaho State women's track & field team in 2020
- Pipi Eitel, Northern Arizona women's track & field team in 2020
- Dawn Orwick, competed in Masters Track World Championship in 2019
- Kristen Hemp Sovange, competed in Masters Track World Championship in 2019
- Kanani Lodge, 2022 DLS World Rankings
- Katie Calderon, 2022 DLS World Rankings
- Tamikka Brents, MMA fighter in 2014
- Heather Bassett, XFO 50: Xtreme Fighting Organization 50
- Ashlee Evans-Smith, CFA 12: Championship Fighting Alliance 12
- Allanna Jones, CFA 11: Kyle v Wiuff
- Erika Newsome, CFA: 10 McSweeney vs. Staring

II. Documents and tangible items.

Armistead points to L.Armistead_000001-000169 and the forthcoming Defendants' expert reports, and reserves the right to rely on documents produced by the other parties in this case to support her claims and defenses.

III. Computation of damages.

Armistead seeks an award of attorneys' fees pursuant to 42 U.S.C. §1988. Armistead reserves the right to supplement this response.

IV. Insurance Agreements.

Not applicable.

Dated this 11th day of February, 2022

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

CHARLESTON DIVISION

B. P. J., et al.,

Plaintiffs,

v. CIVIL ACTION NO. 2:21-cv-00316

WEST VIRGINIA STATE BOARD OF EDUCATION, et al.,

Defendants,

and

LAINEY ARMISTEAD,

Defendant-Intervenor.

EXPERT REBUTTAL REPORT AND DECLARATION OF DEANNA ADKINS, M.D.

I, Deanna Adkins, M.D., hereby declare as follows:

1. I have been retained by counsel for Plaintiff as an expert in connection with the above-captioned litigation.

2. I have actual knowledge of the matters stated in this rebuttal report and declaration ("Adkins Rebuttal")

and have collected and cite to relevant literature concerning the issues that arise in this litigation in the body of the report. I refer herein to my initial expert report in this matter as "Adkins Report."

3. My credentials are set forth in my initial report executed on January 21, 2022.

4. I reviewed the reports of Dr. Stephen Levine and Dr. James M. Cantor (referred to herein as the "Levine Report" and "Cantor Report" respectively). I respond in this report to some of the central points in those disclosures. I do not specifically address each study or article cited but instead explain the overall problems with some of the conclusions that Dr. Levine and Dr. Cantor draw and provide data showing why such conclusions are in error. I reserve the right to supplement my opinions if necessary as the case proceeds.

5. I have knowledge of the matters stated in this report and have collected and cite to relevant literature concerning the issues that arise in this litigation in the body of this declaration.

6. In preparing this report, I reviewed the text of House Bill 3293 ("H.B. 3293") at issue in this matter. I also relied on my scientific education and training, my research experience, and my knowledge of the scientific literature in the pertinent fields. The materials I have relied upon in preparing this declaration and expert report are the same types of materials that experts in my field of study regularly rely upon when forming opinions on these subjects. I may wish to supplement these opinions or the bases for them as a result of new scientific research or publications or in response to statements and issues that may arise in my area of expertise.

SEX ASSIGNMENT AND BIOLOGICAL SEX CHARACTERISTICS

7. Dr. Levine does not appear to have any experience with the process of assigning sex to newborns at birth. Despite that lack of experience, he disputes the scientific consensus described in my initial report that the term "biological sex" is imprecise and should be avoided, as the Endocrine Society has advised.[1] Adkins Report ¶ 41; Levine Report ¶¶ 19-20. Dr. Levine instead asserts that sex is "determined at conception." Levine Report ¶ 20. His only reference for that claim does not support it, but rather is a one-page, undated handout by the National Institutes of Health ("NIH") Office of Research on Women's Health on the topic of sex and gender influences on health. *M.*[2] Dr. Levine's repeated assertions that sex is "binary" *(e.g.,* Levine Report ¶ 24) ignore the extensive explanation in my initial report about the many

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[1] Hembree, Wiley C., et al., Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline, J Clin Endocrinol Metab, Vol. 102, Issue 11, 1 November 2017, 3869-3903.; Berenbaum S., et al., Effects on gender identity of prenatal androgens and genital appearance: Evidence from girls with congenital adrenal hyperplasia. J Clin Endocrinol Metab 2003; 88(3): 1102-6; Dittmann R, et al., Congenital adrenal hyperplasia. I: Gender-related behavior and attitudes in female patients and sisters. Psychoneuroendocrinology 1990; 15(5-6): 401-20; Cohen-Kettenis P. Gender change in 46,XY persons with 5alpha-reductase-2 deficiency and 17beta-hydroxysteroid dehydrogenase-3 deficiency. Arch Sex Behav 2005; 34(4): 399-410; Reiner W, Gearhart J. Discordant sexual identity in some genetic males with cloacal exstrophy assigned to female sex at birth. N Engl J Med 2004; 350(4): 333-41.

[2] *See id.* (citing National Institutes of Health, Office of Research on Women's Health. *How Sex and Gender Influence Health and Disease,* https://orwh.od.nih.gov/sites/orwh/files/docs/SexGender infographic 11x17 508.pdf).

differences of sex development that occur naturally in the population, affecting approximately one out of every 300 births. Adkins Report ¶¶ 47-49. The NIH recognizes "gender minorities" including transgender individuals. Indeed, the NIH has a whole section devoted to research to improve care for these populations as well as to ensure adequate inclusion of these populations in all research. *(See* NIH policy regarding Sexual and Gender Minorities, https://dpcpsi.nih.gov/sgmro.) A paper from Bhargava that Dr. Levine relies on in the Levine Report also goes into great detail about human reproductive development and how many other genes, hormones, and other processes that occur well after conception are necessary for typical male or female reproductive tracts to develop. The paper further supports the conclusion that there is wide variation in presentation of human reproductive organs depending on whether all of these steps occur appropriately. There are scientifically validated tools including the Prader Scale that are used to describe variability in external genitalia of humans at birth. These tools are widely used in endocrinology and urology.

8. In addition, Dr. Levine offers selective references to an NIH requirement to include "sex as a biological variable" in research, Levine Report ¶ 21, and an Endocrine Society statement authored by Bhargava, et al. with observations about applying that requirement. Levine Report ¶¶ 21-22. None of these sources contradict my opinions in this case.

9. Dr. Levine also invokes human brain development and "differences between genders in function studies" to support his claim that sex is a binary concept established at birth, Levine Report ¶ 23, but ignores the literature showing that transgender women share some gender-differentiated brain structures with cisgender women, and

that transgender men share some gender-differentiated brain structures with cisgender men. *(See* Bhargava et al. 2021.) Additionally, there are several studies that show an increase in the likelihood of being transgender with certain variations in the androgen receptor, as well as in utero exposure to certain hormones and hormone related medications.

10. Dr. Levine seeks to refute the biological underpinnings for transgender status by reference to supposed changes in incidence of gender dysphoria, changes in the ratio of transgender boys versus girls, alleged "clustering" among friend groups, claims of desistance, and nonscientific labels some individuals use such as gender fluidity. Levine Report ¶¶ 97-102. He also invokes these examples to contest the explanation in my initial report that gender identity is not subject to voluntary change. Adkins Report ¶ 18; *see also* Cantor Report ¶ 13. But the increase in the number of people known to be transgender in no way suggests that people's gender identity can be changed. We are able to see and treat more transgender people now because of increased societal acceptance and improved medical treatments over the past decade. And that some people describe their gender as fluid does not mean that they can change their gender identity. Gender identity—whether cisgender, transgender, or something that does not fall into a binary male or female category—cannot be changed voluntarily or by external factors and is therefore fixed. That some people have changing understandings of their gender identity or express it differently at different times in no way changes that.

11. It is also not the case that there are high numbers of transgender people who "desist" in their transgender identity once they reach puberty. Adolescents with

persistent gender dysphoria after reaching Tanner Stage 2 almost always persist in their gender identity in the longterm, whether or not they were provided gender-affirming care.[3] No medical treatment is provided to transgender youth until they have reached Tanner Stage 2. But for pre-pubertal children who may explore transgender identity and later realize that they are not transgender, that does not mean their gender identity is not "fixed" but rather that their understanding of it evolved.

12. Dr. Levine and Dr. Cantor misconstrue my statements in my opening report that differences of sex development help us understand the importance of one's gender identity. Adkins Report ¶¶ 42-47. As I explained, surgical interventions undertaken on children with differences of sex development to supposedly normalize their genital structures, without adequate information about the child's gender identity, have sometimes had disastrous results because gender identity cannot be involuntarily altered. Adkins Report ¶ 46. Dr. Levine asserts that it is "an error to conflate the two distinct concepts." Levine Report ¶¶ 105-107; *see also* Cantor Report ¶¶ 25-26. But my testimony is not that having a difference of sex development and being transgender are the same, but that the similarities in these conditions help demonstrate that gender identity is deeply rooted for people who are transgender or intersex, just as for cisgender people. Dr. Levine suggests that if you identify with a gender other than those that are represented by your chromosomes that you are transgender. Levine

[3] Turban JL, DeVries ALC, Zucker K. Gender Incongruence & Gender Dysphoria. In Martin A, Bloch MH, Volkmar FR (Editors): *Lewis's Child and Adolescent Psychiatry: A Comprehensive Textbook,* Fifth Edition. Philadelphia: Wolters Kluwer 2018.

Report ¶¶ 109-111. Under that inaccurate premise, all women with complete androgen insensitivity, who have XY chromosomes and cannot sense testosterone at all, would also be categorized as transgender. Dr. Levine's theory is erroneous and does not represent my testimony, or the relevant science, on the matter.

13. Although in medicine we endeavor through research and scholarship to learn the causes of various conditions, illness, and diseases, we do not do so to the exclusion of providing decades-long documented safe and efficacious treatment to the patient immediately in front of us. Such is the case with gender-affirming care and patients with gender dysphoria. It is unnecessary for us to know the exact cause of a medical condition before we can provide treatment to alleviate distress and suffering. There are many other conditions in medicine that do not have a known genetic cause, and yet we still provide medical treatments that have been shown for decades to be helpful in treatment as we continue to study and learn more about their precise causes or etiologies These conditions include autism as well as the multitude of different medical issues that affect people with Down syndrome. For example, I would not hesitate to treat someone with Down syndrome who has hyper- or hypo-thyroidism, which is common in this patient population, simply because I did not know the exact explanation or source for the hyper or hypo-thyroidism. In the medical profession, there are well-documented research and clear treatments for autism and Down syndrome, and I do not need to know the exact reason behind the condition before I would use those treatments to save the lives of my patients.

TREATMENT PROTOCOLS FOR GENDER DYSPHORIA

14. Dr. Levine offers a variety of opinions about treatment models for persons who are transgender, Levine Report ¶¶ 34-54, with an emphasis on treatment for prepubertal children. It is worth clarifying that opinions about this population are irrelevant to this case based on my understanding of H.B. 3293, which does not apply to elementary schools, and therefore generally does not affect prepubertal children. Additionally, while the vast majority of Dr. Levine's opinions appear focused on the appropriate behavioral and medical care for minors with gender dysphoria, H.B. 3293 (which is about sports participation) does not have any effect on those decisions, which are reserved to parents, their children, and their team of medical and mental health care providers.

15. Dr. Levine and Dr. Cantor repeatedly express concerns about the purported lack of mental health evaluation before medical interventions are determined to be medically indicated for adolescents *(e.g.,* Levine Report ¶¶ 73, 83; Cantor Report ¶¶ 14, 19), but this misunderstands the standards of care and how practitioners administer this care. Both the Endocrine Society Clinical Practice Guideline (the "Endocrine Society Guideline") and the World Professional Association of Transgender Health Standards of Care (the "WPATH SOC") require mental health assessments and informed consent processes before any medical treatment is initiated. In my experience treating over 600 youth with gender dysphoria during my tenure at the Duke Center for Child and Adolescent Gender Care (commonly referred to as the Duke Gender Clinic), each patient undergoes a psychological assessment and, if medical interventions are deemed medically appropriate, an extensive informed consent process before such interventions are provided. Any and all decisions about medical care involve not just the adolescent, but also their

legal guardians, ensuring that informed consent is provided both by the patient and adults responsible for their care. Additionally, Dr. Cantor's suggestion that gender dysphoric children should be treated *exclusively* with counseling as opposed to any gender affirming medical care underscores his lack of clinical experience in providing any treatment whatsoever to this population. Cantor Report ¶ 17. Cantor's assertion that my opinion about possible outcomes of untreated gender dysphoria misrepresents Spack et al.'s views or conclusions from the 2012 article are also unfounded. *Id.* Dr. Cantor cherry-picked various sentences from the Spack article and strung them together to fit his hypothesis, even going so far as to ignore the clear statement from the article that "Our observations reflect the Dutch finding that psychological functioning improves with medical intervention and suggests that the patients' psychiatric symptoms might be secondary to a medical incongruence between mind and body, not primarily psychiatric." (Spack, *et al.,* 2012, at 422-23). Finally, Dr. Levine incorrectly and without evidence asserts that the role of psychotherapy in the treatment of gender dysphoria was "downgraded" in the WPATH SOC Version 7. Levine Report ¶¶ 70, 73. Dr. Levine's apparent concern is that if patients are not "required" to undergo psychotherapy for an arbitrary amount of time even when it is clear that medical treatment is indicated, advocates of conversion therapy like himself will be unable to "enable[e] a patient to return to or achieve comfort with the gender identity aligned with his or her biology"—in other words, to not be transgender. The medical community has learned a great deal from the harms inflicted on transgender patients by delaying medical intervention because of the faulty assumption that being transgender was an inherent pathology. Levine Report ¶ 5.

16. Contrary to Dr. Levine's suggestions, providers who treat patients do not encourage any patient to initiate gender-affirming care, nor do they rush patients into medical treatment. *See, e.g.,* Levine ¶¶ 123, 126. Nor does gender-affirming care consist of treatment "on-demand" as Dr. Cantor repeatedly suggests. *See, e.g.,* Cantor Report ¶ 45. Consistent with the WPATH SOC and the Endocrine Society Guideline, each patient in my clinic is met first by mental health providers who explore the patient's medical and mental health history and identity. When following the Standards of Care, no provider rushes any patient into any treatment, much less medical treatment, and no treatment is initiated without the mental health evaluations and a thorough informed consent process for patients and their guardians.

17. Dr. Levine and Dr. Cantor express a view that care should be withheld from adolescents so that they can be encouraged to identify with their birth-assigned sex. This view contravenes the standard of care; encourages "conversion therapy," which has been widely discredited as unethical and profoundly harmful; and is wholly unsupported by any scientific evidence, as both admit. Levine Report ¶ 49 (admitting that "there is no evidence beyond anecdotal reports that psychotherapy can enable a return" to identifying as one's birth-assigned sex); Cantor Report ¶ 42 (admitting "there has not yet been any such study" that supports withholding care). Additionally, being deprived of access to medically necessary care for gender dysphoria can impose serious and potentially irreversible harms. Many physiological changes that happen during endogenous puberty cause severe distress for patients with gender dysphoria and can be difficult, if not impossible, to reverse with subsequent treatment. Based on my clinical experience, patients with severe dysphoria who are able to receive medically indicated

treatment as adolescents experience substantial mental health improvements.

WPATH IS A PROFESSIONAL MEDICAL ORGANIZATION

18. Dr. Levine critiques WPATH because it is "a voluntary membership organization" and "attendance at its biennial meetings has been open to trans individuals who are not licensed professionals." Levine Report ¶ 67. This critique is misplaced, as an organization can both advocate for patients and pursue rigorous scientific research, which WPATH and many other medical associations do. This is not an isolated or new phenomenon in medicine. The American Diabetes Association, for example, is a professional association that both advocates for patients with diabetes and is a scientific organization that conducts research, hosts meetings with open attendance, and reports on developments in the field. Similarly, rigorously researched papers are presented at the WPATH biennial meetings and well-funded scientific scholarship is reported on to other attendees. I have attended many of these meetings and have heard open, collegial and cordial debate. I have not had the experience suggested by Dr. Levine in the last decade, nor has he, as he has admittedly not been a member of WPATH for more than two decades. Levine Report ¶ 66.

19. Dr. Levine additionally critiques WPATH and its members, claiming, "some current members of WPATH have little ongoing experience with the mentally ill" and recognizing and treating psychiatric comorbidities. Levine Report ¶ 73. In my clinic, as is recommended by the Endocrine Society Guideline, every patient is treated by a multidisciplinary team that includes a social worker, psychologist, psychiatrist, and endocrinologist. The mental health providers are all well-trained faculty and

clinicians at Duke University Medical School with years of experience diagnosing and treating mental health conditions. For patients who have other mental health diagnoses, they are treated by a team of mental health providers before medical treatment for gender dysphoria is initiated. Clinic protocol requires written confirmation from the patient's mental health team that any other underlying mental health conditions are well-managed, and the patient is able to begin treatment.

20. Similarly, Dr. Levine asserts that the 2017 Endocrine Society Guidelines are not "standards of care." Levine Report ¶¶ 85-86. Dr. Levine misinterprets my testimony in that the titles of the clinical care recommendations based in the medical literature published by the Endocrine Society are all titled "clinical care guidelines." These guidelines are meant to be useful to providers in this field, and are recommendations from the Endocrine Society to improve care for transgender individuals.

SAFETY AND EFFICACY OF TREATMENTS

Safety and Efficacy of Puberty-Delaying Treatment

21. Puberty blockers have been used to treat patients with gender dysphoria since at least 2004 in the United States. We have almost 20 years of data showing the safety and efficacy of this treatment for patients with gender dysphoria. We have over 30 years of data about the safety of this treatment based on data from treating children with precocious (i.e., early onset) puberty. Even with all of this supporting data, the Duke Gender Clinic still does not treat patients with a "one-size-fits-all approach" that Drs. Levine and Cantor proclaim exists. Not all patients who are experiencing their endogenous puberty when they present for care at our clinic are

indicated for treatment with puberty blockers. This avenue of treatment is a case-by-case decision made with the expertise and thoughtful analysis of the entire multidisciplinary team, and with the patient and their family weighing the risks and benefits of each treatment path.

22. Though Dr. Levine warns throughout his report about delaying puberty, pubertal suppression in transgender youth does not delay puberty beyond the typical age range. Pubertal development has a very wide age variation among individuals. Puberty in individuals assigned male at birth typically begins anywhere from age nine to age 14, and sometimes does not complete until a person's early twenties. For those individuals assigned female at birth, puberty typically occurs sometime within the ages of eight to 17, generally beginning between the ages of eight and 13. Protocols used to treat adolescents with gender dysphoria would tend to put them in the latter third of typical pubertal age ranges but nothing outside of the typical range.[4] Though some peers of a patient on pubertal suppression may undergo pubertal changes earlier than the gender dysphoric patient, many peers will have comparably timed or even later puberty. There is no data to support Dr. Levine's assertion that delaying puberty within these normal age ranges will have negative social and developmental consequences, including Dr. Levine's unsupported claim that transgender youth will

[4] Hembree, W.C., Cohen-Kettenis, P.T., Gooren, L., et al. Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *The Journal of Clinical Endocrinology & Metabolism.* 2017; 102(11): 3869-903; Euling, S.Y., Herman-Giddens, M.E., Lee, P.A., et al. Examination of U.S. Puberty-Timing Data from 1940 to 1994 for Secular Trends: Panel Findings. *Pediatrics.* 2008; 121 (Supplemental 3): S172-S191.

experience psychosocial harms from their purportedly delayed puberty. Levine Report ¶ 192. Contrary to the suggestions by Dr. Cantor and Dr. Levine, my clinical experience has shown that adolescents who access needed gender-affirming medical treatment have improved social and romantic relationships and are able to develop positive peer relationships with cisgender and transgender people alike.

23. Dr. Levine claims that patients treated with puberty-delaying medication will experience a range of health consequences. Levine Report ¶11185-94. For example, he says that patients treated with puberty suppressants will be at an elevated risk of lower bone density. Levine Report ¶ 186. During the course of treatment, patients may have reduced bone mineral density, but after two years on hormone therapy, their bone structure and strength generally matches that of cisgender people who went through the same puberty. This has been shown in research[5] and has also been my experience with patients. Additionally, studies have shown no changes in bone mineralization among patients with central precocious puberty treated with pubertal suppression for a period of four years.[6] As with all of the risks of puberty suppression, the risks related to bone

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[5] van der Loos, M.A., Hellinga, I., Vlot, M.C., et al. Development of Hip Bone Geometry During Gender-Affirming Hormone Therapy in Transgender Adolescents Resembles That of the Experienced Gender When Pubertal Suspension Is Started in Early Puberty. *Journal of Bone and Mineral Research.* 2021; 36(5): 931-41. doi: https://doi.org/10.1002/jbmr.4262.

[6] Park, H.K., Lee, H.S., Ko, J.H., et al. The effect of gonadotrophin-releasing hormone agonist treatment over 3 years on bone mineral density and body composition in girls with central precocious puberty. *Clinical Endocrinology.* 2012; 77(5): 743-48.

mineralization and the state of the evidence are discussed extensively with patients and their parents during the informed consent process.

24. Dr. Levine's claim that brain development occurring during puberty is negatively affected by pubertal suppression is not accurate. Levine Report ¶ 187. Patients with gender dysphoria who are treated with puberty-delaying medication undergo hormonal puberty with all the same brain and other bodily system development.[7] Dr. Levine's claim is inaccurate for the additional reason that some people never go through hormonal puberty, such as patients with Turner Syndrome, and still have normal brain development with respect to cognition and executive function. His claim also seems to imply that youth with gender dysphoria have their puberty delayed beyond the typical age range, but, as I discussed above, this is not accurate. He also implies that gender dysphoric youth treated with pubertal suppression remain on puberty blockers longer than those treated for precocious puberty. Levine Report ¶ 184. This is also not accurate. The longest period of time that my patients with gender dysphoria are treated with pubertal suppression before the introduction of pubertal hormones is approximately three years. By contrast, many patients with precocious puberty are treated with pubertal suppression for five to seven years.

25. As I explained in my initial report, Adkins Report ¶ 30, puberty-delaying medication simply pauses development at the stage it has reached at the time

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[7] Staphorsius, A. S., Kreukels, B. P., Cohen-Kettenis, P. T., et al. Puberty suppression and executive functioning: An fMRI-study in adolescents with gender dysphoria. *Psychoneuroendocrinology.* 2015; 56: 190-99. doi: https://doi. org/10.1016/j .psyneuen. 2015.03.007.

treatment is initiated. On its own, pubertal-delaying medication has no permanent effects on the maturation of sexual organs. For patients treated with puberty blockers who do not go on to gender-affirming hormones, once they stop taking blockers, puberty—including maturation of sexual organs—resumes. Dr. Levine's concerns about potentially diminished sexual response are also misplaced. Levine Report 11199. For transgender women on estrogen who experience sexual side effects from the treatment, these are effectively managed through dosing as well. None of these side effects are inevitable, unmanageable, or unique to this treatment, and all potential side effects are discussed with patients during the informed consent process required to initiate treatment. And, in my experience, many patients experience no side effects whatsoever from treatment, and instead experience exactly their intended effect: the diminishment of distress caused by untreated gender dysphoria. There is also data that shows that the majority of transgender individuals see an improvement in their sexual satisfaction after gender-affirming care.

26. Dr. Levine's theories about the unknown impact of puberty blockers on fertility and the supposed "irreversibility" of this treatment are again uninformed. Levine Report 1111179, 180, 185. In addition to treating precious puberty and gender dysphoria, puberty blockers are used to *preserve* gonadal function and ensure fertility when patients undergo gonadotoxic treatments. For example, puberty blockers have been shown to protect gonadal function and preserve fertility in patients undergoing cancer and rheumatologic treatment.[8]

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[8] Int J Rheum Dis. 2018 Jun ; 21(6):1287-1292. doi: 10.1111/1756-185X.13318. Effect of a gonadotropin-releasing hormone analog for ovarian function preservation after intravenous cyclophosphamide

Puberty delaying medication is supported as the standard of care to preserve fertility in oncology patients who may undergo gonadal injuring treatments. When patients are no longer undergoing this treatment, their natal gonads resume their normal function and development. It is precisely for this reason, and for the decades of safe and efficient use of these treatments for children with precocious puberty that puberty blockers are relied upon as the least invasive intervention for medical treatment of gender dysphoria.

