

No. ____

In the Supreme Court of the United States

THE STATE OF WEST VIRGINIA; WEST VIRGINIA STATE BOARD OF EDUCATION; WEST VIRGINIA SECONDARY SCHOOL ACTIVITIES COMMISSION; W. CLAYTON BURCH, IN HIS OFFICIAL CAPACITY AS STATE SUPERINTENDENT; AND LAINEY ARMISTEAD,

Applicants,

v.

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

Respondent.

TO THE HONORABLE JOHN G. ROBERTS, JR., CHIEF JUSTICE OF THE UNITED STATES
AND CIRCUIT JUSTICE FOR THE FOURTH CIRCUIT

**APPENDIX TO APPLICATION TO VACATE THE INJUNCTION ENTERED BY
THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT**

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FILED: February 22, 2023

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 23-1078 (L)
(2:21-cv-00316)

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

Plaintiffs - Appellants

v.

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

Defendants - Appellees

and

THE STATE OF WEST VIRGINIA; LAINEY ARMISTEAD

Intervenors - Appellees

ORDER

Upon consideration of submissions relative to Appellants' motion for stay

pending appeal relief requested by February 26, 2023, which the court construes as a motion for an injunction pending appeal, the court grants the motion and stays the district court's January 5, 2023, order dissolving its preliminary injunction.

Entered at the direction of the panel: Judge Harris and Judge Heytens. Judge Agee dissents from the court's order.

For the Court

/s/ Patricia S. Connor, Clerk

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.

MEMORANDUM OPINION AND ORDER

Pending before the court is Plaintiff's Motion for a Stay Pending Appeal. [ECF No. 515]. For the reasons stated herein, B.P.J.'s motion is **DENIED**.

I. Background

This case concerned the lawfulness of West Virginia's Save Women's Sports Act (the "Act"), a law passed by the West Virginia Legislature in April 2021. The Act classifies school athletic teams according to biological sex and prohibits biological males from participating on athletic teams designated for females. W. Va. Code § 18-2-25d(a)(5), (b), (c)(2). B.P.J., a transgender minor seeking to join her middle school's girls' cross country and track teams, filed a Complaint with this court, alleging that the Act violates the Equal Protection Clause of the Fourteenth Amendment and Title IX. [ECF No. 1]. On July 21, 2021, I granted B.P.J. a preliminary injunction enjoining enforcement of the Act against her. [ECF No. 67]. Thus, B.P.J. was able to compete on the girls' cross country and track teams during the pendency of this case.

The parties filed motions for summary judgment on April 21, 2022. [ECF Nos. 276, 278, 283, 285, 286, 289]. On January 5, 2023, I denied B.P.J.’s motion for summary judgment and granted summary judgment in favor of the State of West Virginia, the Harrison County defendants, the State Board defendants, and Intervenor Lainey Armistead (collectively, the “Defendants”). [ECF No. 512]. I also dissolved the preliminary injunction. *Id.*

On January 20, 2023, B.P.J. filed the instant motion requesting that the court stay its January 5, 2023 Order, dissolving the preliminary injunction, until her appeal is resolved. [ECF No. 515]. B.P.J. seeks this relief so that she can “continue participating on those [athletic] teams consistent with her gender identity.” *Id.* at 5. Defendants jointly responded on January 27, 2023. [ECF No. 520]. B.P.J. replied on January 30, 2023. [ECF No. 521].

II. Legal Standard

Rule 62(d) of the Federal Rules of Civil Procedure permits the court to “restore” an injunction “[w]hile an appeal is pending from . . . final judgment that . . . dissolves . . . [the] injunction.” When ruling on a motion to stay an order, the court considers the following four factors: “(1) whether the stay applicant has made a strong showing that [s]he is likely to succeed on the merits; (2) whether the applicant will be irreparably injured absent a stay; (3) whether issuance of the stay will substantially injure the other parties interested in the proceeding; and (4) where the public interest lies.” *Nken v. Holder*, 556 U.S. 418, 426 (2009) (quoting *Hilton v. Braunskill*, 481 U.S.

770, 776 (1987)). “The first two factors . . . are the most critical,” and a party seeking a stay must demonstrate more than a mere possibility of success on the merits. *Id.* at 434.

III. Discussion

As the Defendants have acknowledged, this was a novel and difficult case. *See* [ECF No. 520, at 13]. With respect to the instant motion, the second, third, and fourth factors weigh heavily in favor of granting B.P.J.’s motion for a stay. B.P.J. is a twelve-year-old transgender girl in middle school, often considered a memorable and pivotal time in a child’s life. For many children, the middle school experience is shaped considerably by their participation on their school’s athletic teams. B.P.J.’s experience has been no different. [ECF No. 515-1, ¶¶ 5–6]. Moreover, as I expressed in my previous Orders, not one child has been or is likely to be harmed by B.P.J.’s continued participation on her middle school’s cross country and track teams. [ECF No. 67, at 11; ECF No. 512, at 9]. Both cross country and track are non-contact sports, and B.P.J. often finishes near the end of the pack, [ECF Nos. 515-3, 515-4]. I am unpersuaded, as Defendants have argued, that B.P.J. finishing ahead of a few other children, who would have placed one spot higher without her participation, constitutes a substantial injury. In the end, the only person truly injured by the enforcement of the Act against her is B.P.J., who must now watch her teams compete from the sidelines. It is in the public interest that all children who seek to participate in athletics have a genuine opportunity to do so. Moreover, there is a public interest

in celebrating not only the unique differences of those who fit into society's binary world but also those who fall outside that box.

That said, a law is not deemed unconstitutional simply because it causes harm. When analyzing equal protection claims, courts apply different levels of scrutiny to different types of classifications. In this case, the court applied intermediate scrutiny to the Act because the Act "separates student athletes based on sex." [ECF No. 512, at 14]. This level of scrutiny applied to both B.P.J.'s facial and as-applied challenges. *See Oswald v. Ireland-Imhof*, 599 F. Supp. 3d 211, 218 (D.N.J. 2022) (applying the same level of scrutiny to the plaintiff's facial and as-applied challenges). To pass intermediate scrutiny, a law must be substantially related to an important governmental objective. *Miss. Univ. for Women v. Hogan*, 458 U.S. 718, 724 (1982).

As I explained in my Order granting summary judgment to the Defendants, B.P.J. never challenged the well-accepted practice of separating sports by sex; rather, she only challenged the state's definitions of "male" and "female," which determine the athletic team an individual may participate on. [ECF No. 512, at 10]. To achieve sex-separated sports, however, the state needed to adopt some definition to determine eligibility for participation on either team. In this case, the state, claiming an interest in promoting equal athletic opportunities for females, drew the line at biological sex determined at birth. It is common knowledge that "sex, and the physical characteristics that flow from it," are linked "to athletic performance and fairness in sports." *Id.* at 19. Thus, separating athletic teams based on biology is substantially

related to the state's important interest in providing equal athletic opportunities to females, who would otherwise be displaced if required to compete with males. The Act, therefore, is not violative of the Equal Protection Clause.

As for Title IX, which authorizes sex-separate sports, “[t]here is no serious debate that [its] endorsement . . . refers to biological sex.” *Id.* at 21–22. Like the alleged interest put forth by the state in this case, the goal of Title IX “was to increase opportunities for women and girls in athletics.” *Id.* at 21 (citing *Williams v. Sch. Dist. of Bethlehem, Pa.*, 998 F.2d 168, 175 (3d Cir. 1993)). Thus, I could not, and still cannot, find that the Act, “which largely mirrors Title IX, violates Title IX.” *Id.* at 22. As such, I am unpersuaded that B.P.J. is likely to succeed on her facial challenge of the Act on appeal.

Under the above analysis, the state is permitted to use biology as the sole criterion in separating school athletic teams. The legislature, of course, could have used less rigid definitions which would allow transgender individuals to play on the athletic team consistent with their gender identity. Indeed, more inclusive definitions might have even furthered the legislature's stated objective. “But it [was] not for the court to impose such a requirement here.” *Id.* at 19. The question before the court was whether the Act survives intermediate scrutiny, and intermediate scrutiny does not require the tightest fit between means and ends for a law to withstand constitutional muster.


B.P.J.’s as-applied challenge asked the court to consider her gender in lieu of sex and to include her in the state’s definition of “female.” To do so, the court would have needed to assess B.P.J.’s individual characteristics, which is not appropriate under intermediate scrutiny. The court was required, instead, to consider whether excluding B.P.J. from teams designated as female—because she is biologically male and males consistently outperform females in athletics—is substantially related to the important government interest of providing equal athletic opportunities for females. The court answered that question in the affirmative: intermediate scrutiny permits the line drawing between “males” and “females” adopted here by the state in the context of sports, without individual consideration of occasional outliers. *Id.* The analysis must end there. Had the court looked any further and taken B.P.J.’s gender and sex characteristics into account, it would have been applying strict scrutiny’s narrow tailoring requirement. *See id.* That analysis also would have been inconsistent with my decision to uphold the legislature’s chosen definitions of “male” and “female” for the purpose of athletics. Accordingly, I cannot find that B.P.J. is likely to succeed on her as-applied challenge of the Act on appeal.

Because B.P.J. cannot satisfy the first prong of the test to obtain a stay, her motion is **DENIED**.

IV. Conclusion

For the foregoing reasons, B.P.J.'s Motion for a Stay Pending Appeal [ECF No. 515] is **DENIED**. The court **DIRECTS** the Clerk to send a copy of this Order to counsel of record and any unrepresented party.

ENTER: February 7, 2023



JOSEPH R. GOODWIN
UNITED STATES DISTRICT JUDGE

**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.

MEMORANDUM OPINION AND ORDER

West Virginia passed a law that defines “girl” and “woman,” for the purpose of secondary school sports, as biologically female. Under the law, all biological males, including those who identify as transgender girls, are ineligible for participation on girls’ sports teams. B.P.J., a transgender girl who wants to play girls’ sports, challenges the law. The question before the court is whether the legislature’s chosen definition of “girl” and “woman” in this context is constitutionally permissible. I find that it is.

I. Relevant Facts

A. B.P.J.

B.P.J. is an eleven-year-old transgender girl. This means that although B.P.J.’s biological sex is male, she now identifies and lives as a girl. According to her First Amended Complaint, B.P.J. began expressing her female gender identity when she

was three years old. [ECF No. 285-2]. By the end of third grade, B.P.J. expressed herself fully—both at home and otherwise—as a girl. In 2019, B.P.J. was diagnosed with gender dysphoria and, at the first signs of puberty, she began taking puberty blocking medications to treat that condition. [ECF No. 289-21]. As a result, B.P.J. has not undergone endogenous male puberty.

In 2021, as she prepared to enter middle school, B.P.J. expressed interest in trying out for the girls' cross-country and track teams. When her mother, Plaintiff Heather Jackson, asked the school to allow B.P.J. to participate on the girls' teams, the school initially informed her that whether B.P.J. would be permitted to play on the girls' teams depended on the outcome of House Bill (“H.B.”) 3293, which was then pending in the West Virginia legislature. When the law passed, the school informed Ms. Jackson that B.P.J. would not be permitted to try out for the girls' teams.

B. The “Save Women’s Sports Bill”

H.B. 3293, entitled the “Save Women’s Sports Bill,” was introduced in the West Virginia House of Delegates on March 18, 2021. The bill passed and was codified as West Virginia Code Section 18-2-25d, entitled “Clarifying participation for sports events to be based on biological sex of the athlete at birth.” The law, which was clearly carefully crafted with litigation such as this in mind, begins with the following legislative findings:

- (1) There are inherent differences between biological males and females, and that these differences are cause for celebration, as determined by the Supreme Court of the United States in *United States v. Virginia* (1996);

- (2) These inherent differences are not a valid justification for sex-based classifications that make overbroad generalizations or perpetuate the legal, social, and economic inferiority of either sex. Rather, these inherent differences are a valid justification for sex-based classifications when they realistically reflect the fact that the sexes are not similarly situated in certain circumstances, as recognized by the Supreme Court of the United States in *Michael M. v. Sonoma County Superior Court* (1981) and the Supreme Court of Appeals of West Virginia in *Israel v. Secondary Schools Act. Com'n* (1989);
- (3) In the context of sports involving competitive skill or contact, biological males and biological females are not in fact similarly situated. Biological males would displace females to a substantial extent if permitted to compete on teams designated for biological females, as recognized in *Clark v. Ariz. Interscholastic Ass'n* (9th Cir. 1982);
- (4) Although necessarily related, as concluded by the United States Supreme Court in *Bostock v. Clayton County* (2020), gender identity is separate and distinct from biological sex to the extent that an individual's biological sex is not determinative or indicative of the individual's gender identity. Classifications 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; and
- (5) Classifications of teams according to biological sex is necessary to promote equal athletic opportunities for the female sex.

W. Va. Code § 18-2-25d(a)(1)–(5).

After making these findings, the law sets forth definitions of “biological sex,” “female,” and male” as follows:

- (1) “Biological sex” means an individual's physical form as a male or female based solely on the individual's reproductive biology and genetics at birth.

(2) “Female” means an individual whose biological sex determined at birth is female. As used in this section, “women” or “girls” refers to biological females.

(3) “Male” means an individual whose biological sex determined at birth is male. As used in this section, “men” or “boys” refers to biological males.

Id. § 18-2-25d(b)(1)–(3).

Finally, the law requires that each athletic team that is “sponsored by any public secondary school or a state institution of higher education” “be expressly designated as” either male, female, or coed, “based on biological sex.” *Id.* § 18-2-25d(c). Teams that are designated “female” “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.” *Id.* § 18-2-25d(c)(2).

C. Procedural History

On May 26, 2021, B.P.J., through her mother, filed this lawsuit against the West Virginia State Board of Education and its then-Superintendent W. Clayton Burch, the Harrison County Board of Education and its Superintendent Dora Stutler, and the West Virginia Secondary Schools Activities Commission (“WVSSAC”). The State of West Virginia moved to intervene, and that motion was granted. Plaintiff then amended her complaint, [ECF No. 64], naming the State of West Virginia and Attorney General Patrick Morrisey as defendants. Mr. Morrisey has since been dismissed as a party from this lawsuit.

In her amended complaint, B.P.J. alleges that Defendants Burch, Stutler, and the WVSSAC deprived her of the equal protection guaranteed to her by the

Fourteenth Amendment and that the State, the State Board of Education, the Harrison County Board of Education, and the WVSSAC have violated Title IX. B.P.J. seeks a declaratory judgment that Section 18-2-25d of the West Virginia Code violates Title IX and the Equal Protection Clause; an injunction preventing Defendants from enforcing the law against her; a waiver of the requirement of a surety bond for preliminary injunctive relief; nominal damages; and reasonable attorneys' fees.

B.P.J. initially requested a preliminary injunction to allow her to compete on the girls' track and cross-country teams during the pendency of this case. Finding that B.P.J. had a likelihood of success on the merits of her as-applied challenge to the law, I granted the preliminary injunction. All defendants moved to dismiss, and those motions were denied. Lainey Armistead, a cisgender¹ female college athlete then moved to intervene as a defendant and that motion was granted. All parties have now moved for summary judgment.

II. Legal Standard

Summary judgment is appropriate where the “depositions, documents, electronically stored information, affidavits or declarations, stipulations . . . , admissions, interrogatory answers, or other materials” show that “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed R. Civ. P. 56(a), (c)(1)(A).

¹ “Cisgender” means a person whose gender identity aligns with her biological sex. *See Grimm v. Gloucester Cnty. Sch. Bd.*, 972 F.3d 586, 594 (4th Cir. 2020), *as amended* (Aug. 28, 2020), *cert. denied*, 141 S. Ct. 2878 (2021).

III. Analysis

B.P.J. alleges that H.B. 3293 violates the Constitution's Equal Protection Clause and Title IX. I will address each argument in turn. Before turning to the merits of those arguments, however, I find it important to address some preliminary matters.

A. The WVSSAC's Motion

The WVSSAC does not argue the merits of Plaintiff's Equal Protection or Title IX claims. Rather, the WVSSAC only argues that it is not a state actor and is therefore not subject to scrutiny under either the Equal Protection Clause or Title IX. I disagree. Defendant WVSSAC's motion [ECF No. 276] is **DENIED**.

A court may only apply equal protection scrutiny to state action. U.S. Const. amend. XIV, § 1, cl. 4.; *Lugar v. Edmondson Oil Co., Inc.*, 457 U.S. 922, 923–24 (1982). Likewise, only a party acting under the color of state law is subject to suit pursuant to 42 U.S.C. § 1983. Despite differing terms, the color-of-law requirement in a § 1983 claim and the state action requirement under the Fourteenth Amendment are synonymous and are analyzed the same way. *See Lugar*, 457 U.S. at 923–24; *United States v. Price*, 383 U.S. 787, 794 (1966).

“[T]he character of a legal entity is determined neither by its expressly private characterization in statutory law, nor by the failure of the law to acknowledge the entity's inseparability from recognized government officials or agencies.” *Brentwood Acad. v. Tenn. Secondary Sch. Athletic Ass'n*, 531 U.S. 288, 931 (2001) (citing *Lebron v. Nat'l R.R. Passenger Corp.*, 513 U.S. 374 (1995)). For example, an ostensibly

private actor can become a state actor when it is “controlled by an ‘agency of the State,’” or “entwined with governmental policies[,]” or the government is “entwined in [its] management or control.” *Pennsylvania v. Bd. of Dir. of City Trs. of Phila.*, 353 U.S. 230, 231 (1957); *Evans v. Newton*, 382 U.S. 296, 299 (1966). There is, however, no rigid test to determine when a challenged action becomes a state action. *Brentwood Acad.*, 531 U.S. at 295. No single fact nor set of conditions will definitively confer state action because there may be a better “countervailing reason against attributing activity to the government.” *Id.* at 295–96. “Only by sifting facts and weighing circumstances can the nonobvious involvement of the State in private conduct be attributed its true significance.” *Lugar*, 457 U.S. at 939 (citing *Burton v. Wilmington Parking Auth.*, 365 U.S. 715, 860 (1961); *Peltier v. Charter Day Sch., Inc.*, 37 F.4th 104, 116 (4th Cir. 2022) (“[T]he inquiry is highly fact-specific in nature.”).

After considering its composition, rulemaking process, obligations under state law, and other rules for student eligibility, I find the WVSSAC is a state actor. Like in *Brentwood Acad.*, the WVSSAC’s nominally private character “is overborne by the pervasive entwinement of public institutions and public officials in its composition and workings, and there is no substantial reason to claim unfairness in applying constitutional standards to it.” 531 U.S. at 298. I find that the WVSSAC is a state actor for several reasons. Though county boards of education have the statutory authority to supervise and control interscholastic athletic events, they have delegated that authority to the WVSSAC. [ECF No. 285-1]. Every public secondary school in

West Virginia is a member of the WVSSAC, and the school principals sit on the WVSSAC's Board of Control to propose and vote on sports rules and regulations. *Id.* Any rule the WVSSAC passes is then subject to approval by the State Board of Education, and the State Board of Education requires that any coach who is not also a teacher be trained by the WVSSAC and certified by the State Board of Education. *Id.* And the WVSSAC Board of Directors—the entity that enforces the rules—includes representatives of the State Superintendent and the State Board of Education, among other governmental entities. *Id.*; 127 C.S.R. § 127-1-8.2. Here, it appears that the WVSSAC cannot exist without the state, and the state cannot manage statewide secondary school activities without the WVSSAC. The WVSSAC is pervasively entwined with the state.

The WVSSAC's motion for summary judgment [ECF No. 276] is therefore **DENIED.**

B. Animus

In her Amended Complaint, B.P.J. alleges that H.B. 3293 was introduced in the legislature “as part of a concerted, nationwide effort to target transgender youth for unequal treatment.” [ECF No. 64, ¶ 45]. B.P.J. alleges that the law was “targeted at, and intended only to affect, girls who are transgender.” *Id.* ¶ 46. In support of these contentions, B.P.J. points to the actions of bill co-sponsor Delegate Jordan Bridges. According to the Amended Complaint, Delegate Bridges made a Facebook post announcing the introduction of the bill 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.” *Id.* ¶ 47. In her summary judgment motion, B.P.J. again points the court to the actions of Delegate Bridges and points to several instances where legislators made clear that the purpose of the bill was to address transgender participation in sports.

Notwithstanding these statements, B.P.J. does not argue that the law is unconstitutional under the Supreme Court’s animus doctrine, and the record lacks sufficient legislative history to make such a finding. The record makes abundantly clear, however, that West Virginia had no “problem” with transgender students playing school sports and creating unfair competition or unsafe conditions. In fact, at the time it passed the law, West Virginia had no known instance of any transgender person playing school sports. While the legislature did take note of transgender students playing sports in other states, it is obvious to me that the statute is at best a solution to a potential, but not yet realized, “problem.”

Even so, the law is only unconstitutional under the animus doctrine if the reason for its passage was the “bare desire” to harm transgender people. *U.S. Dep’t of Agric. v. Moreno*, 413 U.S. 528, 535 (1973). While the record before me does reveal that at least one legislator held or implicitly supported private bias against, or moral disapproval of, transgender individuals, it does not contain evidence of that type of animus more broadly throughout the state legislature. Therefore, I cannot find unconstitutional animus on the record before me.

C. Other Matters

Next, before proceeding to the merits of the case, I find it important to briefly discuss what this case is *not*.

First, despite the politically charged nature of transgender acceptance in our culture today, this case is *not* one where the court needs to accept or approve B.P.J.'s existence as a transgender girl. B.P.J., like all transgender people, deserves respect and the ability to live free from judgment and hatred for simply being who she is. But for the state legislature, creating a "solution" in search of a problem, the courts would have no reason to consider eligibility rules for youth athletics. Nevertheless, I must do so now.

This is also *not* a case where B.P.J. challenges the entire structure of school sports. B.P.J. does not challenge, on a broad basis, sex-separation in sports. B.P.J. wants to play on a girls' team. And she admits that there are benefits associated with school athletics, "including when such athletics are provided in a sex-separated manner." [ECF No. 286-1, at 1445]. Ultimately, B.P.J.'s issue here is not with the state's offering of girls' sports and boys' sports. It is with the state's definitions of "girl" and "boy." The state has determined that for purposes of school sports, the definition of "girl" should be "biologically female," based on physical differences between the sexes. And the state argues that its definition is appropriate here because it is substantially related to an important government interest. B.P.J., for her part, seeks a legal declaration that a transgender girl is "female."

I will not get into the business of defining what it means to be a “girl” or “woman.” The courts have no business creating such definitions, and I would be hard-pressed to find many other contexts where one’s sex and gender are relevant legislative considerations. But I am forced to consider whether the state’s chosen definition passes constitutional muster in this one discrete context.

D. Equal Protection

Having addressed those matters, I now turn to the merits of B.P.J.’s claim that H.B. 3293 violates the Constitution’s Equal Protection Clause.

1. Legal Standard

The Equal Protection Clause of the Fourteenth Amendment provides that no state may deny any person within its jurisdiction “equal protection of the laws.” U.S. Const. amend. XIV, § 1, cl. 4. In other words, “all persons similarly situated should be treated alike.” *City of Cleburne, Tex. v. Cleburne Living Ctr.*, 473 U.S. 432, 439 (1985). Realistically, though, every law impacts people differently, and the Fourteenth Amendment does not prohibit that outcome. *Reed v. Reed*, 404 U.S. 71, 75 (1971). But the Equal Protection Clause does forbid a statute from placing people into different classes and treating them unequally for reasons “wholly unrelated to the objective of that statute.” *Id.* at 75–76. Ultimately, if a law seeks to treat different groups of people differently, it must do so “upon some ground of difference having a fair and substantial relation to the object of the legislation, so that all persons similarly circumstanced shall be treated alike.” *Id.* at 76 (quoting *Royster Guano Co. v. Virginia*, 253 U.S. 412, 415 (1920)).

In general, courts presume that a law is constitutional. Based on that presumption, courts may only overturn a law if the challenger can show that the law's classification is not rationally related to *any* government interest. *Moreno*, 413 U.S. at 533. This general review is known as rational basis review. However, the court's inquiry becomes more searching if the law disadvantages a group of people who have historically been discriminated against and whose identity has nothing to do with their ability to participate in society. Race-based laws, for example, are "immediately suspect" because "they threaten to stigmatize individuals by reason of their membership in a racial group." *Shaw v. Reno*, 509 U.S. 630, 643 (1993). Laws based on race, or other suspect classifications such as alienage and national origin, are subject to strict scrutiny and will only be upheld "upon an extraordinary justification." *Id.* at 643–44 (quoting *Pers. Adm'r of Mass. v. Feeney*, 442 U.S. 256, 272 (1979)). Under strict scrutiny, the law must be "narrowly tailored to serve a compelling governmental interest." *Cleburne*, 473 U.S. at 440.