27. An additional claim by Dr. Levine that lacks evidentiary bases is that an "irreversible" and "inevitable" outcome of the administration of puberty blockers is the later use of hormone therapy. In contrast to Dr Levine's baselessly imagined world of unethical medical professionals, in actual medical practice in actual medical clinics like mine, no treatment is decided in advance for every single patient, and that is a foremost standard of care. While the majority of my patients who undergo puberty delaying treatment do go on to initiate hormone therapy, some do not. Dr. Levine' imbedded premise is that puberty blockers work as a cause-and-effect mechanism for later use of hormone therapy, but that misses reality entirely, when the cause for any medical treatment is the appropriate management of gender dysphoria with the goal of finding the best treatment possible for each patient, without a predetermined idea of what that will be.

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therapy in systemic lupus erythematosus patients: a retrospective inception cohort study; nt J Mol Sci 2020 Oct 21;21(20):7792. doi: 10.3390/ijms21207792. Advances in the Treatment and Prevention of Chemotherapy-Induced Ovarian Toxicity Hyun-Woong Cho, et al.

28. Finally, Dr. Levine makes it appear as if the Endocrine Society has significant reservations about puberty-delaying treatment by again misquoting and misrepresenting quoted portions of the 2017 Guidelines. Levine Report ¶¶ 87, 188. To begin with, Dr. Levine asserts that on page 3872, the Guidelines "go no further than `suggest[ing]' use of puberty blockers." *Id.* ¶ 87. This quote can be found nowhere on page 3872. Instead, in the abstract section labeled "Conclusion" beginning on the first page of the Guidelines (3869) and continuing onto page 3870 is the direct quote "We ***recommend*** treating gender-dysphoric/gender-incongruent adolescents who have entered puberty at Tanner Stage G2/B2 by suppression with gonadotropin-releasing hormone agonists." (emphasis added). Levine then goes on to quote several disconnected sentences from the Guidelines out of context as support for his wholly unsupported hypothesis that there is a "negative impact" on brain development of adolescents treated with puberty delaying medication. Levine Report ¶¶ 187-88. Notably, while Dr. Levine offers no insight about the impact of the anxiety, depression, and overall distress caused by untreated gender dysphoria on adolescent brain development, he maintains that the Guidelines support his unsubstantiated hypothesis by "acknowledging as much." Levine Report ¶ 188. The Guidelines do no such thing; instead they merely acknowledge the data existing at the current moment, and like any field of medicine, the need for additional study and information. For example, Dr. Levine's first out of context quote ignores the Guidelines' following statements from the same page that "[i]nitial data in GD/gender-incongruent subjects demonstrated *no change* of absolute areal BMD [bone mineral density] during 2 years of GnRH analog therapy but a decrease in BMD z scores." The Guidelines also note, and Levine

omits, that "[r]esearchers reported normal BMD z scores at age 35 years in one individual who used GnRH analogs from age 13.7 until age 18.6 years before initiating sex hormone treatment." Additionally, Dr. Levine leaves out the entire first half of the sentence before his reference to "animal data," from page 3883, which in complete form states that "[a] single cross-sectional study demonstrated no compromise of executive function." Regardless of Dr. Levine's mischaracterizations of the purpose or words of the Endocrine Society Guidelines, in the five years since they were published, additional research has been completed by clinicians and researchers in the area, resulting in findings like those recently included in a study in the Best Practice & Research Clinical Endocrinology and Metabolism: "With more than 30 years of experience, we can affirm that GnRHa treatment is safe. The most frequently documented side effects are headaches and hot flashes."[9]

Safety and Efficacy of Hormone Therapy

29. Dr. Levine expresses concern that the evidence supporting hormone therapy for treatment of gender dysphoria is graded as low quality. Levine Report ¶¶ 144-47. It is common that standard treatments in medicine generally, and endocrinology specifically, receive reviews that the quality of evidence is "low" or "very low" because of the evidence available at the moment a review is conducted and because of the limited and rigid definitions of "evidence" used by the reviewing organizations. For example, the Endocrine Society also has a Clinical

[9] Leandro Soriano-Guillen, Jesus Argente, Central precocious puberty, functional and tumor-related, Best Practice & Research Clinical Endocrinology & Metabolism, Volume 33, Issue 3, 2019, 101262, ISSN 1521-690X, https://doi.org/10.1016/j.beem.2019.01.003.

Practice Guideline for the Treatment of Pediatric Obesity which was released the same year as the Endocrine Society Guideline for the Treatment of Gender Dysphoric Persons. In the Pediatric Obesity Guideline, the Guideline's strong recommendation for the prevention of obesity is that clinicians prescribe "healthy eating habits"—an obviously time-tested and well-founded recommendation—but this recommendation has a "very low" quality rating of the evidence—just like puberty blockers. Similarly, the Cochrane Database of Systemic Reviews on which Dr. Levine relies has similar levels of evidence for treatments that are standard of care in medicine. For example, in 2021 the Cochrane Database provided a review of "early versus delayed appendectomy for abscess." Despite appendectomies being one of the oldest and most common surgical procedures completed on children in the United States, the Cochrane Review looked at 66 years' worth of study and research and found just two studies with 80 total patients that were acceptable for their review and from that data deemed that the evidence is "of very low quality." (Cochrane Database 2017).

30. Finally, Dr. Levine's assertion that random control trials are necessary in order to establish any worthwhile science on the safe and effective medical treatment for gender dysphoria is unethical. When withholding treatment is more dangerous (likely to result in death or injury) than providing that treatment, clinicians will, with informed consent and appropriate screening mechanisms, use that treatment even if the amount of evidence supporting the treatment is not vast. In the case of gender-affirming hormone therapy, available data supports that these treatments lower suicide attempts and suicidal ideation as much as four-fold. When combined with the fact that the second leading cause of death in all

adolescents is suicide, there are ample reasons to utilize this treatment pathway even if evidence does not meet the stringent levels of the Cochrane Review. Significantly, there are no reported deaths in youth from receiving puberty blockers or hormone therapy. Given that withholding this care increases the likelihood of death, it is unethical to do so in order to perform a randomized control trial ("RCT"). RCTs are only ethically performed between treatments that are at equal in treating a condition. Providing gender-affirming care to transgender young people and not providing it are not equal in treating the condition, as decades of evidence of the death of transgender individuals before gender-affirming hormone treatments were available demonstrate.

31. Dr. Levine warns of risks of infertility related to gender-affirming hormone therapy, Levine Report ¶ 197, but many transgender individuals conceive children both during and after undergoing hormone therapy.[10] Pregnancy among trans men after undergoing testosterone therapy is very common.[11]A recent eight-year study found that four months after stopping

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[10] Light A.D., Obedin-Maliver J., Sevelius J.M., et al. Transgender men who experienced pregnancy after female-to-male gender transitioning. *Obstetrics Gynecology.* 2014; 124(6): 112027; Maxwell S., Noyes N., Keefe D., Berkeley A.S., et al. Pregnancy Outcomes After Fertility Preservation in Transgender Men. *Obstetrics Gynecology.* 2017; 129(6):1031-34; Neblett M.F. & Hipp H.S. Fertility Considerations in Transgender Persons. *Endocrinology and Metabolism Clinics.* 2019; 48(2): 391-402.

[11] See, *e.g.,* Moseson, H., Fix, L., Hastings, J., et al. Pregnancy intentions and outcomes among transgender, nonbinary, and gender-expansive people assigned female or intersex at birth in the United States: Results from a national, quantitative survey. *International Journal of Transgender Health.* 2020; 22(1-2): 30-41. doi: .

testosterone treatment, transgender men had comparable egg yields to non-transgender women.[12] Going directly from pubertal suppression to gender-affirming hormones does affect fertility. For these patients, and any patients treated with estrogen, who are concerned about the impact of estrogen on fertility, fertility preservation remains a viable option we communicate to patients. More generally, many medical interventions necessary to preserve a person's health and well-being can impact an individual's fertility, but as with virtually every decision in medicine, we carefully weigh the risks and the benefits of treatment and proceed with the treatment after informed consent.

32. Dr. Levine asserts that transgender people "most likely [] require regular administration of hormones for the rest of their lives." Levine Report ¶ 129. Some patients may take hormones for some number of years and then decide to discontinue the treatment if dysphoria is well-managed. For those who do remain on maintenance doses of hormone therapy for their lifetime, the risks of ongoing hormone therapy can be well-managed and are not unlike risks associated with those present for other patients who undergo long-term hormone therapy for different conditions like hypothyroidism, Kleinfelter's Syndrome, Turner Syndrome, or hypopituitism. Generally, in endocrinology, our treatment goals for all patients are to maintain hormone levels at the range of normal human physiology, regardless of a person's chromosomes, reproductive anatomy, or gender identity. When this is done, the body knows no difference in the source of the

[12] Leung, A., Sakkas, D., Pang, S., et al. Assisted reproductive technology outcomes in female-to-male transgender patients compared with cisgender patients: a new frontier in reproductive medicine. *Fertility and Sterility.* 2019; 112(5): 858-65.

hormones and functions in normal physiologic fashion, regardless of whether the patient is cisgender or transgender.

33. Ultimately, Dr. Levine's and Dr. Cantor's reports reveal a central opinion is that it is not healthy to be transgender and that government policies and medical practice should undertake efforts to make people not transgender *(i.e.,* use endless psychotherapy to encourage people to live in accordance with their assigned sex at birth rather than their gender identity, deny them medical treatment when it is indicated, ignore their distress unless science and medicine is 100 percent certain there is no possible risk to any intervention). This approach to the management of any condition is counter to medicine and science overall. And attempts to "treat" transgender people in this manner is historically well-known to be not only entirely ineffective, but to be extremely harmful and is considered unethical by every major medical association.[13] My clinical experience and the peer-reviewed literature overwhelmingly demonstrate that gender-affirming medical care drastically improves the health and well-being of adolescents with gender dysphoria for whom the care is medically indicated.

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

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[13] American Academy of Child & Adolescent Psychiatry. Conversion Therapy. 2018. https://www.aacap.org/AACAP/PolicyStatements/2018/ConversionTherapy.aspx; American Medical Association. Health care needs of lesbian, gay, bisexual and transgender populations. H- 160.991. 2017. https://policysearch.ama-assn.org/policyfinder/detail/H-160.991%20?uri=%2FAMADoc%2FHOD.xml-0-805.xml/

Executed on this 10th day of March 2022.

/s/Deanna Adkins, M.D.
Deanna Adkins, M.D.

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

CHARLESTON DIVISION

B. P. J., et al.,

Plaintiffs,

v. CIVIL ACTION NO. 2:21-cv-00316

WEST VIRGINIA STATE BOARD OF EDUCATION, et al.,

Defendants,

and

LAINEY ARMISTEAD,

Defendant-Intervenor.

REBUTTAL EXPERT REPORT AND DECLARATION OF ARON JANSSEN, M.D.

I, Aron Janssen, M.D., hereby declare as follows:

1. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation. I submit this expert declaration based on my personal knowledge.

2. The purpose of this declaration is to respond to the expert reports of Dr. Stephen Levine, MD and Dr. Stephen

Cantor, Ph.D., submitted by Defendants in this case, which misrepresent current standards of care for treating gender dysphoria in children and adolescents, the practices commonly known as gender-affirming care, and the scientific data supporting those practices.

3. I have knowledge of the matters stated in this declaration and have collected and cite to relevant literature concerning the issues that arise in this litigation in the body of this declaration.

4. In preparing this declaration, I reviewed: the Complaint in this action, the expert reports of Dr. Joshua D. Safer, M.D., and Dr. Deanna Adkins, M.D., submitted by Plaintiff, and the expert reports of Dr. Levine and Dr. Cantor submitted by Defendants. I also relied on my scientific education and training, my research experience, my knowledge of the scientific literature in the pertinent fields, and my clinical experience treating children, adolescents, and adults with gender dysphoria. A true and accurate copy of my curriculum vitae is attached hereto as Exhibit A. It documents my education, training, research, and years of experience in this field and includes a list of my publications from the last 10 years, which I also rely upon to support my opinions.

5. The materials I have relied upon in preparing this declaration are the same types of materials that experts in my field regularly rely upon when forming opinions on these subjects. I may wish to supplement these opinions or the bases for them as a result of new scientific research or publications or in response to statements and issues that may arise in my area of expertise.

BACKGROUND QUALIFICATIONS

6. I am the Vice Chair of the Pritzker Department of Psychiatry and Behavioral Health at the Ann and Robert

H. Lurie Children's Hospital of Chicago ("Children's Hospital"), where I also serve as Clinical Associate Professor of Child and Adolescent Psychiatry and Medical Director for Outpatient Psychiatric Services.

7. I previously served as Co-Director of the New York University Pediatric Consultation Liaison Service for the New York University Department of Child and Adolescent Psychiatry. I also was the Founder and Clinical Director of the New York University Gender and Sexuality Service, which I founded in 2011.

8. I am Board Certified in Child, Adolescent, and Adult Psychiatry. In my clinical practice, I have seen approximately 500 transgender patients.

9. I am an Associate Editor of the peer-reviewed publication *Transgender Health.* I am also a reviewer for *LGBT Health* and *Journal of the American Academy of Child and Adolescent Psychiatry,* both of which are peer-reviewed journals.

10. I am the author or co-author of 16 articles on care for transgender patients and am the co-author of *Affirmative Mental Health Care for Transgender and Gender Diverse Youth: A Clinical Casebook,* Springer Publishing, 2018. I have also authored or co-authored numerous book chapters on treatment for transgender adults and youth.

11. I have been a member of the World Professional Association for Transgender Health ("WPATH") since 2011. I have been actively involved in WPATH's revision of its Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People ("Standards of Care"), serving as a member of revision committees for both the child and adult mental health

chapters of the forthcoming eighth edition of WPATH's Standards of Care.

12. I am involved in a number of international, national, and regional committees that contribute to the scholarship and provision of care to transgender people. I am the Chair of the American Academy of Child and Adolescent Psychiatry's Sexual Orientation and Gender Identity Committee. I serve as a member of the Transgender Health Committee for the Association of Gay and Lesbian Psychiatrists. I also am the Founder and Director of the Gender Variant Youth and Family Network.

13. I have not testified as an expert at trial or by deposition in the last four years.

14. I am being compensated for my work on this matter at a rate of $400 per hour for preparation of this report and for time spent preparing for and giving local deposition or trial testimony. In addition, I would be compensated $2,500 per day for deposition or trial testimony requiring travel and $300 per hour for time spent travelling, plus reasonable expenses. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I may provide.

SUMMARY OF OPINIONS

15. My understanding is that this case is a legal challenge to a West Virginia law ("H.B. 3293") that prohibits girls and women who are transgender from participating on girls' and women's sports teams in "[i]nterscholastic, intercollegiate, intramural, or club athletic teams or sports that are sponsored by any public secondary school or a state institution of higher education." W. Va. Code § 18-2-25d(c)(1). In their expert reports, Dr. Levine and Dr. Cantor do not offer any expert opinions directly relating to H.B. 3293 or the participation of

transgender athletes. Instead, Dr. Levine and Dr. Cantor launch a broadside attack against the prevailing model of gender-affirming care for transgender youth that has been endorsed by the American Academy of Child and Adolescent Psychiatry, the American Academy of Pediatrics, the American Psychological Association, the American Psychiatric Association, and the American Medical Association, among many other mainstream medical organizations.

16. As an initial matter, it is important to note that Dr. Levine and Dr. Cantor's litany of criticisms are largely irrelevant to the population of people affected by H.B. 3293. Most of Dr. Levine and Dr. Cantor's arguments relate to (a) prepubertal children who "desist" from expressing a transgender identity once they reach puberty and (b) transgender boys who first seek treatment for gender dysphoria during adolescence. But H.B. 3293 does not affect elementary school students or transgender boys. It affects transgender girls and women in middle school, high school, and college.

17. As I explain in this report, Dr. Levine and Dr. Cantor's criticisms are also utterly unfounded. First, Dr. Levine and Dr. Cantor lack experience with gender dysphoria in children and adolescents—the groups whom their reports discuss.

18. Second, with respect to prepubertal children, Dr. Levine and Dr. Cantor present a caricatured description of prevailing standards of care that reflects a profound misunderstanding of the subject. Gender-affirming care for prepubertal children is not synonymous with "transition on demand" (Cantor Rep. ¶ 45) or a rubber-stamp recommendation that every prepubertal child expressing feelings of gender dysphoria be encouraged to socially transition. Treatment is individualized based on

the needs of the child and the family and other psychosocial considerations and is decided upon only after a discussion of possible benefits and risks. For prepubertal transgender children with intense, persistent gender dysphoria, there is substantial evidence that, in appropriate cases, socially transitioning can have significant mental health benefits.

19. Third, Dr. Levine and Dr. Cantor's criticisms of gender-affirming care for adolescents—like their criticisms of gender-affirming care for prepubertal children—also reflect a distorted interpretation of the relevant scientific literature and a caricatured understanding of what gender-affirming care is. Studies have repeatedly documented that puberty-blocking medication and gender-affirming hormone therapy are associated with mental health benefits in both the short and long term. Contrary to the portrayal in Dr. Levine and Dr. Cantor's reports, gender-affirming treatment also requires a careful and thorough assessment of a patient's mental health, including co-occurring conditions, history of trauma, and substance use, among many other factors.

20. Finally, while purporting to offer expert opinions on mental health care for transgender youth, Dr. Levine and Dr. Cantor do not appear to offer any expert opinions on the mental health impact of H.B. 3293 itself. Excluding transgender adolescent girls and women from female sports teams will not cure their gender dysphoria or improve their mental health. To the contrary, stigma and discrimination have been shown to have a profoundly harmful impact on the mental health of transgender people and other minority groups.

DISCUSSION

Dr. Levine and Dr. Cantor Lack Experience with Gender Dysphoria in Children and Adolescents

21. According to his CV, Dr. Levine is not board certified in child and adolescent psychiatry, which requires specialized training in child development that is essential for working with transgender young people and their families. His declaration and CV also indicate that he does not have significant clinical experience working with adolescents experiencing gender dysphoria, the patient population at the heart of this case.

22. Moreover, Dr. Levine repeatedly acknowledges in his report that he has no firsthand knowledge of how gender-affirming mental health care is actually provided to children and adolescents. His descriptions are based on second-hand conversations and often sensationalized media reports. *(See, e.g.,* Levine Rep. 749, 118 (offering opinions based on anecdotal reports from the internet).)

23. Dr. Cantor appears to have no experience in child or adolescent psychology and no relevant experience with respect to gender dysphoria in childhood and adolescence. His academic career has focused on pedophilia and sexual paraphilias in adults.

Gender-Affirming Care for Prepubertal Children

24. Dr. Levine and Dr. Cantor devote substantial portions of their expert reports to criticizing the positions of mainstream medical organizations with respect to gender-affirming care for prepubertal transgender children. *(See, e.g.,* Levine Rep. ¶¶ 42-43, 114-17, 130-34; Cantor Rep. ¶¶ 36-45, 82-87.) According to Dr. Levine and Dr. Cantor, studies have indicated that gender dysphoria in prepubertal children may desist by the time the children reach puberty, and thus medical professionals

should adopt a "watchful waiting" approach and avoid affirming a prepubertal child's gender identity.

25. Before addressing Dr. Levine and Dr. Cantor's arguments about prepubertal children, it is important to emphasize that those arguments are irrelevant to what I understand to be the issues in this case. H.B. 3293 does not apply to elementary schools, and the plaintiff in this case is an 11-year-old middle school student. The relevant population affected by H.B. 3293 is composed of transgender adolescents and young adults, not prepubertal children.

26. With respect to prepubertal children, Dr. Levine and Dr. Cantor present a caricatured description of prevailing standards of care that reflects a profound misunderstanding of the subject. Mental health providers cannot change a prepubertal child's gender identity or prevent them from being transgender, just as mental health providers cannot change a cisgender child's gender identity. Prepubertal children who "desist" are children with non-conforming gender expression who realize with the onset of puberty that their gender identity is consistent with their sex assigned at birth. Their understanding of their gender identity changes with the onset of puberty, but their gender identity does not. We cannot definitively determine which prepubertal children will go on to identify as transgender when they reach adolescence, but we know that children with gender dysphoria who persist into puberty are more likely to have expressed a consistent, persistent, and insistent understanding of their gender identity from a young age.[1]

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[1] Steensma, T.D., *et al.* (2013). *Factors Associated with Desistence and Persistence of Childhood Gender Dysphoria: A Quantitative*

27. Gender-affirming care for prepubertal children is not synonymous with "transition on demand" (Cantor Rep. ¶ 45) or a rubber-stamp recommendation that every prepubertal child expressing feelings of gender dysphoria be encouraged to socially transition. Treatment is individualized based on the needs of the child and the family and other psychosocial considerations, and is decided upon only after a discussion of possible benefits and risks.[2] As part of those discussions, the child and their family are advised that prepubertal children do not always go on to identify as transgender when they reach adolescence, and that children are encouraged to continue developing an understanding of their gender identity without expectation of a specific outcome even after social transition takes place.[3]

28. The focus of gender-affirming care is supporting overall health and wellbeing, regardless of whether the young person continues to identify as transgender. In this manner, the primary goal of gender-affirming care is to help a child understand their own gender identity and

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Follow-Up Study. J. AM. ACAD. CHILD ADOLESC. PSYCHIATRY. 52(6):582-90 ("Steensma 2013").

[2] *See Hidalgo, M.A., et al. (2013). The Gender Affirmative Model: What We Know and What We Aim to Learn. HUMAN DEV. 56(5):285-90.*

[3] *See* American Psychological Association. (2015). *Guidelines for Psychological Practice with Transgender and Gender Nonconforming People.* AM. PSYCHOLOGIST. 70(9):832-64 ("APA 2015"); Edwards-Leeper, L., & Spack, N.P. (2012). *Psychological evaluation and medical treatment of transgender youth in an interdisciplinary "Gender Management Service" (GeMS) in a major pediatric center. J.* HOMOSEXUALITY. 59(3):321-36 ("Edwards-Leeper 2012").

build resilience and mental wellness in a child and family, without privileging any one outcome over another.

29. Important considerations in deciding whether social transition is in a child's best interest include: whether there is a consistent, stable articulation of a gender different from the child's sex assigned at birth, which should be distinguished from merely dressing or acting in a gender non-conforming manner; whether the child is expressing a strong desire or need to transition; the degree of distress the child is experiencing as a result of the gender dysphoria; and whether the child will be emotionally and physically safe during and following transition.[4]

30. A treatment plan is informed by a psychosocial assessment, which may vary greatly depending on the patient's presentation and the complexity of the issues the patient is navigating. Further, in conducting that assessment, the mental health provider is drawing from their professional training and experience in working with transgender young people, exercising professional judgment, and tailoring the assessment to each individual patient.

31. There is also no requirement that prepubertal children who socially transition receive mental health therapy. Many prepubertal children who express a gender identity different from their sex assigned at birth do not experience any co-occurring conditions or other psychological distress requiring treatment.[5] Mental

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[4] APA 2015.

[5] *See* Levine Rep. ¶ 30 (acknowledging that "[y]oung children who are living a transgender identity commonly suffer materially fewer symptoms of concurrent mental distress than do older patients."); de Vries, A.L.C, *et al.* (2011). *Psychiatric comorbidity in gender*

health therapy may be useful for some prepubertal children but is not necessary or appropriate for everyone. Forcing children to undergo therapy when it is not medically indicated is both harmful and unethical.

32. What makes gender-affirming care "gender affirming" is that it does not presume that being transgender is incompatible with a young person's short- and long-term health and wellbeing. Simply being transgender or gender nonconforming is not a medical condition or pathology to be treated. As the DSM-5 recognizes, diagnosis and treatment are "focus[ed] on dysphoria as the clinical problem, not identity per se." American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders (DSM-5),* 451 (2013). The DSM-5 unequivocally repudiated the outdated view that being transgender is a pathology by revising the diagnostic criteria (and name) of gender dysphoria to recognize the clinical distress as the focus of the treatment, not the patient's transgender status.

33. In criticizing what they imagine to be gender-affirming care, Dr. Levine and Dr. Cantor do not merely advocate for "watchful waiting" to see whether dysphoria persists into adolescence before any treatment is provided. Instead, they offer wild speculation that mental health professionals can and should intervene and provide therapy to encourage the patient to identify with their sex assigned at birth, which they believe will reduce the likelihood that gender dysphoria will persist. Both Dr. Levine and Dr. Cantor candidly admit that there is no credible scientific research indicating that such practices

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dysphoric adolescents. J. CHILD PSYCHOLOGY & PSYCHIATRY. 52(11):1195-202 (noting that 67.6% had no concurrent psychiatric disorder).

are either possible or ethical. *(See* Levine Rep. ¶ 49 ("To my knowledge, there is no evidence beyond anecdotal reports that psychotherapy can enable a return to male identification for genetically male boys, adolescents, and men, or return to female identification for genetically female girls, adolescents, and women."); Cantor Rep. ¶ 42 (speculating that "therapeutic intervention [could] facilitate or speed desistance" while admitting "there has not yet been any such study").)

34. Although Dr. Levine refers to his preferred modality as the "psychotherapy model" (Levine Rep. 746-48), this approach is more appropriately characterized as the "gender identity conversion model" because its goal is to bring the patient's gender identity into alignment with their assigned sex and foreclose gender transition as a treatment for gender dysphoria. A recent study found that people who reported experiencing those conversion efforts were more likely to have reported attempting suicide, especially those who reported receiving such therapy in childhood.[6] That conclusion is further supported by the extensive evidence that rejection of a young person's gender identity by family and peers is the strongest predictor for adverse mental health outcomes.[7] Attempting to change a person's gender identity is not an

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[6] Turban, J.L., *et al.* (2020). *Association Between Recalled Exposure to Gender Identity Conversion Efforts and Psychological Distress and Suicide Attempts Among Transgender Adults.* JAMA PSYCHIATRY. 77(1) : 68-76.

[7] Ryan, C., *et al.* (2010). *Family Acceptance in Adolescence and the Health of LGBT Young Adults. J.* CHILD ADOLESC. PSYCHIATRIC NURSING. 23(4):205-13; Klein, A., & Golub, S.A. (2016). *Family Rejection as a Predictor of Suicide Attempts and Substance Misuse Among Transgender and Gender Nonconforming Adults.* LGBT HEALTH. 3 (3): 193-99.

appropriate therapeutic modality, and such practices have been widely recognized as discredited, harmful, and ineffective.[8]

35. In contrast, for prepubertal transgender children with intense, persistent gender dysphoria, there is substantial evidence that, in appropriate cases, socially transitioning can have significant mental health benefits. While not true for every transgender child, transgender children as a group have higher rates of depression, anxiety, and suicidal thoughts and behaviors. Research indicates that social transition significantly improves the mental health of transgender young people, bringing their mental health profiles into close alignment with their non-transgender peers, finding only slightly higher levels of anxiety and no elevated levels of depression.[9]

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[8] *See* American Academy of Child & Adolescent Psychiatry Policy Statement: Conversion Therapy (2018); American Psychiatric Association Position Statement on Conversion Therapy and LGBTQ Patients (2018); American Psychological Association Resolution on Gender Identity Change Efforts (2021).

[9] *See* Gibson, D.J., *et al.* (2021). *Evaluation of Anxiety and Depression in a Community Sample of Transgender Youth.* JAMA NETWORK OPEN. 4(4):e214739; Durwood, L., *et al.* (2017). *Mental Health and Self-Worth in Socially Transitioned Transgender Youth. J.* AM. ACAD. CHILD ADOLESC. PSYCHIATRY. 56(2):116-23; Olson, K.R., *et al.* (2016). *Mental Health of Transgender Children Who Are Supported in Their Identities.* PEDIATRICS. 137(3):e20153223 ("Olson 2016").

Dr. Cantor points to a critique of Olson 2016 which attempted—unsuccessfully—to show statistical errors in the paper. (Cantor Rep. ¶¶ 15-16, 100 (citing Schumm, W. R., & Crawford, D.W. (2020). *Is Research on Transgender Children What It Seems? Comments on Recent Research on Transgender Children with High Levels of Parental Support.* THE LINACRE QUARTERLY. 87(1):9--24).) The small statistical errors in Olson 2016 had already been corrected in 2018 and did not alter any of the study's findings. *See* Olson, K.R.,

36. Dr. Levine and Dr. Cantor criticize research demonstrating the benefits of social transition and argue that even after socially transitioning, transgender youth as a group can experience higher rates of anxiety and depression than cisgender children of the same age. To be sure, stigma and discrimination have been shown to have a profoundly harmful impact on mental health of transgender people and other minority groups.[10] But preventing a child from socially transitioning does not prevent the child from being transgender, and social transition is a treatment for gender dysphoria, not a panacea for all co-occurring mental health concerns. Dr. Levine and Dr. Cantor offer no support whatsoever for their apparent assumption that mental health outcomes would be improved by preventing social transition from occurring.

37. There is also no evidence supporting Dr. Levine's speculation that allowing prepubertal children to socially transition puts children on a "conveyor belt" path to becoming transgender adolescents and adults. *(See* Levine Rep. ¶¶ 131-34.) Rather, the evidence shows that the same prepubertal children who are likely to have a stable transgender identity into adolescence are the children who are most likely to articulate a strong and consistent need to socially transition.[11]For example, a recent study found that a group of transgender children who transitioned before puberty and a group of

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et al. (2018). *Mental Health of Transgender Children Who Are Supported in Their Identities* (Errata). PEDIATRICS. 142(2):e20181436.

[10] White Hughto, J.M., *et al.* (2015). *Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. Soc.* SCI. MED. 147:222-31 ("White Hughto 2015").

[11] Steensma 2013.

transgender children who waited to transition until after puberty both showed the same intensity of cross-gender identification. In other words, socially transitioning before puberty did not increase children's cross-gender identification, and deferring transition did not decrease cross-gender identification.[12] Intense cross-gender identification and a strong, persistent desire to transition is simply an indicator that a child is more likely to be transgender and not merely gender nonconforming.

Gender-Affirming Care for Adolescents

38. Dr. Levine and Dr. Cantor also devote much of their reports to criticizing the provision of gender-affirming care for adolescents, arguing that the benefits of puberty-blocking medication are overstated and that adolescents should have more rigorous mental health screening. As with their criticisms of gender-affirming care for prepubertal children, Dr. Levine and Dr. Cantor do not explain how any of their criticisms are relevant to the issue of whether girls and women who are transgender should be able to participate on female sports teams in secondary school and college.

39. Dr. Levine and Dr. Cantor's criticisms of gender-affirming care for adolescents—like their criticisms of gender-affirming care for prepubertal children—also reflect a distorted interpretation of the relevant scientific literature and a caricatured understanding of what gender-affirming care is. Despite Dr. Levine's suggestion to the contrary, there is no "watchful waiting" approach for transgender adolescents. Even practitioners who oppose social transition in childhood provide gender-affirming care for transgender adolescents, including

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[12] Rae, J.R., *et al.* (2019). *Predicting Early-Childhood Gender Transitions.* PSYCHOLOGICAL SCI. 30(5):669-81.

puberty-blocking medication and gender-affirming hormone treatments for gender dysphoria.[13] As with their criticism of care for prepubertal children, Dr. Levine and Dr. Cantor criticize the methodology of studies supporting gender-affirming care while proposing a "therapy only" treatment without any empirical or scientific support whatsoever.

40. Studies have repeatedly documented that puberty blocking medication and gender-affirming hormone therapy are associated with mental health benefits in both the short and long term.[14] In addition to forestalling

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[13] Jack Turban, Annelou DeVries & Kenneth Zucker, "Gender Incongruence & Gender Dysphoria," in *Lewis's Child and Adolescent Psychiatry: A Comprehensive Textbook* (A Martin, *et al.,* eds., 5th ed., 2018).

[14] *See* Tordoff, D.M., *et al.* (2022). *Mental Health Outcomes in Transgender and Nonbinary Youths Receiving Gender-Affirming Care.* JAMA NETWORK OPEN. 5(2):e220978 at 1 (finding that receipt of gender-affirming care, including puberty blockers and gender-affirming hormones, was associated with 60% lower odds of moderate or severe depression and 73% lower odds of suicidality over a 12-month follow-up); Green, A.E., *et al.* (2021). *Association of Gender-Affirming Hormone Therapy with Depression, Thoughts of Suicide, and Attempted Suicide Among Transgender and Nonbinary Youth.* J. ADOLESC. HEALTH [ePublication ahead of print] at 1 (finding that access to gender-affirming hormones during adolescence was associated with lower odds of recent depression and having attempted suicide in the past year); Turban, J.L., *et al.* (2020) *Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation.* PEDIATRICS. 145(2):e20191725 at 1 (finding that access to puberty blockers during adolescence is associated with a decreased lifetime incidence of suicidal ideation among adults); Achille, C., *et al.* (2020). *Longitudinal impact of gender-affirming endocrine intervention on the mental health and wellbeing of transgender youths: Preliminary results. INT'L J.* PEDIATRIC ENDOCRINOLOGY. 2020:8 at 1 (finding that endocrine intervention was associated with decreased depression and suicidal ideation and improved quality of life for transgender youth); Kuper, L.E., *et al.*

increased distress and dysphoria resulting from the physical changes accompanying puberty, puberty-delaying medication followed by gender-affirming hormones brings a transgender person's body into greater alignment with their identity over the long term and reduces the number of surgeries a transgender person may need as an adult. The benefits of puberty-blocking medication thus increase over the long term as the person progresses into adulthood.[15]

41. Dr. Cantor fails to discuss many of the studies documenting the benefits of puberty-blocking medication. For the studies he does discuss, Dr. Cantor's primary criticism is that many of the prospective cohort studies offered psychosocial support in addition to puberty

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(2020). *Body Dissatisfaction and Mental Health Outcomes of Youth on Gender-Affirming Hormone Therapy.* PEDIATRICS. 145(4):e20 193006 at 1 (showing hormone therapy in youth is associated with reducing body dissatisfaction and modest improvements in mental health); van der Miesen, A.I.R., *et al.* (2020). *Psychological Functioning in Transgender Adolescents Before and After Gender-Affirmative Care Compared with Cisgender General Population Peers.* J. ADOLESC. HEALTH. 66(6):699-704 at 699 (showing fewer emotional and behavioral problems after puberty suppression, and similar or fewer problems compared to same-age cisgender peers) ("van der Miesen 2020"); Costa, R., *et al.* (2015). *Psychological Support, Puberty Suppression, and Psychosocial Functioning in Adolescents with Gender Dysphoria.* J. SEXUAL MEDICINE. 12(11):2206-14 at 2206 (finding increased psychological function after six months of puberty suppression); de Vries, A.L.C., *et al.* (2014). *Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment.* PEDIATRICS. 134(4):696-704 (following a cohort of transgender young people in the Netherlands from puberty suppression through surgical treatment and finding that the cohort had global functioning that was equivalent to the Dutch population) ("de Vries 2014").

[15] de Vries 2014.

blockers and hormones, which prevented the study from isolating whether the benefit is associated with the puberty blocker, the gender-affirming hormones, or some combination. (Cantor Rep. ¶¶ 64, 66.) But, as Dr. Cantor himself notes, elsewhere "in medical research, where we cannot manipulate people in ways that would clear up difficult questions, all studies will have a fault. In science, we do not, however, reject every study with any identifiable short-coming—rather, we gather a diversity of observations, made with their diversity of compromises to safety and ethics (and time and cost, etc.)." (Cantor Rep. ¶ 87.) When viewed as a comprehensive body of research, the weight of the evidence and the experience of clinicians has demonstrated that puberty-blocking medication and hormones have been associated with a variety of mental health benefits across different contexts.

42. There is also no credible basis for Dr. Levine's assertion that an adolescent's decision to begin puberty-blocking medication "act[s] as a psychosocial `switch,' decisively shifting many children to a persistent transgender identity." (Levine Rep. ¶ 137.) Studies showing that a high percentage of transgender adolescents who receive puberty blockers ultimately decide to move forward with gender-affirming hormone therapy more likely reflect the fact that participants were rigorously screened and had demonstrated sustained, persistent gender dysphoria before receiving medical treatment.

43. Instead of addressing the proper treatment for transgender adolescents in need of care, Dr. Levine and Dr. Cantor devote most of their attention to the possibility that a person could be misdiagnosed with gender dysphoria and then later regret their medical transition. For example, Dr. Levine and Dr. Cantor devote a great

deal of space to discussing a theory that an increasing number of people who are assigned female at birth are suddenly identifying as males in mid-to-late adolescence as a result of peer pressure and social contagion. (Levine Rep. ¶¶ 38, 118-20; Cantor Rep. ¶¶ 73-74.) The theory that some adolescents experience "rapid-onset gender dysphoria" (Levine Rep. ¶ 118; Cantor Rep. ¶¶ 73-74) as a result of social influences is based almost exclusively on one highly controversial study.[16] Although purporting to provide a basis for Dr. Levine's speculations, the study was based on an anonymous survey, allegedly of parents, about the etiology of their child's gender dysphoria. Participants were recruited from websites promoting this social contagion theory, and the children were not surveyed or assessed by a clinician. Those serious methodological flaws render the study meaningless. The only conclusion that can be drawn from that study is that a self-selected sample of anonymous people recruited through websites that predisposed participants to believe transgender identity can be influenced by social factors do, in fact, believe those social factors influence children to identify as transgender.[17]

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

[17] Aside from these serious methodological flaws, Littman's hypothesis of "rapid onset gender dysphoria" focuses specifically on gender dysphoria in boys who are transgender and were assigned a female sex at birth. By contrast, the restrictions in H.B. 3293 are limited to girls and women who are transgender and were assigned a male sex at birth. As with their arguments about prepubertal children, Dr. Levine and Dr. Cantor's arguments about boys who are transgender are not relevant to the population actually affected by H.B. 3293.

44. Some transgender people who do not come forward until adolescence may have experienced symptoms of gender dysphoria for long periods of time but been uncomfortable disclosing those feelings to parents. Other transgender people do not experience distress until they experience the physical changes accompanying puberty. In either case, gender-affirming care requires a comprehensive assessment and persistent, sustained gender dysphoria before medical treatment is prescribed.

45. Contrary to the portrayal in Dr. Levine and Dr. Cantor's reports, gender-affirming treatment also requires a careful and thorough assessment of a patient's mental health, including co-occurring conditions, history of trauma, and substance use, among many other factors.[18] As a result, I have had patients who presented with some symptoms of gender dysphoria, but who ultimately did not meet the diagnostic criteria for a variety of reasons, and therefore I recommended treatments other than transition to alleviate their psychological distress.

46. Dr. Levine and Dr. Cantor also devote substantial space to discussing the possibility that a person could be misdiagnosed with gender dysphoria instead of another mental health condition. *(See, e.g.* Levine Rep. ¶¶ 118-26; Cantor Rep. ¶¶ 73-74, 76-80.) Studies on transgender young people have long reported data on co-occurring conditions. Indeed, Dr. Cantor specifically cites to one of my own articles on the topic. (Cantor Rep. ¶ 76 (citing Janssen, A., *et al.* (2019). *The Complexities of Treatment Planning for Transgender Youth with Co-Occurring Severe Mental Illness: A Literature Review and Case*

[18] Olson-Kennedy, J., *et al.* (2019). *Creating the Trans Youth Research Network: A Collaborative Research Endeavor.* TRANSGENDER HEALTH. 4(1):304-12; Edwards-Leeper 2012.

Study. ARCHIVES OF SEXUAL BEHAVIOR. 48(7):2003-09).)

47. The existence—and prevalence—of co-occurring conditions among transgender young people is unsurprising. Transgender young people must cope with many stressors, from the fear of rejection by family and peers to pervasive societal discrimination. Not to mention, their underlying gender dysphoria can cause significant psychological distress which, if left untreated, can result in or exacerbate the co-occurring conditions identified in studies on transgender young people.[19] And, given that transgender young people typically delay disclosing their transgender status or initially experience family rejection following disclosure, it is not uncommon for transgender young people to engage with psychological or psychiatric care for other reasons prior to being diagnosed with gender dysphoria.

48. Requiring that a transgender patient resolve all co-occurring conditions, many of which are chronic with no reasonable expectation that they be "resolved," prior to receiving gender-affirming care—as suggested by Dr. Cantor—is not possible, nor is it ethical. (Cantor Rep. ¶¶ 14, 35, 69, 92, 110.) No relevant organizations cite the need for co-occurring mental health conditions to be resolved before a patient may receive gender-affirming care. Rather, such conditions should be reasonably well-controlled and not impair the ability of the patient to make an informed decision or interfere with the accuracy of the diagnosis of gender dysphoria. Indeed, some co-occurring

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[19] van der Miesen 2020; Turban, J.L., *et al.* (2021). *Timing of Social Transition for Transgender and Gender Diverse Youth, K-12 Harassment, and Adult Mental Health Outcomes.* J. ADOLESC. HEALTH. 69(6): 991-98.

conditions (for example, Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder, to name a few) could be chronic disorders where complete resolution is impossible and the goal of treatment is mitigating harm and improving functioning,

49. It is important to note that distress associated with untreated gender dysphoria can also amplify co-occurring conditions that developed independently of the gender dysphoria. Thus, treating the underlying gender dysphoria is essential to alleviating the psychological distress associated with co-occurring conditions.

Discriminating Against Transgender Students Does Not Improve Their Mental Health

50. The overarching theme of Dr. Levine and Dr. Cantor's reports is that transgender people as a group have greater rates of a variety of negative social outcomes and co-occurring conditions over the course of their lives and that, to avoid those negative outcomes and conditions, mental health providers should withhold gender-affirming care to discourage transgender youth from growing into transgender adults.[20]

51. Discriminating against transgender people, or withholding gender-affirming care, will not prevent those people from being transgender. And excluding transgender adolescent girls and women from female

[20] Dr. Levine bizarrely speculates that once a transgender person's siblings "marry and have children," they will not "wish the transgender individual to be in contact with those children," and that transgender people will be less likely to find "individuals willing to develop a romantic and intimate relationship with them." (Levine Rep. ¶¶ 202-03.) Dr. Levine offers no statistical support for these assertions and, in my experience, clinical practice has shown the opposite to be true.

sports teams will not cure their gender dysphoria or improve their mental health. To the contrary, as noted previously, stigma and discrimination have been shown to have a profoundly harmful impact on the mental health of transgender people and other minority groups.[21]

52. No reasonable mental health professional with relevant experience treating children and adolescents could conclude that H.B. 3293 is anything but harmful to the mental health of transgender youth. Exclusion and isolation are harmful for all adolescents, but particularly so for transgender youth who face the additional burden of societal stigma. Preventing transgender youth from participating in the same activities as their peers—or forcing transgender youth to be treated inconsistent with their gender identity—undermines their ability to socially transition and prevents transgender youth from accessing important educational and social benefits of the school environment.[22]

CONCLUSION

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

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[21] White Hughto 2015.

[22] American Psychological Association Resolution on Supporting Sexual/Gender Diverse Children and Adolescents in Schools (2020) at 5 (supporting inclusion of transgender youth in school activities and sports consistent with their gender identity); Clark, C.M., & Kosciw, J.G. (2022). *Engaged or excluded: LGBTQ youth's participation in school sports and their relationship to psychological well-being.* PSYCHOLOGY IN THE SCHOOLS. 59:95-114 (finding transgender youth who participated in sports had increased well-being and greater school belonging).

Executed on 3/10/2022 /s/ Aron Janssen

Aron Janssen, MD

Curriculum Vitae

Aron Janssen, M.D.

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Personal Data

Born	Papillion, Nebraska
Citizenship	USA

Academic Appointments

2011-2017	Clinical Assistant Professor of Child and Adolescent Psychiatry
2011-2019	Founder & Clinical Director, NYU Gender and Sexuality Service Director, LGBT Mental Health Elective, NYULMC
2015-2019	Co-Director, NYU Pediatric Consultation Liaison Service New York University Department of Child and Adolescent Psychiatry
2017-present	Clinical Associate Professor of Child and Adolescent Psychiatry
2019-present	Vice Chair, Pritzker Department of Psychiatry and Behavioral Health Ann and Robert H. Lurie Children's Hospital of Chicago

2020-present Medical Director, Outpatient Psychiatric Services Ann and Robert H. Lurie Children's Hospital of Chicago

Education

Year	Degree	Field	Institution
6/97	Diploma		Liberty High School
5/01	B.A.	Biochemistry	University of Colorado
5/06	M.D.	Medicine	University of Colorado

Postdoctoral Training

2006-2009 Psychiatry Residency Ze'ev Levin, M.D. NYU Department of Psychiatry

2009-2011 Child and Adolescent Psychiatry Fellowship — Fellow and Clinical Instructor

Jess Shatkin, M.D. NYU Dept of Child/Adolescent Psychiatry

Licensure and Certification

2007-present New York State Medical License

2011-present Certification in Adult Psychiatry, American Board of Psychiatry and Neurology

2013-present Certification in Child and Adolescent Psychiatry, ABPN

Academic Appointments

2009-2011 Clinical Instructor, NYU Department of Child and Adolescent Psychiatry

2011-2017 Clinical Asst Professor, NYU Dept of Child and Adolescent Psychiatry

2017-2019 Clinical Assoc Professor, NYU Dept of Child and Adolescent Psychiatry

2011-present	Clinical Director, NYU Gender and Sexuality Service
2015-2019	Co-Director, NYU Pediatric Consultation-Liaison Service
2019-present	Associate Professor of Child and Adolescent Psychiatry, Northwestern University
2019-present	Vice Chair of Clinical Affairs, Pritzker Department of Psychiatry and Behavioral Health, Lurie Children's Hospital of Chicago

Major Committee Assignments

International, National and Regional

2021-present	Sexual Orientation and Gender Identity Committee, Chair, AACAP
2019-present	WPATH Standards of Care Revision Committee, Children
2019-present	WPATH Standards of Care Revision Committee, Adult Mental Health
2015-2019	Department of Child Psychiatry Diversity Ambassador
2013-2021	Sexual Orientation and Gender Identity Committee Member, AACAP
2012-present	Founder and Director, Gender Variant Youth and Family Network

2012-present	Association of Gay and Lesbian Psychiatrists, Transgender Health Committee
2012-2019	NYULMC, Chair LGBTQ Advisory Council
2012-2019	NYULMC, Child Abuse and Protection Committee
2013-2015	NYULMC, Pediatric Palliative Care Team
2003-2004	American Association of Medical Colleges (AAMC), Medical Education Delegate
2004-2006	AAMC, Western Regional Chair

Psychiatry Residency

2006-2009	Resident Member, Education Committee
2007-2008	Resident Member, Veterans Affairs (VA) Committee

Medical School

2002-2006	Chair, Diversity Curriculum Development Committee
2002-2006	AAMC, Student Representative
2003-2004	American Medical Student Assoc. (AMSA) World AIDS Day Coordinator
2003-2004	AMSA, Primary Care Week Coordinator
2004-2006	Chair, Humanism in Medicine Committee

Memberships, Offices, and Committee Assignments in Professional Societies

2006-present	American Psychiatric Association (APA)
2009-present	American Academy of Child and Adolescent Psychiatry (AACAP)
2011-present	World Professional Association for Transgender Health (WPATH)
2011-present	Director, Gender Variant Youth and Family Network, NYC
2013-2019	Chair, NYU Langone Medical Center LGBTQ Council
2015-present	Clinical Associate Editor, *Transgender Health*

Editorial Positions

2016-present	Clinical Assistant Editor, *Transgender Health*

2014-present	Ad Hoc Reviewer, *LGBT Health*.
2016-present	Ad Hoc Reviewer, *JAACAP*
2018-present	Associate Editor, *Transgender Health*

Principal Clinical and Hospital Service Responsibilities

2011-2019	Staff Psychiatrist, Pediatric Consultation Liaison Service
2011-2019	Faculty Physician, NYU Child Study Center
2011-2019	Founder and Clinical Director, NYU Gender & Sexuality Service
2015-2019	Co-Director, Pediatric Consultation Liaison Service
2019-present	Vice Chair, Pritzker Dept of Psychiatry and Behavioral Health
2019-present	Chief Psychiatrist, Gender Development Program
2020-present	Medical Director, Outpatient Psychiatry Services

Relevant Program Development

Gender and Sexuality Service

– founded by Aron Janssen in 2011, who continues to direct the service

– first mental health service dedicated to transgender youth in NYC

– served over 200 families in consultation, with 2-3 referrals to the gender clinic per week

– trained over 500 mental health practitioners in transgender mental health —1 or 2 full day trainings in partnership with the Ackerman Institute's Gender and Family Project (GFP) and with WPATH Global Educational Initiative (GEI)

– New hires in Adolescent Medicine, Psychology, Plastic Surgery, Urology, Gynecology, Endocrinology, Social Work, Department of Population Health with focus on transgender care has led to expansion of available services for transgender youth at NYULMC in partnership with the Gender and Sexuality Service

– development of partnerships with Ackerman Institute, Callen-Lorde Health Center —both institutions have been granted access to our IRB and have agreed to develop shared research and clinical priorities with the Gender and Sexuality Service. Two active projects are already underway

– multiple IRB research projects underway, including in partnership with national and international clinics

– model has been internationally recognized

Clinical Specialties/Interests

Gender and Sexual Identity Development

Co-Occurring Mental Health Disorders in Transgender children, adolescents and adults

Pediatric Consultation/Liaison Psychiatry

Psychotherapy

- Gender Affirmative Therapy, Supportive Psychotherapy, CBT, MI

Teaching Experience

2002-2006 Course Developer and Instructor, LGBT Health (University of Colorado School of Medicine

2011-2019 Instructor, Cultural Competency in Child Psychiatry (NYU Department of Child and Adolescent Psychiatry) — 4 hours per year

2011-2019 Course Director, Instructor "Sex Matters: Identity, Behavior and Development" —100 hours per year

2011-2019 Course Director, LGBT Mental Health Elective (NYU Department of Psychiatry)

- 50 hours of direct supervision/instruction per year

2011-2019 Course Director, Transgender Mental Health (NYU Department of Child and Adolescent Psychiatry — course to begin in Spring 2018.