In the middle of rational basis review and strict scrutiny lies intermediate scrutiny. Intermediate scrutiny applies to laws that discriminate on the basis of a quasi-suspect classification, like sex, *United States v. Virginia*, 518 U.S. 515, 533 (1996), and transgender status, *Grimm v. Gloucester Cnty. Sch. Bd.*, 972 F.3d 586, 611 (4th Cir. 2020), *as amended* (Aug. 28, 2020), *cert. denied*, 141 S. Ct. 2878 (2021) ("Engaging with the suspect class test, it is apparent that transgender persons constitute a quasi-suspect class."). Sex discrimination receives intermediate scrutiny because while states have historically used sex as a basis for invidious discrimination,

we recognize that there are some “real differences” between males and females that could legitimately form the basis for different treatment. *Virginia*, 518 U.S. at 533.

The Supreme Court has long “viewed with suspicion laws that rely on ‘overbroad generalizations about the different talents, capacities, or preferences of males and females.’” *Sessions v. Morales-Santana*, 137 S. Ct. 1678, 1692 (2017) (quoting *Virginia*, 518 U.S. at 533). Therefore, laws that discriminate based on sex must be backed by an “exceedingly persuasive justification.” *Virginia*, 518 U.S. at 513. That is to say, the law’s proponents must show that it “serves important governmental objectives and that the discriminatory means employed are substantially related to the achievement of those objectives.” *Miss. Univ. for Women v. Hogan*, 458 U.S. 718, 724 (1982). Even if the law’s objective is to protect the members of one sex, that “objective itself is illegitimate” if it relies on “fixed notions concerning [that sex’s] roles and abilities.” *Morales-Santana*, 137 S. Ct. at 1692.

The party defending the statute must “present[] sufficient probative evidence in support of its stated rationale for enacting a [sex] preference, i.e., . . . the evidence [must be] sufficient to show that the preference rests on evidence-informed analysis rather than on stereotypical generalizations.” *H.B. Rowe Co. v. Tippett*, 615 F.3d 233, 242 (4th Cir. 2010) (quoting *Eng’g Contractors Ass’n of S. Fla. v. Metro. Dade Cnty.*, 122 F.3d 895, 910 (11th Cir. 1997)); *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 321 F.3d 950, 959 (10th Cir. 2003) (“[T]he gender-based measures . . . [must be] based on ‘reasoned analysis rather than [on] the mechanical application of

traditional, often inaccurate, assumptions.” (quoting *Miss. Univ. for Women*, 458 U.S. at 726)).

2. Discussion

There is no debate that intermediate scrutiny applies to the law at issue here—H.B. 3293 plainly separates student athletes based on sex. And even B.P.J. agrees that the state has an important interest in providing equal athletic opportunities for female students. [ECF No. 291, at 24]. As discussed earlier, B.P.J. does not challenge sex-separation in sports on a broad basis; she does not argue that teams should be separated based on some other factor or not separated at all. Rather, B.P.J. recognizes the benefits of sex-separated athletics and takes issue only with the state’s definitions of “girl” and “woman” as based on biological sex.

B.P.J. argues that “H.B. 3293 excludes students from sports teams based on ‘biological sex’ and defines ‘biological sex’ solely in terms of ‘reproductive biology and genetics at birth.” *Id.* at 19. According to B.P.J., H.B. 3293 uses this “ends-driven definition[] of “biological sex” to ‘guarantee a particular outcome’: Barring girls who are transgender from qualifying as girls for purposes of school sports and thereby categorically excluding them from girls’ teams and therefore from school sports altogether.” *Id.* (quoting *Grimm*, 972 F.3d at 626 (Wynn, J., concurring)). B.P.J. argues that this definition of “biological sex,” and the related definitions of “girl” and “woman,” are not substantially related to the government interest in providing equal athletic opportunities for females.

The State of West Virginia, the State Board defendants, the Harrison County defendants, and Intervenor Lainey Armistead all argue that the state's classification based on "biological sex" is substantially related to its important interest in providing equal athletic opportunities for females. The state points to a longstanding recognition in the courts that "[p]hysical differences between men and women . . . are enduring' and render 'the two sexes . . . not fungible.'" [ECF No. 305, at 13–14 (quoting *Virginia*, 518 U.S. at 533)]. And the state argues that in order to preserve athletic opportunities for females, it is necessary to exclude biological males from female teams because males as a group have significant athletic advantage over females and thus the two groups are not similarly situated. [ECF No. 287, at 6–8].

The record does make clear that, in passing this law, the legislature intended to prevent transgender girls from playing on girls' sports teams. In making that decision, the legislature considered an instance in Connecticut where two transgender girls ran on the girls' track team and won at least one event. Cisgender girls there sued, claiming the state's policy allowing the transgender girls to play on girls' teams violated Title IX. *Id.* at 5. But acting to prevent transgender girls, along with all other biological males, from playing on girls' teams is not unconstitutional if the classification is substantially related to an important government interest. The state's interest in providing equal athletic opportunity to females is not at issue here, and B.P.J. does not argue that sex-separate sports in general are not substantially related to that interest. Rather, B.P.J. argues that she and other transgender girls

should be able to play on girls' teams despite their male sex, because their gender identity is "girl."

While sex and gender are related, they are not the same. *See e.g., PFLAG, PFLAG National Glossary of Terms* (June 2022), <http://pflag.org/glossary> (defining "biological sex" as the "anatomical, physiological, genetic, or physical attributes that determine if a person is male, female, or intersex . . . includ[ing] both primary and secondary sex characteristics, including genitalia, gonads, hormone levels, hormone receptors, chromosomes, and genes" and explaining that "[b]iological sex is often conflated or interchanged with gender, which is more societal than biological, and involves personal identity factors"). It is beyond dispute that, barring rare genetic mutations not at issue here, a person either has male sex chromosomes or female sex chromosomes. Gender, on the other hand, refers to "a set of socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate." *Id.* Gender identity, then, is "[a] person's deeply held core sense of self in relation to gender." *Id.* For most people, gender identity is in line with biological sex. *See Grimm*, 972 F.3d at 594. That is, most females identify as girls or women, and most males identify as boys or men. But gender is fluid. There are females who may prefer to dress in a style that is more typical of males (or vice versa), and there are males who may not enjoy what are considered typical male activities. These individuals may, however, still identify as the gender that aligns with their sex. Others may not. When one's gender identity is incongruent with their sex, that person is transgender. To be transgender, one must have a deeply held "consistent[], persistent[], and insistent[]"

conviction that their gender is, “on a binary, . . . opposite to their” biological sex. *Id.* I recognize that being transgender is natural and is not a choice. But one’s sex is also natural, and it dictates physical characteristics that are relevant to athletics.

Whether a person has male or female sex chromosomes determines many of the physical characteristics relevant to athletic performance. Those with male chromosomes, regardless of their gender identity, naturally undergo male puberty, resulting in an increase in testosterone in the body. B.P.J. herself recognizes that “[t]here is a medical consensus that the largest known biological cause of average differences in athletic performance between [males and females] is circulating testosterone beginning with puberty.” [ECF No. 291, at 28]. While some females may be able to outperform some males, it is generally accepted that, on average, males outperform females athletically because of inherent physical differences between the sexes. This is not an overbroad generalization, but rather a general principle that realistically reflects the average physical differences between the sexes. Given B.P.J.’s concession that circulating testosterone in males creates a biological difference in athletic performance, I do not see how I could find that the state’s classification based on biological sex is not substantially related to its interest in providing equal athletic opportunities for females.

In parts of her briefing, B.P.J. asks me to find that specifically excluding transgender girls from the definition of “girl” in this context is unconstitutional because transgender girls can take puberty blockers or other hormone therapies to mitigate any athletic advantage over cisgender females. B.P.J., for example, is

biologically male, but she identifies as a girl. To express her gender identity, she goes by a traditionally feminine name, wears her hair long, uses female pronouns, and in all other respects lives as a girl. Before the first signs of puberty, B.P.J. made no other changes as a result of her transgender identity. But, once she started showing signs of male puberty, B.P.J. began taking puberty blocking medications, pausing the male puberty process. In that respect, B.P.J. argues that she has not gained the physical characteristics typical of males during and after puberty.

While this may be true for B.P.J., other transgender girls may not take those medications. They may not even come to realize or accept that they are transgender until after they have completed male puberty. Even if a transgender girl wanted to receive hormone therapy, she may have difficulty accessing those treatment options depending on her age and the state where she lives. And, as evidenced by the thousands of pages filed by the parties in this case, there is much debate over whether and to what extent hormone therapies after puberty can reduce a transgender girl's athletic advantage over cisgender girls. Additionally, of course, there is no requirement that a transgender person take any specific medications or undergo hormone therapy before or after puberty. A transgender person may choose to only transition socially, rather than medically. In other words, the social, medical, and physical transition of each transgender person is unique.

The fact is, however, that a transgender girl is biologically male and, barring medical intervention, would undergo male puberty like other biological males. And biological males generally outperform females athletically. The state is permitted to

legislate sports rules on this basis because sex, and the physical characteristics that flow from it, are substantially related to athletic performance and fairness in sports.

Could the state be more inclusive and adopt a different policy, as B.P.J. suggests, which would allow transgender individuals to play on the team with which they, as an individual, are most similarly situated at a given time? Of course. But it is not for the court to impose such a requirement here. Sex-based classifications fall under intermediate scrutiny and therefore do not have a “narrowly-tailored” requirement. As intervenor, Lainey Armistead, points out, “[s]ome boys run slower than the average girl . . . [and] [s]ome boys have circulating testosterone levels similar to the average girl because of medical conditions or medical interventions,” but B.P.J. denies that the latter “would be similarly situated [to cisgender girls] for purposes of Title IX and the Equal Protection Clause,” and does not argue that they should be allowed to play on girls’ teams. [ECF No. 288, at 17 (citing ECF No. 286-1, at 1473)]. This is inconsistent with her argument that the availability of hormone therapies makes transgender girls similarly situated to cisgender girls. In fact, after reviewing all of the evidence in the record, including B.P.J.’s telling responses to requests for admission, it appears that B.P.J. really argues that transgender girls are similarly situated to cisgender girls for purposes of athletics at the moment they verbalize their transgender status, regardless of their hormone levels.

The legislature’s definition of “girl” as being based on “biological sex” is substantially related to the important government interest of providing equal athletic

opportunities for females. B.P.J.’s motion for summary judgment on this basis is **DENIED**.

E. Title IX

Finally, I address B.P.J.’s claim that H.B. 3293 violates Title IX. B.P.J. brings this claim against the State of West Virginia, the State Board of Education, the County Board of Education, and the WVSSAC.

1. Legal Standard

Title IX provides that “no person . . . shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.” 20 U.S.C. § 1681(a). To succeed on a Title IX claim, a plaintiff must prove that she was (1) excluded from an educational program on the basis of sex; (2) that the educational institution was receiving federal financial assistance at the time; and (3) that “improper discrimination caused [her] harm.” *Grimm*, 972 F.3d at 616 (citing *Preston v. Va. ex rel. New River Cmty. Coll.*, 31 F.3d 203, 206 (4th Cir. 1994)). “In the Title IX context, discrimination ‘mean[s] treating [an] individual worse than others who are similarly situated.’” *Id.* at 618 (quoting *Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1741 (2020)). Title IX permits sex-separate athletic teams “where selection for such teams is based upon competitive skill or the activity involved is a contact sport.” 34 C.F.R. § 106.41(b).

2. Discussion

B.P.J. argues that H.B. 3293 violates Title IX because it excludes transgender girls from participation on girls' sports teams. B.P.J. argues that this amounts to complete exclusion from school sports altogether, and that it is discrimination because she and other transgender girls are similarly situated to cisgender girls. [ECF No. 291, at 17]. The state responds that the law does not violate Title IX because it does not exclude B.P.J. from school athletics. "To the contrary, it simply designates on which team [she] shall play." [ECF No. 287, at 22]. And, the County Defendants argue that Title IX authorizes sex separation in sports in the same scenarios outlined in H.B. 3293—"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). All Defendants² argue that while it did not define the term, Title IX used "sex" in the biological sense because its purpose was to promote sex equality. Therefore, they argue that H.B. 3293 furthers, not violates, Title IX. I agree.

Title IX authorizes sex separate sports in the same manner as H.B. 3293, so long as overall athletic opportunities for each sex are equal. 34 C.F.R. § 106.41(b)–(c). As other courts that have considered Title IX have recognized, although the regulation "applies equally to boys as well as girls, it would require blinders to ignore that the motivation for the promulgation of the regulation" was to increase opportunities for women and girls in athletics. *Williams v. Sch. Dist. of Bethlehem, Pa.*, 998 F.2d 168, 175 (3d Cir. 1993). There is no serious debate that Title IX's

² Excluding the WVSSAC.

endorsement of sex separation in sports refers to biological sex. Nevertheless, B.P.J. argues that transgender girls are similarly situated to cisgender girls, and therefore their exclusion from girls' teams is unlawful discrimination. But as I have already discussed, transgender girls are biologically male. Short of any medical intervention that will differ for each individual person, biological males are not similarly situated to biological females for purposes of athletics. And, despite her repeated argument to the contrary, transgender girls are not excluded from school sports entirely. They are permitted to try out for boys' teams, regardless of how they express their gender.

I do not find that H.B. 3293, which largely mirrors Title IX, violates Title IX. B.P.J.'s motion for summary judgment on this basis is **DENIED**.

IV. Conclusion

I have no doubt that H.B. 3293 aimed to politicize participation in school athletics for transgender students. Nevertheless, there is not a sufficient record of legislative animus. Considering the law under the intermediate scrutiny standard, I find that it is substantially related to an important government interest. B.P.J.'s motion for summary judgment is **DENIED**. Defendant WVSSAC's motion for summary judgment [ECF No. 276] is **DENIED**. The motions for summary judgment filed by the State of West Virginia [ECF No. 285], the Harrison County defendants [ECF No. 278], the State Board defendants [ECF No. 283], and Intervenor Lainey Armistead [ECF No. 286] are **GRANTED** to the extent they argue that H.B. 3293 is constitutional and complies with Title IX. The preliminary injunction is **DISSOLVED**. All other pending motions are **DENIED as moot**.

The court **DIRECTS** the Clerk to send a copy of this Order to counsel of record and any unrepresented party. The court further **DIRECTS** the Clerk to post a copy of this published opinion on the court's website, www.wvwd.uscourts.gov.

ENTER: January 5, 2023



JOSEPH R. GOODWIN
UNITED STATES DISTRICT JUDGE

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.,

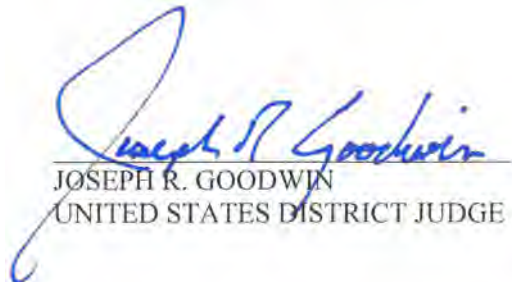
Defendants.

JUDGMENT ORDER

The court **ORDERS** that judgment be entered in accordance with accompanying Memorandum Opinion and Order, and that this case be dismissed and stricken from the docket.

The court **DIRECTS** the Clerk to send a certified copy of this Judgment Order to counsel of record and to any unrepresented party.

ENTER: January 5, 2023


JOSEPH R. GOODWIN
UNITED STATES DISTRICT JUDGE

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

CHARLESTON DIVISION

B. P. J., et al.,

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CIVIL ACTION NO. 2:21-cv-00316

WEST VIRGINIA STATE BOARD OF EDUCATION, et al.,

Defendants.

MEMORANDUM OPINION & ORDER

A fear of the unknown and discomfort with the unfamiliar have motivated many of the most malignant harms committed by our country's governments on their own citizens. Out of fear of those less like them, the powerful have made laws that restricted who could attend what schools, who could work certain jobs, who could marry whom, and even how people can practice their religions. Recognizing that classifying human beings in ways that officially sanction harm is antithetical to democracy, the states ratified the Fourteenth Amendment. It ensures that no state may "deny to any person within its jurisdiction the equal protection of the laws." Accordingly, the courts are most juberous of any law—state or federal—that treats groups of people differently.

The matter before me today is a motion to preliminarily enjoin a recently passed state law. Those standing in opposition to this law assert that it was enacted to incite fear and exclude certain persons rather than to address a legitimate government interest. At this point, I have been provided with scant evidence that this law addresses any problem at all, let alone an important problem. When the

government distinguishes between different groups of people, those distinctions must be supported by compelling reasons. Having determined that Plaintiff has a likelihood of success in demonstrating that this statute is unconstitutional as it applies to her and that it violates Title IX, Plaintiff's Motion for a Preliminary Injunction is **GRANTED**.

I. Plaintiff and Her Claims

B.P.J. is an eleven-year-old girl preparing to begin the sixth grade at a new school. Like many of her peers, B.P.J. intends to participate in school athletics. She hopes to join both the girls' cross country and track teams. However, B.P.J. was informed by her school that because of a new statute, she will no longer be permitted to join either team because she is a transgender girl.

For a definition of terms such as gender identity,¹ gender dysphoria,² cisgender,³ etc., I refer to the meticulously researched and written opinion in *Grimm v. Gloucester County School Board*, 972 F.3d 586, 594–597 (4th Cir. 2020). I adopt the definition of transgender used in that opinion. “‘Transgender’ is . . . ‘used as an umbrella term to describe groups of people who transcend conventional expectations of gender identity or expression.’” *Grimm*, 972 at 596 (quoting *PFLAG, PFLAG National Glossary of Terms* (July 2019), <http://pflag.org/glossary>).

B.P.J. writes in depth about her history—revealing publicly what are inherently private details—to educate both the court and public. B.P.J. is a transgender girl who, while assigned the sex of male at birth, knew from a young age that she is a girl. [ECF No. 64, ¶ 31]. By the third grade, B.P.J. was living as a girl at

¹ One's “deeply felt, inherent sense” of one's gender. *Grimm*, 927 F.3d at 594.

² “[A] condition that is characterized by debilitating distress and anxiety resulting from the incongruence between an individual's gender identity and birth-assigned sex.” *Grimm*, 927 F.3d at 594–95.

³ A person whose gender identity aligns with her sex-assigned-at-birth. *Grimm*, 927 F.3d at 594.

home but dressing as a boy at school. *Id.* B.P.J. then asked to change her name to a name commonly associated with girls and began living as a girl in both public and private. *Id.* B.P.J. also joined her elementary school's all-girl cheerleading team. *Id.* at ¶ 36. B.P.J. practiced and competed with this team without incident.

B.P.J. was diagnosed with gender dysphoria in 2019. *Id.* at ¶ 33. She began puberty-delaying treatment on June 15, 2020, to treat that condition.⁴ Plaintiff avers that this treatment, which prevents endogenous puberty and therefore any physiological changes caused by increased testosterone circulation, prevents her from developing any physiological advantage over other girl athletes.⁵

B.P.J., through her mother, filed this lawsuit against the West Virginia State Board of Education, the Harrison County Board of Education, the West Virginia Secondary Schools Activities Commission ("WVSSAC"), State Superintendent W. Clayton Burch, and Harrison County Superintendent Dora Stutler. The State of West Virginia moved to intervene, and that motion was granted. Plaintiff then amended her complaint, [ECF No. 64], naming both the State and Attorney General Patrick Morrisey as defendants.

In her complaint, B.P.J. alleges that Defendants Burch, Stutler, the WVSSAC, and Attorney General Morrisey deprived her of the equal protection guaranteed to her by the Fourteenth Amendment and that the State, the State Board of Education,

⁴ "The medical treatment for gender dysphoria is to eliminate [] clinically significant distress by helping a transgender person live in alignment with their gender identity." [ECF No. 2-1, Adkins Decl., at 5]. For some transgender youth, the distress from gender dysphoria is addressed through puberty blocking treatment. *Id.* at 6. "Puberty blocking treatment allows transgender youth to avoid going through their endogenous puberty thereby avoiding the heightened gender dysphoria and permanent physical changes that puberty would cause." *Id.* The State cites to experts who question when social transition and puberty blocking treatment are appropriate for young people. *See*, [ECF No. 49, Ex. E]. But what is or should be the default treatment for transgender youth is not the question before the court.

⁵ The NCAA and the International Olympic Committee, which both permit transgender women to compete as women in athletic events, require that the athletes suppress their testosterone for a certain period of time or that it be suppressed below a particular threshold.

the Harrison County Board of Education, and the WVSSAC have violated Title IX. [ECF No. 64, at 20–23]. B.P.J. seeks a declaratory judgment that Section 18-2-25d of the West Virginia Code violates Title IX and the Equal Protection Clause; an injunction preventing Defendants from enforcing the law against her; a waiver of the requirement of a surety bond for preliminary injunctive relief; nominal damages; and reasonable attorneys' fees.

The motion for a preliminary injunction that accompanies her complaint seeks relief only insofar as this law applies to her. That is, granting this motion will only prevent the State and other Defendants from enforcing Section 18-2-25d against B.P.J. Whether the law is facially unconstitutional is an issue raised in the Complaint and will be resolved at a later stage of litigation.

II. The Law

On March 18, 2021, ten delegates in the West Virginia House of Delegates introduced House Bill 3293, strategically referred to as the “Save Women’s Sports Bill.” West Virginia Governor Jim Justice signed the bill into law on April 28, 2021, and it was codified as West Virginia Code, Section 18-2-25d, entitled “Clarifying participation for sports events to be based on biological sex of the athlete at birth.”

The statute begins by noting that “[t]here are inherent differences between biological males and biological females, and that these differences are cause for celebration, as determined by the Supreme Court of the United States in *United States v. Virginia* (1996).” § 18-2-25d(a)(1). The statute then provides a series of definitions, all at issue here:

(1) “Biological sex” means an individual’s physical form as a male or female based solely on the individual’s reproductive biology and genetics at birth.

(2) “Female” means an individual whose biological sex determined at birth is female. As used in this section, “women” or “girls” refers to biological females.

(3) “Male” means an individual whose biological sex determined at birth is male. As used in this section, “men” or “boys” refers to biological males.

§ 18-2-25d(b)(1)–(3).

Using these definitions, the gravamen of the statute requires that “[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,” “shall be expressly designated as one of the following based on biological sex: (A) Males, men, or boys; (B) Females, women, or girls; or (C) Coed or mixed.” § 18-2-25d(c)(1). Once those teams are properly designated, the statute goes on to address who may participate on which teams. “Athletic 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.” § 18-2-25d(c)(1).

According to the statute’s text, its definition of “biological sex” has nothing to do with gender identity. “Gender identity is separate and distinct from biological sex to the extent that an individual’s biological sex is not determinative or indicative of the individual’s gender identity. Classifications 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.” § 18-2-25d(a)(4).

The State asserts that the objective of the statute is to provide equal athletic opportunities for female athletes and to protect the physical safety of female athletes when competing. [ECF No. 49, at 7]. Plaintiff argues that the State’s assertion is a

façade concealing the true objective: to exclude transgender girls and women from participating in sports.

III. The Preliminary Injunction

The United States Supreme Court and the United States Court of Appeals for the Fourth Circuit have provided district courts with a precise analytical framework for determining whether to grant preliminary injunctive relief. First, B.P.J. must make a clear showing that she will likely succeed on the merits. Second, she must make a clear showing that she is likely to be irreparably harmed absent preliminary relief. Third, she must show that the balance of equities tips in her favor. Finally, B.P.J. must show that an injunction is in the public interest. All four requirements must be satisfied. *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7 (2008); *The Real Truth About Obama, Inc. v. Federal Election Commission*, 575 F.3d 342, 346–47 (4th Cir. 2009), *vacated on other grounds*, 130 S. Ct. 2371 (2010).

a. Likelihood of Success on the Merits

As required by *Natural Resource Defense Counsel*, I must first determine if B.P.J. has demonstrated a clear likelihood of success on the merits of either her Equal Protection Claim or her Title IX Claim. I will address each in turn.

i. Equal Protection Claim

The Equal Protection Clause of the Fourteenth Amendment provides that “[n]o State shall . . . deny to any person within its jurisdiction the equal protection of the laws.” U.S. Const. amend. XIV, § 1. It is “essentially a direction that all persons similarly situated should be treated alike.” *City of Cleburne v. Cleburne Living Ctr.*, 473 U.S. 432, 439 (1985).

The first step in an equal protection analysis is to determine what level of scrutiny I must apply to Section 18-2-25d. The answer to this question turns on what

classifications are created by the law. Plaintiff argues that this law discriminates against transgender girls and only transgender girls because cisgender boys, cisgender girls, and transgender boys are all unaffected by the law's central tenet: non-cisgender girls may not participate on a girls' sports team. [ECF No. 19, at 19]. The State responded that this law does not treat transgender girls differently than other groups because this law is premised on "biological sex," and it treats all "biological males" similarly by prohibiting them from participating on girls' sports teams.