2015-2019 Instructor, Gender & Health Selective (NYU School of Medicine) — 4 hours per year.

Academic Assignments/Course Development

New York University Department of Child and Adolescent Mental Health Studies

– Teacher and Course Director: "Sex Matters: Identity, Behavior and Development." A full semester 4 credit course, taught to approximately 50 student per year since 2011, with several students now in graduate school studying sexual and gender identity development as a result of my mentorship.

NYU Department of Child and Adolescent Psychiatry

– Instructor: Cultural Competency in Child and Adolescent Psychiatry

– Director: LGBTQ Mental Health Elective

World Professional Association of Transgender Health

– Official Trainer: Global Education Initiative — one of two child psychiatrists charged with training providers in care of transgender youth and adults.

Peer Reviewed Publications

1. Janssen, A., Erickson-Schroth, L., "A New Generation of Gender: Learning Patience from our Gender Non-Conforming Patients," Journal of the American Academy of Child and Adolescent Psychiatry, Volume 52, Issue 10, pp. 995-997, October, 2013.
2. Janssen, A., et. al. "Theory of Mind and the Intolerance of Ambiguity: Two Case Studies of Transgender Individuals with High-Functioning Autism Spectrum

3. Janssen A, Huang H, and Duncan C., Transgender Health. February 2016, "Gender Variance Among Youth with Autism: A Retrospective Chart Review." 1(1): 63-68. doi:10.1089/trgh.2015.0007.

4. Goedel WC, Reisner SL, Janssen AC, Poteat TC, Regan SD, Kreski NT, Confident G, Duncan DT. (2017). Acceptability and Feasibility of Using a Novel Geospatial Method to Measure Neighborhood Contexts and Mobility Among Transgender Women in New York City. Transgender Health. July 2017, 2(1): 96-106.

5. Janssen A., et. al., "Gender Variance Among Youth with ADHD: A Retrospective Chart Review," in review

6. Janssen A., et. al., "Initial Clinical Guidelines for Co-Occurring Autism Spectrum Disorder and Gender Dysphoria or Incongruence in Adolescents," Journal of Child & Adolescent Psychology, 105-115, January 2018.

7. Janssen A., et. al., "A Review of Evidence Based Treatments for Transgender Youth Diagnosed with Social Anxiety Disorder," Transgender Health, 3:1, 27-33, DOI: 10.1089/ trgh.2017.0037.

8. Janssen A., et. al., "The Complexities of Treatment Planning for Transgender Youth with Co-Occurring Severe Mental Illness: A Literature Review and Case Study," Archives of Sexual Behavior, 2019. # 3563492

9. Kimberly LL, Folkers KM, Friesen P, Sultan D, Quinn GP, Bateman-House A, Parent B, Konnoth C, Janssen A, Shah LD, Bluebond-Langner R, Salas-Humara C., "Ethical Issues in Gender-

Affirming Care for Youth," Pediatrics, 2018 Dec;142(6).

10. Strang JF, Janssen A, Tishelman A, Leibowitz SF, Kenworthy L, McGuire JK, Edwards-Leeper L, Mazefsky CA, Rofey D, Bascom J, Caplan R, Gomez-Lobo V, Berg D, Zaks Z, Wallace GL, Wimms H, Pine-Twaddell E, Shumer D, Register-Brown K, Sadikova E, Anthony LG., "Revisiting the Link: Evidence of the Rates of Autism in Studies of Gender Diverse Individuals," Journal of the American Academy of Child and Adolescent Psychiatry, 2018 Nov;57(11):885-887.

11. Goedel William C, Regan Seann D, Chaix Basile, Radix Asa, Reisner Sari L, Janssen Aron C, Duncan Dustin T, "Using global positioning system methods to explore mobility patterns and exposure to high HIV prevalence neighbourhoods among transgender women in New York City," Geospatial Health, 2019 Jan; 14(2): 351-356.

12. Madora, M., Janssen, A., Junewicz, A., "Seizure-like episodes, but is it really epilepsy?" Current Psychiatry. 2019 Aug; 18(8): 42-47.

13. Janssen, A., Busa, S., Wemick, J., "The Complexities of Treatment Planning for Transgender Youth with Co-Occurring Severe Mental Illness: A Literature Review and Case Study," Archives of Sexual Behavior. 2019 Oct; 48(7): 2003-2009.

14. Wemick Jeremy A, Busa Samantha, Matouk Kareen, Nicholson Joey, Janssen Aron, "A Systematic Review of the Psychological Benefits of Gender-Affirming Surgery," Urol Clin North Am. 2019 Nov; 46(4): 475-486.

15. Strang, J.F., Knauss, M., van der Miesen, A.I.R., McGuire, J., Kenworthy, L., Caplan, R., Freeman, A.J., Sadikova, E., Zacks, Z., Pervez, N., Balleur, A., Rowlands, D.W., Sibarium, E., McCool, M.A., Ehrbar, R.D., Wyss, S.E., Wimms, H., Tobing, J., Thomas, J., Austen, J., Pine, E., Willing, L., Griffin, A.D., Janssen, A., Gomez-Lobo, A., Brandt, A., Morgan, C., Meagher, H., Gohari, D., Kirby, L., Russell, L., Powers, M., & Anthony, L.G., (in press 2020). A clinical program for transgender and gender-diverse autistic/neurodiverse adolescents developed through community-based participatory design. *Journal of Clinical Child and Adolescent Psychology.* DOI 10.1080/15374416.2020.1731817

16. Coyne, C. A., Poquiz, J. L., Janssen, A., & Chen, D. Evidence-based psychological practice for transgender and non-binary youth: Defining the need, framework for treatment adaptation, and future directions. Evidence-based Practice in Child and Adolescent Mental Health.

17. Janssen, A., Voss, R.. Policies sanctioning discrimination against transgender patients flout scientific evidence and threaten health and safety. Transgender Health.

18. Dubin, S., Cook, T., Liss, A., Doty, G., Moore, K., Janssen, A. (In press 2020). Comparing Electronic Health Records Domains' Utility to Identify Transgender Patients. Transgender Health, DOI 10.1089/trgh.2020.0069

Published Abstracts

1. Thrun, M., Janssen A., et. al. "Frequency of Patronage and Choice of Sexual Partners may Impact Likelihood of HIV Transmission in Bathhouses," original

research poster presented at the 2007 Conference on Retroviruses and Opportunistic Infections, February, 2007.

2. Janssen, A., "Advocating for the mental health of Lesbian, Gay, Bisexual and Transgender (LGBT) population: The Role of Psychiatric Organizations." Workshop for the American Psychiatric Association Institute of Psychiatric Services Annual Meeting, October 2012.

3. Janssen, A., "Gender Variance in Childhood and Adolescents: Training the Next Generation of Psychiatrists," 23rd Symposium of the World Professional Association for Transgender Health, Amsterdam, The Netherlands, February 2014.

4. Janssen, A., "When Gender and Psychiatric Acuity/Comorbidities Overlap: Addressing Complex Issues for Gender Dysphoric and Non-Conforming Youth," AACAP Annual Meeting, October 2014.

5. Janssen, A., "Patient Experiences as Drivers of Change: A unique model for reducing transgender health disparities as an academic medical center," Philadelphia Transgender Health Conference, June 2016.

6. Janssen, A., "How much is too much? Assessments & the Affirmative Approach to TGNC Youth," 24th Symposium of the World Professional Association for Transgender Health, Amsterdam, The Netherlands, June 2016.

7. Janssen, A., "Trauma, Complex Cases and the Role of Psychotherapy," 24th Symposium of the World Professional Association for Transgender Health, Amsterdam, The Netherlands, June 2016.

8. Janssen, A., "Gender Variance Among Youth with Autism: A Retrospective Chart Review," Research Poster, 24th Symposium of the World Professional Association for Transgender Health, Amsterdam, The Netherlands, June 2016.

9. Janssen, A., "Gender Fluidity and Gender Identity Development," Center for Disease Control — STD Prevention Conference, September 2016.

10. Janssen, A., "Transgender Identities Emerging During Adolescents' Struggles With Mental Health Problems," AACAP Annual Conference, October 2016.

11. Janssen, A., "How Much is Too Much? Assessments and the Affirmative Approach to Transgender and Gender Diverse Youth," US Professional Association for Transgender Health Inaugural Conference, Los Angeles, February 2017.

12. Janssen, A., "Trauma, Complex Cases and the Role of Psychotherapy," US Professional Association for Transgender Health Inaugural Conference, Los Angeles, February 2017.

13. Sutter ME, Bowman-Curci M, Nahata L, Tishelman AC, Janssen AC, Salas-Humara C, Quinn GP. Sexual and reproductive health among transgender and gender-expansive AYA: Implications for quality of life and cancer prevention. Oral presentation at the Oncofertility Consortium Conference, Chicago, IL. November 14, 2017.

14. Janssen, A., Sidhu, S., Gwynette, M., Turban, J., Myint, M., Petersen, D., "It's Complicated: Tackling Gender Dysphoria in Youth with Autism Spectrum Disorders from the Bible Belt to New York City," AACAP Annual Conference, October 2017.

15. May 2018: "A Primer in Working with Parents of Transgender Youth," APA Annual Meeting.

16. October 2018: "Gender Dysphoria Across Development" — Institute for AACAP Annual Conference.

17. November 2018: "Gender Variance Among Youth with Autism," World Professional Association for Transgender Health Biannual Conference.

18. March 2019: "Gender Trajectories in Child and Adolescent Development and Identity," Austin Riggs Grand Rounds.

19. Janssen, A., et. al., "Ethical Principles in Gender Affirming Care," AACAP Annual Conference, October 2019.

20. Janssen, A., "Gender Diversity and Gender Dysphoria in Youth," EPATH Conference, April 2019

21. Englander, E., Janssen A., et. al., "The Good, The Bad, and The Risky: Sexual Behaviors Online," AACAP Annual Conference, October 2020

22. Englander, E., Janssen, A., et. al., "Love in Quarantine," AACAP Annual Conference, October 2021

23. Janssen, A., Leibowitz, S., et. al., "The Evidence and Ethics for Transgender Youth Care: Updates on the International Standards of Care, 8th Edition," AACAP Annual Conference, October 2021

24. Turban, J., Janssen, A., et. al., "Transgender Youth: Understanding "Detransition," Nonlinear Gender Trajectories, and Dynamic Gender Identities," AACAP Annual Conference, October 2021

Books

1. Janssen, A., Leibowitz, S (editors), Affirmative Mental Health Care for Transgender and Gender Diverse Youth: A Clinical Casebook, Springer Publishing, 2018.

Book Chapters

1. Janssen, A., Shatkin, J., "Atypical and Adjunctive Agents," Pharmacotherapy for Child and Adolescent Psychiatric Disorders, 3rd Edition, Marcel Dekker, Inc, New York, 2012.

2. Janssen, A; Liaw, K: "Not by Convention: Working with People on the Sexual & Gender Continuum," book chapter in The Massachusetts General Hospital Textbook on Cultural Sensitivity and Diversity in Mental Health. Humana Press, New York, Editor R. Parekh, January 2014.

3. Janssen, A; Glaeser, E., Liaw, K: "Paving their own paths: What kids & teens can teach us about sexual and gender identity," book chapter in Cultural Sensitivity in Child and Adolescent Mental Health, MGH Psychiatry Academy Press, Editor R. Parekh, 2016

4. Janssen A., "Gender Identity," Textbook of Mental and Behavioral Disorders in Adolescence, February 2018.

5. Busa S., Wernick, J., & Janssen, A. (In Review) Gender Dysphoria in Childhood. Encyclopedia of Child and Adolescent Development. Wiley, 2018.

6. Janssen A., Busa S., "Gender Dysphoria in Childhood and Adolescence," Complex Disorders in Pediatric Psychiatry: A Clinician's Guide, Elsevier, Editors Driver D., Thomas, S., 2018.

7. Wernick J.A., Busa S.M., Janssen A., Liaw K.RL. "Not by Convention: Working with People on the Sexual and Gender Continuum." Book chapter in The

Massachusetts General Hospital Textbook on Diversity and Cultural Sensitivity in Mental Health, editors Parekh R., Trinh NH. August, 2019.

8. Weis, R., Janssen, A., & Wernick, J. The implications of trauma for sexual and reproductive health in adolescence. In *Not Just a nightmare: Thinking beyond PTSD to help teens exposed to trauma.* 2019

9. Connors J., Irastorza, I., Janssen A., Kelly, B., "Child and Adolescent Medicine," The Equal Curriculum: The Student and Educator Guide to LGBTQ Health, editors Lehman **J.,** et al. November 2019.

10. Janssen, A., et. al., "Gender and Sexual Diversity in Childhood and Adolescence," Dulcan's Textbook of Child and Adolescent Psychiatry, 3rd edition, editor Dulcan, M., (in press)

11. Busa S., Wernick J, Janssen, A., "Gender Dysphoria," The Encyclopedia of Child and Adolescent Development, DOI: 10.1002/9781119171492. Wiley, December 2020.

Invited Academic Seminars/Lectures

1. April 2006: "How to Talk to a Gay Medical Student" — presented at the National AAMC Meeting.

2. March 2011: "Kindling Inspiration: Two Model Curricula for Expanding the Role of Residents as Educators" — workshop presented at National AADPRT Meeting.

3. May 2011: Janssen, A., Shuster, A., "Sex Matters: Identity, Behavior and Development," Grand Rounds Presentation, NYU Department of Child and Adolescent Psychiatry.

4. March 2012: Janssen, A., Lothringer, L., "Gender Variance in Children and Adolescents," Grand Rounds Presentation, NYU Department of Child and Adolescent Psychiatry.

5. June 2012: Janssen, A., "Gender Variance in Childhood and Adolescence," Grand Rounds Presentation, Woodhull Department of Psychiatry

6. October 2012: "Advocating for the mental health of Lesbian, Gay, Bisexual and Transgender (LGBT) population: The Role of Psychiatric Organizations." Workshop for the American Psychiatric Association Institute of Psychiatric Services Annual Meeting.

7. March 2013: "Gender Variance in Childhood and Adolescence," Sexual Health Across the Lifespan: Practical Applications, Denver, CO.

8. October 18th, 2013: "Gender Variance in Childhood and Adolescence," Grand Rounds Presentation, NYU Department of Endocrinology.

9. October, 2014: GLMA Annual Conference: "Theory of Mind and Intolerance of Ambiguity: Two Case Studies of Transgender Individuals with High-Functioning ASD," Invited Presentation

10. October 2014: New York Transgender Health Conference: "Mental Health Assessment in Gender Variant Children," Invited Presentation.

11. November, 2014: Gender Spectrum East: "Affirmative Clinical Work with Gender-Expansive Children and Youth: Complex Situations."

12. October 2015: "Gender Dysphoria and Complex Psychiatric Co-Morbidity," LGBT Health Conference, Invited Speaker

13. October 2015: "Transgender Health Disparities: Challenges and Opportunities," Grand Rounds, Illinois Masonic Department of Medicine

14. November 2015: "Autism and Gender Variance," Gender Conference East, Invited Speaker

15. February 2016: "Working with Gender Variant Youth," New York State Office of Mental Health State Wide Grand Rounds, Invited Speaker

16. March, 2016: "Working with Gender Variant Youth," National Council for Behavioral Health Annual Meeting, Invited Speaker

17. March 2016: "Gender Variance Among Youth with Autism: A Retrospective Chart Review and Case Presentation," Working Group on Gender, Columbia University, Invited Speaker.

18. September, 2016: "Best Practices in Transgender Mental Health: Addressing Complex Issues for Gender Dysphoric and Non-Conforming Youth," DeWitt Wallace Institute for the History of Psychiatry, Weill Cornell.

19. October, 2016: "LGBTQ Youth Psychiatric Care," Midwest LGBTQ Health Symposim

20. October, 2016: "Gender Fluidity and Gender Identity Development," NYU Health Disparities Conference.

21. February, 2017: "Best Practices in Transgender Mental Health," Maimonides Grand Rounds

22. March, 2017: "Transgender Health: Challenges and Opportunities," Invited speaker, Center for Disease Control STD Prevention Science Series.

23. September 2017: "Autism and Gender Dysphoria," Grand Rounds, NYU Department of Neurology.

24. November 2017: "Consent and Assent in Transgender Adolescents," Gender Conference East.

25. November 2017: "Transgender Mental Health: Challenges and Opportunities," Grand Rounds, Lenox Hill Hospital.

26. April 2018: "Gender Trajectories in Childhood and Adolescent Development and Identity," Sex, Sexuality and Gender Conference, Harvard Medical School.

27. September 2019: "Social and Psychological Challenges of Gender Diverse Youth," Affirmative Mental Health Care for Gender Diverse Youth, University of Haifa.

28. October 2019: "Best Practices in Transgender Mental Health," Grand Rounds, Rush Department of Psychiatry.

29. February 2020: "The Overlap of Autism and Gender Dysphoria," Grand Rounds, Northwestern University Feinberg School of Medicine Department of Psychiatry

30. February 2020: "Gender Dysphoria and Autism," Grand Rounds, University of Illinois at Chicago Department of Psychiatry

31. September 2021: "Gender Diversity and Autism," Grand Rounds, Kaiser Permanente Department of Pediatrics

32. October 2021: Gender Dysphoria and Autism," Grand Rounds, Case Western Reserve University Department of Psychiatry.

Selected Invited Community Seminars/Lectures

1. April 2012: "Gender and Sexuality in Childhood and Adolescence," Commission on Race, Gender and Ethnicity, NYU Steinhardt Speakers Series.

2. February 2013: "Supporting Transgender Students in School," NYC Independent School LGBT Educators Panel, New York, NY.

3. June 2013: "LGBT Health," Presentation for Neuropsychology Department

4. August 2013: "Chronic Fatigue Syndrome: Etiology, Diagnosis and Management," invited presentation.

5. September 2013: Panelist, "LGBTQ Inclusive Sex Education."

6. April 2015: Transgender Children, BBC News, BBCTwo, invited expert

7. January 2016: Gender Dysphoria and Autism — Ackerman Podcast - http://ackerman.podbean.com/e/the-ackerman-podcast-22-gender-dysphoria-autism-with-aron-janssen-md/

8. February 2016: "Best Practices in Transgender Mental Health," APA District Branch Meeting, Invited Speaker.

9. May 2016: "Best Practices in Transgender Mental Health," Washington D.C., District Branch, APA, Invited Speaker

10. July 2016: "Transgender Youth," Union Square West

11. November 2017: "Understanding Gender: Raising Open, Accepting and Diverse Children," Heard in Rye, Conversations in Parenting.

12. January 2018: "The Emotional Life of Boys," Saint David's School Panel, Invited Speaker

13. June 2018: "Supporting Youth Engaged in Gender Affirming Care," NYU Child Study Center Workshop.

14. October 2018: "Medicine in Transition: Advances in Transgender Mental Health," NYCPS HIV Psychiatry and LGBT Committee Meeting.

15. October 2018: "Understanding Gender Fluidity in Kids," NYU Slope Pediatrics.

16. October, 2021: Issues of Ethical Importance: Health Care for Pediatric LGBTQ+ Patients, American Medical Association, Invited Talk

Selected Mentoring of Graduate Students, Residents, Post-Doctoral Fellows

2013-2014	Rebecca Hopkinson, Adult Psychiatry Resident, Provided clinical supervision for one year and training in transgender mental health. Dr. Hopkinson works as at Attending Child Psychiatrist at Seattle Children's and works with transgender youth
2013-2014	Sara Weekly, Chief Child and Adolescent Psychiatry Resident. Provided clinical supervision. Dr. Weekly is now an attending physician at Bay Area Children's Association in Oakland, California.
2013-present	Elizabeth Glaeser, Undergraduate Student. Provided research and

	administrative supervision. Elizabeth is now a PhD candidate in Psychology at Columbia and the director of research at the Gender and Family Project
2014-2015	Laura Erickson Schroth, Adult Psychiatry Resident. Provided clinical supervision for one year and training in transgender mental health. Dr. Erickson Schroth is the editor of Trans Bodies, Trans Selves, and Attending Psychiatrist at the Hetrick Martin Institute
2015-2016	Brandon Ito, Child Psychiatry Fellow, Provided Clinical Supervision. Dr. Ito is now an Attending Child and Adolescent Psychiatrist at UCLA.
2015-2017	Howard Huang, Undergraduate Student. Provided research supervision. Howard is now a PhD candidate in psychology at Boston College, pursuing work in gender and sexuality with published peer-reviewed literature.
2016-2019	Samantha Busa, PsyD, Post-Doctoral Fellow. Provide clinical supervision in transgender health. Dr. Busa joined the NYU Gender and Sexuality Service as faculty in 2017.
2016-2019	Lara Brodsinzky, PhD, Attending Psychologist. Provide clinical supervision in transgender health. Dr. Brodsinzky is an Attending Psychologist on the NYU Pediatric Consultation Liaison Service.

2016-2019	Jeremy Wernick, MSW. Provide clinical and administrative supervision.
2017-2019	Serena Chang, Child Psychiatry Fellow; provide clinical and research supervision.