Essentially, the State contends that the Equal Protection Clause is not being violated because B.P.J. is being treated the same under this law as those she is similarly situated with: "biological males" as defined by West Virginia Code § 18-2-25d(b)(3). But this is misleading. Plaintiff is not most similarly situated with cisgender boys; she is similarly situated to other girls. *Accord Grimm*, 972 F.3d at 610 ("The overwhelming thrust of everything in the record . . . is that Grimm was similarly situated to other boys"). Plaintiff has lived as a girl for years. She has competed on the all-girls cheerleading team at her school. She changed her name to a name more commonly associated with girls. And of the girls at her middle school, B.P.J. is the only girl who will be prevented from participating in school-sponsored athletics. Here, there is an inescapable conclusion that Section 18-2-25d discriminates on the basis of transgender status. *Hecox v. Little*, 479 F. Supp. 3d 930, 975 (D. Idaho 2020) ("while the physiological differences the Defendants suggest support the categorical bar on transgender women's participation in women's sports may justify the Act, they do not overcome the inescapable conclusion that the Act discriminates on the basis of transgender status"). The question then is what level of scrutiny applies to classifications based on transgender status.

The Fourth Circuit answered that question in *Grimm*. *Stare decisis* requires that I apply intermediate, or heightened, scrutiny to laws that classify people according to transgender status. *Grimm* arrived at this conclusion from two different directions. First, *Grimm* finds that discrimination against transgender people is inherently based in sex, and therefore the level of scrutiny applicable to sex discrimination applies to transgender discrimination. 972 F.3d at 607. In the alternative, *Grimm* finds that transgender people are a quasi-suspect class and therefore entitled to intermediate scrutiny of laws that treat them differently than non-transgender people. *Id.*

To survive a review under intermediate scrutiny, the government must provide an “exceedingly persuasive justification” for the classification created by a law or policy. *Mississippi Univ. For Women v. Hogan*, 458 U.S. 718, 724 (1982). At a minimum, the government must show that “the classification serves important governmental objectives and that the discriminatory means employed are substantially related to the achievement of those objectives.” *Id.* A law discriminating against a quasi-suspect class “must be genuine, not hypothesized or invented *post hoc* in response to litigation. And it must not rely on overbroad generalizations about the different talents, capacities, or preferences of males and females.” *United States v. Virginia*, 518 U.S. 515, 533 (1996) (citing *Weinberger v. Wiesenfeld*, 420 U.S. 636, 643, 648 (1975)).

“Under intermediate scrutiny, the government bears the burden of establishing a reasonable fit between the challenged statute and a substantial governmental objective.” *United States v. Chapman*, 666 F.3d 220, 226 (4th Cir. 2012) (citing *United States v. Chester*, 628 F.3d 673, 683 (4th Cir. 2010)). The party defending the statute must “present[] sufficient probative evidence in support of its stated rationale for

enacting a gender preference, i.e., . . . the evidence [must be] sufficient to show that the preference rests on evidence-informed analysis rather than on stereotypical generalizations.” *H.B. Rowe Co. v. Tippett*, 615 F.3d 233, 242 (4th Cir. 2010) (quoting *Eng’g Contractors Ass’n of S. Fla. v. Metropolitan Dade Cnty.*, 122 F.3d 895, 910 (11th Cir. 1997)); *Concrete Works of Colorado, Inc. v. City and Cnty. of Denver*, 321 F.3d 950, 959 (10th Cir. 2003) (“[T]he gender-based measures . . . [must be] based on ‘reasoned analysis rather than [on] the mechanical application of traditional, often inaccurate, assumptions.’” (quoting *Mississippi Univ. for Women*, 458 U.S. at 726)).

In this preliminary matter, my inquiry is constrained to whether this statute is unconstitutional *as applied* to B.P.J. An as-applied challenge is “based on a developed factual record and the application of a statute to a specific person[.]” *Educational Media Co. at Va. Tech, Inc. v. Insley*, 731 F.3d 291, 298 n.5 (4th Cir. 2013) (quoting *Richmond Med. Ctr. for Women v. Herring*, 570 F.3d 165, 172 (4th Cir. 2009) (en banc)). “It is axiomatic that a ‘statute may be invalid as applied to one state of facts and yet valid as applied to another.’” *Ayotte v. Planned Parenthood of Northern New England*, 546 U.S. 320, 328 (2006) (quoting *Dahnke-Walker Milling Co. v. Bondurant*, 257 U.S. 282, 289 (1921)).

Here, the State’s proffered objective for the statute is to provide equal athletic opportunities for female athletes and to protect female athletes while they participate in athletics. [ECF No. 49, at 7]. B.P.J. argues that I should reject this offered objective and instead find that the State’s true objective is to exclude transgender women and girls from participating in state-sponsored athletics. While I need not do so, *Virginia*, 518 U.S. at 536, I will proceed as if the State’s offered objective is genuine. Regardless, I find that this statute as applied to B.P.J. is not substantially related to providing equal athletic opportunities for girls.

As described at length in her memorandum in support of her motion for a preliminary injunction, B.P.J. has been living publicly as a girl for over a year at this point. As part of treating her gender dysphoria, B.P.J. has been on puberty delaying drugs for over a year. As a result, B.P.J. has not undergone and will not undergo endogenous puberty, the process that most young boys undergo that creates the physical advantages warned about by the State.

B.P.J. has provided evidence that any physical advantages that men and boys enjoy are derived from higher concentrations of circulating testosterone. This is supported by both the NCAA policy⁶ and the International Olympic Committee's policy⁷ that permit transgender women to compete on teams that align with their gender identity so long as those athletes receive testosterone suppressing treatment. According to B.P.J.'s experts, "there is a medical consensus that the difference in testosterone is generally the primary known driver of differences in athletic performance between elite male athletes and elite female athletes." [ECF No. 2-1, Safer Decl., at 6–7].

The Defendant cites to an expert who asserts that for transgender athletes who have undergone endogenous puberty, later suppression of testosterone does not eradicate all competitive advantage. [ECF No. 49, Ex. G]. Like Judge Nye in the District of Idaho, I find this opinion unpersuasive. *See Hecox v. Little*, 479 F. Supp. 3d 930, 980 (D. Idaho 2020). While that argument may be relevant to a facial challenge of the statute, it is irrelevant to this as-applied analysis. B.P.J. has not undergone endogenous puberty and will not so long as she remains on her prescribed

⁶ *NCAA Inclusion of Transgender Student-Athletes*, NCAA (Aug. 2011), https://www.ncaa.org/sites/default/files/Transgender_Handbook_2011_Final.pdf

⁷ *IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism*, Int'l Olympic Comm. (Nov. 2015), https://stillmed.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2015-11_ioc_consensus_meeting_on_sex_reassignment_and_hyperandrogenism-en.pdf.

puberty blocking drugs. At this preliminary stage, B.P.J. has shown that she will not have any inherent physical advantage over the girls she would compete against on the girls' cross country and track teams.

Further, permitting B.P.J. to participate on the girls' teams would not take away athletic opportunities from other girls. Transgender people make up a small percentage of the population: 0.6% of the adult population generally, and 0.7% of thirteen- to seventeen-year-olds. Herman, Flores, Brown, et al., *Age of Individuals Who Identify as Transgender in the United States*, The Williams Institute (Jan. 2017), <http://williamsinstitute.law.ucla.edu/wp-content/uploads/Age-Trans-Individuals-Jan-2017.pdf>. The number of transgender people who wish to participate in school-sponsored athletics is even smaller. Insofar as I am aware, B.P.J. is the only transgender student at her school interested in school-sponsored athletics. Therefore, I cannot find that permitting B.P.J. to participate on the girls' cross country and track teams would significantly, if at all, prevent other girl athletes from participating.

Finally, as applied to B.P.J., this law cannot possibly protect the physical safety of other girl athletes. Cross country and track are not contact sports. The physical ability of one athlete does not put another in danger in the way it might in another sport like football or hockey.

As applied to B.P.J., Section 18-2-25d is not substantially related to protecting girls' opportunities in athletics or their physical safety when participating in athletics. I find that B.P.J. is likely to succeed on the merits of her equal protection claim.

ii. Title IX

Success on her Title IX claim would require B.P.J. to show “(1) that [she] was excluded from participation in an education program ‘on the basis of sex’; (2) that the

educational institution was receiving federal financial assistance at the time; and (3) that improper discrimination caused [her] harm.” *Grimm*, 972 F.3d at 616 (citing *Preston v. Va. ex rel. New River Cmty. Coll.*, 31 F.3d 203, 206 (4th Cir. 1994)). There is no question that Defendants named in this case received federal funding or that the athletic programs run by Harrison County are part of an education program. Recognizing this, what remains to be determined is whether B.P.J has demonstrated that she will likely succeed in proving that she is being excluded on the basis of sex and that she was harmed by unlawful discrimination.

That B.P.J. is being excluded from school athletics on the basis of her sex is clear. Like the Fourth Circuit’s decision in *Grimm*, I “have little difficulty holding” that Section 18-2-25d discriminates against her “on the basis of sex.” *Grimm*, 972 F.3d at 616; accord *Bostock v. Clayton County*, 140 S. Ct. 1731, 1741 (2020) (holding that discrimination against a person for being transgender is discrimination “on the basis of sex” under Title VII). The law could not exclude B.P.J. from a girls’ athletics team without referencing her “biological sex” as defined in the statute. Her sex “remains a but-for cause” of her exclusion under the law. *Grimm*, 972 F.3d at 616.

Again, as in *Grimm*, I also have little difficulty finding that B.P.J. is harmed by this law. All other students in West Virginia secondary schools—cisgender girls, cisgender boys, transgender boys, and students falling outside of any of these definitions trying to play on the boys’ teams—are permitted to play on sports teams that best fit their gender identity. Under this law, B.P.J. would be the only girl at her school, as far as I am aware, that is forbidden from playing on a girls’ team and must join the boys’ team. Like the discriminatory policy in *Grimm*, this law both stigmatizes and isolates B.P.J.

The final question is whether the law unlawfully discriminates against B.P.J. In the Title IX context, discrimination “mean[s] treating that individual worse than others who are similarly situated.” *Grimm*, 972 F.3d at 618 (quoting *Bostock*, 140 S. Ct. at 1740). Here, as I have stated above, B.P.J. will be treated worse than girls with whom she is similarly situated because she alone cannot join the team corresponding to her gender identity. Considering all of this, I find that B.P.J. has demonstrated a likelihood of success on the merits for her Title IX claim.

b. Irreparable Harm

When a party has shown a likelihood of a constitutional violation, the party has shown an irreparable harm. *Henry v. Greenville Airport Comm’n*, 284 F.2d 631, 633 (4th Cir. 1960). Forcing a girl to compete on the boys’ team when there is a girls’ team available would cause her unnecessary distress and stigma. In addition to the harm to B.P.J., requiring her to compete on the boys’ team would also be confusing to coaches and teammates. And not only would B.P.J. be excluded from girls’ sports completely; she would be excluded because of who she is: a transgender girl. Having found above that her exclusion is likely to be in violation of the Equal Protection Clause and Title IX, I find that B.P.J. has demonstrated that she will be irreparably harmed if this law were to take full effect.

c. Balance of Equities and the Public Interest

Where, as here, the government is a party, the “balance of the equities” and “public interest” prongs of the preliminary injunction test merge. *Nken v. Holder*, 556 U.S. 418, 435 (2009). In evaluating the balance of the equities, courts “must balance the competing claims of injury and must consider the effect on each party of the granting or withholding of the requested relief.” *Winter*, 555 U.S. at 24. It is always

in the public interest to uphold constitutional rights. *Centro Tepeyac v. Montgomery Cnty.*, 722 F.3d 184, 191 (4th Cir. 2013).

It is clearly in the public interest to uphold B.P.J.’s constitutional right to not be treated any differently than her similarly situated peers because any harm to B.P.J.’s personal rights is a harm to the share of American rights that we all hold collectively. The right not to be discriminated against by the government belongs to all of us in equal measure. It is that communal and shared ownership of freedom that makes up the American ideal. The American ideal is one “that never has been yet— And yet must be—the land where *every* man is free.” *Let America be America Again*, *Langston Hughes*.

Plaintiff B.P.J.’s Motion for a Preliminary Injunction is **GRANTED**.

IV. Bond Requirement

Plaintiff also seeks to waive the bond required by Federal Rule of Civil Procedure 65(c). “Where the district court determines that the risk of harm [to the enjoined party] is remote, or that the circumstances otherwise warrant it, the court may fix the amount of the bond accordingly. In some circumstances, a nominal bond may suffice.” *Hoecst Diafoil Co. v. Nan Ya Plastics Corp.*, 174 F.3d 411, 421 n.3 (4th Cir. 1999). This bond can even be waived entirely when the defendant would not suffer any harm from the injunction. *Citizens for a Responsible Curriculum v. Montgomery Cnty. Pub. Sch.*, No. Civ. A. AW-05-1994, 2005 WL 1075634, at *12 (D. Md. May 5, 2005). I find that a bond is unnecessary and waive its requirement in this case.

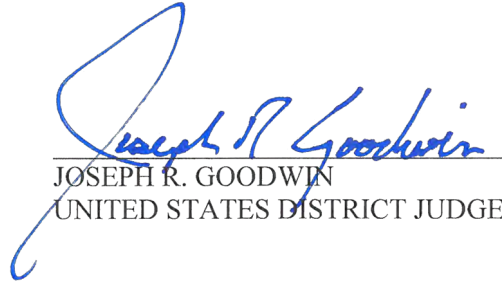
V. Conclusion

For the reasons stated above, Plaintiff’s Motion for a Preliminary Injunction [ECF No. 2] is **GRANTED**. While this case is pending, Defendants are enjoined from

enforcing Section 18-2-25d against B.P.J. She will be permitted to sign up for and participate in school athletics in the same way as her girl classmates.

The court **DIRECTS** the Clerk to send a copy of this Order to counsel of record and any unrepresented party. The court further **DIRECTS** the Clerk to post a copy of this published opinion on the court's website, www.wvwd.uscourts.gov.

ENTER: July 21, 2021



JOSEPH R. GOODWIN
UNITED STATES DISTRICT JUDGE



Kathleen R. Hartnett
T: +1 415 693 2071
khartnett@cooley.com

January 27, 2023

Molly C. Dwyer
Clerk of Court
U.S. Court of Appeals for the Ninth Circuit
95 Seventh Street
San Francisco, CA 94103

Re: *Lindsay Hecox and Jane Doe with her next friends Jean Doe and John Doe v. Bradley Little, et al., and Madison Kenyon and Mary Marshall, Nos. 20-35813, 20-35815*

Dear Ms. Dwyer:

Pursuant to Federal Rule of Appellate Procedure 28(j), Plaintiff-Appellee Lindsay Hecox responds to Intervenor-Appellants' 28(j) letter regarding *Adams v. School Board of St. Johns County* (Dkt. No. 187). *Adams* does not support reversal of the District Court's preliminary injunction: it is inconsistent with this Court's precedent, and its reasoning is inapplicable here.

First, Adams, which analyzed the claim at issue as alleged sex discrimination, does not conflict with this Court's previous holding that discrimination based on transgender status independently triggers heightened scrutiny. *Kamoski v. Trump*, 926 F.3d 1180, 1201 (9th Cir. 2019). Under this "demanding" standard, the proper inquiry is whether Appellants have demonstrated an "exceedingly persuasive" justification for the State's categorical ban of all women and girls who are transgender from school sports. *See United States v. Virginia (VMI)*, 518 U.S. 515, 533 (1996). For the reasons stated in Ms. Hecox's briefing, Appellants have not. *See, e.g.*, Dkt. 65 at 26-37.

Second, the privacy interests alleged in *Adams* are distinct from the state interests asserted here. Under heightened scrutiny, the Court must evaluate the actual, "genuine" government interests that the state said justified H.B. 500 when the legislature passed it. *See VMI*, 518 U.S. at 533. *Adams'* evaluation of state interests that are not at issue here is therefore irrelevant to this Court's inquiry of whether H.B. 500 survives constitutional scrutiny.¹

Finally, the District Court's opinion does not contradict *Clark* (which is not supplemental authority, notwithstanding Appellants' invocation of it in their letter). *Clark* involved a policy preventing cisgender boys from playing volleyball on girls' teams. (*See* 1-ER-62-66.) As the District Court's opinion correctly held, in contrast to the policy in *Clark*, H.B. 500's categorical exclusion of girls who are transgender "discriminates against a historically disadvantaged group" and "entirely eliminates their opportunity to participate in school sports" with no evidence that "allowing transgender women to compete on women's teams would substantially displace female athletes." (1-ER-64-66.)

The District Court's opinion correctly applies this Court's precedent and should be affirmed.

¹ Contrary to Intervenor-Appellants' implication, *Adams'* holding does not apply to sports: the language that Intervenor-Appellants cite in support of their argument is from a one-judge concurrence.

Cooley

Molly C. Dwyer
January 27, 2023
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Sincerely,

/s/ Kathleen R. Hartnett

Kathleen R. Hartnett

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

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

Plaintiff,

vs.

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

Defendants,

and

LAINIEY ARMISTEAD,

Defendant-Intervenor.

Case No. 2:21-cv-00316

Hon. Joseph R. Goodwin

DECLARATION OF GREGORY A. BROWN, PH.D., FACSM

I, Dr. Gregory A. Brown, 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 Declaration of Gregory A. Brown, Ph.D., FACSM in the Case of B.P.J. v. West Virginia State Board of Education, 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.

Executed on February 23, 2022.



Gregory A. Brown

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

Expert Report of
Gregory A Brown, Ph.D. FACSM
In the case of B.P.J. vs. West Virginia State Board of Education.

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Personal Qualifications and Disclosure

I serve as Professor of Exercise Science in the Department of Kinesiology and Sport Sciences at the University of Nebraska Kearney, where I teach classes in Exercise Physiology among other topics. I am also the Director of the General Studies program. I have served as a tenured (and nontenured) professor at universities since 2002.

In August 2002, I received a Doctor of Philosophy degree from Iowa State University, where I majored in Health and Human Performance, with an emphasis in the Biological Bases of Physical Activity. In May 1999, I received a Master of Science degree from Iowa State University, where I majored in Exercise and Sport Science, with an emphasis in Exercise Physiology.

I have received many awards over the years, including the Mortar Board Faculty Excellence Honors Award, College of Education Outstanding Scholarship / Research Award, and the College of Education Award for Faculty Mentoring of Undergraduate Student Research. I have authored more than 40 refereed publications and more than 50 refereed presentations in the field of Exercise Science. I have authored chapters for multiple books in the field of Exercise Science. And I have served as a peer reviewer for over 25 professional journals, including *The American Journal of Physiology*, the *International Journal of Exercise Science*, the *Journal of Strength and Conditioning Research*, and *The Journal of Applied Physiology*.

My areas of research have included the endocrine response to testosterone prohormone supplements in men and women, the effects of testosterone prohormone supplements on health and the adaptations to strength training in men, the effects of energy drinks on the physiological response to exercise, and assessment of various athletic training modes in males and females. Articles that I have published that are closely related to topics that I discuss in this white paper include:

- Studies of the effect of ingestion of a testosterone precursor on circulating testosterone levels in young men. Douglas S. King, Rick L. Sharp, Matthew D. Vukovich, Gregory A. Brown, et al., *Effect of Oral Androstenedione on Serum Testosterone and Adaptations to Resistance Training in Young Men: A Randomized Controlled Trial*, JAMA 281: 2020-2028 (1999); G. A. Brown, M. A. Vukovich, et al., *Effects of Anabolic Precursors on Serum Testosterone Concentrations and Adaptations to Resistance Training in Young Men*, INT J SPORT NUTR EXERC METAB 10: 340-359 (2000).
- A study of the effect of ingestion of that same testosterone precursor on circulating testosterone levels in young women. G. A. Brown, J. C. Dewey, et

al., *Changes in Serum Testosterone and Estradiol Concentrations Following Acute Androstenedione Ingestion in Young Women*, HORM METAB RES 36: 62-66 (2004.)

- A study finding (among other things) that body height, body mass, vertical jump height, maximal oxygen consumption, and leg press maximal strength were higher in a group of physically active men than comparably active women, while the women had higher percent body fat. G. A. Brown, Michael W. Ray, et al., *Oxygen Consumption, Heart Rate, and Blood Lactate Responses to an Acute Bout of Plyometric Depth Jumps in College-Aged Men And Women*, J. STRENGTH COND RES 24: 2475-2482 (2010).
- A study finding (among other things) that height, body mass, and maximal oxygen consumption were higher in a group of male NCAA Division 2 distance runners, while women NCAA Division 2 distance runners had higher percent body fat. Furthermore, these male athletes had a faster mean competitive running speed (~3.44 min/km) than women (~3.88 min/km), even though the men ran 10 km while the women ran 6 km. Katherine Semin, Alvah C. Stahlnecker, Kate A. Heelan, G. A. Brown, et al, *Discrepancy Between Training, Competition and Laboratory Measures of Maximum Heart Rate in NCAA Division 2 Distance Runners*, JOURNAL OF SPORTS SCIENCE AND MEDICINE 7: 455-460 (2008).
- A presentation at the 2021 American Physiological Society New Trends in Sex and Gender Medicine Conference entitled “Transwomen Competing in Women’s Sports: What We Know and What We Don’t”. I have also authored an August 2021 entry for the American Physiological Society Physiology Educators Community of Practice Blog (PECOP Blog) titled “The Olympics, Sex, and Gender in the Physiology Classroom.”

A list of my published scholarly work for the past 10 years appears as an Appendix.

Purpose of this Declaration

I have been asked by counsel for Defendant State of West Virginia and Intervenor Defendant Lainey Armistead in the matter of *B.P.J. by her next friend and mother Heather Jackson, v. State of West Virginia State Board of Education, et al.* to offer my opinions about the following: (a) whether males have inherent advantages in athletic performance over females, and if so the scale and physiological basis of those advantages, to the extent currently understood by science and (b) whether the sex-based performance advantage enjoyed by males is eliminated if feminizing hormones are administered to male athletes who identify as transgender (and in the case of prepubertal children, whether puberty blockers eliminate the advantage). In this declaration, when I use the terms “boy” or “male,” I am referring to biological males based on the individual’s reproductive biology and genetics as determined at birth. Similarly, when I use the terms “girl” or “female,” I am referring to biological females based on the individual’s reproductive biology and genetics as determined at birth. When I use the term transgender, I am referring to persons who are males or females, but who identify as a member of the opposite sex.

I have previously provided expert information in cases similar to this one in the form of a written declaration and a deposition in the case of *Soule vs. CIAC* in the state of Connecticut, and in the form of a written declaration in the case of *Hecox vs. Little* in the state of Idaho. I have not previously testified as an expert in any trials.

The opinions I express in this declaration are my own, and do not necessarily reflect the opinions of my employer, the University of Nebraska.

I have been compensated for my time serving as an expert in this case at the rate of \$150 per hour. My compensation does not depend on the outcome in the case.

Overview

In this declaration, I explore three important questions relevant to current discussions and policy decisions concerning inclusion of transgender individuals in women's athletic competitions. Based on my professional familiarity with exercise physiology and my review of the currently available science, including that contained in the many academic sources I cite in this report, I set out and explain three basic conclusions:

- At the level of (a) elite, (b) collegiate, (c) scholastic, and (d) recreational competition, men, adolescent boys, or male children, have an advantage over equally aged, gifted, and trained women, adolescent girls, or female children in almost all athletic events;
- Biological male physiology is the basis for the performance advantage that men, adolescent boys, or male children have over women, adolescent girls, or female children in almost all athletic events; and
- The administration of androgen inhibitors and cross-sex hormones to men or adolescent boys after the onset of male puberty does not eliminate the performance advantage that men and adolescent boys have over women and adolescent girls in almost all athletic events. Likewise, there is no published scientific evidence that the administration of puberty blockers to males before puberty eliminates the pre-existing athletic advantage that prepubertal males have over prepubertal females in almost all athletic events.

In short summary, men, adolescent boys, and prepubertal male children perform better in almost all sports than women, adolescent girls, and prepubertal female children because of their inherent physiological advantages. In general, men, adolescent boys, and prepubertal male children, can run faster, output more muscular power, jump higher, and possess greater muscular endurance than women, adolescent girls, and prepubertal female children. These advantages become greater during and after male puberty, but they exist before puberty.

Further, while after the onset of puberty males are on average taller and heavier than females, a male performance advantage over females has been measured in weightlifting competitions even between males and females matched for body mass.

Male advantages in measurements of body composition, tests of physical fitness, and athletic performance have also been shown in children before puberty. These advantages are magnified during puberty, triggered in large part by the higher testosterone concentrations in men, and adolescent boys, after the onset of

male puberty. Under the influence of these higher testosterone levels, adolescent boys and young men develop even more muscle mass, greater muscle strength, less body fat, higher bone mineral density, greater bone strength, higher hemoglobin concentrations, larger hearts and larger coronary blood vessels, and larger overall statures than women. In addition, maximal oxygen consumption ($VO_2\text{max}$), which correlates to ~30-40% of success in endurance sports, is higher in both elite and average men and boys than in comparable women and girls when measured in regard to absolute volume of oxygen consumed and when measured relative to body mass.

Although androgen deprivation (that is, testosterone suppression) may modestly decrease some physiological advantages that men and adolescent boys have over women and adolescent girls, it cannot fully or even largely eliminate those physiological advantages once an individual has passed through male puberty.

Evidence and Conclusions

I. The scientific reality of biological sex

1. The scientific starting point for the issues addressed in this report is the biological fact of dimorphic sex in the human species. It is now well recognized that dimorphic sex is so fundamental to human development that, as stated in a recent position paper issued by the Endocrine Society, it “must be considered in the design and analysis of human and animal research. . . . Sex is dichotomous, with sex determination in the fertilized zygote stemming from unequal expression of sex chromosomal genes.” (Bhargava et al. 2021 at 220). As stated by Sax (2002 at 177), “More than 99.98% of humans are either male or female.” All humans who do not suffer from some genetic or developmental disorder are unambiguously male or female.

2. Although sex and gender are used interchangeably in common conversation, government documents, and in the scientific literature, the American Psychological Association defines sex as “physical and biological traits” that “distinguish between males and females” whereas gender “implies the psychological, behavioral, social, and cultural aspects of being male or female (i.e., masculinity or femininity)” (<https://dictionary.apa.org>, accessed January 14, 2022). The concept that sex is an important biological factor determined at conception is a well-established scientific fact that is supported by statements from a number of respected organizations including, but not limited to, the Endocrine Society (Bhargava et al. 2021 at 220), the American Physiological Society (Shah 2014), the Institute of Medicine, and the National Institutes of Health (Miller 2014 at H781-82). Collectively, these and other organizations have stated that every cell has a sex

and every system in the body is influenced by sex. Indeed, “sex often influences gender, but gender cannot influence sex.” (Bhargava 2021 at 228.)

3. To further explain: “The classical biological definition of the **2 sexes** is that females have ovaries and make larger female gametes (eggs), whereas males have testes and make smaller male gametes (sperm) ... the definition can be extended to the ovaries and testes, and in this way the categories—female and male—can be applied also to individuals who have gonads but do not make gametes ... sex is dichotomous because of the different roles of each sex in reproduction.” (Bhargava 2021 at 221.) Furthermore, “sex determination begins with the inheritance of XX or XY chromosomes” (Bhargava 2021 at 221.) And, “Phenotypic sex differences develop in XX and XY embryos as soon as transcription begins. The categories of X and Y genes that are unequally represented or expressed in male and female mammalian zygotes ... cause phenotypic sex differences” (Bhargava 2021 at 222.)

4. Although disorders of sexual development (DSDs) are sometimes confused with discussions of transgender individuals, the two are different phenomena. DSDs are disorders of physical development. Many DSDs are “associated with genetic mutations that are now well known to endocrinologists and geneticists.” (Bhargava 2021 at 225) By contrast, a sense of transgender identity is usually not associated with any physical disorder, and “a clear biological causative underpinning of gender identity remains to be demonstrated.” (Bhargava 2021 at 226.)

5. Further demonstrating the biological importance of sex, Gershoni and Pietrokovski (2017) detail the results of an evaluation of “18,670 out of 19,644 informative protein-coding genes in men versus women” and reported that “there are over 6500 protein-coding genes with significant S[ex]D[ifferential] E[xpression] in at least one tissue. Most of these genes have SDE in just one tissue, but about 650 have SDE in two or more tissues, 31 have SDE in more than five tissues, and 22 have SDE in nine or more tissues” (Gershoni 2017 at 2-3.) Some examples of tissues identified by these authors that have SDE genes include breast mammary tissue, skeletal muscle, skin, thyroid gland, pituitary gland, subcutaneous adipose, lung, and heart left ventricle. Based on these observations the authors state “As expected, Y-linked genes that are normally carried only by men show SDE in many tissues” (Gershoni 2017 at 3.) As stated by Heydari et al. (2022, at 1), “Y chromosome harbors male-specific genes, which either solely or in cooperation with their X-counterpart, and independent or in conjunction with sex hormones have a considerable impact on basic physiology and disease mechanisms in most or all tissues development.”

6. In a review of 56 articles on the topic of sex-based differences in skeletal muscle, Haizlip et al., (2015) state that “More than 3,000 genes have been

identified as being differentially expressed between male and female skeletal muscle.” (Haizlip 2015 at 30.) Furthermore, the authors state that “Overall, evidence to date suggests that skeletal muscle fiber-type composition is dependent on species, anatomical location/function, and sex” (Haizlip 2015 at 30.) The differences in genetic expression between males and females influence the skeletal muscle fiber composition (i.e. fast twitch and fast twitch sub-type and slow twitch), the skeletal muscle fiber size, the muscle contractile rate, and other aspects of muscle function that influence athletic performance. As the authors review the differences in skeletal muscle between males and females they conclude, “Additionally, all of the fibers measured in men have significantly larger cross-sectional areas (CSA) compared with women.” (Haizlip 2015 at 31.) The authors also explore the effects of thyroid hormone, estrogen, and testosterone on gene expression and skeletal muscle function in males and females. One major conclusion by the authors is that “The complexity of skeletal muscle and the role of sex adding to that complexity cannot be overlooked.” (Haizlip 2015 at 37.) The evaluation of SDE in protein coding genes helps illustrate that the differences between men and women are intrinsically part of the chromosomal and genetic makeup of humans which can influence many tissues that are inherent to the athletic competitive advantages of men compared to women.

II. Biological men, or adolescent boys, have large, well-documented performance advantages over women and adolescent girls in almost all athletic contests.

7. It should scarcely be necessary to invoke scientific experts to “prove” that men are on average larger, stronger, and faster than women. All of us, along with our siblings and our peers and perhaps our children, have passed through puberty, and we have watched that differentiation between the sexes occur. This is common human experience and knowledge.

8. Nevertheless, these differences have been extensively studied and measured. I cited many of these studies in the first paper on this topic that I prepared, which was submitted in litigation in January 2020. Since then, in light of current controversies, several authors have compiled valuable collections or reviews of data extensively documenting this objective fact about the human species, as manifest in almost all sports, each of which I have reviewed and found informative. These include Coleman (2020), Hilton & Lundberg (2021), World Rugby (2020), Harper (2021), Hamilton (2021), and a “Briefing Book” prepared by the Women’s Sports Policy Working Group (2021). The important paper by Handelsman et al. (2018) also gathers scientific evidence of the systematic and large male athletic advantage.

9. These papers and many others document that men, adolescent boys, and prepubertal male children, substantially outperform comparably aged women,

adolescent girls and prepubertal female children, in competitions involving running speed, swimming speed, cycling speed, jumping height, jumping distance, and strength (to name a few, but not all, of the performance differences). As I discuss later, it is now clear that these performance advantages for men, adolescent boys, and prepubertal male children, are inherent to the biological differences between the sexes.

10. In fact, I am not aware of any scientific evidence today that disproves that after puberty men possess large advantages in athletic performance over women—so large that they are generally insurmountable for comparably gifted and trained athletes at every level (i.e. (a) elite, (b) collegiate, (c) scholastic, and (d) recreational competition). And I am not aware of any scientific evidence today that disproves that these measured performance advantages are at least largely the result of physiological differences between men and women which have been measured and are reasonably well understood.

11. My use of the term “advantage” in this paper must not be read to imply any normative judgment. The adult female physique is simply different from the adult male physique. Obviously, it is optimized in important respects for the difficult task of childbearing. On average, women require far fewer calories for healthy survival. Evolutionary biologists can and do theorize about the survival value or “advantages” provided by these and other distinctive characteristics of the female physique, but I will leave that to the evolutionary biologists. I use “advantage” to refer merely to performance advantages in athletic competitions.

12. I find in the literature a widespread consensus that the large performance and physiological advantages possessed by males—rather than social considerations or considerations of identity—are precisely the *reason* that most athletic competitions are separated by sex, with women treated as a “protected class.” To cite only a few statements accepting this as the justification:

- Handelsman et al. (2018) wrote, “Virtually all elite sports are segregated into male and female competitions. The main justification is to allow women a chance to win, as women have major disadvantages against men who are, on average, taller, stronger, and faster and have greater endurance due to their larger, stronger, muscles and bones as well as a higher circulating hemoglobin level.” (803)
- Millard-Stafford et al. (2018) wrote “Current evidence suggests that women will not swim or run as fast as men in Olympic events, which speaks against eliminating sex segregation in these individual sports” (530) “Given the historical context (2% narrowing in swimming over 44 y), a reasonable assumption might be that no more than 2% of the

current performance gap could still potentially be attributed to sociocultural influences.”, (533) and “Performance gaps between US men and women stabilized within less than a decade after federal legislation provided equal opportunities for female participation, but only modestly closed the overall gap in Olympic swimming by 2% (5% in running).” (533) Dr. Millard-Stafford, a full professor at Georgia Tech, holds a Ph.D. in Exercise Physiology and is a past President of the American College of Sports Medicine.

- In 2021, Hilton et al. wrote, “most sports have a female category the purpose of which is the protection of both fairness and, in some sports, safety/welfare of athletes who do not benefit from the physiological changes induced by male levels of testosterone from puberty onwards.” (204)
- In 2020 the Swiss High Court (“Tribunal Fédéral”) observed that “in most sports . . . women and men compete in two separate categories, because the latter possess natural advantages in terms of physiology.”¹
- The members of the Women’s Sports Policy Working Group wrote that “If sports were not sex-segregated, female athletes would rarely be seen in finals or on victory podiums,” and that “We have separate sex sport and eligibility criteria based on biological sex because this is the only way we can assure that female athletes have the same opportunities as male athletes not only to participate but to win in competitive sport. . . . If we did not separate athletes on the basis of biological sex—if we used any other physical criteria—we would never see females in finals or on podiums.” (WSPWG Briefing Book 2021 at 5, 20.)
- In 2020, the World Rugby organization stated that “the women's category exists to ensure protection, safety and equality for those who do not benefit from the biological advantage created by these biological performance attributes.” (World Rugby Transgender Women Guidelines 2020.)
- In 2021 Harper et al. stated “...the small decrease in strength in transwomen after 12–36 months of GAHT [Gender Affirming Hormone Therapy] suggests that transwomen likely retain a strength advantage

¹ “dans la plupart des sports . . . les femmes et les hommes concourent dans deux catégories séparées, ces derniers étant naturellement avantagés du point de vue physique.” Tribunal Fédéral decision of August 25, 2020, Case 4A_248/2019, 4A_398/2019, at §9.8.3.3.

over cisgender women.” (7) and “...observations in trained transgender individuals are consistent with the findings of the current review in untrained transgender individuals, whereby 30 months of GAHT may be sufficient to attenuate some, but not all, influencing factors associated with muscular endurance and performance.” (8)

- Hamilton et al. (2021), in a consensus statement for the International Federation of Sports Medicine (FIMS) concluded that “Transwomen have the right to compete in sports. However, cisgender women have the right to compete in a protected category.” (1409)

13. While the sources I mention above gather more extensive scientific evidence of this uncontroversial truth, I provide here a brief summary of representative facts concerning the male advantage in athletic performance.

A. Men are stronger.

14. Males exhibit greater strength throughout the body. Both Handelsman et al. (2018) and Hilton & Lundberg (2021) have gathered multiple literature references that document this fact in various muscle groups.

15. Men have in the neighborhood of 60%-100% greater **arm strength** than women. (Handelsman 2018 at 812.)² One study of elbow flexion strength (basically, bringing the fist up towards the shoulder) in a large sample of men and women found that men exhibited 109% greater isometric strength, and 89% higher strength in a single repetition. (Hilton 2021 at 204, summarizing Hubal (2005) at Table 2.)

16. **Grip strength** is often used as a useful proxy for strength more generally. In one study, men showed on average 57% greater grip strength than women. (Bohannon 2019.) A wider meta-analysis of multiple grip-strength studies not limited to athletic populations found that 18- and 19-year-old males exhibited in

² Handelsman expresses this as women having 50% to 60% of the “upper limb” strength of men. Handelsman cites Sale, *Neuromuscular function*, for this figure and the “lower limb” strength figure. Knox et al., *Transwomen in elite sport* (2018) are probably confusing the correct way to state percentages when they state that “differences lead to decreased trunk and lower body strength by 64% and 72% respectively, in women” (397): interpreted literally, this would imply that men have **almost 4x as much** lower body strength as do women.

the neighborhood of 2/3 greater grip strength than females. (Handelsman 2017 Figure 3, summarizing Silverman 2011 Table 1.)³

17. In an evaluation of maximal isometric handgrip strength in 1,654 healthy men, 533 healthy women aged 20-25 years and 60 “highly trained elite female athletes from sports known to require high hand-grip forces (judo, handball),” Leyk et al. (2007) observed that, “The results of female national elite athletes even indicate that the strength level attainable by extremely high training will rarely surpass the 50th percentile of untrained or not specifically trained men.” (Leyk 2007 at 415.)

18. Men have in the neighborhood of 25%-60% greater **leg strength** than women. (Handelsman 2018 at 812.) In another measure, men exhibit 54% greater knee extension torque and this male leg strength advantage is consistent across the lifespan. (Neder 1999 at 120-121.)

19. When male and female Olympic weightlifters of the same body weight are compared, the top males lift weights between 30% and 40% greater than the females of the same body weight. But when top male and female performances are compared in powerlifting, without imposing any artificial limitations on bodyweight, the male record is 65% higher than the female record. (Hilton 2021 at 203.)

20. In another measure that combines many muscle groups as well as weight and speed, moderately trained males generated 162% greater punching power than females even though men do not possess this large an advantage in any single bio-mechanical variable. (Morris 2020.) This objective reality was subjectively summed up by women’s mixed-martial arts fighter Tamikka Brents, who suffered significant facial injuries when she fought against a biological male who identified as female and fought under the name of Fallon Fox. Describing the experience, Brents said:

“I’ve fought a lot of women and have never felt the strength that I felt in a fight as I did that night. I can’t answer whether it’s because she was born a man or not because I’m not a doctor. I can only say, I’ve never felt so overpowered ever in my life, and I am an abnormally strong female in my own right.”⁴

³ Citing Silverman, *The secular trend for grip strength in Canada and the United States*, *J. Sports Sci.* 29:599-606 (2011).

⁴ <http://whoatv.com/exclusive-fallon-foxs-latest-opponent-opens-up-to-whoatv/> (last accessed October 5, 2021).

B. Men run faster.

21. Many scholars have detailed the wide performance advantages enjoyed by men in running speed. One can come at this reality from a variety of angles.

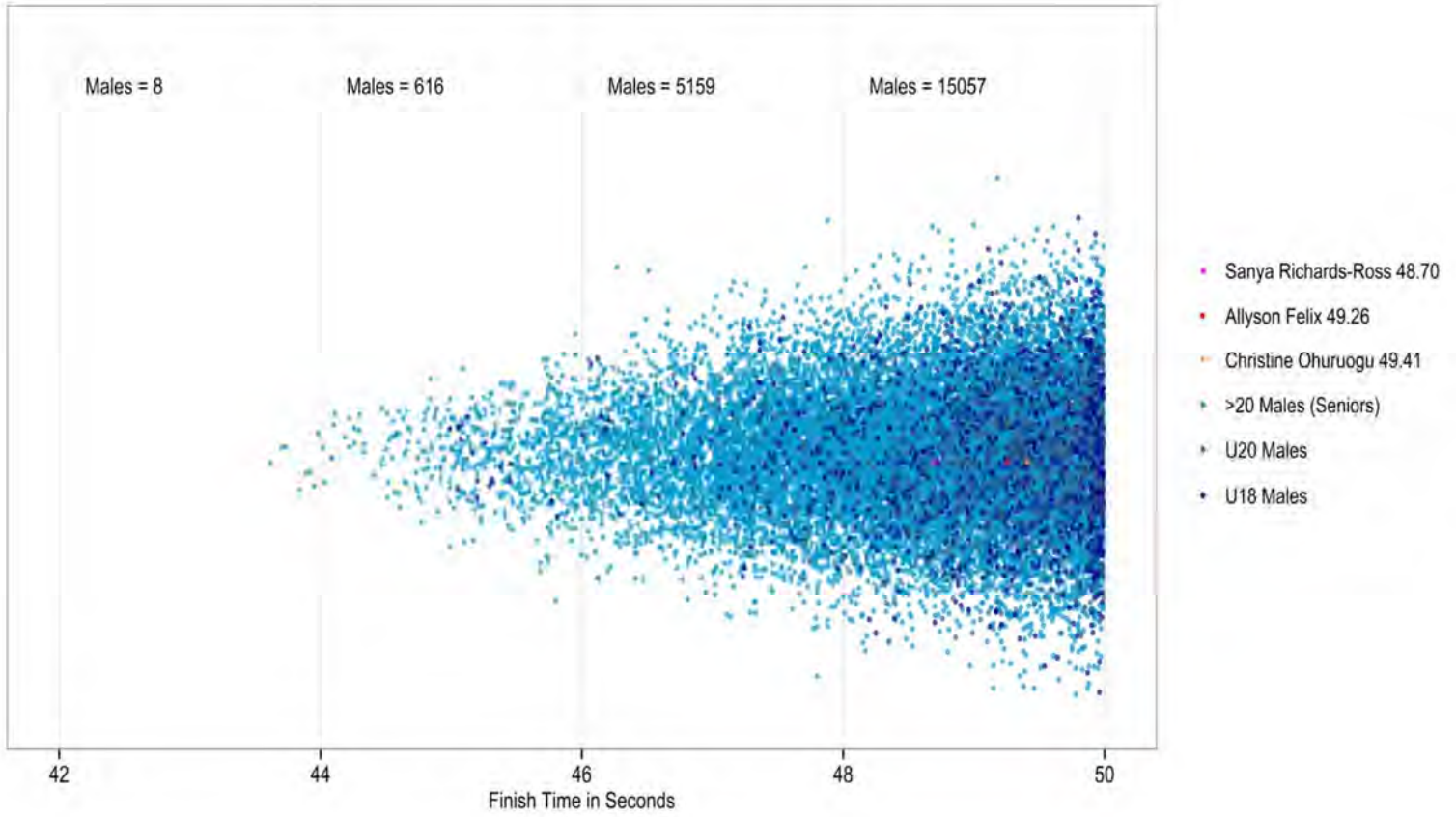
22. Multiple authors report a male speed advantage in the neighborhood of 10%-13% in a variety of events, with a variety of study populations. Handelsman et al. 2018 at 813 and Handelsman 2017 at 70 both report a male advantage of about 10% by age 17. Thibault et al. 2010 at 217 similarly reported a stable 10% performance advantage across multiple events at the Olympic level. Tønnessen et al. (2015 at 1-2) surveyed the data and found a consistent male advantage of 10%-12% in running events after the completion of puberty. They document this for both short sprints and longer distances. One group of authors found that the male advantage increased dramatically in ultra-long-distance competition (Lepers & Knechtle 2013.)

23. A great deal of current interest has been focused on track events. It is worth noting that a recent analysis of publicly available sports federation and tournament records found that men enjoy the *least* advantage in running events, as compared to a range of other events and metrics, including jumping, pole vaulting, tennis serve speed, golf drives, baseball pitching speed, and weightlifting. (Hilton 2021 at 201-202.) Nevertheless, as any serious runner will recognize, the approximately 10% male advantage in running is an overwhelming difference. Dr. Hilton calculates that “approximately 10,000 males have personal best times that are faster than the current Olympic 100m female champion.” (Hilton 2021 at 204.) Professors Doriane Coleman, Jeff Wald, Wickliffe Shreve, and Richard Clark dramatically illustrated this by compiling the data and creating the figure below (last accessed on February 10, 2022, at <https://bit.ly/35yOyS4>), which shows that the *lifetime best performances* of three female Olympic champions in the 400m event—including Team USA’s Sanya Richards-Ross and Allyson Felix—would not match the performances of “literally thousands of boys and men, including thousands who would be considered second tier in the men’s category” *just in 2017 alone*: (data were drawn from the International Association of Athletics Federations (IAAF) website which provides complete, worldwide results for individuals and events, including on an annual and an all-time basis).

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

Comparing the Best Elite Females to Boys and Men:
Personal Bests for 3 Female Gold Medalists versus 2017 Performances by Boys and Men



24. Professor Coleman and her colleague Wicklyffe Shreve also created the table below (last accessed on February 10, 2022, at <https://bit.ly/37E1s2X>), which “compares the number of men—males over 18—competing in events reported to the International Association of Athletics Federation whose results in each event in 2017 would have ranked them above the very best elite woman that year.”

Event	Best Women’s Result	Best Men’s Result	# of Men Outperforming
100 Meters	10.71	9.69	2,474
200 Meters	21.77	19.77	2,920
400 Meters	49.46	43.62	4,341
800 Meters	1:55.16*	1:43.10	3,992+
1500 Meters	3:56.14	3:28.80	3,216+
3000 Meters	8:23.14	7:28.73	1307+
5000 Meters	14:18.37	12:55.23	1,243
High Jump	2.06 meters	2.40 meters	777
Pole Vault	4.91 meters	6.00 meters	684
Long Jump	7.13 meters	8.65 meters	1,652
Triple Jump	14.96 meters	18.11 meters	969

25. The male advantage becomes insuperable well before the developmental changes of puberty are complete. Dr. Hilton documents that even “schoolboys”—defined as age 15 and under—have beaten the female world records in running, jumping, and throwing events. (Hilton 2021 at 204.)

26. Similarly, Coleman and Shreve created the table below (last accessed on February 10, 2022, at <https://bit.ly/37E1s2X>), which “compares the number of boys—males under the age of 18—whose results in each event in 2017 would rank them above the single very best elite [adult] woman that year:” data were drawn from the International Association of Athletics Federations (IAAF) website

Event	Best Women’s Result	Best Boys’ Result	# of Boys Outperforming
100 Meters	10.71	10.15	124+
200 Meters	21.77	20.51	182
400 Meters	49.46	45.38	285
800 Meters	1:55.16*	1:46.3	201+
1500 Meters	3:56.14	3:37.45	101+
3000 Meters	8:23.14	7:38.90	30
5000 Meters	14:18.37	12:55.58	15
High Jump	2.06 meters	2.25 meters	28
Pole Vault	4.91 meters	5.31 meters	10
Long Jump	7.13 meters	7.88 meters	74
Triple Jump	14.96 meters	17.30 meters	47

27. In an analysis I have performed of running events (consisting of the 100 m, 200 m, 400 m, 800 m, 1500 m, 5000 m, and 10000 m) in the Division 1, Division 2, and Division 3 NCAA Outdoor track championships for the years of 2010-2019, the average performance across all events of the 1st place man was 14.1% faster than the 1st place woman, with the smallest difference being a 10.2% advantage for men in the Division 1 100 m race. The average 8th place man across all events (the last place to earn the title of All American) was 11.2% faster than 1st place woman, with the smallest difference being a 6.5% advantage for men in the Division 1 100 m race. (Brown et al. Unpublished observations, to be presented at the 2022 Annual Meeting of the American College of Sports Medicine.)

28. Athletic.net® is an internet-based resource providing “results, team, and event management tools to help coaches and athletes thrive.” Among the resources available on Athletic.net are event records that can be searched by nationally or by state age group, school grade, and state. Higerd (2021) in an evaluation of high school track running performance records from five states (CA, FL, MN, NY, WA), over three years (2017 – 2019) observed that males were 14.38% faster than females in the 100M (at 99), 16.17% faster in the 200M (at 100), 17.62% faster in the 400M (at 102), 17.96% faster in the 800M (at 103), 17.81% faster in the 1600M (at 105), and 16.83% faster in the 3200M (at 106).

C. Men jump higher and farther.

29. Jumping involves both leg strength and speed as positive factors, with body weight of course a factor working against jump height. Despite their substantially greater body weight, males enjoy an even greater advantage in jumping than in running. Handelsman 2018 at 813, looking at youth and young adults, and Thibault 2010 at 217, looking at Olympic performances, both found male advantages in the range of 15%-20%. See also Tønnessen 2015 (approximately 19%); Handelsman 2017 (19%); Hilton 2021 at 201 (18%). Looking at the vertical jump called for in volleyball, research on elite volleyball players found that males jumped on average 50% higher during an “attack” at the net than did females. (Sattler 2015; see also Hilton 2021 at 203 (33% higher vertical jump).)

30. Higerd (2021) in an evaluation of high school high jump performance available through the track and field database athletic.net®, which included five states (CA, FL, MN, NY, WA), over three years (2017 – 2019) (at 82) observed that in 23,390 females and 26,843 males, females jumped an average of 1.35 m and males jumped an average of 1.62 m, for an 18.18% performance advantage for males (at 96). In an evaluation of long jump performance in 45,705 high school females and 54,506 high school males the females jumped an average of 4.08 m and males jumped an average of 5.20 m, for a 24.14% performance advantage for males (at 97).

31. The combined male advantage of body height and jump height means, for example, that a total of seven women in the WNBA have ever dunked a basketball in the regulation 10 foot hoop,⁵ while the ability to dunk appears to be almost universal among NBA players: “Since the 1996–97 season (the earliest data is available from Basketball-Reference.com), 1,801 different [NBA] players have combined for 210,842 regular-season dunks, and 1,259 out of 1,367 players (or 92%) who have played at least 1,000 minutes have dunked at least once.”⁶

D. Men throw, hit, and kick faster and farther.

32. Strength, arm-length, and speed combine to give men a large advantage over women in throwing. This has been measured in a number of studies.