Major Research Interests

Gender and Sexual Identity Development

Member, Research Consortium for Gender Identity Development

Delirium: Assessment, Treatment and Management

Suicide Prevention

Research Studies

Study Title	IRB Study #	Dates
Suicide Attempts Identified in a Children's Hospital Before and During COVID-19	2021-4428	2/26/21 – present
Lurie Children's Sex & Gender Development Program Clinical Measure Collection	2019-2898	2019-present
Adolescent Gender Identity Research Study (principal	s15-00431	4/15-5/19

investigator) - unfunded		
Co-Occurrence of Autism Spectrum Disorders and Gender Variance: Retrospective Chart Review (principal investigator) - unfunded	s14-01930	10/14-5/19
Expert Consensus on Social Transitioning Among Prepubertal Children Presenting with Transgender Identity and/or Gender Variance: A Delphi Proce-dure Study (principal investigator) - unfunded	s13-00576	3/16-5/19
Co-Occurrence of ADHD/Gender Dysphoria (principal investigator) - unfunded	s16-00001	1/16-5/19
PICU Early Mobility-unfunded	s16-02261	12/16-5/19
Metformin for Overweight and Obese Children and Adolescents with Bipolar Spectrum	s16-01571	8/16-5/19

Disorders Treated with
Second-Generation
Antipsychotics —
Funded by PCORI

Other

Grant Funding:

Zero Suicide Initiative, PI Aron Janssen, M.D.
Awarded by Cardinal Health Foundation, 9/2020
Total amount: $100,000

Direct income for the department generated by teaching Sex Matters: Identity, Behavior and Development for the Child and Adolescent Mental Health Studies (CAMS) undergraduate program at NYU:

Time Frame	Income
2011 - 2016	$1,968,950

Selected Media Appearances:

Guest Expert on Gender Identity on Anderson, "When Your Husband Becomes Your Wife," Air Date February 8th, 2012

Guest Host, NYU About Our Kids on Sirius XM, 2011

NYU Doctor Radio: LGBT Health, September 2013

NYU Doctor Radio: LGBT Kids, November 2013

NYU Doctor Radio: LGBT Health, July 2014

NYU Doctor Radio: Gender Variance in Childhood, December 2014

BBC Two: Transgender Youth, April 2015

NYU Doctor Radio: Transgender Youth, June 2015

Fox-5 News: Trump's proposed military ban and Transgender Youth, July, 2017

Healthline.com: Mental Health Experts Call President's Tweets `Devastating' for Trans Teens, July, 2017

Huffington Post: What the Military Ban Says to Our Transgender Youth: August, 2017

Metro: How to talk to your transgender kid about Trump, August 2017

NYU Doctor Radio: Transgender Youth, August 2017

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

CHARLESTON DIVISION

B. P. J., et al.,

Plaintiffs,

v. CIVIL ACTION NO. 2:21-cv-00316

WEST VIRGINIA STATE BOARD OF EDUCATION, et al.,

Defendants.

DECLARATION OF JAMES M. CANTOR, PHD.

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

James M. Cantor
Dr. James M. Cantor, PhD.

Executed: February, 2022

Expert Report of

James M. Cantor, PhD.

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

February 23, 2022

I. Background & Credentials

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

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

scientists, I regularly interact with and am routinely exposed to the views and opinions of most of the scientists active in our field today, within the United States and throughout the world.

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

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

5. I have served as an expert witness in a total of 14 cases, which are listed in my *curriculum vitae,* attached

here as Appendix 1, which includes a list of cases in which I have recently testified.

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

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

II. Introduction

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

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

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

c) No study has demonstrated that "affirming" the transgender identity of a child or adolescent produces

better mental health outcomes or reduced suicidality relative to psychotherapy and mental health support.

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

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

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

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

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

b. The Amended Complaint in this litigation.

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

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

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

III. Clarifying Terms

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

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

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

IV. Evidence Cited by Plaintiffs' Expert Reports

13. Dr. Adkins claimed a person's gender identity cannot be voluntarily changed. In actual clinical practice, that is rarely the relevant issue. The far more typical situation is youth who are *mistaken* about their gender identity. These youth are misinterpreting their experiences to indicate they are transgender, or they are exaggerating their descriptions of their experiences in

service of attention-seeking or other psychological needs. Dr. Adkins' claim is not merely lacking any science to support it; the claim itself defies scientific thinking. In science, it is not possible to know that gender identity cannot be changed: We can know only that we lack evidence of such a procedure. In the scientific method, it remains eternally possible for evidence of such a treatment to emerge, and unlike sexual orientation's long history with conversion therapy, there have not been systematic attempts to change gender identity.

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

15. Adkins' support for the claim that untreated gender dysphoria lessens mental health consisted of two articles: Olson, *et al.* (2016) and Spack (2012). Such is a terrible misrepresentation of the state of the scientific literature. Although Olson, et al., did indeed report that gender dysphoric children showed no mental health differences from the non-transgender control groups,

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

Olson's report turned out to be incorrect. The Olson data were reanalyzed, and after correcting for statistical errors in the original analysis, the data instead showed that the gender dysphoric children under Olson's care *did,* in fact, exhibit significantly lower mental health.[2]

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

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

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

solves their psychological distress."[5] Whereas Adkins (selectively) cited Spack to support her insinuation that transition relieves distress, Spack instead explicitly warned against drawing exactly that conclusion.

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

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

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[5] Spack, *et al.,* 2013, at 484, italics added

[6] Adkins Report at 5.

[7] Anzani, *et al.,* 2020; Lehmann, *et al.,* 2021.

Nonetheless, with the broad exception of the AAP, their statements repeatedly noted:

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

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

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

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

guidelines received unanimous ratings of "Do not recommend."[10]

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

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

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[10] Dahlen, *et al.,* 2021, at 7.
[11] de Vries, et al., 2011.
[12] Kalin, 2020.
[13] c.f., Carmichael, *et al.,* 2021; Biggs, 2019; Biggs, 2020.

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

24. Adkins repeatedly claimed success on the basis of what her patients tell her. In the absence of any systematic method, however, it is not possible to evaluate to what extent such a conclusion reflects human recall bias, cases of negative outcomes dropping out of treatment thus becoming invisible to Adkins, the aforementioned impression management efforts of clients, psychotherapy that they were receiving at the same time, or simple maturation during which the patients would have experienced improved mental health regardless of transition. Indeed, the very purpose of engaging in systematic, peer-reviewed research instead of relating anecdotal recollections is to rule out exactly these biases.

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[14] Swedish Agency of Health Technology Assessment and Assessment of Social Services, 2019.
[15] Nainggolan, 2021.
[16] Finland Ministry of Social Affairs and Health, Council for Choices in Health Care, 2020, June 11.
[17] Finland Ministry of Social Affairs and Health, Council for Choices in Health Care, 2020, June 16.
[18] United Kingdom National Health Service (NHS), 2021, March 11.
[19] McCall, 2021.

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

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

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

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

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

V. Evidence Missing from Plaintiffs' Expert Reports

28. One of the most widespread public misunderstandings about transsexualism and people with gender dysphoria is that all cases of gender dysphoria represent the same phenomenon; however, the clinical

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

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

A. Adult-Onset Gender Dysphoria

30. People with adult-onset gender dysphoria typically attend clinics requesting transition services in mid-adulthood, usually in their 30s or 40s. Such individuals are

[22] Blanchard, 1985.

nearly exclusively male.[23] They typically report being sexually attracted to women and sometimes to both men and women. Some cases profess asexuality, but very few indicate any sexual interest in or behavior involving men.[24] Cases of adult-onset gender dysphoria are typically associated with a sexual interest pattern (medically, a *paraphilia)* involving themselves in female form.[25]

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

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

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

2. Mental Health Issues in Adult-Onset Gender Dysphoria

33. The research evidence on mental health issues in gender dysphoria indicates it to be different between

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[23] Blanchard, 1990, 1991.
[24] Blanchard, 1988.
[25] Blanchard 1989a, 1989b, 1991.
[26] Blanchard, *et al.,* 1989.
[27] Dhejneberg, *et al.,* 2014.
[28] Wiepjes, *et al.,* 2018.

adult-onset versus adolescent-onset versus prepubescent-onset types. The co-occurrence of mental illness with gender dysphoria in adults is widely recognized and widely documented.[29] A research team in 2016 published a comprehensive and systematic review of all studies examining rates of mental health issues in transgender adults.[30] There were 38 studies in total. The review indicated that many studies were methodologically weak, but nonetheless concluded (1) that rates of mental health issues among people are highly elevated both before and after transition, (2) but that rates were less elevated among those who completed transition. Analyses were not conducted in a way so as to compare the elevation in mental health issues observed among people newly attending clinics to improvement after transition. Also, several studies showed more than 40% of patients becoming "lost to follow-up." With attrition rates that high, it is unclear to what extent the information from the available participants genuinely reflects the whole sample. The very high "lost to follow-up" rate leaves open the possibility of considerably more negative results overall.

34. An important caution applies to interpreting these results: These very high proportions of mental health issues come from people who are attending a clinic for the first time and are undergoing assessment. Clinics serving a "gate-keeper" role divert candidates with mental health issues away from medical intervention. The side-effect of removing these people from the samples of transitioners is that if a researcher compared the average mental health of individuals coming into the clinic with the average mental health of individuals going through medical transition, then the post-transition group would appear to

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[29] *See, e.g.,* Hepp, *et al.,* 2005.
[30] Dhejne, *et al.,* 2016.

show a substantial improvement, even though transition had no *effect at all:* The removal of people with poorer mental health created the statistical illusion of improvement among the remaining people.

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

B. Childhood Onset (Pre-Puberty) Gender Dysphoria

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

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

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

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

studies. *See* the appendix to Appendix 2 (listing these studies).

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

39. Notably, in most cases, these children were receiving professional psychosocial support across the study period aimed not at affirming cross-gender identification, but at resolving stressors and issues potentially interfering with desistance. While beneficial to these children and their families, the inclusion of therapy in the study protocol represents a complication for the interpretation of the results: That is, it is not possible to know to what extent the observed outcomes (predominant desistance, with a small but consistent occurrence of persistence) were influenced by the psychosocial support, or would have emerged regardless. It can be concluded only that prepubescent children who suffer gender dysphoria and receive psychosocial support focused on issues other than "affirmation" of cross-gender identification do in fact desist in suffering from gender dysphoria, at high rates, over the course of puberty.

40. While the absolute number of those who present as prepubescent children with gender dysphoria and "persist" through adolescence is very small in relation to the total population, persistence in some subjects was

observed in each of these studies. Thus, the clinician cannot take either outcome for granted.

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

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

43. It is also important to note that research has not yet identified any reliable procedure for discerning which children who present with gender dysphoria will persist, as against the majority who will desist, absent transition and "affirmation." Such a method would be valuable, as the more accurately that potential persisters can be distinguished from desisters, the better the risks and benefits of options can be weighted. Such "risk prediction" and behavioral "test construction" are standard components of applied statistics in the behavioral sciences. Multiple research teams have reported that, on average, groups of persisters are somewhat more gender

nonconforming than desisters, but not so different as to usefully predict the course of a particular child.[32]

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

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

transition; rather, it distinguishes unlikely from even less likely to transition.

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

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

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

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

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

The components of the Dutch Approach are:

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

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

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

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

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

52. Within the Dutch approach, there is no social transition before age twelve. That is, social affirmation of the new gender may not begin until age 12—as desistance is less likely to occur past that age. "Watchful Waiting" refers to a child's developmental period up to that age. Watchful waiting does not mean do nothing but passively observe the child. Such children and families typically present with substantial distress involving both gender and non-gender issues. It is during the watchful waiting period that a child (and other family members as appropriate) would undergo therapy, resolving other issues which may be exacerbating psychological stress or dysphoria. As noted by the Dutch clinic, "[T]he adolescents in this study received extensive family or other social support . . . [and they] were all regularly seen by one of the clinic's psychologists or psychiatrists."[38] One is actively treating the person, while carefully "watching" the dysphoria.

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

[38] de Vries, *et al.,* 2011, at 2280-81.

its own anyway. This situation is referred to in science as a "confound."

3. Studies of Transition Outcomes: Overview

54. Very many strong claims have appeared in the media and on social media asserting that transition results in improved mental health or, contradictorily, in decreased mental health. In the highly politicized context of gender and transgender research, many authors have cited only the findings which appear to support one side, cherry-picking from the complete set of research reports. Seemingly contradictory findings are common in science with on-going research projects. When considered together, however, the full set of relevant reports show that a coherent pattern and conclusion has emerged over time, as detailed in the following sections. Initial optimism was suggested by reports of improvements in mental health.[39] Upon continued analysis, these seeming successes turned out to be illusory, however: The Branstrom and Pachankis (2019) finding has been retracted.[40] The greater mental health among transitioners reported by Costa, *et al.* (2015) was noted to be because the control group consisted of cases excluded from hormone eligibility exactly because they showed poor mental health to begin with.[41] The improvements reported by the de Vries studies from the Dutch Clinic themselves appear genuine; however, because that clinic also provides psychotherapy to all cases receiving puberty-blockers, it remains entirely plausible that the psychotherapy and not the puberty blockers caused the

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[39] Branstrom & Pachankis 2019; Costa, *et al.,* 2015; de Vries, *et al.,* 2011; de Vries, *et al.,* 2014.
[40] Kalin, 2020.
[41] Biggs, 2019.

improvements.[42] New studies continued to appear an accelerating rate, repeatedly reporting deteriorations or lacks of improvement in mental health[43] or lack of improvement beyond psychotherapy alone,[44] and other studies continue to report on only the combined effect of both psychotherapy and hormone treatment together.[45]

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

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

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

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

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

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

59. Costa, *et al.* (2015) reported on preliminary outcomes from the Tavistock and Portman NHS Foundation Trust clinic in the UK. They compared the psychological functioning of one group of youth receiving psychological support with a second group receiving both psychological support as well as puberty blocking medication. Both groups improved in psychological functioning over the course of the study, but no statistically significant differences between the groups was detected at any point.[50] As those authors concluded, "Psychological support and puberty suppression were both associated with an improved global psychosocial

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

functioning in GD adolescence. Both these interventions may be considered effective in the clinical management of psychosocial functioning difficulties in GD adolescence."[51]Because psychological support does not pose the physical health risks that hormonal interventions or surgery does (such as loss of reproductive function), one cannot justify taking on the greater risks of social transition, puberty blockers or surgery without evidence of such treatment producing superior results. Such evidence does not exist.

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

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

[51] Costa, *et al.,* at 2206.
[52] de Vries, *et al.,* 2011.

only the clients' own self-report. Systematic recordings of outcomes, so as to allow for detection and correction of clinical deficiencies, were eliminated.

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

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

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

63. The Tavistock and Portman clinic in the U.K. recently released its findings, attempting to replicate the outcomes reported by the Dutch clinic.[54] Study participants were ages 12-15 (Tanner stages 3 for natal males, Tanner 2 for natal females) and were repeatedly tested before beginning puberty-blocking medications and then every six months thereafter. Cases exhibiting serious mental illnesses *(e.g.,* psychosis, bipolar disorder, anorexia nervosa, severe body-dysmorphic disorder unrelated to gender dysphoria) were excluded. Relative to

[53] Tetelepta, 2021.
[54] Carmichael, *et al.,* 2021.

the time point before beginning puberty suppression, there were no significant changes in any psychological measure, from either the patients' or their parents' perspective.

64. A multidisciplinary team from Dallas published a prospective follow-up study which included 25 youths as they began puberty suppression.[55] (The other 123 study participants were undergoing cross-sex hormone treatment.) Interventions were administered according to "Endocrine Society Clinical Practice Guidelines."[56] Their analyses found no *statistically significant changes* in the group undergoing puberty suppression on any of the nine measures of wellbeing measured, spanning tests of body satisfaction, depressive symptoms, or anxiety symptoms.[57] (Although the authors reported detecting some improvements, these were only found when the large group undergoing cross-sex hormone treatment were added in.) Although the Dutch Approach includes age 12 as a minimum for puberty suppression treatment, this team provided such treatment beginning at age 9.8 years (full range: 9.8-14.9 years).[58]

65. Achille, *et al.* (2020) at Stony Brook Children's Hospital in New York treated a sample of 95 youth with gender dysphoria, providing follow-up data on 50 of them. (The report did not indicate how these 50 were selected from the 95.) As well as receiving puberty blocking medications, "Most subjects were followed by mental health professionals. Those that were not were encouraged to see a mental health professional."[59] The

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[55] Kuper, *et al.,* 2020, at 5.
[56] Kuper, *et al.,* 2020, at 3, referring to Hembree, *et al.,* 2017.
[57] Kuper, *et al.,* 2020, at Table 2.
[58] Kuper, *et al.,* 2020, at 4.
[59] Achille, *et al.,* 2020, at 2.

puberty blockers themselves "were introduced in accordance with the Endocrine Society and the WPATH guidelines."[60] Upon follow-up, some incremental improvements were noted; however, after statistically adjusting for psychiatric medication and engagement in counselling, *"most predictors did not reach statistical significance."*[61] That is, puberty blockers did not improve mental health any more than did mental health care on its own.

66. In a recent update, the Dutch clinic reported continuing to find improvement in transgender adolescents' psychological functioning, reaching age-typical levels, "after the start of specialized transgender care involving puberty suppression."[62] Unfortunately, because the transgender care method of that clinic involves both psychosocial support and puberty suppression, it cannot be known which of those (or their combination) is driving the improvement. Also, the authors indicate that the changing demographic and other features among gender dysphoric youth might have caused the treated group to differ from the control group in unknown ways. As the study authors themselves noted, "The present study can, therefore, not provide evidence about the direct benefits of puberty suppression over time and long-term mental health outcomes."[63]

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

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[60] Achille, *et al.,* 2020, at 2.
[61] Achille, *et al.,* 2020, at 3 (italics added).
[62] van der Miesen, *et al.,* 2020, at 699.
[63] van der Miesen, *et al.,* 2020, at 703.

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

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

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

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

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

4. Mental Health Issues in Childhood-Onset Gender Dysphoria

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

example, a child experiencing depression from social isolation might develop hope—and the unrealistic expectation—that transition will help them fit in, this time as and with the other sex.

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

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

72. A systematic, comprehensive review of all studies of Autism Spectrum Disorders (ASDs) and Attention-

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

Deficit Hyperactivity Disorder (ADHD) among children diagnosed with gender dysphoria was recently conducted. It was able to identify a total of 22 studies examining the prevalence of ASD or ADHD I youth with gender dysphoria. Studies reviewing medical records of children and adolescents referred to gender clinics showed 5-26% to have been diagnosed with ASD.[66] Moreover, those authors gave specific caution on the "considerable overlap between symptoms of ASD and symptoms of gender variance, exemplified by the subthreshold group which may display symptoms which could be interpreted as either ASD or gender variance. Overlap between symptoms of ASD and symptoms of GD may well confound results."[67] When two or more issues are present at the same time (in this case, gender dysphoria present at the same time as ADHD or ASD), researchers cannot distinguish when a result is associated with or caused by the issue of interest (gender dysphoria itself) or one of the side issues, called *confounds* (ADHD or ASD, in the present case).[68] The rate of ADHD among children with GD was 8.3-11%. Conversely, in data from children (ages 6-18) with Autism Spectrum Disorders (ASDs) show they are more than seven times more likely to have parent-reported "gender variance."[69]

C. Adolescent-Onset Gender Dysphoria

1. Features of Adolescent-Onset Gender Dysphoria

73. A third profile has begun to present to clinicians or socially, characteristically distinct from the previously

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[66] Thrower, *et al.,* 2020.
[67] Thrower, *et al.,* 2020, at 703.
[68] Cohen-Kettenis *et al.,* 2003, at 51; Skelly *et al.,* 2012.
[69] Janssen, *et al.,* 2016.

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

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

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[70] Kaltiala-Heino, *et al.,* 2015; Littman, 2018.
[71] Littman, 2018.
[72] Littman, 2018.
[73] Kaltiala-Heino, *et al.,* 2015; Littman, 2018; Warner, *et al.,* 2020.
[74] Boivin, *et al.,* 2020.
[75] Biggs, 2020; Littman, 2018.

that any given feature would be present, in general, throughout all types of gender dysphoria.

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

75. There do not yet exist prospective outcomes studies either for social transition or for medical interventions for people whose gender dysphoria began in adolescence. That is, instead of taking a sample of individuals and following them forward over time (thus permitting researchers to account for people dropping out of the study, people misremembering the order of events, etc.), all studies have thus far been *retrospective.* It is not possible for such studies to identify what factors caused what outcomes. No study has yet been organized in such a way as to allow for an analysis of the adolescent-onset group, as distinct from childhood-onset or adult-onset cases. Many of the newer clinics (not the original clinics systematically tracking and reporting on their case results) fail to distinguish between people who had childhood-onset gender dysphoria and have aged into adolescence and people whose onset was not until adolescence. Similarly, there are clinics failing to distinguish people who had adolescent-onset gender dysphoria and aged into adulthood from adult-onset gender dysphoria. Studies selecting groups according to their current age instead of their ages of onset can produce only confounded results, representing unclear mixes according to how many of each type of case wound up in the final sample.

3. Mental Illness in Adolescent-Onset Gender Dysphoria

76. In 2019, a Special Section of the *Archives of Sexual Behavior* was published: "Clinical Approaches to

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

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

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

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

2. A pattern of unstable and intense interpersonal relationship characterized by alternating between extremes of idealization and devaluation.

3. *Identity disturbance: markedly and persistently unstable self-image or sense of self.*

4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (Note: Do not include suicidal or self-mutilating behavior covered in Criterion 5.)

5. *Recurrent suicidal behaviour, gestures, or threats, or self-mutilating behavior.*

6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).

7. Chronic feelings of emptiness.

8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).

9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

(Italics added.)

78. It is increasingly hypothesized that very many cases appearing to be adolescent-onset gender dysphoria are actually cases of BPD.[82] That is, some people may be misinterpreting their experiences to represent a gender identity issue, when it instead represents the "identity disturbance" noted in symptom Criterion 3. Like

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

adolescent-onset gender dysphoria, BPD begins to manifest in adolescence, is substantially more common among biological females than males, and occurs in 23% of the population, rather than 1-in-5,000 people *(i.e.,* 0.02%). Thus, if even only a portion of people with BPD had an 'identity disturbance' that focused on gender identity and were mistaken for transgender, they could easily overwhelm the number of genuine cases of gender dysphoria.

79. A primary cause for concern is symptom Criterion 5: recurrent suicidality. Regarding the provision of mental health care, this is a crucial distinction: A person with BPD going undiagnosed will not receive the appropriate treatments (the currently most effective of which is Dialectical Behavior Therapy). A person with a cross-gender identity would be expected to feel relief from medical transition, but someone with BPD would not: The problem was not about *gender* identity, but about having an *unstable* identity. Moreover, after a failure of medical transition to provide relief, one would predict for these people increased levels of hopelessness and increased risk of suicidality. One would predict also that misdiagnoses would occur more often if one reflexively dismissed or discounted symptoms of BPD as responses to "minority stress." *See infra* Part VI.D (discussing minority stress).

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

VI. Alleged Scientific Claims Assessed

A. Conversion Therapy

81. Activists and social media increasingly, but erroneously, apply the term "conversion therapy" moving farther and farther from what the research has reported. "Conversion therapy" (or "reparative therapy" and other names) was the attempt to change a person's sexual orientation; however, with the public more frequently accustomed to "LGB" being expanded to "LGBTQ+", the claims relevant only to sexual orientation are being misapplied to gender identity. The research has repeatedly demonstrated that once one explicitly acknowledges being gay or lesbian, this is only rarely mistaken. That is entirely unlike gender identity, wherein the great majority of children who declare cross-gender identity cease to do so by puberty, as shown unanimously by every follow-up study ever published. As the field grows increasingly polarized, any therapy failing to provide affirmation-on-demand is mislabeled "conversion therapy."[83] Indeed, even actions of non-therapists, unrelated to any therapy have been labelled conversion therapy, including the very prohibition of biological males competing on female teams.[84]

B. Claims that All Childhood Outcome Studies Are Wrong

82. As already indicated, the follow-up studies of gender dysphoric children are unanimous in their

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[83] D'Angelo, R., Syrulnik, E., Ayad, S., Marchiano, L., Kenny, D. T., & Clarke, P. (2021). One size does not fit all: In support of psychotherapy for gender dysphoria. *Archives of Sexual Behavior, 50,* 716.