33. One study of elite male and female baseball pitchers showed that men throw baseballs 35% faster than women—81 miles/hour for men vs. 60 miles/hour for women. (Chu 2009.) By age 12, “boys’ throwing velocity is already between 3.5 and 4 standard deviation units higher than the girls’.” (Thomas 1985 at 276.) By age seventeen, the *average* male can throw a ball farther than 99% of seventeen-year-old females. (Lombardo 2018; Chu 2009; Thomas 1985 at 268.) Looking at publicly available data, Hilton & Lundberg found that in both baseball pitching and the field hockey “drag flick,” the *record* ball speeds achieved by males are more than 50% higher than those achieved by females. (Hilton 2021 at 202-203.)

34. Men achieve serve speeds in tennis more that 15% faster than women; and likewise in golf achieve ball speeds off the tee more than 15% faster than women. (Hilton 2021 at 202.)

35. Males are able to throw a javelin more than 30% farther than females. (Lombardo 2018 Table 2; Hilton 2021 at 203.)

36. Men serve and spike volleyballs with higher velocity than women, with a performance advantage in the range of 29-34%. (Hilton 2021 at 204 Fig. 1.)

37. Men are also able to kick balls harder and faster. A study comparing collegiate soccer players found that males kick the ball with an average 20% greater velocity than females. (Sakamoto 2014.)

⁵ https://www.espn.com/wnba/story/_/id/32258450/2021-wnba-playoffs-brittney-griner-owns-wnba-dunking-record-coming-more.

⁶ <https://www.si.com/nba/2021/02/22/nba-non-dunkers-patty-mills-tj-mccconnell-steve-novak-daily-cover>

E. Males exhibit faster reaction times.

38. Interestingly, men enjoy an additional advantage over women in reaction time—an attribute not obviously related to strength or metabolism (e.g. VO_2max). “Reaction time in sports is crucial in both simple situations such as the gun shot in sprinting and complex situations when a choice is required. In many team sports this is the foundation for tactical advantages which may eventually determine the outcome of a game.” (Dogan 2009 at 92.) “Reaction times can be an important determinant of success in the 100m sprint, where medals are often decided by hundredths or even thousandths of a second.” (Tønnessen 2013 at 885.)

39. The existence of a sex-linked difference in reaction times is consistent over a wide range of ages and athletic abilities. (Dykiert 2012.) Even by the age of 4 or 5, in a ruler-drop test, males have been shown to exhibit 4% to 6% faster reaction times than females. (Latorre-Roman 2018.) In high school athletes taking a common baseline “ImPACT” test, males showed 3% faster reaction times than females. (Mormile 2018.) Researchers have found a 6% male advantage in reaction times of both first-year medical students (Jain 2015) and world-class sprinters (Tønnessen 2013).

40. Most studies of reaction times use computerized tests which ask participants to hit a button on a keyboard or to say something in response to a stimulus. One study on NCAA athletes measured “reaction time” by a criterion perhaps more closely related to athletic performance—that is, how fast athletes covered 3.3 meters after a starting signal. Males covered the 3.3 meters 10% faster than females in response to a visual stimulus, and 16% faster than females in response to an auditory stimulus. (Spierer 2010.)

41. Researchers have speculated that sex-linked differences in brain structure, as well as estrogen receptors in the brain, may be the source of the observed male advantage in reaction times, but at present this remains a matter of speculation and hypothesis. (Mormile at 19; Spierer at 962.)

III. Men have large measured physiological differences compared to women which demonstrably or likely explain their performance advantages.

42. No single physiological characteristic alone accounts for all or any one of the measured advantages that men enjoy in athletic performance. However, scientists have identified and measured a number of physiological factors that contribute to superior male performance.

A. Men are taller and heavier than women

43. In some sports, such as basketball and volleyball, height itself provides competitive advantage. While some women are taller than some men, based on data from 20 countries in North America, Europe, East Asia, and Australia, the 50th percentile for body height for women is 164.7 cm (5 ft 5 inches) and the 50th percentile for body height for men is 178.4 cm (5 ft 10 inches). Helping to illustrate the inherent height difference between men and women, from the same data analysis, the 95th percentile for body height for women is 178.9 cm (5 feet 10.43 inches), which is only 0.5 cm taller than the 50th percentile for men (178.4 cm; 5 feet 10.24 inches), while the 95th percentile for body height for men is 193.6 cm (6 feet 4.22 inches). (Roser 2013.)

44. To look at a specific athletic population, an evaluation of NCAA Division 1 basketball players compared 68 male guards and 59 male forwards to 105 female guards and 91 female forwards, and found that on average the male guards were 187.4 ± 7.0 cm tall and weighed 85.2 ± 7.4 kg while the female guards were 171.6 ± 5.0 cm tall and weighed 68.0 ± 7.4 kg. The male forwards were 201.7 ± 4.0 cm tall and weighed 105.3 ± 5.9 kg while the female forwards were 183.5 ± 4.4 cm tall and weighed 82.2 ± 12.5 kg. (Fields 2018 at 3.)

B. Males have larger and longer bones, stronger bones, and different bone configuration.

45. Obviously, males on average have longer bones. “Sex differences in height have been the most thoroughly investigated measure of bone size, as adult height is a stable, easily quantified measure in large population samples. Extensive twin studies show that adult height is highly heritable with predominantly additive genetic effects that diverge in a sex-specific manner from the age of puberty onwards.” (Handelsman 2018 at 818.) “Pubertal testosterone exposure leads to an ultimate average greater height in men of 12–15 centimeters, larger bones, greater muscle mass, increased strength and higher hemoglobin levels.” (Gooren 2011 at 653.)

46. “Men have distinctively greater bone size, strength, and density than do women of the same age. As with muscle, sex differences in bone are absent prior to puberty but then accrue progressively from the onset of male puberty due to the sex difference in exposure to adult male circulating testosterone concentrations.” (Handelsman 2018 at 818.)

47. “[O]n average men are 7% to 8% taller with longer, denser, and stronger bones, whereas women have shorter humerus and femur cross-sectional

areas being 65% to 75% and 85%, respectively, those of men.” (Handelsman 2018 at 818.)

48. Greater height, leg, and arm length themselves provide obvious advantages in several sports. But male bone geometry also provides less obvious advantages. “The major effects of men’s larger and stronger bones would be manifest via their taller stature as well as the larger fulcrum with greater leverage for muscular limb power exerted in jumping, throwing, or other explosive power activities.” (Handelsman 2018 at 818.)

49. Male advantage in bone size is not limited to length, as larger bones provide the mechanical framework for larger muscle mass. “From puberty onwards, men have, on average, 10% more bone providing more surface area. The larger surface area of bone accommodates more skeletal muscle so, for example, men have broader shoulders allowing more muscle to build. This translates into 44% less upper body strength for women, providing men an advantage for sports like boxing, weightlifting and skiing. In similar fashion, muscle mass differences lead to decreased trunk and lower body strength by 64% and 72%, respectively in women. These differences in body strength can have a significant impact on athletic performance, and largely underwrite the significant differences in world record times and distances set by men and women.” (Knox 2019 at 397.)

50. Meanwhile, distinctive aspects of the female pelvis geometry cut against athletic performance. “[T]he widening of the female pelvis during puberty, balancing the evolutionary demands of obstetrics and locomotion, retards the improvement in female physical performance.” (Handelsman 2018 at 818.) “[T]he major female hormones, oestrogens, can have effects that disadvantage female athletic performance. For example, women have a wider pelvis changing the hip structure significantly between the sexes. Pelvis shape is established during puberty and is driven by oestrogen. The different angles resulting from the female pelvis leads to decreased joint rotation and muscle recruitment ultimately making them slower.” (Knox 2019 at 397.)

51. There are even sex-based differences in foot size and shape. Wunderlich & Cavanaugh (2001) observed that a “foot length of 257 mm represents a value that is ... approximately the 20th percentile men’s foot lengths and the 80th percentile women’s foot lengths.” (607) and “For a man and a woman, both with statures of 170 cm (5 feet 7 inches), the man would have a foot that was approximately 5 mm longer and 2 mm wider than the woman.” (608). Based on these, and other analyses, they conclude that “female feet and legs are not simply scaled-down versions of male feet but rather differ in a number of shape characteristics, particularly at the arch, the lateral side of the foot, the first toe, and the ball of the foot.” (605) Further, Fessler et al. (2005) observed that “female foot length is consistently smaller than male foot length” (44) and concludes that

“proportionate foot length is smaller in women” (51) with an overall conclusion that “Our analyses of genetically disparate populations reveal a clear pattern of sexual dimorphism, with women consistently having smaller feet proportionate to stature than men.” (53)

52. Beyond simple performance, the greater density and strength of male bones provide higher protection against stresses associated with extreme physical effort: “[S]tress fractures in athletes, mostly involving the legs, are more frequent in females, with the male protection attributable to their larger and thicker bones.” (Handelsman 2018 at 818.)

C. Males have much larger muscle mass.

53. The fact that, on average, men have substantially larger muscles than women is as well known to common observation as men’s greater height. But the male advantage in muscle size has also been extensively measured. The differential is large.

54. “On average, women have 50% to 60% of men’s upper arm muscle cross-sectional area and 65% to 70% of men’s thigh muscle cross-sectional area, and women have 50% to 60% of men’s upper limb strength and 60% to 80% of men’s leg strength. Young men have on average a skeletal muscle mass of >12 kg greater than age-matched women at any given body weight.” (Handelsman 2018 at 812. See also Gooren 2011 at 653, Thibault 2010 at 214.)

55. “There is convincing evidence that the sex differences in muscle mass and strength are sufficient to account for the increased strength and aerobic performance of men compared with women and is in keeping with the differences in world records between the sexes.” (Handelsman 2018 at 816.)

56. Once again, looking at specific and comparable populations of athletes, an evaluation of NCAA Division 1 basketball players consisting of 68 male guards and 59 male forwards, compared to 105 female guards and 91 female forwards, reported that on average the male guards had 77.7 ± 6.4 kg of fat free mass and 7.4 ± 3.1 kg fat mass while the female guards had 54.6 ± 4.4 kg fat free mass and 13.4 ± 5.4 kg fat mass. The male forwards had 89.5 ± 5.9 kg fat free mass and 15.9 ± 5.6 kg fat mass while the female forwards had 61.8 ± 5.9 kg fat free mass and 20.5 ± 7.7 kg fat mass. (Fields 2018 at 3.)

D. Females have a larger proportion of body fat.

57. While women have smaller muscles, they have proportionately more body fat, in general a negative for athletic performance. “Oestrogens also affect body

composition by influencing fat deposition. Women, on average, have higher percentage body fat, and this holds true even for highly trained healthy athletes (men 5%–10%, women 8%–15%). Fat is needed in women for normal reproduction and fertility, but it is not performance-enhancing. This means men with higher muscle mass and less body fat will normally be stronger kilogram for kilogram than women.” (Knox 2019 at 397.)

58. “[E]lite females have more (<13 vs. <5 %) body fat than males. Indeed, much of the difference in [maximal oxygen uptake] between males and females disappears when it is expressed relative to lean body mass. . . . Males possess on average 7–9 % less percent body fat than females.” (Lepers 2013 at 853.)

59. Knox et al. observe that both female pelvis shape and female body fat levels “disadvantage female athletes in sports in which speed, strength and recovery are important,” (Knox 2019 at 397), while Tønnessen et al. describe the “ratio between muscular power and total body mass” as “critical” for athletic performance. (Tønnessen 2015 at 7.)

E. Males are able to metabolize and release energy to muscles at a higher rate due to larger heart and lung size, and higher hemoglobin concentrations.

60. While advantages in bone size, muscle size, and body fat are easily perceived and understood by laymen, scientists also measure and explain the male athletic advantage at a more abstract level through measurements of metabolism, or the ability to deliver energy to muscles throughout the body.

61. Energy release at the muscles depends centrally on the body’s ability to deliver oxygen to the muscles, where it is essential to the complex chain of biochemical reactions that make energy available to power muscle fibers. Men have multiple distinctive physiological attributes that together give them a large advantage in oxygen delivery.

62. Oxygen is taken into the blood in the lungs. Men have greater capability to take in oxygen for multiple reasons. “[L]ung capacity [is] larger in men because of a lower diaphragm placement due to Y-chromosome genetic determinants.” (Knox 2019 at 397.) Supporting larger lung capacity, men have “greater cross-sectional area of the trachea”; that is, they can simply move more air in and out of their lungs in a given time. (Hilton 2021 at 201.)

63. More, male lungs provide superior oxygen exchange even for a given volume: “The greater lung volume is complemented by testosterone-driven **enhanced alveolar multiplication** rate during the early years of life. Oxygen exchange takes place between the air we breathe and the bloodstream at the alveoli,

so more alveoli allows more oxygen to pass into the bloodstream. Therefore, the greater lung capacity allows more air to be inhaled with each breath. This is coupled with an improved uptake system allowing men to absorb more oxygen.” (Knox 2019 at 397.)

64. “Once in the blood, oxygen is carried by haemoglobin. **Haemoglobin concentrations** are directly modulated by testosterone so men have higher levels and can carry more oxygen than women.” (Knox 2019 at 397.) “It is well known that levels of circulating hemoglobin are androgen-dependent and consequently higher in men than in women by 12% on average.... Increasing the amount of hemoglobin in the blood has the biological effect of increasing oxygen transport from lungs to tissues, where the increased availability of oxygen enhances aerobic energy expenditure.” (Handelsman 2018 at 816.) (See also Lepers 2013 at 853; Handelsman 2017 at 71.) “It may be estimated that as a result the average maximal oxygen transfer will be ~10% greater in men than in women, which has a direct impact on their respective athletic capacities.” (Handelsman 2018 at 816.)

65. But the male metabolic advantage is further multiplied by the fact that men are also able to **circulate more blood per second** than are women. “Oxygenated blood is pumped to the active skeletal muscle by the heart. The left ventricle chamber of the heart is the reservoir from which blood is pumped to the body. The larger the left ventricle, the more blood it can hold, and therefore, the more blood can be pumped to the body with each heartbeat, a physiological parameter called ‘stroke volume’. The female heart size is, on average, 85% that of a male resulting in the stroke volume of women being around 33% less.” (Knox 2018 at 397.) Hilton cites different studies that make the same finding, reporting that men on average can pump 30% more blood through their circulatory system per minute (“cardiac output”) than can women. (Hilton 2021 at 202.)

66. Finally, at the cell where the energy release is needed, men appear to have yet another advantage. “Additionally, there is experimental evidence that testosterone increases . . . **mitochondrial biogenesis**, myoglobin expression, and IGF-1 content, which may augment energetic and power generation of skeletal muscular activity.” (Handelsman 2018 at 811.)

67. “Putting all of this together, men have a much more efficient cardiovascular and respiratory system.” (Knox 2019 at 397.) A widely accepted measurement that reflects the combined effects of all these respiratory, cardiovascular, and metabolic advantages is referred to as “ $\dot{V}O_2\text{max}$,” which refers to the maximum rate at which an individual can consume oxygen during aerobic

exercise.⁷ Looking at 11 separate studies, including both trained and untrained individuals, Pate et al. concluded that men have a 50% higher VO_2max than women on average, and a 25% higher VO_2max in relation to body weight. (Pate 1984 at 92. See also Hilton 2021 at 202.)

IV. The role of testosterone in the development of male advantages in athletic performance.

68. The following tables of reference ranges for circulating testosterone in males and females are presented to help provide context for some of the subsequent information regarding athletic performance and physical fitness in children, youth, and adults, and regarding testosterone suppression in transwomen and athletic regulations. These data were obtained from the Mayo Clinic Laboratories (available at <https://www.mayocliniclabs.com/test-catalog/overview/83686#Clinical-and-Interpretive>, accessed January 14, 2022).

Reference ranges for serum testosterone concentrations in males and females.

Age	Males	Females
0 – 5 months	2.6 – 13.9 nmol/l	0.7 – 2.8 nmol/l
6 months – 9 years	0.2 – 0.7 nmol/l	0.2 – 0.7 nmol/l
10 – 11 years	0.2 – 4.5 nmol/l	0.2 – 1.5 nmol/l
12 -13 years	0.2 – 27.7 nmol/l	0.2 – 2.6 nmol/l
14 years	0.2 – 41.6 nmol/l	0.2 – 2.6 nmol/l
15 – 16 years	3.5 – 41.6 nmol/l	0.2 – 2.6 nmol/l
17 – 18 years	10.4 – 41.6 nmol/l	0.7 – 2.6 nmol/l
19 years and older	8.3 – 32.9 nmol/l	0.3 – 2.1 nmol/l

Please note that testosterone concentrations are sometimes expressed in units of ng/dl, and 1 nmol/l = 28.85 ng/dl.

69. Tanner Stages can be used to help evaluate the onset and progression of puberty and may be more helpful in evaluating normal testosterone concentrations than age in adolescents. “Puberty onset (transition from Tanner stage I to Tanner stage II) occurs for boys at a median age of 11.5 years and for girls

⁷ VO_2max is “based on hemoglobin concentration, total blood volume, maximal stroke volume, cardiac size/mass/compliance, skeletal muscle blood flow, capillary density, and mitochondrial content.” International Statement, *The Role of Testosterone in Athletic Performance* (January 2019), available at https://law.duke.edu/sites/default/files/centers/sportslaw/Experts_T_Statement_2019.pdf.

at a median age of 10.5 years. . . . Progression through Tanner stages is variable. Tanner stage V (young adult) should be reached by age 18.”

(<https://www.mayocliniclabs.com/test-catalog/overview/83686#Clinical-and-Interpretive>, accessed January 14, 2022).

Reference Ranges for serum testosterone concentrations by Tanner stage

Tanner Stage	Males	Females
I (prepubertal)	0.2 – 0.7 nmol/l	0.7 – 0.7 nmol/l
II	0.3 – 2.3 nmol/l	0.2 – 1.6 nmol/l
III	0.9 – 27.7 nmol/l	0.6 – 2.6 nmol/l
IV	2.9 – 41.6 nmol/l	0.7 – 2.6 nmol/l
V (young adult)	10.4 – 32.9 nmol/l	0.4 – 2.1 nmol/l

70. Senefeld et al. (2020 at 99) state that “Data on testosterone levels in children and adolescents segregated by sex are scarce and based on convenience samples or assays with limited sensitivity and accuracy.” They therefore “analyzed the timing of the onset and magnitude of the divergence in testosterone in youths aged 6 to 20 years by sex using a highly accurate assay” (isotope dilution liquid chromatography tandem mass spectrometry). Senefeld observed a significant difference beginning at age 11, which is to say about fifth grade.

Serum testosterone concentrations (nmol/L) in youths aged 6 to 20 years measured using isotope dilution liquid chromatography tandem mass spectrometry (Senefeld et al. ,2020, at 99)

Age (y)	Boys			Girls		
	5th	50th	95th	5th	50th	95th
6	0.0	0.1	0.2	0.0	0.1	0.2
7	0.0	0.1	0.2	0.0	0.1	0.3
8	0.0	0.1	0.3	0.0	0.1	0.3
9	0.0	0.1	0.3	0.1	0.2	0.6
10	0.1	0.2	2.6	0.1	0.3	0.9
11	0.1	0.5	11.3	0.2	0.5	1.3
12	0.3	3.6	17.2	0.2	0.7	1.4
13	0.6	9.2	21.5	0.3	0.8	1.5
14	2.2	11.9	24.2	0.3	0.8	1.6
15	4.9	13.2	25.8	0.4	0.8	1.8
16	5.2	14.9	24.1	0.4	0.9	2.0
17	7.6	15.4	27.0	0.5	1.0	2.0
18	9.2	16.3	25.5	0.4	0.9	2.1
19	8.1	17.2	27.9	0.4	0.9	2.3
20	6.5	17.9	29.9	0.4	1.0	3.4

A. Boys exhibit advantages in athletic performance even before puberty.

71. It is often said or assumed that boys enjoy no significant athletic advantage over girls before puberty. However, this is not true. Writing in their seminal work on the physiology of elite young female athletes, McManus and Armstrong (2011) reviewed the differences between boys and girls regarding bone density, body composition, cardiovascular function, metabolic function, and other physiologic factors that can influence athletic performance. They stated, “At birth, boys tend to have a greater lean mass than girls. This difference remains small but detectable throughout childhood with about a 10% greater lean mass in boys than girls prior to puberty.” (28) “Sexual dimorphism underlies much of the physiologic response to exercise,” and most importantly these authors concluded that, “Young girl athletes are not simply smaller, less muscular boys.” (23)

72. Certainly, boys’ physiological and performance advantages increase rapidly from the beginning of puberty until around age 17-19. But much data and multiple studies show that significant physiological differences, and significant male athletic performance advantages in certain areas, exist before significant developmental changes associated with male puberty have occurred.

73. Starting at birth, girls have more body fat and less fat-free mass than boys. Davis et al. (2019) in an evaluation of 602 infants reported that at birth and age 5 months, infant boys have larger total body mass, body length, and fat-free mass while having lower percent body fat than infant girls. In an evaluation of 20 boys and 20 girls ages 3-8 years old, matched for age, height, and body weight Taylor et al. (Taylor 1997) reported that the “boys had significantly less fat, a lower % body fat and a higher bone-free lean tissue mass than the girls” when “expressed as a percentage of the average fat mass of the boys”, the girls’ fat mass was 52% higher than the boys “...while the bone-free lean tissue mass was 9% lower” (at 1083.) In an evaluation of 376 prepubertal [Tanner Stage 1] boys and girls, Taylor et al. (2010) observed that the boys had 21.6% more lean mass, and 13% less body fat (when expressed as percent of total body mass) than did the girls. In a review of 22 peer reviewed publications on the topic, Staiano and Katzmarzyk (2012) conclude that “... girls have more T[otal]B[ody]F[at] than boys throughout childhood and adolescence. (at 4.)

74. In the seminal textbook, *Growth, Maturation, and Physical Activity*, Malina et al. (2004) present a summary of data from Gauthier et al. (1983) which present data from “a national sample of Canadian children and youth” demonstrating that from ages 7 to 17, boys have a higher aerobic power output than do girls of the same ages when exercise intensity is measured using heart rate

(Malina at 242.) That is to say, that at a heart rate of 130 beats per minute, or 150, or 170, a 7 to 17 year old boy should be able to run, bike, or swim faster than a similarly aged girl.

75. Considerable data from school-based fitness testing exists showing that prepubertal boys outperform comparably aged girls in tests of muscular strength, muscular endurance, and running speed. These sex-based differences in physical fitness are relevant to the current issue of sex-based sports categories because, as stated by Lesinski et al. (2020), in an evaluation “of 703 male and female elite young athletes aged 8–18” (1) “fitness development precedes sports specialization” (2) and further observed that “males outperformed females in C[ounter]M[ovement]J[ump], D[rop]J[ump], C[hange]o[f]D[irection speed] performances and hand grip strength.” (5).

76. Tambalis et al. (2016) states that “based on a large data set comprising 424,328 test performances” (736) using standing long jump to measure lower body explosive power, sit and reach to measure flexibility, timed 30 second sit ups to measure abdominal and hip flexor muscle endurance, 10 x 5 meter shuttle run to evaluate speed and agility, and multi-stage 20 meter shuttle run test to estimate aerobic performance (738). “For each of the fitness tests, performance was better in boys compared with girls ($p < 0.001$), except for the S[it and] R[each] test ($p < 0.001$).” (739) In order to illustrate that the findings of Tambalis (2016) are not unique to children in Greece, the authors state “Our findings are in accordance with recent studies from Latvia [] Portugal [] and Australia [Catley & Tomkinson (2013)].”(744).

77. The 20-m multistage fitness test is a commonly used maximal running aerobic fitness test used in the Eurofit Physical Fitness Test Battery and the FitnessGram Physical Fitness test. It is also known as the 20-meter shuttle run test, PACER test, or beep test (among other names; this is not the same test as the shuttle run in the Presidential Fitness Test). This test involves continuous running between two lines 20 meters apart in time to recorded beeps. The participants stand behind one of the lines facing the second line and begin running when instructed by the recording. The speed at the start is quite slow. The subject continues running between the two lines, turning when signaled by the recorded beeps. After about one minute, a sound indicates an increase in speed, and the beeps will be closer together. This continues each minute (level). If the line is reached before the beep sounds, the subject must wait until the beep sounds before continuing. If the line is not reached before the beep sounds, the subject is given a warning and must continue to run to the line, then turn and try to catch up with the pace within two more 'beeps'. The subject is given a warning the first time they fail to reach the line (within 2 meters) and eliminated after the second warning.

78. To illustrate the sex-based performance differences observed by Tambalis, I have prepared the following table showing the number of laps completed in the 20 m shuttle run for children ages 6-18 years for the low, middle, and top decile (Tambalis 2016 at 740 & 742), and have calculated the percent difference between the boys and girls using the same equation as Millard-Stafford (2018).