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

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

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

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

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

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[85] Temple Newhook, *et al.,* 2018; Winters, *et al.,* 2018.
[86] Steensma, *et al.,* 2018a; Zucker, *et al.* 2018.

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

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

C. Assessing Claims of Suicidality

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

89. Despite that the media treat them as near synonyms, suicide and suicidality are distinct phenomena. They represent different behaviors with different

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

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

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

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

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

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

93. Of particular relevance in the present context is suicidality as a well-documented symptom of Borderline Personality Disorder (BPD) and that very many cases appearing to be adolescent-onset gender dysphoria actually represent cases of BPD. [See full DSM-5 criteria already listed herein.] That is, some people may be

[88] McNeil, et al., 2017.

misinterpreting their experiencing of the broader "identity disturbance" of symptom Criterion 3 to represent a gender identity issue specifically. Like adolescent-onset gender dysphoria, BPD begins to manifest in adolescence and occurs in 2-3% of the population, rather than 1-in-5,000 people. (Thus, if even only a portion of people with BPD experienced an identity disturbance that focused on gender identity and were mistaken for transgender, they could easily overwhelm the number of genuine cases of gender dysphoria.)

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

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

95. Colloquially, affirmation refers broadly to any actions that treat the person as belonging to a new gender. In different contexts, that could apply to social actions

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

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

96. Referring to "affirmation" as a treatment approach is ambiguous: Although often used in public discourse to take advantage of the positive connotations of the term, it obfuscates what exactly is being affirmed. This often leads to confusion, such as quoting a study of the benefits and risks of social affirmation in a discussion of medical affirmation, where the appearance of the isolated word "affirmation" refers to entirely different actions.

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

98. Formal clinical approaches to helping children expressing gender dysphoria employ a gate-keeper model, with decision trees to help clinicians decide when and if the potential benefits of affirmation of the new gender would outweigh the potential risks of doing so. Because the gate-keepers and decision-trees generally include the possibility of affirmation in at least some cases, it is misleading to refer to any one approach as "the

affirmation approach." The most extreme decision-tree would be accurately called affirmation-on-demand, involving little or no opportunity for children to explore at all whether the distress they feel is due to some other, less obvious, factor, whereas more moderate gate-keeping would endorse transition only in select situations, when the likelihood of regretting transition is minimized.

99. Many outcomes studies have been published examining the results of gatekeeper models, but no such studies have been published regarding affirmation-on-demand with children. Although there have been claims that affirmation-on-demand causes mental health or other improvement, these have been the result only of "retrospective" rather than "prospective" studies. That is, such studies did not take a sample of children and follow them up over time, to see how many dropped out altogether, how many transitioned successfully, and how many transitioned and regretted it or detransitioned. Rather, such studies took a sample of successfully transitioned adults and asked them retrospective questions about their past. In such studies, it is not possible to know how many other people dropped out or regretted transition, and it is not possible to infer causality from any of the correlations detected, despite authors implying and inferring causality.

100. Olson and colleagues employed exactly such a retrospective study. They offered their survey to children in the TransYouth Project—people who have socially transitioned, their families, and any contacts they had, by word of mouth. This method is referred to as "convenience sampling," and differs from genuinely representative samples in applying to means of ensuring study participants accurately represent the population being studied. There were three groups of children for

comparison: (i) children who had already socially transitioned, (ii) their siblings, and (iii) children in a university database of families interested in participating in child development research. As noted by the study authors, "For the first time, this article reports on socially transitioned gender children's mental health as reported by the children."[92] Reports from parents were also recorded.[93] In contrast, no reports or ratings were provided by any mental health care professional or researcher at all. That is, although adding self-assessments to the professional assessments might indeed provide novel insights, this project did not add self-assessment to professional assessment. Rather, it replaced professional assessment with self-assessment. Moreover, as already noted, Olson's data did not show what the Olson team claimed.[94] The dataset was subsequently re-analyzed, and "[T]o the contrary, the transgender children, even when supported by their parents, had significantly lower average scores on anxiety and self-worth."[95]

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

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

desire to be *perceived* as healthy and as having made good choices, rather than reflecting their actual mental health.

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

103. Because this was a single-time study relying on self-reporting, rather than a before-and-after transition study relying on professional evaluation, it is not possible to know if the children reported as well-functioning are in fact well-functioning, nor if so whether they are well-functioning because they were permitted to transition, or whether instead the fact is that they were already well-functioning and therefore permitted to transition. Finally, because the TransYouth project lacks a prospective design, it cannot be known how many cases attempted transition, reacted poorly, and then detransitioned, thus never having entered into the study in the first place.

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

E. Assessing the "Minority Stress Hypothesis"

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

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

106. Also suggesting minority stress cannot be the full story is that the mental health symptoms associated with minority stress do not entirely correspond with those associated with gender dysphoria. The primary symptoms associated with minority stress are depressive symptoms,

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[97] Meyer, 2003.

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

VII. Assessing Statements from Professional Associations

A. Understanding the Value of Statements from Professional Associations

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

[98] Meyer, 2003.

implications of an issue, instead of scientists engaged in the objective study of the topic.

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

B. Misrepresentations of statements of professional associations.

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

110. Notably, despite that all these medical associations reiterate the need for mental health issues to be resolved before engaging in medical transition, only the AACAP members have medical training in mental health. The other medical specialties include clinical participation

with this population, but their assistance in transition generally assumes the mental health aspects have already been assessed and treated beforehand.

1. World Professional Association for Transgender Health (WPATH)

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

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

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

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

> Among adolescents who are referred to gender identity clinics, the number considered eligible for

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[99] Coleman, *et al.,* 2012, at 172.
[100] Coleman, *et al.,* 2012, at 173.

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

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

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

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

2. Endocrine System (ES)

116. The 150,000-member Endocrine Society appointed a nine-member task force, plus a methodologist and a medical writer, who commissioned two systematic reviews of the research literature and, in 2017, published an update of their 2009 recommendations, based on the best available evidence identified. The guideline was co-sponsored by the American Association of Clinical

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

Endocrinologists, American Society of Andrology, European Society for Paediatric Endocrinology, European Society of Endocrinology, Pediatric Endocrine Society (PES), and the World Professional Association for Transgender Health (WPATH).

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

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

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

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

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

transition—avoids relying on the unproven belief that transition will solve such issues.

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

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

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

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

123. It is not clear to what extent this endorsement is meaningful, however. According to the PES, the

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

Endocrine Society "recommendations include evidence that treatment of gender dysphoria/gender incongruence is medically necessary and should be covered by insurance."[111] However, the Endocrine Society makes neither statement. Although the two-page PES document mentioned insurance coverage four times, the only mention of health insurance by the Endocrine Society was: "If GnRH analog treatment is not available (insurance denial, prohibitive cost, or other reasons), postpubertal, transgender female adolescents may be treated with an antiandrogen that directly suppresses androgen synthesis or action."[112] Despite the PES asserting it as "medically necessary," the Endocrine Society stopped short of that. Its only use of that phrase was instead limiting: "We recommend that a patient pursue genital gender-affirming surgery only after the MHP and the clinician responsible for endocrine transition therapy both agree that surgery is medically necessary and would benefit the patient's overall health and/or well-being."[113]

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

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

> Just as family rejection is associated with problems such as depression, suicidality, and substance abuse in gay youth, the proposed benefits of treatment to eliminate gender discordance in youth must be carefully weighed against such possible deleterious

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[111] Pediatric Endocrine Society & Endocrine Society, Dec. 2020, at 1.
[112] Hembree, *et al.* 2017, at 3883.
[113] Hembree, *et al.*, 2017 at 3872, 3894.

> effects. . . . In general, it is desirable to help adolescents who may be experiencing gender distress and dysphoria to defer sex reassignment until adulthood, or at least until the wish to change sex is unequivocal, consistent, and made with appropriate consent.[114]

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

126. The AACAP statement acknowledges the long-term outcomes literature for gender dysphoric children: "In follow-up studies of prepubertal boys with gender discordance—including many without any mental health treatment—the cross gender wishes usually fade over time and do not persist into adulthood,"[116] adding that "[c]linicians should be aware of current evidence on the natural course of gender discordance and associated psychopathology in children and adolescents in choosing the treatment goals and modality."[117]

127. The policy similarly includes a provision for resolving mental health issues: "Gender reassignment services are available in conjunction with mental health services focusing on exploration of gender identity, cross-sex treatment wishes, counseling during such treatment if

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[114] Adelson & AACAP, 2012, at 969.
[115] Adelson & AACAP, 2012, at 969 (italics added).
[116] Adelson & AACAP, 2012, at 963
[117] Adelson & AACAP, 2012, at 968.

any, and *treatment of associated mental health problems.*"[118] The document also includes minority stress issues and the need to deal with mental health aspects of minority status *(e.g.,* bullying).[119]

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

5. American College of Obstetricians & Gynecologists (ACOG)

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

130. Prepubertal children do not typically have clinical contact with gynecologists, and the ACOG

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

recommendations include that the client additionally have a primary health care provider.[122]

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

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

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

6. American College of Physicians (ACP)

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

134. The American College of Physicians published a position paper broadly expressing support for the treatment of LGBT patients and their families, including nondiscrimination, antiharassment, and defining "family" by emotional rather than biological or legal relationships in visitation policies, and the inclusion of transgender health care services in public and private health benefit plans.[126]

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

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[126] Daniel & Butkus, 2015a, 2015b.
[127] Daniel & Butkus, 2015b, at 2.
[128] Daniel & Butkus, 2015b, at 8 (italics added).
[129] APA, 2009 (italics added).
[130] Daniel & Butkus, 2015b, at 8 (italics added).

136. There is another statement,[131] which was funded by ACP and published in the Annals of Internal Medicine under its *"In the Clinic"* feature, noting that 'In the Clinic' does not necessarily represent official ACP clinical policy."[132] The document discusses medical transition procedures for adults rather than for children, except to note that "[n]o medical intervention is indicated for prepubescent youth,"[133] that a "mental health provider can assist the child and family with identifying an appropriate time for a social transition,"[134] and that the "child should be assessed and managed for coexisting mood disorders during this period because risk for suicide is higher than in their cisgender peers."[135]

7. American Academy of Pediatrics (AAP)

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

[131] Safer & Tangpricha, 2019.
[132] Safer & Tangpricha, 2019, at ITC1.
[133] Safer & Tangpricha, 2019, at ITC9.
[134] Safer & Tangpricha, 2019, at ITC9.
[135] Safer & Tangpricha, 2019, at ITC9.
[136] Cantor, 2020.

one, and that without mentioning the outcome data it contained.[137].

8. The ESPE-LWPES GnRH Analogs Consensus Conference Group

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

139. The effort concluded that "[u]se of gonadotropin-releasing hormone analogs for conditions other than central precocious puberty requires additional investigation and cannot be suggested routinely."[139] However, gender dysphoria was not explicitly mentioned as one of those other conditions.

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[137] Cantor, 2020, at 1.
[138] Carel et al., 2009.
[139] Carel et al. 2009, at 752.

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EXPERT REPORT OF JAMES M. CANTOR, PHD

APPENDIX 1

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EDUCATION

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

Doctor of Philosophy Sep., 1993-Jun., 2000
Psychology • McGill University • Montreal, Canada

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

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

EMPLOYMENT HISTORY

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

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

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

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

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

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

Clinical Psychology Intern Sep., 1998-Aug., 1999

Centre for Addiction and Mental Health • Toronto, Canada

Teaching Assistant Sep., 1993-May, 1998

Department of Psychology

McGill University • Montreal, Canada

Pre-Doctoral Practicum Sep., 1993-Jun., 1997

Sex and Couples Therapy Unit

Royal Victoria Hospital • Montreal, Canada

Pre-Doctoral Practicum May, 1994-Dec., 1994

Department of Psychiatry

Queen Elizabeth Hospital • Montreal, Canada

ACADEMIC APPOINTMENTS

Associate Professor Jul., 2010-May, 2019

Department of Psychiatry

University of Toronto Faculty of Medicine • Toronto, Canada

Adjunct Faculty Aug. 2013-Jun., 2018

Graduate Program in Psychology
York University • Toronto, Canada

Associate Faculty (Hon) Oct., 2017-Dec., 2017

School of Behavioural, Cognitive & Social Science
University of New England • Armidale, Australia

Assistant Professor Jun., 200□-Jun., 2010

Department of Psychiatry

University of Toronto Faculty of Medicine • Toronto, Canada

Adjunct Faculty Sep., 2004-Jun., 2010

Clinical Psychology Residency Program

St. Joseph's Healthcare • Hamilton, Canada

PUBLICATIONS

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PUBLICATIONS

LETTERS AND COMMENTARIES

1. Cantor, J. M. (2015). Research methods, statistical analysis, and the phallometric test for hebephilia: Response to Fedoroff [Editorial Commentary]. *Journal of Sexual Medicine, 12,* 2499-2500. doi: 10.1111/jsm.13040

2. Cantor, J. M. (2015). In his own words: Response to Moser [Editorial Commentary]. *Journal of Sexual Medicine, 12,* 2502-2503. doi: 10.1111/jsm.13075

3. Cantor, J. M. (2015). Purported changes in pedophilia as statistical artefacts: Comment on Muller et al. (2014). *Archives of Sexual Behavior, 44,* 253-254. doi: 10.1007/s10508014-0343-x

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[Letter to the Editor]. *Archives of Sexual Behavior, 41, 749-752.* doi: 10.1007/s10508-012-9954-2

9. Cantor, J. M. (2011). New MR1 studies support the Blanchard typology of male-to-female transsexualism [Letter to the Editor]. *Archives of Sexual Behavior, 40,* 863-864. doi: 10.1007/s10508-011-9805-6

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11. Cantor, J. M. (2003, Summer). Review of the book *The Man Who Would Be Queen* by J. Michael Bailey. *Newsletter of Division 44 of the American Psychological Association, 19(2),* 6.

12. Cantor, J. M. (2003, Spring). What are the hot topics in LGBT research in psychology? *Newsletter of Division 44 of the American Psychological Association, 19(1),* 21-24.

13. Cantor, J. M. (2002, Fall). Male homosexuality, science, and pedophilia. *Newsletter of Division 44 of the American Psychological Association, 18(3),* 5-8.

14. Cantor, J. M. (2000). Review of the book *Sexual Addiction: An Integrated Approach. Journal of Sex and Marital Therapy, 26,* 107-109.

EDITORIALS

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

2. Cantor, J. M. (2011). Editorial note. *Sexual Abuse: A Journal of Research and Treatment, 23,* 414.

3. Barbaree, H. E., & Cantor, J. M. (2010). Performance indicates for *Sexual Abuse: A Journal of*

Research and Treatment (SAJRT) [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 22,* 371-373.

4. Barbaree, H. E., & Cantor, J. M. (2009). *Sexual Abuse: A Journal of Research and Treatment* performance indicators for 2007 [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 21,* 3-5.

5. Zucker, K. J., & Cantor, J. M. (2009). Cruising: Impact factor data [Editorial]. *Archives of Sexual Research, 38,* 878-882.

6. Barbaree, H. E., & Cantor, J. M. (2008). Performance indicators for *Sexual Abuse: A Journal of Research and Treatment* [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 20,* 3-4.

7. Zucker, K. J., & Cantor, J. M. (2008). The *Archives* in the era of online first ahead of print[Editorial]. *Archives of Sexual Behavior, 37,* 512-516.

8. Zucker, K. J., & Cantor, J. M. (2006). The impact factor: The *Archives* breaks from the pack [Editorial]. *Archives of Sexual Behavior, 35,* 7-9.

9. Zucker, K. J., & Cantor, J. M. (2005). The impact factor: "Goin' up" [Editorial]. *Archives of Sexual Behavior, 34,* 7-9.

10. Zucker, K., & Cantor, J. M. (2003). The numbers game: The impact factor and all that jazz [Editorial]. *Archives of Sexual Behavior, 32,* 3-5.

FUNDING HISTORY

Principal Investigators: Doug VanderLaan, Meng Chuan Lai

Co-Investigators: James M. Cantor, Megha Mallar Chakravarty, Nancy Lobaugh, M. Palmert, M. Skorska

Title: *Brain function and connectomics following sex hormone treatment in adolescents experience gender dysphoria*

Agency: Canadian Institutes of Health Research (CIHR), Behavioural Sciences-B-2

Funds: $650,250 / 5 years (July, 2018)

Principal Investigator: Michael C. Seto

Co-Investigators: Martin Lalumiere , James M. Cantor

Title: *Are connectivity differences unique to pedophilia?*

Agency: University Medical Research Fund, Royal Ottawa Hospital

Funds: $50,000 / 1 year (January, 2018)

Principal Investigator: Lori Brotto

Co-Investigators: Anthony Bogaert, James M. Cantor, Gerulf Rieger

Title: *Investigations into the neural underpinnings and biological correlates of asexuality*

Agency: Natural Sciences and Engineering Research Council (NSERC), Discovery Grants Program

Funds: $195,000 / 5 years (April, 2017)

Principal Investigator: Doug VanderLaan

Co-Investigators: Jerald Bain, James M. Cantor, Megha Mallar Chakravarty, Sofia Chavez, Nancy Lobaugh, and Kenneth J. Zucker

Title: *Effects of sex hormone treatment on brain development: A magnetic resonance imaging study of adolescents with gender dysphoria*

Agency: Canadian Institutes of Health Research (CIHR), Transitional Open Grant Program

Funds: $952,955 / 5 years (September, 2015)

Principal Investigator: James M. Cantor

Co-Investigators: Howard E. Barbaree, Ray Blanchard, Robert Dickey, Todd A. Girard, Phillip E. Klassen, and David J. Mikulis

Title: *Neuroanatomic features specific to pedophilia*

Agency: Canadian Institutes of Health Research (CIHR)

Funds: $1,071,920 / 5 years (October, 2008)

Principal Investigator: James M. Cantor

Title: *A preliminary study of fMRI as a diagnostic test of pedophilia*

Agency: Dean of Medicine New Faculty Grant Competition, Univ. of Toronto

Funds: $10,000 (July, 2008)

Principal Investigator: James M. Cantor

Co-Investigator: Ray Blanchard

Title: *Morphological and neuropsychological correlates of pedophilia*

Agency: Canadian Institutes of Health Research (CIHR)

Funds: $196,902 / 3 years (April, 2006)

KEYNOTE AND INVITED ADDRESSES

1. Cantor, J. M. (2021, September 28). *No topic too tough for this expert panel: A year in review.* Plenary Session for the 40th Annual Research and Treatment Conference, Association for the Treatment of Sexual Abusers.

2. Cantor, J. M. (2019, May 1). *Introduction and Q&A for 'I, Pedophile.'* StopSO 2' Annual Conference, London, UK.

3. Cantor, J. M. (2018, August 29). *Neurobiology of pedophilia or paraphilia? Towards a 'Grand Unified Theory' of sexual interests.* Keynote address to the International Association for the Treatment of Sexual Offenders, Vilnius, Lithuania.

4. Cantor, J. M. (2018, August 29). *Pedophilia and the brain: Three questions asked and answered.* Preconference training presented to the International Association for the Treatment of Sexual Offenders, Vilnius, Lithuania.

5. Cantor, J. M. (2018, April 13). *The responses to* I, Pedophile *from We, the people.* Keynote address to the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, Minnesota.

6. Cantor, J. M. (2018, April 11). *Studying atypical sexualities: From vanilla to* I, Pedophile. Full day workshop at the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, Minnesota.

7. Cantor, J. M. (2018, January 20). *How much sex is enough for a happy life?* Invited lecture to the University of Toronto Division of Urology Men's Health Summit, Toronto, Canada.

8. Cantor, J. M. (2017, November 2). Pedophilia as a phenomenon of the brain: Update of evidence and the public response. Invited presentation to the 7t^{h} annual SBC education event, Centre for Addiction and Mental Health, Toronto, Canada.

9. Cantor, J. M. (2017, June 9). Pedophilia being in the brain: The evidence and the public's reaction. Invited presentation to *SEXposium at the ROM: The science of love and sex,* Toronto, Canada.

10. Cantor, J. M., & Campea, M. (2017, April 20). *"I, Pedophile" showing and discussion.* Invited presentation to the 42" annual meeting of the Society for Sex Therapy and Research, Montreal, Canada.

11. Cantor, J. M. (2017, March 1). *Functional and structural neuroimaging of pedophilia: Consistencies across methods and modalities.* Invited lecture to the Brain Imaging Centre, Royal Ottawa Hospital, Ottawa, Canada.

12. Cantor, J. M. (2017, January 26). *Pedophilia being in the brain: The evidence and the public reaction.* Inaugural keynote address to the University of Toronto Sexuality Interest Network, Toronto, Ontario, Canada.

13. Cantor, J. M. (2016, October 14). *Discussion of CBC's "I, Pedophile."* Office of the Children's Lawyer Educational Session, Toronto, Ontario, Canada.

14. Cantor, J. M. (2016, September 15). *Evaluating the risk to reoffend: What we know and what we don't.* Invited lecture to the Association of Ontario Judges, Ontario Court of Justice Annual Family Law Program, Blue Mountains, Ontario, Canada. [Private link only: https://vimeo.com/239131108/3387c80652]

15. Cantor, J. M. (2016, April 8). *Pedophilia and the brain: Conclusions from the second generation of research.* Invited lecture at the 10t^{h} annual Risk and Recovery Forensic Conference, Hamilton, Ontario.

16. Cantor, J. M. (2016, April 7). *Hypersexuality without the hyperbole.* Keynote address to the 10th annual Risk and Recovery Forensic Conference, Hamilton, Ontario.

17. Cantor, J. M. (2015, November). *No one asks to be sexually attracted to children: Living in Daniel's World.* Grand Rounds, Centre for Addiction and Mental Health. Toronto, Canada.

18. Cantor, J. M. (2015, August). *Hypersexuality: Getting past whether "it" is or "it" isn't.* Invited address at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.

19. Cantor, J. M. (2015, July). *A unified theory of typical and atypical sexual interest in men: Paraphilia, hypersexuality, asexuality, and vanilla as outcomes of a single, dual opponent process.* Invited presentation to the 2015 Puzzles of Sexual Orientation conference, Lethbridge, AL, Canada.

20. Cantor, J. M. (2015, June). *Hypersexuality.* Keynote Address to the Ontario Problem Gambling Provincial Forum. Toronto, Canada.

21. Cantor, J. M. (2015, May). *Assessment of pedophilia: Past, present, future.* Keynote Address to the International Symposium on Neural Mechanisms Underlying Pedophilia and Child Sexual Abuse (NeMUP). Berlin, Germany.

22. Cantor, J. M. (2015, March). *Prevention of sexual abuse by tackling the biggest stigma of them all: Making*

sex therapy available to pedophiles. Keynote address to the 40th annual meeting of the Society for Sex Therapy and Research, Boston, MA.

23. Cantor, J. M. (2015, March. *Pedophilia: Predisposition or perversion?* Panel discussion at Columbia University School of Journalism. New York, NY.

24. Cantor, J. M. (2015, February). *Hypersexuality.* Research Day Grand Rounds presentation to Ontario Shores Centre for Mental Health Sciences, Whitby, Ontario, Canada.

25. Cantor, J. M. (2015, January). *Brain research and pedophilia: What it means for assessment, research, and policy.* Keynote address to the inaugural meeting of the Netherlands Association for the Treatment of Sexual Abusers, Utrecht, Netherlands.

26. Cantor, J. M. (2014, December). *Understanding pedophilia and the brain: Implications for safety and society.* Keynote address for The Jewish Community Confronts Violence and Abuse: Crisis Centre for Religious Women, Jerusalem, Israel.

27. Cantor, J. M. (2014, October). *Understanding pedophilia & the brain.* Invited full-day workshop for the Sex Offender Assessment Board of Pennsylvania, Harrisburg, PA.

28. Cantor, J. M. (2014, September). *Understanding neuroimaging of pedophilia: Current status and implications.* Invited lecture presented to the Mental Health and Addition Rounds, St. Joseph's Healthcare, Hamilton, Ontario, Canada.