Performance difference between boys and girls ÷ Girls performance

Number of laps completed in the 20m shuttle run for children ages 6-18 years

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
6	4	14	31	4.0	12.0	26.0	0.0%	16.7%	19.2%
7	8	18	38	8.0	15.0	29.0	0.0%	20.0%	31.0%
8	9	23	47	9.0	18.0	34.0	0.0%	27.8%	38.2%
9	11	28	53	10.0	20.0	40.0	10.0%	40.0%	32.5%
10	12	31	58	11.0	23.0	43.0	9.1%	34.8%	34.9%
11	15	36	64	12.0	26.0	48.0	25.0%	38.5%	33.3%
12	15	39	69	12.0	26.0	49.0	25.0%	50.0%	40.8%
13	16	44	76	12.0	26.0	50.0	33.3%	69.2%	52.0%
14	19	50	85	12.0	26.0	50.0	58.3%	92.3%	70.0%
15	20	53	90	12.0	25.0	47.0	66.7%	112.0%	91.5%
16	20	54	90	11.0	24.0	45.0	81.8%	125.0%	100.0%
17	18	50	86	10.0	23.0	50.0	80.0%	117.4%	72.0%
18	13	48	87	8.0	23.0	39.5	62.5%	108.7%	120.3%

79. The Presidential Fitness Test was widely used in schools in the United States from the late 1950s until 2013 (when it was phased out in favor of the Presidential Youth Fitness Program and FitnessGram, both of which focus on health-related physical fitness and do not present data in percentiles). Students participating in the Presidential Fitness Test could receive “The National Physical Fitness Award” for performance equal to the 50th percentile in five areas of the fitness test, “while performance equal to the 85th percentile could receive the Presidential Physical Fitness Award.” Tables presenting the 50th and 85th percentiles for the Presidential Fitness Test for males and females ages 6 – 17, and differences in performance between males and females, for curl-ups, shuttle run, 1 mile run, push-ups, and pull-ups appear in the Appendix.

80. For both the 50th percentile (The National Physical Fitness Award) and the 85th percentile (Presidential Physical Fitness Award), with the exception of curl-ups in 6-year-old children, boys outperform girls. The difference in pull-ups for the 85th percentile for ages 7 through 17 are particularly informative with boys

outperforming girls by 100% – 1200%, highlighting the advantages in upper body strength in males.

81. A very recent literature review commissioned by the five United Kingdom governmental Sport Councils concluded that while “[i]t is often assumed that children have similar physical capacity regardless of their sex, . . . large-scale data reports on children from the age of six show that young males have significant advantage in cardiovascular endurance, muscular strength, muscular endurance, speed/agility and power tests,” although they “score lower on flexibility tests.” (UK Sports Councils’ Literature Review 2021 at 3.)

82. Hilton et al., also writing in 2021, reached the same conclusion: “An extensive review of fitness data from over 85,000 Australian children aged 9–17 years old showed that, compared with 9-year-old females, 9-year-old males were faster over short sprints (9.8%) and 1 mile (16.6%), could jump 9.5% further from a standing start (a test of explosive power), could complete 33% more push-ups in 30 [seconds] and had 13.8% stronger grip.” (Hilton 2021 at 201, summarizing the findings of Catley & Tomkinson 2013.)

83. The following data are taken from Catley & Tomkinson (2013 at 101) showing the low, middle, and top decile for 1.6 km run (1.0 mile) run time for 11,423 girls and boys ages 9-17.

1.6 km run (1.0 mile) run time for 11,423 girls and boys ages 9-17

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
9	684	522	423	769.0	609.0	499.0	11.1%	14.3%	15.2%
10	666	511	420	759.0	600.0	494.0	12.3%	14.8%	15.0%
11	646	500	416	741.0	586.0	483.0	12.8%	14.7%	13.9%
12	621	485	408	726.0	575.0	474.0	14.5%	15.7%	13.9%
13	587	465	395	716.0	569.0	469.0	18.0%	18.3%	15.8%
14	556	446	382	711.0	567.0	468.0	21.8%	21.3%	18.4%
15	531	432	373	710.0	570.0	469.0	25.2%	24.2%	20.5%
16	514	423	366	710.0	573.0	471.0	27.6%	26.2%	22.3%
17	500	417	362	708.0	575.0	471.0	29.4%	27.5%	23.1%

84. Tomkinson et al. (2018) performed a similarly extensive analysis of literally millions of measurements of a variety of strength and agility metrics from the “Eurofit” test battery on children from 30 European countries. They provide detailed results for each metric, broken out by decile. Sampling the low, middle, and top decile, 9-year-old boys performed better than 9-year-old girls by between 6.5%

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and 9.7% in the standing broad jump; from 11.4% to 16.1% better in handgrip; and from 45.5% to 49.7% better in the “bent-arm hang.” (Tomkinson 2018.)

85. The Bent Arm Hang test is a measure of upper body muscular strength and endurance used in the Eurofit Physical Fitness Test Battery. To perform the Bent Arm Hang, the child is assisted into position with the body lifted to a height so that the chin is level with the horizontal bar (like a pull up bar). The bar is grasped with the palms facing away from body and the hands shoulder width apart. The timing starts when the child is released. The child then attempts to hold this position for as long as possible. Timing stops when the child's chin falls below the level of the bar, or the head is tilted backward to enable the chin to stay level with the bar.

86. Using data from Tomkinson (2018; table 7 at 1452), the following table sampling the low, middle, and top decile for bent arm hang for 9- to 17-year-old children can be constructed:

Bent Arm Hang time (in seconds) for children ages 9 - 17 years

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
9	2.13	7.48	25.36	1.43	5.14	16.94	48.95%	45.53%	49.70%
10	2.25	7.92	26.62	1.42	5.15	17.06	58.45%	53.79%	56.04%
11	2.35	8.32	27.73	1.42	5.16	17.18	65.49%	61.24%	61.41%
12	2.48	8.79	28.99	1.41	5.17	17.22	75.89%	70.02%	68.35%
13	2.77	9.81	31.57	1.41	5.18	17.33	96.45%	89.38%	82.17%
14	3.67	12.70	38.39	1.40	5.23	17.83	162.14%	142.83%	115.31%
15	5.40	17.43	47.44	1.38	5.35	18.80	291.30%	225.79%	152.34%
16	7.39	21.75	53.13	1.38	5.63	20.57	435.51%	286.32%	158.29%
17	9.03	24.46	54.66	1.43	6.16	23.61	531.47%	297.08%	131.51%

87. Evaluating these data, a 9-year-old boy in the 50th percentile (that is to say a 9-year-old boy of average upper body muscular strength and endurance) will perform better in the bent arm hang test than 9 through 17-year-old girls in the 50th percentile. Similarly, a 9-year-old boy in the 90th percentile will perform better in the bent arm hang test than 9 through 17-year-old girls in the 90th percentile.

88. Using data from Tomkinson et al. (2017; table 1 at 1549), the following table sampling the low, middle, and top decile for running speed in the last stage of the 20 m shuttle run for 9- to 17-year-old children can be constructed.

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20 m shuttle Running speed (km/h at the last completed stage)

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
9	8.94	10.03	11.13	8.82	9.72	10.61	1.36%	3.19%	4.90%
10	8.95	10.13	11.31	8.76	9.75	10.74	2.17%	3.90%	5.31%
11	8.97	10.25	11.53	8.72	9.78	10.85	2.87%	4.81%	6.27%
12	9.05	10.47	11.89	8.69	9.83	10.95	4.14%	6.51%	8.58%
13	9.18	10.73	12.29	8.69	9.86	11.03	5.64%	8.82%	11.42%
14	9.32	10.96	12.61	8.70	9.89	11.07	7.13%	10.82%	13.91%
15	9.42	11.13	12.84	8.70	9.91	11.11	8.28%	12.31%	15.57%
16	9.51	11.27	13.03	8.71	9.93	11.14	9.18%	13.49%	16.97%
17	9.60	11.41	13.23	8.72	9.96	11.09	10.09%	14.56%	19.30%

89. Evaluating these data, a 9-year-old boy in the 50th percentile (that is to say a 9-year-old boy of average running speed) will run faster in the final stage of the 20 m shuttle run than 9 through 17-year-old girls in the 50th percentile. Similarly, a 9-year-old boy in the 90th percentile will run faster in the final stage of the 20-m shuttle run than 9 through 15, and 17-year-old girls in the 90th percentile and will be 0.01 km/h (0.01%) slower than 16-year-old girls in the 90th percentile.

90. Just using these two examples for bent arm hang and 20-m shuttle running speed (Tomkinson 2107, Tomkinson 2018) based on large sample sizes (thus having tremendous statistical power) it becomes apparent that a 9-year-old boy will be very likely to outperform similarly trained girls of his own age and older in athletic events involving upper body muscle strength and/or running speed.

91. Another report published in 2014 analyzed physical fitness measurements of 10,302 children aged 6 -10.9 years of age, from the European countries of Sweden, Germany, Hungary, Italy, Cyprus, Spain, Belgium, and Estonia. (De Miguel-Etayo et al. 2014.) The authors observed "... that boys performed better than girls in speed, lower- and upper-limb strength and cardiorespiratory fitness." (57) The data showed that for children of comparable fitness (i.e. 99th percentile boys vs. 99th percentile girls, 50th percentile boys vs. 50th percentile girls, etc.) the boys outperform the girls at every age in measurements of handgrip strength, standing long jump, 20-m shuttle run, and predicted VO₂max (pages 63 and 64, respectively). For clarification, VO₂max is the maximal oxygen consumption, which correlates to 30-40% of success in endurance sports.

92. The standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power used in the Eurofit Physical Fitness Test Battery and in the NFL Combine. In the standing long jump, the participant stands behind a line marked on the ground with feet slightly apart. A two-foot take-

off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The participant attempts to jump as far as possible, landing on both feet without falling backwards. The measurement is taken from takeoff line to the nearest point of contact on the landing (back of the heels) with the best of three attempts being scored.

93. Using data from De Miguel-Etayo et al. (2014, table 3 at 61), which analyzed physical fitness measurements of 10,302 children aged 6 -10.9 years of age, from the European countries of Sweden, Germany, Hungary, Italy, Cyprus, Spain, Belgium, and Estonia, the following table sampling the low, middle, and top decile for standing long jump for 6- to 9-year-old children can be constructed:

Standing Broad Jump (cm) for children ages 6-9 years

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
6-<6.5	77.3	103.0	125.3	69.1	93.8	116.7	11.9%	9.8%	7.4%
6.5-<7	82.1	108.0	130.7	73.6	98.7	121.9	11.5%	9.4%	7.2%
7-<7.5	86.8	113.1	136.2	78.2	103.5	127.0	11.0%	9.3%	7.2%
7.5-<8	91.7	118.2	141.6	82.8	108.3	132.1	10.7%	9.1%	7.2%
8-<8.5	96.5	123.3	146.9	87.5	113.1	137.1	10.3%	9.0%	7.1%
8.5-<9	101.5	128.3	152.2	92.3	118.0	142.1	10.0%	8.7%	7.1%

94. Another study of Eurofit results for over 400,000 Greek children reported similar results. “[C]ompared with 6-year-old females, 6-year-old males completed 16.6% more shuttle runs in a given time and could jump 9.7% further from a standing position.” (Hilton 2021 at 201, summarizing findings of Tambalis et al. 2016.)

95. Silverman (2011) gathered hand grip data, broken out by age and sex, from a number of studies. Looking only at the nine direct comparisons within individual studies tabulated by Silverman for children aged 7 or younger, in eight of these the boys had strength advantages of between 13 and 28 percent, with the remaining outlier recording only a 4% advantage for 7-year-old boys. (Silverman 2011 Table 1.)

96. To help illustrate the importance of one specific measure of physical fitness in athletic performance, Pocek (2021) stated that to be successful, volleyball “players should distinguish themselves, besides in skill level, in terms of above-average body height, upper and lower muscular power, speed, and agility. Vertical jump is a fundamental part of the spike, block, and serve.” (8377) Pocek further stated that “relative vertical jumping ability is of great importance in volleyball regardless of the players’ position, while absolute vertical jump values can differentiate players not only in terms of player position and performance level but in their career trajectories.” (8382)

97. Using data from Ramírez-Vélez (2017; table 2 at 994) which analyzed vertical jump measurements of 7,614 healthy Colombian schoolchildren aged 9 -17.9 years of age the following table sampling the low, middle, and top decile for vertical jump can be constructed:

Vertical Jump Height (cm) for children ages 9 - 17 years

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
9	18.0	24.0	29.5	16.0	22.3	29.0	12.5%	7.6%	1.7%
10	19.5	25.0	32.0	18.0	24.0	29.5	8.3%	4.2%	8.5%
11	21.0	27.0	32.5	19.5	25.0	31.0	7.7%	8.0%	4.8%
12	22.0	27.5	34.5	20.0	25.5	31.5	10.0%	7.8%	9.5%
13	23.0	30.5	39.0	19.0	25.5	32.0	21.1%	19.6%	21.9%
14	23.5	32.0	41.5	20.0	25.5	32.5	17.5%	25.5%	27.7%
15	26.0	35.5	43.0	20.2	26.0	32.5	28.7%	36.5%	32.3%
16	28.0	36.5	45.1	20.5	26.5	33.0	36.6%	37.7%	36.7%
17	28.0	38.0	47.0	21.5	27.0	35.0	30.2%	40.7%	34.3%

98. Similarly, using data from Taylor (2010; table 2, at 869) which analyzed vertical jump measurements of 1,845 children aged 10 -15 years in primary and secondary schools in the East of England, the following table sampling the low, middle, and top decile for vertical jump can be constructed:

Vertical Jump Height (cm) for children 10 -15 years

Age	Male			Female			Male-Female % Difference		
	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile	10th %ile	50th %ile	90th %ile
10	16.00	21.00	29.00	15.00	22.00	27.00	6.7%	-4.5%	7.4%
11	20.00	27.00	34.00	19.00	25.00	32.00	5.3%	8.0%	6.3%
12	23.00	30.00	37.00	21.00	27.00	33.00	9.5%	11.1%	12.1%
13	23.00	32.00	40.00	21.00	26.00	34.00	9.5%	23.1%	17.6%
14	26.00	36.00	44.00	21.00	28.00	34.00	23.8%	28.6%	29.4%
15	29.00	37.00	44.00	21.00	28.00	39.00	38.1%	32.1%	12.8%

99. As can be seen from the data from Ramírez-Vélez (2017) and Taylor (2010), males consistently outperform females of the same age and percentile in vertical jump height. Both sets of data show that an 11-year-old boy in the 90th percentile for vertical jump height will outperform girls in the 90th percentile at ages 11 and 12, and will be equal to girls at ages 13, 14, and possibly 15. These data indicate that an 11-year-old would be likely to have an advantage over girls of the same age and older in sports such as volleyball where “absolute vertical jump

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values can differentiate players not only in terms of player position and performance level but in their career trajectories.” (Pocek 2021 at 8382.)

100. Boys also enjoy an advantage in throwing well before puberty. “Boys exceed girls in throwing velocity by 1.5 standard deviation units as early as 4 to 7 years of age. . . The boys exceed the girls [in throwing distance] by 1.5 standard deviation units as early as 2 to 4 years of age.” (Thomas 1985 at 266.) This means that the average 4- to 7-year-old boy can out-throw approximately 87% of all girls of his age.

101. Record data from USA Track & Field indicate that boys outperform girls in track events even in the youngest age group for whom records are kept (age 8 and under).⁸

American Youth Outdoor Track & Field Record times in age groups 8 and under (time in seconds)

Event	Boys	Girls	Difference
100M	13.65	13.78	0.95%
200M	27.32	28.21	3.26%
400M	62.48	66.10	5.79%
800M	148.59	158.11	6.41%
1500M	308.52	314.72	2.01%
Mean			3.68%

102. Looking at the best times within a single year shows a similar pattern of consistent advantage for even young boys. I consider the 2018 USATF Region 8 Junior Olympic Championships for the youngest age group (8 and under).⁹

2018 USATF Region 8 Junior Olympic Championships for the 8 and under age group

Event	Boys	Girls	Difference
100M	15.11	15.64	3.51%
200M	30.79	33.58	9.06%
400M	71.12	77.32	8.72%
800M	174.28	180.48	3.56%
1500M	351.43	382.47	8.83%
Mean			6.74%

⁸<http://legacy.usatf.org/statistics/records/view.asp?division=american&location=outdoor%20track%20%26%20field&age=youth&sport=TF>

⁹ <https://www.athletic.net/TrackAndField/meet/384619/results/m/1/100m>

⁹ <https://www.athletic.net/CrossCountry/Division/List.aspx?DivID=62211>

103. Using Athletic.net⁹, for 2021 Cross Country and Track & Field data for boys and girls in the 7-8, 9-10, and 11-12 year old age group club reports, and for 5th, 6th, and 7th grade for the whole United States I have compiled the tables for 3000 m events, and for the 100-m, 200-m, 400-m, 800-m, 1600-m, 3000-m, long jump, and high jump Track and Field data to illustrate the differences in individual athletic performance between boys and girls, all of which appear in the Appendix. The pattern of males outperforming females was consistent across events, with rare anomalies, only varying in the magnitude of difference between males and females.

104. Similarly, using Athletic.net, for 2021 Track & Field data for boys and girls in the 6th grade for the state of West Virginia, I have compiled tables, which appear in the appendix, comparing the performance of boys and girls for the 100-m, 200-m, 400-m, 800-m, 1600-m, and 3200-m running events in which the 1st place boy was consistently faster than the 1st place girl, and the average performance of the top 10 boys was consistently faster than the average performance for the top 10 girls. Based on the finishing times for the 1st place boy and girl in the 6th grade in West Virginia 1600-m race, and extrapolating the running time to a running pace, the 1st place boy would be expected to finish 273 m in front of the 1st place girl, which is 2/3 of a lap on a standard 400-m track, or almost the length of 3 football fields. In comparison, the 1st place boy would finish 66 m in front of the 2nd place boy, and the 1st place girl would finish 20 m in front of the 2nd place girl.

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Top 10 West Virginia boys and girls 6th grade outdoor track for 2021 (time in seconds)

	100 m			200 m			400 m		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	13.18	14.00	Difference between #1 boy and #1 girl	26.97	29.28	Difference between #1 boy and #1 girl	60.04	65.50	Difference between #1 boy and #1 girl
2	13.94	14.19		29.38	30.05		60.48	67.51	
3	14.07	14.47	5.9%	30.09	30.34	7.9%	66.26	68.60	8.3%
4	14.44	14.86		30.10	30.73		67.12	70.43	
5	14.46	14.92	Average difference boys vs girls	30.24	31.00	Average difference boys vs girls	68.28	71.09	Average difference boys vs girls
6	14.53	15.04		30.38	31.04		68.36	71.38	
7	14.75	15.04	2.9%	30.54	31.10	2.4%	69.65	73.61	5.6%
8	14.78	15.20		30.69	31.10		69.70	73.87	
9	14.84	15.25		30.74	31.35		69.76	74.07	
10	14.94	15.28		30.99	31.64		70.63	74.21	

	800 m			1600 m			3200 m		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	147.2	164.5	Difference between #1 boy and #1 girl	305.5	357.8	Difference between #1 boy and #1 girl	678.4	776.6	Difference between #1 boy and #1 girl
2	147.9	166.1		318.1	361.6		750.0	809.8	
3	152.1	167.2	10.6%	322.0	379.8	14.6%	763.3	811.0	12.7%
4	153.2	170.2		336.0	385.2		766.3	843.0	
5	155.3	171.0	Average difference boys vs girls	342.2	390.2	Average difference boys vs girls	771.7	850.6	Average difference boys vs girls
6	159.5	171.5		348.0	392.0		782.8	852.1	
7	159.9	174.8	7.5%	356.6	393.3	11.5%	794.1	858.0	8.1%
8	167.8	174.9		357.5	395.7		803.0	862.8	
9	169.2	175.9		362.4	398.1		812.1	869.9	
10	172.6	177.6		366.0	403.2		814.3	883.3	

105. As serious runners will recognize, differences of 3%, 5%, or 8% are not easily overcome. During track competition the difference between first and second place, or second and third place, or third and fourth place (and so on) is often 0.5 - 0.7%, with some contests being determined by as little as 0.01%.

106. I performed an analysis of running events (consisting of the 100-m, 200-m, 400-m, 800-m, 1500-m, 5000-m, and 10,000-m) in the Division 1, Division 2, and Division 3 NCAA Outdoor championships for the years of 2010-2019: the mean difference between 1st and 2nd place was 0.48% for men and 0.86% for women. The mean difference between 2nd and 3rd place was 0.46% for men and 0.57% for women. The mean difference between 3rd place and 4th place was 0.31% for men and 0.44% for women. The mean difference between 1st place and 8th place (the last place to earn the title of All American) was 2.65% for men and 3.77% for women. (Brown et al. Unpublished observations, to be presented at the 2022 Annual Meeting of the American College of Sports Medicine.)

107. A common response to empirical data showing pre-pubertal performance advantages in boys is the argument that the performance of boys may

represent a social–cultural bias for boys to be more physically active, rather than representing inherent sex-based differences in pre-pubertal physical fitness. However, the younger the age at which such differences are observed, and the more egalitarian the culture within which they are observed, the less plausible this hypothesis becomes. Eiberg et al. (2005) measured body composition, VO₂max, and physical activity in 366 Danish boys and 332 Danish girls between the ages of 6 and 7 years old. Their observations indicated that VO₂max was 11% higher in boys than girls. When expressed relative to body mass the boys' VO₂max was still 8% higher than the girls. The authors stated that "...no differences in haemoglobin or sex hormones¹⁰ have been reported in this age group," yet "... when children with the same VO₂max were compared, boys were still more active, and in boys and girls with the same P[hysical] A[ctivity] level, boys were fitter." (728). These data indicate that in pre-pubertal children, in a very egalitarian culture regarding gender roles and gender norms, boys still have a measurable advantage in regards to aerobic fitness when known physiological and physical activity differences are accounted for.

108. And, as I have mentioned above, even by the age of 4 or 5, in a ruler-drop test, boys exhibit 4% to 6% faster reaction times than girls. (Latorre-Roman 2018.)

109. When looking at the data on testosterone concentrations previously presented, along with the data on physical fitness and athletic performance presented, boys have advantages in athletic performance and physical fitness before there are marked differences in testosterone concentrations between boys and girls.

110. For the most part, the data I review above relate to pre-pubertal children. Today, we also face the question of inclusion in female athletics of males who have undergone "puberty suppression." The UK Sport Councils Literature Review notes that, "In the UK, so-called 'puberty blockers' are generally not used until Tanner maturation stage 2-3 (i.e. after puberty has progressed into early sexual maturation)." (9.) While it is outside my expertise, my understanding is that current practice with regard to administration of puberty blockers is similar in the United States. Tanner stages 2 and 3 generally encompass an age range from 10 to 14 years old, with significant differences between individuals. Like the authors of the UK Sports Council Literature Review, I am "not aware of research" directly addressing the implications for athletic capability of the use of puberty blockers. (UK Sport Councils Literature Review at 9.) As Handelsman documents, the male advantage begins to increase rapidly—along with testosterone levels—at about age 11, or "very closely aligned to the timing of the onset of male puberty." (Handelsman 2017.) It seems likely that males who have undergone puberty suppression will

¹⁰ This term would include testosterone and estrogens.

have physiological and performance advantages over females somewhere between those possessed by pre-pubertal boys, and those who have gone through full male puberty, with the degree of advantage in individual cases depending on that individual's development and the timing of the start of puberty blockade.

111. Tack et al. (2018) observed that in 21 transgender-identifying biological males, administration of antiandrogens for 5-31 months (commencing at 16.3 ± 1.21 years of age), resulted in nearly, but not completely, halting of normal age-related *increases* in muscle strength. Importantly, muscle strength did not decrease after administration of antiandrogens. Rather, despite antiandrogens, these individuals retained higher muscle mass, lower percent body fat, higher body mass, higher body height, and higher grip strength than comparable girls of the same age. (Supplemental tables).

112. Klaver et al. (2018 at 256) demonstrated that the use of puberty blockers did not eliminate the differences in lean body mass between biological male and female teenagers. Subsequent use of puberty blockers combined with cross-sex hormone use (in the same subjects) still did not eliminate the differences in lean body mass between biological male and female teenagers. Furthermore, by 22 years of age, the use of puberty blockers, and then puberty blockers combined with cross sex hormones, and then cross hormone therapy alone for over 8 total years of treatment still had not eliminated the difference in lean body mass between biological males and females.

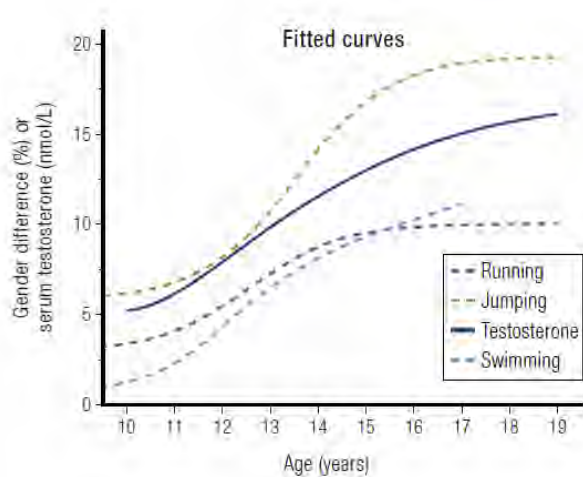
113. The effects of puberty blockers on growth and development, including muscle mass, fat mass, or other factors that influence athletic performance, have been minimally researched. Indeed, Klaver et al. (2018) is the only published research that I am aware of that has evaluated the use of puberty blockers on body composition. As stated by Roberts and Carswell (2021), "No published studies have fully characterized the impact of [puberty blockers on] final adult height or current height in an actively growing TGD youth." (1680). Likewise, "[n]o published literature provides guidance on how to best predict the final adult height for TGD youth receiving GnRHa and gender-affirming hormonal treatment." (1681). Thus, the effect of prescribing puberty blockers to a male child before the onset of puberty on the physical components of athletic performance is largely unknown. There is not any scientific evidence that such treatment eliminates the pre-existing performance advantages that prepubertal males have over prepubertal females.

B. The rapid increase in testosterone across male puberty drives characteristic male physiological changes and the increasing performance advantages.

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. Empirically, this can be seen by contrasting the modest advantages reviewed immediately above against the large performance advantages enjoyed by men that I have detailed in Section II.

115. Multiple studies (along with common observation) document that the male performance advantage begins to increase during the early years of puberty, and then increases rapidly across the middle years of puberty (about ages 12-16). (Tønnessen 2015; Handelsman 2018 at 812-813.) Since it is well known that testosterone levels increase by more than an order of magnitude in boys across puberty, it is unsurprising that Handelsman finds that these increases in male performance advantage correlate to increasing testosterone levels, as presented in his chart reproduced below. (Handelsman 2018 at 812-13.)



116. Handelsman further finds that certain characteristic male changes including boys' increase in muscle mass do not begin at all until "circulating testosterone concentrations rise into the range of males at mid-puberty, which are higher than in women at any age." (Handelsman 2018 at 810.)

117. Knox et al. (2019) agree that "[i]t is well recognised that testosterone contributes to physiological factors including body composition, skeletal structure, and the cardiovascular and respiratory systems across the life span, with significant influence during the pubertal period. These physiological factors underpin strength, speed, and recovery with all three elements required to be competitive in almost all sports." (Knox 2019 at 397.) "High testosterone levels and prior male physiology provide an all-purpose benefit, and a substantial advantage. As the IAAF says, "To the best of our knowledge, there is no other genetic or biological trait encountered in female athletics that confers such a huge performance advantage." (Knox 2019 at 399.)

118. However, the undisputed fact that high (that is, normal male) levels of testosterone drive the characteristically male physiological changes that occur across male puberty does not at all imply that artificially *depressing* testosterone levels after those changes occur will reverse all or most of those changes so as to eliminate the male athletic advantage. This is an empirical question. As it turns out, the answer is that while some normal male characteristics can be changed by means of testosterone suppression, others cannot be, and all the reliable evidence indicates that males retain large athletic advantages even after long-term testosterone suppression.

V. The available evidence shows that suppression of testosterone in a male after puberty has occurred does not substantially eliminate the male athletic advantage.

119. The 2011 “NCAA Policy on Transgender Student-Athlete Participation” requires only that males who identify as transgender be on unspecified and unquantified “testosterone suppression treatment” for “one calendar year” prior to competing in women’s events. In supposed justification of this policy, the NCAA’s Office of Inclusion asserts that, “It is also important to know that any strength and endurance advantages a transgender woman arguably may have as a result of her prior testosterone levels dissipate after about one year of estrogen or testosterone-suppression therapy.” (NCAA 2011 at 8.)

120. Similarly, writing in 2018, Handelsman et al. could speculate that even though some male advantages established during puberty are “fixed and irreversible (bone size),” “[t]he limited available prospective evidence . . . suggests that the advantageous increases in muscle and hemoglobin due to male circulating testosterone concentrations are induced or reversed during the first 12 months.” (Handelsman 2018 at 824.)

121. But these assertions or hypotheses of the NCAA and Handelsman are now strongly contradicted by the available science. In this section, I examine what is known about whether suppression of testosterone in males can eliminate the male physiological and performance advantages over females.

A. Empirical studies find that males retain a strong performance advantage even after lengthy testosterone suppression.

122. As my review in Section II indicates, a very large body of literature documents the large performance advantage enjoyed by males across a wide range of athletics. To date, only a limited number of studies have directly measured the effect of testosterone suppression and the administration of female hormones on the athletic performance of males. These studies report that testosterone suppression for a full year (and in some cases much longer) does not come close to eliminating

male advantage in strength (hand grip, leg strength, and arm strength) or running speed.

Hand Grip Strength

123. As I have noted, hand grip strength is a well-accepted proxy for general strength. Multiple separate studies, from separate groups, report that males retain a large advantage in hand strength even after testosterone suppression to female levels.

124. In a longitudinal study, Van Caenegem et al. reported that males who underwent standard testosterone suppression protocols lost only 7% hand strength after 12 months of treatment, and only a cumulative 9% after two years. (Van Caenegem 2015 at 42.) As I note above, on average men exhibit in the neighborhood of 60% greater hand grip strength than women, so these small decreases do not remotely eliminate that advantage. Van Caenegem et al. document that their sample of males who elected testosterone suppression began with less strength than a control male population. Nevertheless, after one year of suppression, their study population still had hand grip only 21% less than the control male population, and thus still far higher than a female population. (Van Caenegem 2015 at 42.)

125. Scharff et al. (2019) measured grip strength in a large cohort of male-to-female subjects from before the start of hormone therapy through one year of hormone therapy. The hormone therapy included suppression of testosterone to less than 2 nm/L “in the majority of the transwomen,” (1024), as well as administration of estradiol (1021). These researchers observed a small decrease in grip strength in these subjects over that time (Fig. 2), but mean grip strength of this group remained far higher than mean grip strength of females—specifically, “After 12 months, the median grip strength of transwomen [male-to-female subjects] still falls in the 95th percentile for age-matched females.” (1026).

126. Still a third longitudinal study, looking at teen males undergoing testosterone suppression, “noted no change in grip strength after hormonal treatment (average duration 11 months) of 21 transgender girls.” (Hilton 2021 at 207, summarizing Tack 2018.)

127. In a fourth study, Lapauw et al. (2008) looked at the extreme case of testosterone suppression by studying a population of 23 biologically male individuals who had undergone at least two years of testosterone suppression, followed by sex reassignment surgery that included “orchidectomy” (that is, surgical castration), and then at least an additional three years before the study date. Comparing this group against a control of age- and height-matched healthy males, the researchers found that the individuals who had gone through testosterone suppression and then surgical castration had an average hand grip (41 kg) that was

24% weaker than the control group of healthy males. But this remains at least 25% *higher* than the average hand-grip strength of biological females as measured by Bohannon et al. (2019).

128. Summarizing these and a few other studies measuring strength loss (in most cases based on hand grip) following testosterone suppression, Harper et al. (2021) conclude that “strength loss with 12 months of [testosterone suppression] . . . ranged from non-significant to 7%. . . [T]he small decrease in strength in transwomen after 12-36 months of [testosterone suppression] suggests that transwomen likely retain a strength advantage over cisgender women.” (Hilton 2021 at 870.)

Arm Strength

129. Lapauw et al. (2008) found that 3 years after surgical castration, preceded by at least two years of testosterone suppression, biologically male subjects had 33% less bicep strength than healthy male controls. (Lapauw (2008) at 1018.) Given that healthy men exhibit between 89% and 109% greater arm strength than healthy women, this leaves a very large residual arm strength advantage over biological women.

130. Roberts et al. have recently published an interesting longitudinal study, one arm of which considered biological males who began testosterone suppression and cross-sex hormones while serving in the United States Air Force. (Roberts 2020.) One measured performance criterion was pushups per minute, which, while not exclusively, primarily tests arm strength under repetition. *Before* treatment, the biological male study subjects who underwent testosterone suppression could do 45% more pushups per minute than the average for all Air Force women under the age of 30 (47.3 vs. 32.5). *After* between one and two years of testosterone suppression, this group could still do 33% more pushups per minute. (Table 4.) Further, the body weight of the study group did not decline at all after one to two years of testosterone suppression (in fact rose slightly) (Table 3), and was approximately 24 pounds (11.0 kg) higher than the average for Air Force women under the age of 30. (Roberts 2020 at 3.) This means that the individuals who had undergone at least one year of testosterone suppression were not only doing 1/3 more pushups per minute, but were lifting significantly more weight with each pushup.

131. After two years of testosterone suppression, the study sample in Roberts et al. was only able to do 6% more pushups per minute than the Air Force female average. But their weight remained unchanged from their pre-treatment starting point, and thus about 24 pounds higher than the Air Force female average. As Roberts et al. explain, “as a group, transwomen weigh more than CW [cis-women]. Thus, transwomen will have a higher power output than CW when

performing an equivalent number of push-ups. Therefore, our study may underestimate the advantage in strength that transwomen have over CW.” (Roberts 2020 at 4.)

Leg Strength

132. Wiik et al. (2020), in a longitudinal study that tracked 11 males from the start of testosterone suppression through 12 months after treatment initiation, found that isometric strength levels measured at the knee “were maintained over the [study period].”¹¹ (808) “At T12 [the conclusion of the one-year study], the absolute levels of strength and muscle volume were greater in [male-to-female subjects] than in . . . CW [women who had not undergone any hormonal therapy].” (Wiik 2020 at 808.) In fact, Wiik et al. reported that “muscle strength after 12 months of testosterone suppression was comparable to baseline strength. As a result, transgender women remained about 50% stronger than . . . a reference group of females.” (Hilton 2021 at 207, summarizing Wiik 2020.)

133. Lapauw et al. (2008) found that 3 years after surgical castration, preceded by at least two years of testosterone suppression, subjects had peak knee torque only 25% lower than healthy male controls. (Lapauw 2008 at 1018.) Again, given that healthy males exhibit 54% greater maximum knee torque than healthy females, this leaves these individuals with a large average strength advantage over females even years after sex reassignment surgery.

Running speed

134. The most striking finding of the recent Roberts et al. study concerned running speed over a 1.5 mile distance—a distance that tests midrange endurance. Before suppression, the MtF study group ran 21% faster than the Air Force female average. After at least 2 year of testosterone suppression, these subjects still ran 12% faster than the Air Force female average. (Roberts 2020 Table 4.)

135. The specific experience of the well-known case of NCAA athlete Cece Telfer is consistent with the more statistically meaningful results of Roberts et al., further illustrating that male-to-female transgender treatment does not negate the inherent athletic performance advantages of a post-pubertal male. In 2016 and 2017 Cece Telfer competed as Craig Telfer on the Franklin Pierce University men’s track team, being ranked 200th and 390th (respectively) against other NCAA Division 2 men. “Craig” Telfer did not qualify for the National Championships in any events. Telfer did not compete in the 2018 season while undergoing testosterone

¹¹ Isometric strength measures muscular force production for a given amount of time at a specific joint angle but with no joint movement.

suppression (per NCAA policy). In 2019 Cece Telfer competed on the Franklin Pierce University *women's* team, qualified for the NCAA Division 2 Track and Field National Championships, and placed 1st in the women's 400 meter hurdles and placed third in the women's 100 meter hurdles. (For examples of the media coverage of this please see <https://www.washingtontimes.com/news/2019/jun/3/cece-telfer-franklin-pierce-transgenderhurdler-wi/> last accessed May 29, 2020. <https://www.newshub.co.nz/home/sport/2019/06/athletics-transgender-woman-cece-telfer-who-previously-competed-as-a-man-wins-ncaa-track-championship.html> (last accessed May 29, 2020).)

136. The table below shows the best collegiate performance times from the combined 2015 and 2016 seasons for Cece Telfer when competing as a man in men's events, and the best collegiate performance times from the 2019 season when competing as a woman in women's events. Comparing the times for the running events (in which male and female athletes run the same distance) there is no statistical difference between Telfer's "before and after" times. Calculating the difference in time between the male and female times, Telfer performed an average of 0.22% *faster* as a female. (Comparing the performance for the hurdle events (marked with H) is of questionable validity due to differences between men's and women's events in hurdle heights and spacing, and distance for the 110m vs. 100 m.) While this is simply one example, and does not represent a controlled experimental analysis, this information provides some evidence that male-to-female transgender treatment does not negate the inherent athletic performance advantages of a postpubertal male. (These times were obtained from https://www.tfrs.org/athletes/6994616/Franklin_Pierce/CeCe_Telfer.html and <https://www.tfrs.org/athletes/5108308.html>, last accessed May 29, 2020).

As Craig Telfer (male athlete)		As Cece Telfer (female athlete)	
Event	Time (seconds)	Event	Time (seconds)
55	7.01	55	7.02
60	7.67	60	7.63
100	12.17	100	12.24
200	24.03	200	24.30
400	55.77	400	54.41
55 H †	7.98	55 H †	7.91
60 H †	8.52	60 H †	8.33
110 H †	15.17	100 H †	13.41*
400 H ‡	57.34	400 H ‡	57.53**

* women's 3rd place, NCAA Division 2 National Championships

** women's 1st place, NCAA Division 2 National Championships

† men's hurdle height is 42 inches with differences in hurdle spacing between men and women

‡ men's hurdle height is 36 inches, women's height is 30 inches with the same spacing between hurdles

137. Similarly, University of Pennsylvania swimmer Lia Thomas began competing in the women's division in the fall of 2021, after previously competing for U. Penn. in the men's division. Thomas has promptly set school, pool, and/or league women's records in 200 yard freestyle, 500 yard freestyle, and 1650 yard freestyle competitions, beating the nearest female in the 1650 yard by an unheard-of 38 seconds.

138. In a pre-peer review article, Senefeld, Coleman, Hunter, and Joyner (doi: <https://doi.org/10.1101/2021.12.28.21268483>, accessed January 12, 2022) "compared the gender-related differences in performance of a transgender swimmer who competed in both the male and female NCAA (collegiate) categories to the sex-related differences in performance of world and national class swimmers" and observed that this athlete [presumably Lia Thomas based on performance times and the timing of this article] was unranked in 2018-2019 in the 100-yard, ranked 551st in the 200-yard, 65th in the 500-yard 32nd in the 1650-yards men's freestyle. After following the NCAA protocol for testosterone suppression and competing as a woman in 2021-2022, this swimmer was ranked 94th in the 100-yard, 1st in the 200-yard, 1st in the 500-yard, and 6th in the 1650-yard women's freestyle. The performance times swimming as a female, when compared to swimming as a male, were 4.6% slower in the 100-yard, 2.6% slower in the 200-yard, 5.6% slower in the 500-yard, and 6.8% slower in the 1650-yard events than when swimming as a male. *It is important to note that these are mid-season race times and do not represent season best performance times or in a championship event where athletes often set their personal record times.* The authors concluded "...that for middle distance events (100, 200 and 400m or their imperial equivalents) lasting between about one and five minutes, the decrements in performance of the transgender woman swimmer are less than expected on the basis of a comparison of a large cohort of world and national class performances by female and male swimmers" and "it is possible that the relative improvements in this swimmer's rankings in the women's category relative to the men's category are due to legacy effects of testosterone on a number of physiological factors that can influence athletic performance."

139. Harper (2015) has often been cited as "proving" that testosterone suppression eliminates male advantage. And indeed, hedged with many disclaimers, the author in that article does more or less make that claim with respect to "distance races," while emphasizing that "the author makes no claims as to the equality of performances, pre and post gender transition, in any other sport." (Harper 2015 at 8.) However, Harper (2015) is in effect a collection of unverified anecdotes, not science. It is built around self-reported race times from just eight self-selected transgender runners, recruited "mostly" online. How and on what websites the subjects were recruited is not disclosed, nor is anything said about how those not recruited online were recruited. Thus, there is no information to tell us whether these eight runners could in any way be representative, and the

recruitment pools and methodology, which could bear on ideological bias in their self-reports, is not disclosed.

140. Further, the self-reported race times relied on by Harper (2015) *span 29 years*. It is well known that self-reported data, particularly concerning emotionally or ideologically fraught topics, is unreliable, and likewise that memory of distant events is unreliable. Whether the subjects were responding from memory or from written records, and if so what records, is not disclosed, and does not appear to be known to the author. For six of the subjects, the author claims to have been able to verify “approximately half” of the self-reported times. Which scores these are is not disclosed. The other two subjects responded only anonymously, so nothing about their claims could be or was verified. In short, neither the author nor the reader knows whether the supposed “facts” on which the paper’s analysis is based are true.

141. Even if we could accept them at face value, the data are largely meaningless. Only two of the eight study subjects reported (undefined) “stable training patterns,” and even with consistent training, athletic performance generally declines with age. As a result, when the few data points span 29 years, it is not possible to attribute declines in performance to asserted testosterone suppression. Further, distance running is usually not on a track, and race times vary significantly depending on the course and the weather. Only one reporting subject who claimed a “stable training pattern” reported “before and after” times on the same course within three years’ time,” which the author acknowledges would “represent the best comparison points.”

142. Harper (2015) to some extent acknowledges its profound methodological flaws, but seeks to excuse them by the difficulty of breaking new ground. The author states that, “The first problem is how to formulate a study to create a meaningful measurement of athletic performance, both before and after testosterone suppression. No methodology has been previously devised to make meaningful measurements.” (2) This statement was not accurate at the time of publication, as there are innumerable publications with validated methodology for comparing physical fitness and/or athletic performance between people of different ages, sexes, and before and after medical treatment, any of which could easily have been used with minimal or no adaptation for the purposes of this study. Indeed, well before the publication of Harper (2015), several authors that I have cited in this review had performed and published disciplined and methodologically reliable studies of physical performance and physiological attributes “before and after” testosterone suppression.

143. More recently, and to her credit, Harper has acknowledged the finding of Roberts (2020) regarding the durable male advantage in running speed in the 1.5 mile distance, even after two years of testosterone suppression. She joins with co-

authors in acknowledging that this study of individuals who (due to Air Force physical fitness requirements) “could at least be considered exercise trained,” agrees that Roberts’ data shows that “transwomen ran significantly faster during the 1.5 mile fitness test than ciswomen,” and declares that this result is “consistent with the findings of the current review in untrained transgender individuals” that even 30 months of testosterone suppression does not eliminate all male advantages “associated with muscle endurance and performance.” (Harper 2021 at 8.) The Harper (2021) authors conclude overall “that strength may be well preserved in transwomen during the first 3 years of hormone therapy,” and that [w]hether transgender and cisgender women can engage in meaningful sport [in competition with each other], even after [testosterone suppression], is a highly debated question.” (Harper 2021 at 1, 8.)

144. Higerd (2021) “[a]ssess[ed] the probability of a girls’ champion being biologically male” by evaluating 920,11 American high school track and field performances available through the track and field database Athletic.net in five states (CA, FL, MN, NY, WA), over three years (2017 – 2019), in eight events; high jump, long jump, 100M, 200M, 400M, 800M, 1600M, and 3200M and estimated that “there is a simulated 81%-98% probability of transgender dominance occurring in the female track and field event” and further concluded that “in the majority of cases, the entire podium (top of the state) would be MTF [transgender athletes]” (at xii).

B. Testosterone suppression does not reverse important male physiological advantages.

145. We see that, once a male has gone through male puberty, later testosterone suppression (or even castration) leaves large strength and performance advantages over females in place. It is not surprising that this is so. What is now a fairly extensive body of literature has documented that many of the specific male physiological advantages that I reviewed in Section II are not reversed by testosterone suppression after puberty, or are reduced only modestly, leaving a large advantage over female norms still in place.

146. Handelsman has well documented that the large increases in physiological and performance advantages characteristic of men develop in tandem with, and are likely driven by, the rapid and large increases in circulating testosterone levels that males experience across puberty, or generally between the ages of about 12 through 18. (Handelsman 2018.) Some have misinterpreted Handelsman as suggesting that all of those advantages are and remain entirely dependent—on an ongoing basis—on *current* circulating testosterone levels. This is a misreading of Handelsman, who makes no such claim. As the studies reviewed above demonstrate, it is also empirically false with respect to multiple measures of

performance. Indeed, Handelsman himself, referring to the Roberts et al. (2020) study which I describe below, has recently written that “transwomen treated with estrogens after completing male puberty experienced only minimal declines in physical performance over 12 months, substantially surpassing average female performance for up to 8 years.” (Handelsman 2020.)

147. As to individual physiological advantages, the more accurate and more complicated reality is reflected in a statement titled “The Role of Testosterone in Athletic Performance,” published in 2019 by several dozen sports medicine experts and physicians from many top medical schools and hospitals in the U.S. and around the world. (Levine et al. 2019.) This expert group concurs with Handelsman regarding the importance of testosterone to the male advantage, but recognizes that those advantages depend not only on *current* circulating testosterone levels in the individual, but on the “exposure in biological males to much higher levels of testosterone during growth, development, and throughout the athletic career.” (*Emphasis added.*) In other words, both past and current circulating testosterone levels affect physiology and athletic capability.

148. Available research enables us to sort out, in some detail, which specific physiological advantages are immutable once they occur, which can be reversed only in part, and which appear to be highly responsive to later hormonal manipulation. The bottom line is that very few of the male physiological advantages I have reviewed in Section II above are largely reversible by testosterone suppression once an individual has passed through male puberty.

Skeletal Configuration

149. It is obvious that some of the physiological changes that occur during “growth and development” across puberty cannot be reversed. Some of these irreversible physiological changes are quite evident in photographs that have recently appeared in the news of transgender competitors in female events. These include skeletal configuration advantages including:

- Longer and larger bones that give height, weight, and leverage advantages to men;
- More advantageous hip shape and configuration as compared to women.

Cardiovascular Advantages

150. Developmental changes for which there is no apparent means of reversal, and no literature suggesting reversibility, also include multiple

contributors to the male cardiovascular advantage, including diaphragm placement, lung and trachea size, and heart size and therefore pumping capacity.¹²

151. On the other hand, the evidence is mixed as to hemoglobin concentration, which as discussed above is a contributing factor to VO_2 max. Harper (2021) surveyed the literature and found that “Nine studies reported the levels of Hgb [hemoglobin] or HCT [red blood cell count] in transwomen before and after [testosterone suppression], from a minimum of three to a maximum of 36 months post hormone therapy. Eight of these studies. . . found that hormone therapy led to a significant (4.6%–14.0%) decrease in Hgb/HCT ($p < 0.01$), while one study found no significant difference after 6 months,” but only one of those eight studies returned results at the generally accepted 95% confidence level. (Harper 2021 at 5-6 and Table 5.)

152. I have not found any study of the effect of testosterone suppression on the male advantage in mitochondrial biogenesis.

Muscle mass

153. Multiple studies have found that muscle mass decreases modestly or not at all in response to testosterone suppression. Knox et al. report that “healthy young men did not lose significant muscle mass (or power) when their circulating testosterone levels were reduced to 8.8 nmol/L (lower than the 2015 IOC guideline of 10 nmol/L) for 20 weeks.” (Knox 2019 at 398.) Gooren found that “[i]n spite of muscle surface area reduction induced by androgen deprivation, after 1 year the mean muscle surface area in male-to- female transsexuals remained significantly greater than in untreated female-to-male transsexuals.” (Gooren 2011 at 653.) An earlier study by Gooren found that after one year of testosterone suppression, muscle mass at the thigh was reduced by only about 10%, exhibited “no further reduction after 3 years of hormones,” and “remained significantly greater” than in his sample of untreated women. (Gooren 2004 at 426-427.) Van Caenegem et al. found that muscle cross section in the calf and forearm decreased only trivially (4% and 1% respectively) after two years of testosterone suppression. (Van Caenegem 2015 Table 4.)

154. Taking measurements one month after start of testosterone suppression in male-to-female (non-athlete) subjects, and again 3 and 11 months after start of feminizing hormone replacement therapy in these subjects, Wiik et al.

¹² “[H]ormone therapy will not alter . . . lung volume or heart size of the transwoman athlete, especially if [that athlete] transitions postpuberty, so natural advantages including joint articulation, stroke volume and maximal oxygen uptake will be maintained.” (Knox 2019 at 398.)

found that total lean tissue (i.e. primarily muscle) did not decrease significantly across the entire period. Indeed, “some of the [subjects] did not lose any muscle mass at all.” (Wiik 2020 at 812.) And even though they observed a small decrease in thigh muscle mass, they found that isometric strength levels measured at the knee “were maintained over the [study period].” (808) “At T12 [the conclusion of the one-year study], the absolute levels of strength and muscle volume were greater in [male-to-female subjects] than in [female-to-male subjects] and CW [women who had not undergone any hormonal therapy].” (808)

155. Hilton & Lundberg summarize an extensive survey of the literature as follows:

“12 longitudinal studies have examined the effects of testosterone suppression on lean body mass or muscle size in transgender women. The collective evidence from these studies suggests that 12 months, which is the most commonly examined intervention period, of testosterone suppression to female typical reference levels results in a modest (approximately– 5%) loss of lean body mass or muscle size. . . .