29. Cantor, J. M. (2014, June). *An evening with Dr. James Cantor.* Invited lecture presented to the Ontario

Medical Association, District 11 Doctors' Lounge Program, Toronto, Ontario, Canada.

30. Cantor, J. M. (2014, April). *Pedophilia and the brain.* Invited lecture presented to the University of Toronto Medical Students lunchtime lecture. Toronto, Ontario, Canada.

31. Cantor, J. M. (2014, February). *Pedophilia and the brain: Recap and update.* Workshop presented at the 2014 annual meeting of the Washington State Association for the Treatment of Sexual Abusers, Cle Elum, WA.

32. Cantor, J. M., Lafaille, S., Hannah, J., Kucyi, A., Soh, D., Girard, T. A., & Mikulis, D. M. (2014, February). *Functional connectivity in pedophilia.* Neuropsychiatry Rounds, Toronto Western Hospital, Toronto, Ontario, Canada.

33. Cantor, J. M. (2013, November). *Understanding pedophilia and the brain: The basics, the current status, and their implications.* Invited lecture to the Forensic Psychology Research Centre, Carleton University, Ottawa, Canada.

34. Cantor, J. M. (2013, November). *Mistaking puberty, mistaking hebephilia.* Keynote address presented to the 32[1]'d annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.

35. Cantor, J. M. (2013, October). *Understanding pedophilia and the brain: A recap and update.* Invited workshop presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.

36. Cantor, J. M. (2013, October). *Compulsive-hyper-sex-addiction: I don't care what we all it, what can we* do? Invited address presented to the Board of Examiners of

Sex Therapists and Counselors of Ontario, Toronto, Ontario, Canada.

37. Cantor, J. M. (2013, September). *Neuroimaging of pedophilia: Current status and implications.* McGill University Health Centre, Department of Psychiatry Grand Rounds presentation, Montreal, Quebec, Canada.

38. Cantor, J. M. (2013, April). *Understanding pedophilia and the brain.* Invited workshop presented at the 2013 meeting of the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, MN.

39. Cantor, J. M. (2013, April). *The neurobiology of pedophilia and its implications for assessment, treatment, and public policy.* Invited lecture at the 38th annual meeting of the Society for Sex Therapy and Research, Baltimore, MD.

40. Cantor, J. M. (2013, April). *Sex offenders: Relating research to policy.* Invited roundtable presentation at the annual meeting of the Academy of Criminal Justice Sciences, Dallas, TX.

41. Cantor, J. M. (2013, March). *Pedophilia and brain research: From the basics to the state-of-the-art.* Invited workshop presented to the annual meeting of the Forensic Mental Health Association of California, Monterey, CA.

42. Cantor, J. M. (2013, January). *Pedophilia and child molestation.* Invited lecture presented to the Canadian Border Services Agency, Toronto, Ontario, Canada.

43. Cantor, J. M. (2012, November). *Understanding pedophilia and sexual offenders against children: Neuroimaging and its implications for public safety.* Invited guest lecture to University of New Mexico School of Medicine Health Sciences Center, Albuquerque, NM.

44. Cantor, J. M. (2012, November). *Pedophilia and brain research.* Invited guest lecture to the annual meeting of the Circles of Support and Accountability, Toronto, Ontario, Canada.

45. Cantor, J. M. (2012, January). *Current findings on pedophilia brain research.* Invited workshop at the San Diego International Conference on Child and Family Maltreatment, San Diego, CA.

46. Cantor, J. M. (2012, January). *Pedophilia and the risk to re-offend.* Invited lecture to the Ontario Court of Justice Judicial Development Institute, Toronto, Ontario, Canada.

47. Cantor, J. M. (2011, November). *Pedophilia and the brain: What it means for assessment, treatment, and policy.* Plenary Lecture presented at the Association for the Treatment of Sexual Abusers, Toronto, Ontario, Canada.

48. Cantor, J. M. (2011, July). *Towards understanding contradictory findings in the neuroimaging of pedophilic men.* Keynote address to 7th annual conference on Research in Forensic Psychiatry, Regensberg, Germany.

49. Cantor, J. M. (2011, March). *Understanding sexual offending and the brain: Brain basics to the state of the art.* Workshop presented at the winter conference of the Oregon Association for the Treatment of Sexual Abusers, Oregon City, OR.

50. Cantor, J. M. (2010, October). *Manuscript publishing for students.* Workshop presented at the 29th annual meeting of the Association for the Treatment of Sexual Abusers, Phoenix, AZ.

51. Cantor, J. M. (2010, August). *Is sexual orientation a paraphilia?* Invited lecture at the International

Behavioral Development Symposium, Lethbridge, Alberta, Canada.

52. Cantor, J. M. (2010, March). *Understanding sexual offending and the brain: From the basics to the state of the art.* Workshop presented at the annual meeting of the Washington State Association for the Treatment of Sexual Abusers, Blaine, WA.

53. Cantor, J. M. (2009, January). *Brain structure and function of pedophilia men.* Neuropsychiatry Rounds, Toronto Western Hospital, Toronto, Ontario.

54. Cantor, J. M. (2008, April). *Is pedophilia caused by brain dysfunction?* Invited address to the University-wide Science Day Lecture Series, SUNY Oswego, Oswego, NY.

55. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2006, September). *MRIs of pedophilic men.* Invited presentation at the 25th annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.

56. Cantor, J. M., Blanchard, R., & Christensen, B. K. (2003, March). *Findings in and implications of neuropsychology and epidemiology of pedophilia.* Invited lecture at the 28th annual meeting of the Society for Sex Therapy and Research, Miami.

57. Cantor, J. M., Christensen, B. K., Klassen, **P.** E., Dickey, R., & Blanchard, R. (2001, July). *Neuropsychological functioning in pedophiles.* Invited lecture presented at the 27th annual meeting of the International Academy of Sex Research, Bromont, Canada.

58. Cantor, J. M., Blanchard, R., Christensen, B., Klassen, P., & Dickey, R. (2001, February). *First glance at IQ, memory functioning and handedness in sex offenders.* Lecture presented at the Forensic Lecture Series, Centre for Addiction and Mental Health, Toronto, Ontario, Canada.

59. Cantor, J. M. (1999, November). *Reversal of SSRI-induced male sexual dysfunction: Suggestions from an animal model.* Grand Rounds presentation at the Allan Memorial Institute, Royal Victoria Hospital, Montreal, Canada.

PAPER PRESENTATION AND SYMPOSIA

1. Cantor, J. M. (2020, April). "I'd rather have a trans kid than a dead kid": Critical assessment of reported rates of suicidality in trans kids. *Paper presented at the annual meeting of the Society for the Sex Therapy and Research.* Online in lieu of in person meeting.

2. Stephens, S., Lalumiere, M., Seto, M. C., & Cantor, J. M. (2017, October). *The relationship between sexual responsiveness and sexual exclusivity in phallometric profiles.* Paper presented at the annual meeting of the Canadian Sex Research Forum, Fredericton, New Brunswick, Canada.

3. Stephens, S., Cantor, J. M., & Seto, M. C. (2017, March). *Can the SSPI-2 detect hebephilic sexual interest?* Paper presented at the annual meeting of the American-Psychology Law Society Annual Meeting, Seattle, WA.

4. Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2015, October). *Victim choice polymorphism and recidivism.* Symposium Presentation. Paper presented at the 34t^{h} annual meeting of the Association for the Treatment of Sexual Abusers, Montreal, Canada.

5. McPhail, I. V., Hermann, C. A., Fernane, S. Fernandez, Y., Cantor, J. M., & Nunes, K. L. (2014, October). *Sexual deviance in sexual offenders against children: A meta-analytic review of phallometric research.* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.

6. Stephens, S., Seto, M. C., Cantor, J. M., & Goodwill, A. M. (2014, October). *Is hebephilic sexual interest a criminogenic need?: A large scale recidivism*

study. Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.

7. Stephens, S., Seto, M. C., Cantor, J. M., & Lalumiere, M. (2014, October). *Development and validation of the Revised Screening Scale for Pedophilic Interests (SSPI-2).* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.

8. Cantor, J. M., Lafaille, S., Hannah, J., Kucyi, A., Soh, D., Girard, T. A., & Mikulis, D. M. (2014, September). *Pedophilia and the brain: White matter differences detected with DTI.* Paper presented at the 13th annual meeting of the International Association for the Treatment of Sexual Abusers, Porto, Portugal.

9. Stephens, S., Seto, M., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2014, March). *The role of hebephilic sexual interests in sexual victim choice.* Paper presented at the annual meeting of the American Psychology and Law Society, New Orleans, LA.

10. McPhail, I. V., Fernane, S. A., Hermann, C. A., Fernandez, Y. M., Nunes, K. L., & Cantor, J. M. (2013, November). *Sexual deviance and sexual recidivism in sexual offenders against children: A meta-analysis.* Paper presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.

11. Cantor, J. M. (2013, September). *Pedophilia and the brain: Current MRI research and its implications.* Paper presented at the 21st annual World Congress for Sexual Health, Porto Alegre, Brazil. [Featured among Best Abstracts, top 10 of 500.]

12. Cantor, J. M. (Chair). (2012, March). *Innovations in sex research.* Symposium conducted at the 37th annual meeting of the Society for Sex Therapy and Research, Chicago.

13. Cantor, J. M., & Blanchard, R. (2011, August). fMRI versus phallometry in the diagnosis of pedophilia and hebephilia. In J. M. Cantor (Chair), *Neuroimaging of men's object preferences.* Symposium presented at the 37th annual meeting of the International Academy of Sex Research, Los Angeles, USA.

14. Cantor, J. M. (Chair). (2011, August). *Neuroimaging of men's object preferences.* Symposium conducted at the 37th annual meeting of the International Academy of Sex Research, Los Angeles.

15. Cantor, J. M. (2010, October). A meta-analysis of neuroimaging studies of male sexual arousal. In S. Stolern (Chair), *Brain processing of sexual stimuli in pedophilia: An application offunctional neuroimaging.* Symposium presented at the 29th annual meeting of the Association for the Treatment of Sexual Abusers, Phoenix, AZ.

16. Chivers, M. L., Seto, M. C., Cantor, J. C., Grimbos, T., & Roy, C. (April, 2010). *Psychophysiological assessment of sexual activity preferences in women.* Paper presented at the 35th annual meeting of the Society for Sex Therapy and Research, Boston, USA.

17. Cantor, J. M., Girard, T. A., & Lovett-Barron, M. (2008, November). *The brain regions that respond to erotica: Sexual neuroscience for dummies.* Paper presented at the 51st annual meeting of the Society for the Scientific Study of Sexuality, San Juan, Puerto Rico.

18. Barbaree, H., Langton, C., Blanchard, R., & Cantor, J. M. (2007, October). *The role of age-at-release in*

the evaluation of recidivism risk of sexual offenders. Paper presented at the 26th annual meeting of the Association for the Treatment of Sexual Abusers, San Diego.

19. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2006, July). *Pedophilia and brain morphology.* Abstract and paper presented at the 32nd annual meeting of the International Academy of Sex Research, Amsterdam, Netherlands.

20. Seto, M. C., Cantor, J. M., & Blanchard, R. (2006, March). *Child pornography offending is a diagnostic indicator of pedophilia.* Paper presented at the 2006 annual meeting of the American Psychology-Law Society Conference, St. Petersburg, Florida.

21. Blanchard, R., Cantor, **J.** M., Bogaert, A. F., Breedlove, S. M., & Ellis, L. (2005, August). *Interaction of fraternal birth order and handedness in the development of male homosexuality.* Abstract and paper presented at the International Behavioral Development Symposium, Minot, North Dakota.

22. Cantor, J. M., & Blanchard, R. (2005, July). *Quantitative reanalysis of aggregate data on IQ in sexual offenders.* Abstract and poster presented at the 31st annual meeting of the International Academy of Sex Research, Ottawa, Canada.

23. Cantor, J. M. (2003, August). *Sex reassignment on demand: The clinician's dilemma.* Paper presented at the 111th annual meeting of the American Psychological Association, Toronto, Canada.

24. Cantor, J. M. (2003, June). *Meta-analysis of VIQ—PIQ differences in male sex offenders.* Paper presented at the Harvey Stancer Research Day, Toronto, Ontario, Canada.

25. Cantor, J. M. (2002, August). *Gender role in autogynephilic transsexuals: The more things change...* Paper presented at the 110th annual meeting of the American Psychological Association, Chicago.

26. Cantor, J. M., Christensen, B. K., Klassen, P. E., Dickey, R., & Blanchard, R. (2001, June). *IQ, memory functioning, and handedness in male sex offenders.* Paper presented at the Harvey Stancer Research Day, Toronto, Ontario, Canada.

27. Cantor, J. M. (1998, August). *Convention orientation for lesbian, gay, and bisexual students.* Papers presented at the 106th annual meeting of the American Psychological Association.

28. Cantor, J. M. (1997, August). *Discussion hour for lesbian, gay, and bisexual students.* Presented at the 105th annual meeting of the American Psychological Association.

29. Cantor, J. M. (1997, August). *Convention orientation for lesbian, gay, and bisexual students.* Paper presented at the 105th annual meeting of the American Psychological Association.

30. Cantor, J. M. (1996, August). *Discussion hour for lesbian, gay, and bisexual students.* Presented at the 104th annual meeting of the American Psychological Association.

31. Cantor, J. M. (1996, August). *Symposium: Question of inclusion: Lesbian and gay psychologists and accreditation.* Paper presented at the 104th annual

meeting of the American Psychological Association, Toronto.

32. Cantor, J. M. (1996, August). *Convention orientation for lesbian, gay, and bisexual students.* Papers presented at the 104th annual meeting of the American Psychological Association.

33. Cantor, J. M. (1995, August). *Discussion hour for lesbian, gay, and bisexual students.* Presented at the 103rd annual meeting of the American Psychological Association.

34. Cantor, J. M. (1995, August). *Convention orientation for lesbian, gay, and bisexual students.* Papers presented at the 103rd annual meeting of the American Psychological Association.

35. Cantor, J. M. (1994, August). *Discussion hour for lesbian, gay, and bisexual students.* Presented at the 102nd annual meeting of the American Psychological Association.

36. Cantor, J. M. (1994, August). *Convention orientation for lesbian, gay, and bisexual students.* Papers presented at the 102nd annual meeting of the American Psychological Association.

37. Cantor, J. M., & Pilkington, N. W. (1992, August). *Homophobia in psychology programs: A survey of graduate students.* Paper presented at the Centennial Convention of the American Psychological Association, Washington, DC. (ERIC Document Reproduction Service No. ED 351 618)

38. Cantor, J. M. (1991, August). *Being gay and being a graduate student: Double the memberships, four times the problems.* Paper presented at the 99th annual meeting of the American Psychological Association, San Francisco.

POSTER PRESENTATIONS

1. Klein, L., Stephens, S., Goodwill, A. M., Cantor, J. M., & Seto, M. C. (2015, October). *The psychological propensities of risk in undetected sexual offenders.* Poster presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montreal, Canada.

2. Pullman, L. E., Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2015, October). *Why are incest offenders less likely to recidivate?* Poster presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montreal, Canada.

3. Seto, M. C., Stephens, S. M., Cantor, J. M., Lalumiere, M. L., Sandler, J. C., & Freeman, N. A. (2015, August). *The development and validation of the Revised Screening Scale for Pedophilic Interests (SSPI-2).* Poster presentation at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.

4. Soh, D. W., & Cantor, J. M. (2015, August). *A peek inside a furry convention.* Poster presentation at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.

5. VanderLaan, D. P., Lobaugh, N. J., Chakravarty, M. M., Patel, R., Chavez, S. Stojanovski, S. 0., Takagi, A., Hughes, S. K., Wasserman, L., Bain, J., Cantor, J. M., & Zucker, K. J. (2015, August). *The neurohormonal hypothesis of gender dysphoria: Preliminary evidence of cortical surface area differences in adolescent natal females.* Poster presentation at the 31st annual meeting of the International Academy of Sex Research. Toronto, Canada.

6. Cantor, J. M., Lafaille, S. J., Moayedi, M., Mikulis, D. M., & Girard, T. A. (2015, June). *Diffusion tensor imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses.* Harvey Stancer Research Day, Toronto, Ontario Canada.

7. Newman, J. E., Stephens, S., Seto, M. C., & Cantor, J. M. (2014, October). *The validity of the Static-99 in sexual offenders with low intellectual abilities.* Poster presentation at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.

8. Lykins, A. D., Walton, M. T., & Cantor, J. M. (2014, June). *An online assessment of personality, psychological, and sexuality trait variables associated with self-reported hypersexual behavior.* Poster presentation at the 30th annual meeting of the International Academy of Sex Research, Dubrovnik, Croatia.

9. Stephens, S., Seto, M. C., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2013, November). *The utility of phallometry in the assessment of hebephilia.* Poster presented at the 32' annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.

10. Stephens, S., Seto, M. C., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2013, October). *The role of hebephilic sexual interests in sexual victim choice.* Poster presented at the 32" annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.

11. Fazio, R. L., & Cantor, J. M. (2013, October). *Analysis of the Fazio Laterality Inventory (FLI) in a population with established atypical handedness.* Poster presented at the 33rd annual meeting of the National Academy of Neuropsychology, San Diego.

12. Lafaille, S., Hannah, J., Soh, D., Kucyi, A., Girard, T. A., Mikulis, D. M., & Cantor, J. M. (2013, August). *Investigating resting state networks in pedohebephiles.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.

13. McPhail, I. V., Lykins, A. D., Robinson, J. J., LeBlanc, S., & Cantor, J. M. (2013, August). *Effects of prescription medication on volumetric phallometry output.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.

14. Murray, M. E., Dyshniku, F., Fazio, R. L., & Cantor, J. M. (2013, August). *Minor physical anomalies as a window into the prenatal origins ofpedophilia.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.

15. Sutton, K. S., Stephens, S., Dyshniku, F., Tulloch, T., & Cantor, J. M. (2013, August). *Pilot group treatment for "procrasturbation."* Poster presented at 39th annual meeting of the International Academy of Sex Research, Chicago.

16. Sutton, K. S., Pytyck, J., Stratton, N., Sylva, D., Kolla, N., & Cantor, J. M. (2013, August). *Client characteristics by type of hypersexuality referral: A quantitative chart review.* Poster presented at the 39th annual meeting of the International Academy of Sex Research, Chicago.

17. Fazio, R. L., & Cantor, J. M. (2013, June). *A replication and extension of the psychometric properties of the Digit Vigilance Test.* Poster presented at the 11th annual meeting of the American Academy of Clinical Neuropsychology, Chicago.

18. Lafaille, S., Moayedi, M., Mikulis, D. M., Girard, T. A., Kuban, M., Blak, T., & Cantor, J. M. (2012, July). *Diffusion Tensor Imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses.* Poster presented at the 38th annual meeting of the International Academy of Sex Research, Lisbon, Portugal.

19. Lykins, A. D., Cantor, J. M., Kuban, M. E., Blak, T., Dickey, R., Klassen, P. E., & Blanchard, R. (2010, July). *Sexual arousal to female children in gynephilic men.* Poster presented at the 38th annual meeting of the International Academy of Sex Research, Prague, Czech Republic.

20. Cantor, J. M., Girard, T. A., Lovett-Barron, M., & Blak, T. (2008, July). *Brain regions responding to visual sexual stimuli: Meta-analysis of PET and fMRI studies.* Abstract and poster presented at the 34th annual meeting of the International Academy of Sex Research, Leuven, Belgium.

21. Lykins, A. D., Blanchard, R., Cantor, J. M., Blak, T., & Kuban, M. E. (2008, July). *Diagnosing sexual attraction to children: Considerations for DSM-V.* Poster presented at the 34th annual meeting of the International Academy of Sex Research, Leuven, Belgium.

22. Cantor, J. M., Blak, T., Kuban, M. E., Klassen, P. E., Dickey, R. and Blanchard, R. (2007, October). *Physical height in pedophilia and hebephilia.* Poster presented at the 26th annual meeting of the Association for the Treatment of Sexual Abusers, San Diego.

23. Cantor, J. M., Blak, T., Kuban, M. E., Klassen, P. E., Dickey, R. and Blanchard, R. (2007, August). *Physical height in pedophilia and hebephilia.* Abstract and poster presented at the 33rd annual meeting of the International Academy of Sex Research, Vancouver, Canada.

24. Puts, D. A., Blanchard, R., Cardenas, R., Cantor, J., Jordan, C. L., & Breedlove, S. M. (2007, August). *Earlier puberty predicts superior performance on male-biased visuospatial tasks in men but not women.* Abstract and poster presented at the 33' annual meeting of the International Academy of Sex Research, Vancouver, Canada.

25. Seto, M. C., Cantor, J. M., & Blanchard, R. (2005, November). *Possession of child pornography is a diagnostic indicator ofpedophilia.* Poster presented at the 24th annual meeting of the Association for the Treatment of Sexual Abusers, New Orleans.

26. Blanchard, R., Cantor, J. M., Bogaert, A. F., Breedlove. S. M., & Ellis, L. (2005, July). *Interaction of fraternal birth order and handedness in the development of male homosexuality.* Abstract and poster presented at the 31st annual meeting of the International Academy of Sex Research, Ottawa, Canada.

27. Cantor, J. M., & Blanchard, R. (2003, July). *The reported VIQ—PIQ differences in male sex offenders are artifactual?* Abstract and poster presented at the 29t^{h} annual meeting of the International Academy of Sex Research, Bloomington, Indiana.

28. Christensen, B. K., Cantor, J. M., Millikin, C., & Blanchard, R. (2002, February). *Factor analysis of two brief memory tests: Preliminary evidence for modality-specific measurement.* Poster presented at the 30th annual meeting of the International Neuropsychological Society, Toronto, Ontario, Canada.

29. Cantor, J. M., Blanchard, R., Paterson, A., Bogaert, A. (2000, June). *How many gay men owe their sexual orientation to fraternal birth order?* Abstract and

poster presented at the International Behavioral Development Symposium, Minot, North Dakota.

30. Cantor, J. M., Binik, Y., & Pfaus, J. G. (1996, November). *Fluoxetine inhibition of male rat sexual behavior: Reversal by oxytocin.* Poster presented at the 26th annual meeting of the Society for Neurosciences, Washington, DC.

31. Cantor, J. M., Binik, Y., & Pfaus, J. G. (1996, June). *An animal model offluoxetine-induced sexual dysfunction: Dose dependence and time course.* Poster presented at the 28th annual Conference on Reproductive Behavior, Montreal, Canada.

32. Cantor, J. M., O'Connor, M. G., Kaplan, B., & Cermak, L. S. (1993, June). *Transient events test of retrograde memory: Performance of amnestic and unimpaired populations.* Poster presented at the 2nd annual science symposium of the Massachusetts Neuropsychological Society, Cambridge, MA.

EDITORIAL AND PEER-REVIEWING ACTIVITIES

Editor-in-Chief	
Sexual Abuse: A Journal of Research and Treatment	Jan., 2010-Dec., 2014
Editorial Board Memberships	
Journal of Sexual Aggression	Jan., 2010-Dec., 2021
Journal of Sex Research, The	Jan., 2008-Aug., 2020
Sexual Abuse: A Journal of Research and Treatment	Jan., 2006-Dec., 2019
Archives of Sexual Behavior	Jan., 2004-Present
The Clinical Psychologist	Jan., 2004-Dec., 2005

Ad hoc Journal Reviewer Activity

American Journal of Psychiatry

Annual Review of Sex Research

Archives of General Psychiatry

Assessment

Biological Psychiatry

BMC Psychiatry

Brain Structure and Function

British Journal of Psychiatry

British Medical Journal

Canadian Journal of Behavioural Science

Canadian Journal of Psychiatry

Cerebral Cortex

Clinical Case Studies

Comprehensive Psychiatry

Developmental Psychology

European Psychologist

Frontiers in Human Neuroscience

Human Brain Mapping

International Journal of Epidemiology

International Journal of Impotence Research

International Journal of Sexual Health

International Journal of Transgenderism

Journal of Abnormal Psychology

Journal of Clinical Psychology

Journal of Consulting and Clinical Psychology

Journal of Forensic Psychology Practice

Journal for the Scientific Study of Religion

Journal of Sexual Aggression

Journal of Sexual Medicine

Journal of Psychiatric Research

Nature Neuroscience

Neurobiology Reviews

Neuroscience & Biobehavioral Reviews

Neuroscience Letters

Proceedings of the Royal Society B

(Biological Sciences)

Psychological Assessment

Psychological Medicine

Psychological Science

Psychology of Men & Masculinity

Sex Roles

Sexual and Marital Therapy

Sexual and Relationship Therapy

Sexuality & Culture

Sexuality Research and Social Policy

The Clinical Psychologist

Traumatology

World Journal of Biological Psychiatry

GRANT REVIEW PANELS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Toronto Faculty of Medicine, Canada.

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

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

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

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

TEACHING AND TRAINING

PostDoctoral Research Supervision

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

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

Doctoral Research Supervision

Centre for Addiction and Mental Health, Toronto, Canada

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

Masters Research Supervision

Centre for Addiction and Mental Health, Toronto, Canada

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

Undergraduate Research Supervision

Centre for Addiction and Mental Health, Toronto, Canada

Kylie Reale • Spring, 2014
Ryerson University

Jarrett Hannah • Summer, 2013
University of Rochester

Michael Humeniuk • Summer, 2012
University of Toronto

Clinical Supervision (Doctoral Internship)

Clinical Internship Program, Centre for Addiction and Mental Health, Toronto, Canada

Katherine S. Sutton • 2011-2012
Queen's University

David Sylva • 2011-2012
Northwestern University

Jordan Rullo • 2010-2011
University of Utah

Lea Thaler • 2010-2011
University of Nevada, Las Vegas

Carolin Klein • 2009-2010
University of British Columbia

Bobby R. Walling • 2009-2010
University of Manitoba

TEACHING AND TRAINING

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

Tyler Tulloch • Ryerson University	2013-2014
Natalie Stratton • Ryerson University	Summer, 2013
Fiona Dyshniku • University of Windsor	Summer, 2013
Mackenzie Becker • McMaster University	Summer, 2013
Skye Stephens • Ryerson University	2012-2013
Vivian Nyantakyi • Capella University	2010-2011
Cailey Hartwick • University of Guelph	Fall, 2010
Tricia Teeft • Humber College	Summer, 2010
Allison Reeves • Ontario Institute for Studies in Education/Univ. of Toronto	2009-2010
Helen Bailey • Ryerson University	Summer, 2009
Edna Aryee • Ontario Institute for Studies in Education/Univ. of Toronto	2008-2009
Iryna Ivanova • Ontario Institute for Studies in Education/Univ. of Toronto	2008-2009
Jennifer Robinson • Ontario Institute for Studies in Education/Univ. of Toronto	2008-2009

Zoë Laksman • Adler School of Professional Psychology	2005-2006
Diana Mandelew • Adler School of Professional Psychology	2005-2006
Susan Wnuk • York University	2004-2005
Hiten Lad • Adler School of Professional Psychology	2004-2005
Natasha Williams • Adler School of Professional Psychology	2003-2004
Lisa Couperthwaite • Ontario Institute for Studies in Education/Univ. of Toronto	2003-2004
Lori Gray, née Robichaud • University of Windsor	Summer, 2003
Sandra Belfry • Ontario Institute for Studies in Education/Univ. of Toronto	2002-2003
Althea Monteiro • York University	Summer, 2002
Samantha Dworsky • York University	2001-2002
Kerry Collins • University of Windsor	Summer, 2001
Jennifer Fogarty • Waterloo University	2000-2001
Emily Cripps • Waterloo University	Summer, 2000
Lee Beckstead • University of Utah	2000

PROFESSIONAL SOCIETY ACTIVITIES

OFFICES HELD

2018-2019	Local Host. Society for Sex Therapy and Research.
2015	Member, International Scientific Committee, World Association for Sexual Health.
2015	Member, Program Planning and Conference Committee, Association for the Treatment of Sexual Abusers
2012-2013	Chair, Student Research Awards Committee, Society for Sex Therapy & Research
2012-2013	Member, Program Planning and Conference Committee, Association for the Treatment of Sexual Abusers
2011-2012	Chair, Student Research Awards Committee, Society for Sex Therapy & Research
2010-2011	Scientific Program Committee, International Academy of Sex Research
2002-2004	Membership Committee • APA Division 12 (Clinical Psychology)
2002-2003	Chair, Committee on Science Issues, APA Division 44
2002	Observer, Grant Review Committee • Canadian Institutes of Health Research Behavioural Sciences (B)

2001-2009	Reviewer • APA Division 44 Convention Program Committee
2001,2002	Reviewer • APA Malyon-Smith Scholarship Committee
2000-2005	Task Force on Transgender Issues, APA Division 44
1998-1999	Consultant, APA Board of Directors Working Group on Psychology Marketplace
1997	Student Representative • APA Board of Professional Affairs' Institute on TeleHealth
1997-1998	Founder and Chair • APA/APAGS Task Force on New Psychologists' Concerns
1997-1999	Student Representative • APA/CAPP Sub-Committee for a National Strategy for Prescription Privileges
1997-1999	Liaison • APA Committee for the Advancement of Professional Practice
1997-1998	Liaison • APA Board of Professional Affairs
1993-1997	Founder and Chair • APA/APAGS Committee on LGB Concerns

PROFESSIONAL SOCIETY ACTIVITIES

MEMBERSHIPS

2017-2021	Member • *Canadian Sex Research Forum*
2009-Present	Member • *Society for Sex Therapy and Research*
2006-Present	Member (elected) • *International Academy of Sex Research*
2006-Present	Research and Clinical Member • *Association for the Treatment of Sex Abusers*
2003-2006	Associate Member (elected) • *International Academy of Sex Research*
2002	Founding Member • CPA Section on Sexual Orientation and Gender Identity
2001-2013	Member • *Canadian Psychological Association* (CPA)
2000-2015	Member • *American Association for the Advancement of Science*
2000-2015	Member • *American Psychological Association* (APA)
	APA Division 12 (Clinical Psychology)
	APA Division 44 (Society for the Psychological Study of LGB Issues)
2000-2020	Member • *Society for the Scientific Study of Sexuality*
1995-2000	Student Member • *Society for the Scientific Study of Sexuality*

1993-2000	Student Affiliate • *American Psychological Association*
1990-1999	Member, American Psychological Association of Graduate Students (APAGS)

CLINICAL LICENSURE/REGISTRATION

Certificate of Registration, Number 3793

College of Psychologists of Ontario, Ontario, Canada

AWARDS AND HONORS

2017 Elected Fellow, Association for the Treatment of Sexual Abusers

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

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

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

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

1995 Dissertation Research Grant Society for the Scientific Study of Sexuality

1994-1996 McGill University Doctoral Scholarship

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

MAJOR MEDIA

(Complete list available upon request.)

Feature-length Documentaries

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

Appearances and Interviews

11 Mar 2020. Ibbitson, John. It is crucial that Parliament gets the conversion-therapy ban right. *The Globe & Mail.*

25 Jan 2020. Ook de hulpvaardige buurman kan verzamelaar van kinderporno zin. *De Morgen.* 3 Nov 2019. Village of the damned. *60 Minutes Australia.*

1 Nov 2019. HAKON F. HOYDAL. Norsk nettovergriper: — Jeg hater meg selv: Nordmannen laster ned overgrepsmateriale fra nettet — og oppfordrer politiet til A gi amnesti for slike som ham.

10 Oct 2019. Smith, T. Growing efforts are looking at how—or if—#MeToo offenders can be reformed. *National Public Radio.*

29 Sep 2019. Carey, B. Preying on Children: The Emerging Psychology of Pedophiles. *New York Times.*

29 Apr 2019. Mathieu, Isabelle. La poupee qui a trouble les Terre-Neuviens. *La Tribune.*

21 Mar 2019. Pope Francis wants psychological testing to prevent problem priests. But can it really do that? *The Washington Post.*

12 Dec 2018. Child sex dolls: Illegal in Canada, and dozens seized at the border. Ontario Today with Rita Celli. *CBC.*

12 Dec 2018. Celli, R. & Harris, K. Dozens of child sex dolls seized by Canadian border agents. *CBC News.*

27 Apr 2018. Rogers, Brook A. The online 'incel' culture is real—and dangerous. *New York Post.*

25 Apr 2018. Yang, J. Number cited in cryptic Facebook post matches Alek Minassian's military ID: Source. *Toronto Star.*

24 Ap 2018 Understanding 'incel'. *CTV News.*

27 Nov 2017. Carey, B. Therapy for Sexual Misconduct? It's Mostly Unproven. *New York Times.*

14 Nov 2017. Tremonti, A. M. The Current. *CBC.*

9 Nov 2017. Christensen, J. Why men use masturbation to harass women. *CNN.* http://www.cnn.com/2017/11/09/health/masturbation-sexual-harassment/index.html

7 Nov 2017. Nazaryan, A. Why is the alt-right obsessed with pedophilia? *Newsweek*

15 Oct 2017. Ouatik, B. Descouvre. Pedophilie et science. *CBC Radio Canada.*

12 Oct 2017. Ouatik, B. Peut-on guerir la pedophilie? *CBC Radio Canada.*

11 Sep 2017. Bums, C. The young paedophiles who say they don't abuse children. *BBC News.*

18 Aug 2017. Interview. *National Post Radio.* Sirius XM Canada.

16 Aug 2017. Blackwell, Tom. Man says he was cured of pedophilia at Ottawa clinic: 'It's like a weight that's

been lifted': But skeptics worry about the impact of sending pedophiles into the world convinced their curse has been vanquished. *National Post.*

26 Apr 2017. Zalkind, S. Prep schools hid sex abuse just like the catholic church. *VICE.*

24 Apr 2017. Sastre, P. Pedophilie: une panique morale jamais n'abolira un crime. *Slate France.*

12 Feb 2017. Payette, G. Child sex doll trial opens Pandora's box of questions. *CBC News.*

26 Nov 2016. Det morke uvettet ["The unknown darkness]". *Fedrelandsvennen.*

13 July 2016. Paedophilia: Shedding light on the dark field. *The Economist.*

1 Jul 2016. Debusschere, B. Niet iedereen die kinderporno kijkt, is een pedofiel: De mythes rond pedofilie ontkracht. *De Morgen.*

12 Apr 2016. O'Connor, R. Terence Martin: The Tasmanian MP whose medication 'turned him into a paedophile'. *The Independent.*

8 Mar 2016. Bielski, Z. 'The most viscerally hated group on earth': Documentary explores how intervention can stop pedophiles. *The Globe and Mail.*

1 Mar 2016. Elmhirst, S. What should we do about paedophiles? *The Guardian.*

24 Feb 2016. The man whose brain tumour 'turned him into a paedophile'. *The Independent.*

24 Nov 2015. Byron, T. The truth about child sex abuse. *BBC Two.*

20 Aug 2015. The Jared Fogle case: Why we understand so little about abuse. *Washington Post.* 19 Aug 2015.

Blackwell, T. Treat sex offenders for impotence-to keep them out of trouble, Canadian psychiatrist says. *National Post.*

2 Aug 2015. Menendez, J. BBC News Hour. *BBC World Service.*

13 Jul 2015. The nature of pedophilia. *BBC Radio 4.*

9 Jul 2015. The sex-offender test: How a computerized assessment can help determine the fate of men who've been accused of sexually abusing children. *The Atlantic.*

10 Apr 2015. NWT failed to prevent sex offender from abusing stepdaughter again. *CBC News.*

10 Feb 2015. Savage, D. "The ethical sadist." In Savage Love. *The Stranger.*

31 Jan 2015. Begrip voor/van pedofilie [Understanding pedophilia]. *de Volkskrant.*

9 Dec 2014. Carey, B. When a rapist's weapon is a pill. *New York Times.*

1 Dec 2014. Singal, J. Can virtual reality help pedophiles? *New York Magazine.*

17 Nov2014. Say pedofile, busco aydua. *El Pais.*

4 Sep 2014. Born that way? *Ideas, with Paul Kennedy.* CBC Radio One.

27 Aug 2014. Interrogating the statistics for the prevalence of paedophilia. BBC.

25 Jul 2014. Stephenson, W. The prevalence of paedophilia. *BBC World Service.*

21 Jul 2014. Hildebrandt, A. Virtuous Pedophiles group gives support therapy cannot. *CBC.*

26 Jan 2014. Paedophilia a result of faulty wiring, scientists suggest. *Daily Mail.*

22 Dec 2013. Kane, L. Is pedophilia a sexual orientation? *Toronto Star.*

21 Jul 2013. Miller, L. The turn-on switch: Fetish theory, post-Freud. *New York Magazine.*

1 Jul 2013. Morin, H. Pedophilie: la difficile quete d'une origine biologique. *Le Monde.*

2 Jun 2013. Malcolm, L. The psychology of paedophilia. *Australian National Radio.*

1 Mar 2013. Kay, J. The mobbing of Tom Flanagan is unwarranted and cruel. *National Post.*

6 Feb 2013. Boy Scouts board delays vote on lifting ban on gays. *L.A. Times.*

31 Aug 2012. CNN Newsroom interview with Ashleigh Banfield. *CNN.*

24 Jun 2012. CNN Newsroom interview with Don Lemon. *CNN.*

LEGAL TESTIMONY, PAST 5 YEARS

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

EXPERT REPORT OF JAMES M. CANTOR, PHD

APPENDIX 2

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

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

James M. Cantor

Toronto Sexuality Centre, Toronto, Canada

Abstract

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

The American Academy of Pediatrics (AAP) recently published a policy statement entitled, *Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents* (Rafferty, AAP Committee on Psychosocial Aspects of Child and Family Health, AAP Committee on Adolescence, AAP Section on Lesbian, Gay, Bisexual, and Transgender Health and Wellness, 2018). These are children who manifest

discontent with the sex they were born as and desire to live as the other sex (or as some alternative gender role). The policy was quite a remarkable document: Although almost all clinics and professional associations in the world use what's called the *watchful waiting* approach to helping transgender and gender diverse (GD) children, the AAP statement rejected that consensus, endorsing only *gender* affirmation. That is, where the consensus is to delay any transitions after the onset of puberty, AAP instead rejected waiting before transition. With AAP taking such a dramatic departure from other professional associations, I was immediately curious about what evidence led them to that conclusion. As I read the works on which they based their policy, however, I was pretty surprised—rather alarmed, actually: These documents simply did not say what AAP claimed they did. In fact, the references that AAP cited as the basis of their policy instead outright contradicted that policy, repeatedly endorsing *watchful waiting.*

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

policy is based on evidence is demonstrably false, as detailed below.

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

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

The citations were:

> 38. Haldeman DC. The practice and ethics of sexual orientation conversion therapy. *I Consult Clin Psychol.* 1994;62(2):221-227.
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> 29. Adelson SL; American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI). Practice parameter on gay, lesbian, or bisexual sexual orientation, gender nonconformity, and gender discordance in children and adolescents. J *Am Acad Child Adolesc Psychiatry.* 2012;51 (9):957-974.
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> 39. Byne W. Regulations restrict practice of conversion therapy. *LGBT Health.* 2016;3(2):97-99.
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> 40. Cohen-Kettenis PT, Delemarrevan de Waal HA, Gooren LJ. The treatment of adolescent

transsexuals: changing insights. J *Sex Med.* 2008;5(8):1892-1897.

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

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

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

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

A. Sexual orientation of adults is unaffected by conversion therapy and any other [known] intervention;

B. Gender dysphoria in childhood before puberty desists in the majority of cases, becoming (cis-gendered) homosexuality in adulthood, again regardless of any [known] intervention; and

C. Gender dysphoria in childhood persisting after puberty tends to persist entirely.

That is, in the context of GD children, it simply makes no sense to refer to externally induced "conversion": The majority of children "convert" to cisgender or "desist" from transgender *regardless* of any attempt to change them. "Conversion" only makes sense with regard to adult sexual orientation because (unlike childhood gender identity), adult homosexuality never or nearly never spontaneously changes to heterosexuality. Although gender identity and sexual orientation may often be analogous and discussed together with regard to social or political values and to civil rights, they are nonetheless distinct—with distinct origins, needs, and responses to medical and mental health care choices. Although AAP emphasized to the reader that "gender identity is not synonymous with 'sexual orientation–' (Rafferty et al., 2018, p. 3), they went ahead to treat them as such nonetheless.

To return to checking AAP's fidelity to its sources: Reference 29 was a practice guideline from the Committee on Quality Issues of the American Academy of Child and Adolescent Psychiatry (AACAP). Despite AAP applying this source to *gender identity,* AACAP was quite unambiguous regarding their intent to speak to sexual orientation and *only* to sexual orientation: "Principle 6. Clinicians should be aware that there is no

evidence that *sexual orientation* can be altered through therapy, and that attempts to do so may be harmful. There is no established evidence that change in a predominant, enduring *homosexual* pattern of development is possible. Although sexual fantasies can, to some degree, be suppressed or repressed by those who are ashamed of or in conflict about them, sexual desire is not a choice. However, behavior, social role, and—to a degree—identity and self-acceptance are. Although operant conditioning modifies sexual fetishes, it does not alter *homosexuality.* Psychiatric efforts to alter *sexual orientation* through 'reparative therapy' *in adults* have found little or no change in *sexual orientation,* while causing significant risk of harm to self-esteem" (AACAP, 2012, p. 967, italics added).

Whereas AAP cites AACAP to support gender affirmation as the only alternative for treating GD children, AACAP's actual view was decidedly neutral, noting the lack of evidence: "Given the lack of empirical evidence from randomized, controlled trials of the efficacy of treatment aimed at eliminating gender discordance, the potential risks of treatment, and longitudinal evidence that gender discordance persists in only a small minority of untreated cases arising in childhood, further research is needed on predictors of persistence and desistence of childhood gender discordance as well as the long-term risks and benefits of intervention before any treatment to eliminate gender discordance can be endorsed" (AACAP, 2012, p. 969). Moreover, whereas AAP rejected watchful waiting, what AACAP recommended was: "In general, it is desirable to help adolescents who may be experiencing gender distress and dysphoria to defer sex reassignment until adulthood" (AACAP, 2012, p. 969). So, not only did AAP

attribute to AACAP something AACAP never said, but also AAP withheld from readers AACAP's actual view.

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

In AAP reference 40, Cohen-Kettenis et al. (2008) did finally pertain to gender identity; however, this article never mentions conversion therapy. (!) Rather, in this study, the authors presented that clinic's lowering of their minimum age for cross-sex hormone treatment from age 18 to 16, which they did on the basis of a series of studies showing the high rates of success with this age group. Although it did strike me as odd that AAP picked as support against conversion therapy an article that did not mention conversion therapy, I could imagine AAP cited the article as an example of what the "mainstream of traditional medical practice" consists of (the logic being that conversion therapy falls outside what an 'ideal' clinic like this one provides). However, what this clinic provides is the very *watchful waiting* approach that AAP rejected. The approach espoused by Cohen-Kettenis (and the other clinics mentioned in the source—Gent, Boston, Oslo, and now formerly, Toronto) is to make puberty-halting interventions available at age 12 because: "[P]ubertal suppression may give adolescents, together with the attending health professional, more time to explore their gender identity, without the

distress of the developing secondary sex characteristics. The precision of the diagnosis may thus be improved" (Cohen-Kettenis et al., 2008, p. 1894).

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

Cited last in this section was a one-paragraph press release from the World Professional Association for Transgender Health. Written during the early stages of the American Psychiatric Association's (APA's) update of the DSM, the statement asserted simply that "The WPATH Board of Directors strongly urges the de-psychopathologisation of gender variance worldwide." Very reasonable debate can (and should) be had regarding whether gender dysphoria should be removed from the DSM as homosexuality was, and WPATH was well within its purview to assert that it should. Now that the DSM revision process is years completed however, history has seen that APA ultimately retained the

diagnostic categories, rejecting WPATH's urging. This makes AAP's logic entirely backwards: That WPATH's request to depathologize gender dysphoria was *rejected* suggests that it is *WPATH's* view—and therefore the AAP policy—which fall "outside the mainstream of traditional medical practice." (!)

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

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

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

> [G]ender affirmation is in contrast to the outdated approach in which a child's gender-diverse assertions are held as "possibly true" until an arbitrary age (often after pubertal onset) when

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

The citations from AAP's reference list are:

> 45. Ehrensaft D, Giammattei SV, Storck K, Tishelman AC, Keo-Meier C. Prepubertal social gender transitions: what we know; what we can learn—a view from a gender affirmative lens. *Int I Transgend.* 2018;19(2):251-268
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> 47. Olson KR. Prepubescent transgender children: what we do and do not know. *I Am Acad Child Adolesc Psychiatry.* 2016;55 (3):155-156.e3

I was surprised first by the AAP's claim that watchful waiting's delay to puberty was somehow "arbitrary." The literature, including AAP's sources, repeatedly indicated the pivotal importance of puberty, noting that outcomes strongly diverge at that point. According to AAP reference 29, in "*prepubertal* boys with gender discordance—including many without any mental health treatment—the cross gender wishes usually fade over time and do not persist into adulthood, with only 2.2% to 11.9% continuing to experience gender discordance"

(Adelson & AACAP, 2012, p. 963 italics added), whereas "when gender variance with the desire to be the other sex is present *in adolescence,* this desire usually does persist through adulthood" (Adelson & AACAP, 2012, p. 963, italics added). Similarly, according to AAP reference 40, "Symptoms of GID *at prepubertal ages* decrease or even disappear in a considerable percentage of children (estimates range from 80-95%). Therefore, any intervention in childhood would seem premature and inappropriate. However, GID persisting *into early puberty* appears to be highly persistent" (Cohen-Kettenis et al., 2008, p. 1895, italics added). That follow-up studies of prepubertal transition differ from postpubertal transition is the very meaning of non-arbitrary. AAP gave readers exactly the reverse of what was contained in its own sources. If AAP were correct in saying that puberty is an arbitrarily selected age, then AAP will be able to offer another point to wait for with as much empirical backing as puberty has.

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

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

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

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

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

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

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

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

Disclosure statement

No potential conflict of interest was reported by the author.

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

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

Appendix

Count	Group	Study
2/16 4/16 10/16	gay* trans-/crossdress straight	Lebovitz, P. S. (1972). Feminine behavior in boys: Aspects of its outcome. *American Journal of Psychiatry, 128*, 1283–1289.
2/16 2/16	trans- uncertain	Zuger, B. (1978). Effeminate behavior present in boys from childhood: Ten additional years

12/16	gay	of follow-up. *Comprehensive Psychiatry, 19*, 363–369.
0/9 9/9	trans- gay	Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow-up. *Journal of Pediatric Psychology, 4*, 29–41.
2/45 10/45 33/45	trans-/crossdress uncertain gay	Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172*, 90–97.
1/10 2/10 3/10 4/10	trans- gay uncertain straight	Davenport, C. W. (1986). A follow-up study of 10 feminine boys. *Archives of Sexual Behavior, 15*, 511–517.
1/44 43/44	trans- cis-	Green, R. (1987). The "sissy boy syndrome" and the development of homosexuality. New Haven, CT: Yale University Press.
0/8 8/8	trans- cis-	Kosky, R. J. (1987). Gender-disordered children: Does inpatient treatment help? *Medical Journal of Australia, 146*, 565–569.

21/54 33/54	trans- cis-	Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*, 1413–1423.
3/25 6/25 16/25	trans- lesbian/bi- straight	Drummond, K. D., Bradley, S. J., Badali-Peterson, M., & Zucker, K. J. (2008). A follow-up study of girls with gender identity disorder. *Developmental Psychology, 44*, 34–45.
17/139 122/139	trans- cis-	Singh, D. (2012). A follow-up study of boys with gender identity disorder. Unpublished doctoral dissertation, University of Toronto.
47/127 80/127	trans- cis-	Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52*, 582–590.

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