“Thus, given the large baseline differences in muscle mass between males and females (Table 1; approximately 40%), the reduction achieved by 12 months of testosterone suppression can reasonably be assessed as small relative to the initial superior mass. We, therefore, conclude that the muscle mass advantage males possess over females, and the performance implications thereof, are not removed by the currently studied durations (4 months, 1, 2 and 3 years) of testosterone suppression in transgender women. (Hilton 2021 at 205-207.)

156. When we recall that “women have 50% to 60% of men’s upper arm muscle cross-sectional area and 65% to 70% of men’s thigh muscle cross-sectional area” (Handelsman 2018 at 812), it is clear that Hilton’s conclusion is correct. In other words, biologically male subjects possess substantially larger muscles than biologically female subjects after undergoing a year or even three years of testosterone suppression.

157. I note that outside the context of transgender athletes, the testosterone-driven increase in muscle mass and strength enjoyed by these male-to-female subjects would constitute a disqualifying doping violation under all league anti-doping rules with which I am familiar.

C. Responsible voices internationally are increasingly recognizing that suppression of testosterone in a male after puberty has occurred does not substantially reverse the male athletic advantage.

158. The previous very permissive NCAA policy governing transgender participation in women's collegiate athletics was adopted in 2011, and the previous IOC guidelines were adopted in 2015. At those dates, much of the scientific analysis of the actual impact of testosterone suppression had not yet been performed, much less any wider synthesis of that science. In fact, a series of important peer-reviewed studies and literature reviews have been published only very recently, since I prepared my first paper on this topic, in early 2020.

159. These new scientific publications reflect a remarkably consistent consensus: once an individual has gone through male puberty, testosterone suppression does not substantially eliminate the physiological and performance advantages that that individual enjoys over female competitors.

160. Importantly, I have found no peer-reviewed scientific paper, nor any respected scientific voice, that is now asserting the contrary—that is, that testosterone suppression can eliminate or even largely eliminate the male biological advantage once puberty has occurred.

161. I excerpt the key conclusions from important recent peer-reviewed papers below.

162. Roberts 2020: “In this study, we confirmed that . . . the pretreatment differences between transgender and cis gender women persist beyond the 12-month time requirement currently being proposed for athletic competition by the World Athletics and the IOC.” (6)

163. Wiik 2020: The muscular and strength changes in males undergoing testosterone suppression “were modest. The question of when it is fair to permit a transgender woman to compete in sport in line with her experienced gender identity is challenging.” (812)

164. Harper 2021: “[V]alues for strength, LBM [lean body mass], and muscle area in transwomen remain above those of cisgender women, even after 36 months of hormone therapy.” (1)

165. Hilton & Lundberg 2021: “evidence for loss of the male performance advantage, established by testosterone at puberty and translating in elite athletes to a 10–50% performance advantage, is lacking. . . . These data significantly

undermine the delivery of fairness and safety presumed by the criteria set out in transgender inclusion policies . . .” (211)

166. Hamilton et al. 2020, “Response to the United Nations Human Rights Council’s Report on Race and Gender Discrimination in Sport: An Expression of Concern and a Call to Prioritize Research”: “There is growing support for the idea that development influenced by high testosterone levels may result in retained anatomical and physiological advantages If a biologically male athlete self-identifies as a female, legitimately with a diagnosis of gender dysphoria or illegitimately to win medals, the athlete already possesses a physiological advantage that undermines fairness and safety. This is not equitable, nor consistent with the fundamental principles of the Olympic Charter.”

167. Hamilton et al. 2021, “Consensus Statement of the Fédération Internationale de Médecine du Sport” (International Federation of Sports Medicine, or FIMS), signed by more than 60 sports medicine experts from prestigious institutions around the world: The available studies “make it difficult to suggest that the athletic capabilities of transwomen individuals undergoing HRT or GAS are comparable to those of cisgender women.” The findings of Roberts et al. “question the required testosterone suppression time of 12 months for transwomen to be eligible to compete in women’s sport, as most advantages over ciswomen were not negated after 12 months of HRT.”

168. Outside the forum of peer-reviewed journals, respected voices in sport are reaching the same conclusion.

169. The **Women’s Sports Policy Working Group** identifies among its members and “supporters” many women Olympic medalists, former women’s tennis champion and LGBTQ activist Martina Navratilova, Professor Doriane Coleman, a former All-American women’s track competitor, transgender athletes Joanna Harper and Dr. Renee Richards, and many other leaders in women’s sports and civil rights. I have referenced other published work of Joanna Harper and Professor Coleman. In early 2021 the Women’s Sports Policy Working Group published a “Briefing Book” on the issue of transgender participation in women’s sports,¹³ in which they reviewed largely the same body of literature I have reviewed above, and analyzed the implications of that science for fairness and safety in women’s sports.

170. Among other things, the Women’s Sports Policy Working Group concluded:

¹³ <https://womenssportspolicy.org/wp-content/uploads/2021/02/Congressional-Briefing-WSPWG-Transgender-Women-Sports-2.27.21.pdf>

- “[T]he evidence is increasingly clear that hormones do not eliminate the legacy advantages associated with male physical development” (8) due to “the considerable size and strength advantages that remain even after hormone treatments or surgical procedures.” (17)
- “[T]here is convincing evidence that, depending on the task, skill, sport, or event, trans women maintain male sex-linked (legacy) advantages even after a year on standard gender-affirming hormone treatment.” (26, citing Roberts 2020.)
- “[S]everal peer-reviewed studies, including one based on data from the U.S. military, have confirmed that trans women retain their male sex-linked advantages even after a year on gender affirming hormones. . . . Because of these retained advantages, USA Powerlifting and World Rugby have recently concluded that it isn't possible fairly and safely to include trans women in women's competition.” (32)

171. As has been widely reported, in 2020, after an extensive scientific consultation process, the **World Rugby** organization issued its Transgender Guidelines, finding that it would not be consistent with fairness or safety to permit biological males to compete in World Rugby women's matches, no matter what hormonal or surgical procedures they might have undergone. Based on their review of the science, World Rugby concluded:

- “Current policies regulating the inclusion of transgender women in sport are based on the premise that reducing testosterone to levels found in biological females is sufficient to remove many of the biologically-based performance advantages described above. However, peer-reviewed evidence suggests that this is not the case.”
- “Longitudinal research studies on the effect of reducing testosterone to female levels for periods of 12 months or more do not support the contention that variables such as mass, lean mass and strength are altered meaningfully in comparison to the original male-female differences in these variables. The lowering of testosterone removes only a small proportion of the documented biological differences, with large, retained advantages in these physiological attributes, with the safety and performance implications described previously.”
- “. . . given the size of the biological differences prior to testosterone suppression, this comparatively small effect of testosterone reduction allows substantial and meaningful differences to remain. This has significant implications for the risk of injury”

- “. . . bone mass is typically maintained in transgender women over the course of at least 24 months of testosterone suppression, . . . Height and other skeletal measurements such as bone length and hip width have also not been shown to change with testosterone suppression, and nor is there any plausible biological mechanism by which this might occur, and so sporting advantages due to skeletal differences between males and females appear unlikely to change with testosterone reduction.

172. In September 2021 the government-commissioned Sports Councils of the United Kingdom and its subsidiary parts (the five Sports Councils responsible for supporting and investing in sport across England, Wales, Scotland and Northern Ireland) issued a formal “Guidance for Transgender Inclusion in Domestic Sport” (UK Sport Councils 2021), following an extensive consultation process, and a commissioned “International Research Literature Review” prepared by the Carbmill Consulting group (UK Sport Literature Review 2021). The UK Sport Literature Review identified largely the same relevant literature that I review in this paper, characterizes that literature consistently with my own reading and description, and based on that science reaches conclusions similar to mine.

173. The UK Sport Literature Review 2021 concluded:

- “Sexual dimorphism in relation to sport is significant and the most important determinant of sporting capacity. The challenge to sporting bodies is most evident in the inclusion of transgender people in female sport.” “[The] evidence suggests that parity in physical performance in relation to gender-affected sport cannot be achieved for transgender people in female sport through testosterone suppression. Theoretical estimation in contact and collision sport indicate injury risk is likely to be increased for female competitors.” (10)
- “From the synthesis of current research, the understanding is that testosterone suppression for the mandated one year before competition will result in little or no change to the anatomical differences between the sexes, and a more complete reversal of some acute phase metabolic pathways such as haemoglobin levels although the impact on running performance appears limited, and a modest change in muscle mass and strength: The average of around 5% loss of muscle mass and strength will not reverse the average 40-50% difference in strength that typically exists between the two sexes.” (7)
- “These findings are at odds with the accepted intention of current policy in sport, in which twelve months of testosterone suppression is

expected to create equivalence between transgender women and females.” (7)

174. Taking into account the science detailed in the UK Sport Literature Review 2021, the UK Sports Councils have concluded:

- “[T]he latest research, evidence and studies made clear that there are retained differences in strength, stamina and physique between the average woman compared with the average transgender woman or non-binary person registered male at birth, with or without testosterone suppression.” (3)
- “Competitive fairness cannot be reconciled with self-identification into the female category in gender-affected sport.” (7)
- “As a result of what the review found, the Guidance concludes that the inclusion of transgender people into female sport cannot be balanced regarding transgender inclusion, fairness and safety in gender-affected sport where there is meaningful competition. This is due to retained differences in strength, stamina and physique between the average woman compared with the average transgender woman or non-binary person assigned male at birth, with or without testosterone suppression.” (6)
- “Based upon current evidence, testosterone suppression is unlikely to guarantee fairness between transgender women and natal females in gender-affected sports. . . . Transgender women are on average likely to retain physical advantage in terms of physique, stamina, and strength. Such physical differences will also impact safety parameters in sports which are combat, collision or contact in nature.” (7)

175. On January 15, 2022 the American Swimming Coaches Association (ASCA) issued a statement stating, “The American Swimming Coaches Association urges the NCAA and all governing bodies to work quickly to update their policies and rules to maintain fair competition in the women’s category of swimming. ASCA supports following all available science and evidenced-based research in setting the new policies, and we strongly advocate for more research to be conducted” and further stated “The current NCAA policy regarding when transgender females can compete in the women’s category can be unfair to cisgender females and needs to be reviewed and changed in a transparent manner.” (<https://swimswam.com/asca-issues-statement-calling-for-ncaa-to-review-transgender-rules/>; Accessed January 16, 2022.)

176. On January 19, 2022, the NCAA Board of Governors approved a change to the policy on transgender inclusion in sport and stated that “...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 N[atational]G[overning]B[ody] 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”

(<https://www.ncaa.org/news/2022/1/19/media-center-board-of-governors-updates-transgender-participation-policy.aspx>; Accessed January 20, 2022.)

177. On February 1, 2022, because “...a competitive difference in the male and female categories and the disadvantages this presents in elite head-to-head competition ... supported by statistical data that shows that the top-ranked female in 2021, on average, would be ranked 536th across all short course yards (25 yards) male events in the country and 326th across all long course meters (50 meters) male events in the country, among USA Swimming members,” USA Swimming released its Athlete Inclusion, Competitive Equity and Eligibility Policy. The policy is intended to “provide a level-playing field for elite cisgender women, and to mitigate the advantages associated with male puberty and physiology.” (USA Swimming Releases Athlete Inclusion, Competitive Equity and Eligibility Policy, available at <https://www.usaswimming.org/news/2022/02/01/usa-swimming-releases-athlete-inclusion-competitive-equity-and-eligibility-policy>.) The policy states:

- For biologically male athletes seeking to compete in the female category in certain “elite” level events, the athlete has the burden of demonstrating to a panel of independent medical experts that:
 - “From a medical perspective, the prior physical development of the athlete as Male, as mitigated by any medical intervention, does not give the athlete a competitive advantage over the athlete’s cisgender Female competitors” and
 - There is a presumption that the athlete is not eligible unless the athlete “demonstrates 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.” This presumption may be rebutted “if the Panel finds, in the unique circumstances of the case, that [the athlete’s prior physical development does not give the athlete a competitive advantage] notwithstanding the athlete’s serum testosterone results (e.g., the athlete has a medical condition

which limits bioavailability of the athlete's free testosterone).” (USA Swimming Athlete Inclusion Procedures at 43.)

Conclusions

The research and actual observed data show the following:

- At the level of (a) elite, (b) collegiate, (c) scholastic, and (d) recreational competition, men, adolescent boys, or male children, have an advantage over equally gifted, aged and trained women, adolescent girls, or female children in almost all athletic events;
- Biological male physiology is the basis for the performance advantage that men, adolescent boys, or male children have over women, adolescent girls, or female children in almost all athletic events; and
- The administration of androgen inhibitors and cross-sex hormones to men or adolescent boys after the onset of male puberty does not eliminate the performance advantage that men and adolescent boys have over women and adolescent girls in almost all athletic events. Likewise, there is no published scientific evidence that the administration of puberty blockers to males before puberty eliminates the pre-existing athletic advantage that prepubertal males have over prepubertal females in almost all athletic events.

For over a decade sports governing bodies (such as the IOC and NCAA) have wrestled with the question of transgender inclusion in female sports. The previous policies implemented by these sporting bodies had an underlying “premise that reducing testosterone to levels found in biological females is sufficient to remove many of the biologically-based performance advantages.” (World Rugby 2020 at 13.) Disagreements centered around what the appropriate threshold for testosterone levels must be—whether the 10nmol/liter value adopted by the IOC in 2015, or the 5nmol/liter value adopted by the IAAF.

But the science that has become available within just the last few years contradicts that premise. Instead, as the UK Sports Councils, World Rugby, the FIMS Consensus Statement, and the Women's Sports Policy Working Group have all recognized the science is now sharply “at odds with the accepted intention of current policy in sport, in which twelve months of testosterone suppression is expected to create equivalence between transgender women and females” (UK Sports Literature Review 2021 at 7), and it is now “difficult to suggest that the athletic capabilities of transwomen individuals undergoing HRT or GAS are comparable to those of cisgender women.” (Hamilton, FIMS Consensus Statement 2021.) It is important to note that while the 2021 “IOC Framework on Fairness,

Inclusion, and Non-Discrimination on the Basis of Gender Identity and Sex Variations” calls for an “evidence-based approach,” that Framework does not actually reference *any* of the now extensive scientific evidence relating to the physiological differences between the sexes, and the inefficacy of hormonal intervention to eliminate male advantages relevant to most sports. Instead, the IOC calls on other sporting bodies to define criteria for transgender inclusion, while demanding that such criteria simultaneously ensure fairness, safety, and inclusion for all. The recently updated NCAA policy on transgender participation also relies on other sporting bodies to establish criteria for transgender inclusion while calling for fair competition and safety.

But what we currently know tells us that these policy goals—fairness, safety, and full transgender inclusion—are irreconcilable for many or most sports. Long human experience is now joined by large numbers of research papers that document that males outperform females in muscle strength, muscular endurance, aerobic and anaerobic power output, VO₂max, running speed, swimming speed, vertical jump height, reaction time, and most other measures of physical fitness and physical performance that are essential for athletic success. The male advantages have been observed in fitness testing in children as young as 3 years old, with the male advantages increasing immensely during puberty. To ignore what we know to be true about males’ athletic advantages over females, based on mere hope or speculation that cross sex hormone therapy (puberty blockers, androgen inhibitors, or cross-sex hormones) might neutralize that advantage, when the currently available evidence says it does not, is not science and is not “evidence-based” policy-making.

Because of the recent research and analysis in the general field of transgender athletics, many sports organizations have revised their policies or are in the process of doing so. As a result, there is not any universally recognized policy among sports organizations, and transgender inclusion policies are in a state of flux, likely because of the increasing awareness that the goals of fairness, safety, and full transgender inclusion are irreconcilable.

Sports have been separated by sex for the purposes of safety and fairness for a considerable number of years. The values of safety and fairness are endorsed by numerous sports bodies, including the NCAA and IOC. The existing evidence of durable physiological and performance differences based on biological sex provides a strong evidence-based rationale for keeping rules and policies for such sex-based separation in place (or implementing them as the case may be).

As set forth in detail in this report, there are physiological differences between males and females that result in males having a significant performance advantage over similarly gifted, aged, and trained females in nearly all athletic events before, during, and after puberty. There is not scientific evidence that any

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amount or duration of cross sex hormone therapy (puberty blockers, androgen inhibitors, or cross-sex hormones) eliminates all physiological advantages that result in males performing better than females in nearly all athletic events. Males who have received such therapy retain sufficient male physiological traits that enhance athletic performance vis-à-vis similarly aged females and are thus, from a physiological perspective, more accurately categorized as male and not female.

Bibliography

- Bhargava, A. et al. *Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scientific Statement*. *Endocr Rev.* 42:219-258 (2021).
- Bohannon, R.W. et al., *Handgrip strength: a comparison of values obtained from the NHANES and NIH toolbox studies*. *Am. J. Occ. Therapy* 73(2) (March/April 2019).
- Catley, M. and G. Tomkinson, *Normative health-related fitness values for children: analysis of 85,437 test results on 9-17-year-old Australians since 1985*. *Br. J. Sports Med.* published online October 21, 2011. bjsm.bmj.com. Additional versions of this article were published by BJSM in 2012 and 2013, including *Br. J. Sports Med.* 47:98-108 (2013).
- Chu, Y. et al., *Biomechanical comparison between elite female and male baseball pitchers*. *J. App. Biomechanics* 25:22-31 (2009).
- Coleman, D.L. and W. Shreve, *Comparing athletic performances: the best elite women to boys and men*. web.law.duke.edu/sites/default/files/centers/sportslaw/comparingathleticperformances.pdf. (Accessed 06/20/21)
- Coleman, D. L. et al., *Re-affirming the value of the sports exception to Title IX's general non-discrimination rule*. *Duke J. of Gender and Law Policy* 27(69):69-134 (2020).
- Davis SM, Kaar JL, Ringham BM, Hockett CW, Glueck DH, and Dabelea D. *Sex differences in infant body composition emerge in the first 5 months of life*. *J Pediatr Endocrinol Metab* 32: 1235-1239 (2019).
- De Miguel-Etayo, P. et al., *Physical fitness reference standards in European children: the IDEFICS study*. *Int. J. Obes (Lond)* 38(2):557-566 (2014).
- Dogan, B., *Multiple-choice reaction and visual perception in female and male elite athletes*. *J. Sports Med. and Physical Fitness* 49:91-96 (2009).
- Dykiert, D. and G. Der, *Sex differences in reaction time mean and intraindividual variability across the life span*. *Developmental Psychology* 48(5): 1262-76 (2012).
- Eiberg, S. et al, *Maximum oxygen uptake and objectively measured physical activity in Danish children 6-7 years of age: the Copenhagen school child intervention study*. *Br J Sports Med* 39:725-30 (2005).

- Fessler, D.M. et al. *Sexual dimorphism in foot length proportionate to stature*. Ann Hum Biol. 32:44-59 (2005).
- Fields J. et al., *Seasonal and Longitudinal Changes in Body Composition by Sport-Position in NCAA Division I Basketball Athletes*. Sports (Basel). 22:6 (2018).
- Gauthier. R. et al. The physical work capacity of Canadian children, aged 7 to 17 in 1983. A comparison with 1968. CAHPER Journal/Revue de l'ACSEPR 50:4–9 (1983).
- Gershoni, M. & Pietrokovski, S. *The landscape of sex-differential transcriptome and its consequent selection in human adults*. BMC BIOL 15: 7 (2017).
- Gooren, L., *The significance of testosterone for fair participation of the female sex in competitive sports*, 13 Asian J. of Andrology 653 (2011).
- Gooren, L., et al., *Transsexuals and competitive sports*. Eur. J. Endocrinol. 151:425-9 (2004).
- Haizlip, K.M. et al., *Sex-based differences in skeletal muscle kinetics and fiber-type composition*. PHYSIOLOGY (BETHESDA) 30: 30–39 (2015).
- Hamilton, B. et al, *Integrating transwomen and female athletes with differences of sex development (DSD) into elite competition: the FIMS 2021 consensus statement*. Sports Med 2021. doi: 10.1007/s40279-021-01451-8.
- Hamilton, B. et al., *Response to the United Nations Human Rights Council's report on race and gender discrimination in sport: an expression of concern and a call to prioritise research*. Sports Med 2020. doi: 10.1007/s40279-020-01380-4.
- Handelsman, D.J. et al., *Circulating testosterone as the hormonal basis of sex differences in athletic performance*. Endocrine Reviews 39(5):803-829 (Oct 2018).
- Handelsman, D.J., *Sex differences in athletic performance emerge coinciding with the onset of male puberty*, 87 Clinical Endocrinology 68 (2017).
- Handelsman, D.J., *"Perspective,"* at <https://www.healio.com/news/endocrinology/20201216/transgender-women-outpace-cisgender-women-in-athletic-tests-after-1-year-on-hormones> (last accessed September 29, 2021).
- Harper, J. et al., *How does hormone transition in transgender women change body composition, muscle strength and haemoglobin? Systematic review with a focus on the implications for sport participation*. Br J Sports Med 55(15):865-872 (2021).

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

Harper, J., *Race time for transgender athletes*. J. Sporting Cultures & Identities 6:1 (2015).

Heydari R, et al. *Y chromosome is moving out of sex determination shadow*. Cell Biosci. 12:4. (2022).

Higerd, G.A. *Assessing the Potential Transgender Impact on Girl Champions in American High School Track and Field*. Doctoral Dissertation United States Sports Academy. (2020).
<https://www.proquest.com/openview/65d34c1e949899aa823beecad873afae/1?pq-origsite=gscholar&cbl=18750&diss=y>

Hilton, E. N. and T.R. Lundberg, *Transgender women in the female category of sport: perspectives on testosterone suppression and performance advantage*. Sports Medicine 51:199-214 (2021).

Hubal, M., H. Gordish-Dressman, P. Thompson, et al., *Variability in muscle size and strength gain after unilateral resistance training*, Med & Sci in Sports & Exercise 964 (2005).

Jain, A. et al., *A comparative study of visual and auditory reaction times on the basis of gender and physical activity levels of medical first year students*. Int J App & Basic Med Res 5:2(124-27) (May-Aug 2015).

Klaver M, et al.. *Early Hormonal Treatment Affects Body Composition and Body Shape in Young Transgender Adolescents*. J Sex Med 15: 251-260 (2018).

Knechtle, B., P. T. Nikolaidis et al., *World single age records in running from 5 km to marathon*, Frontiers in Psych 9(1) (2013).

Knox, T., L.C. Anderson, et al., *Transwomen in elite sport: scientific & ethical considerations*, 45 J. Med Ethics 395 (2019).

Lapauw, B. et al., *Body composition, volumetric and areal bone parameters in male-to-female transsexual persons*. Bone 43:1016-21 (2008).

Latorre-Roman, P. et al., *Reaction times of preschool children on the ruler drop test: a cross-sectional study with reference values*. Perceptual & Motor Skills 125(5):866-78 (2018).

Lepers, R., B. Knechtle et al., *Trends in triathlon performance: effects of sex & age*, 43 Sports Med 851 (2013).

Lesinski, M., A. Schmelcher, et al., *Maturation-, age-, and sex-specific anthropometric and physical fitness percentiles of German elite young athletes*. PLoS One. 15(8):e0237423 (2020).

- Levine, B., M. Joyner et al., *The role of testosterone in athletic performance*. Available at https://web.law.duke.edu/sites/default/files/centers/sportslaw/Experts_T_Statement_2019.pdf (January 2019).
- Leyk, D, W. Gorges et al., *Hand-grip strength of young men, women and highly trained female athletes*, Eur J Appl Physiol. 2007 Mar; 99(4):415-21 (2007).
- Lombardo, M. and R. Deaner, *On the evolution of the sex differences in throwing: throwing as a male adaptation in humans*, Quarterly Rev of Biology 93(2):91-119 (2018).
- Malina R.M., Bouchards, C., Bar-Or, O. Growth, Maturation, and Physical Activity (2nd edition). Published by Human Kinetics. 2004.
- McManus, A. and N. Armstrong, *Physiology of elite young female athletes*. J Med & Sport Sci 56:23-46 (2011).
- Millard-Stafford, M. et al., *Nature versus nurture: have performance gaps between men and women reached an asymptote?* Int'l J. Sports Physiol. & Performance 13:530-35 (2018).
- Miller, V.M. *Why are sex and gender important to basic physiology and translational and individualized medicine?* Am J Physiol Heart Circ Physiol 306(6): H781-788, (2014).
- Mormile, M. et al., *The role of gender in neuropsychological assessment in healthy adolescents*. J Sports Rehab 27:16-21 (2018).
- Morris, J. et al., *Sexual dimorphism in human arm power and force: implications for sexual selection on fighting ability*. J Exp Bio 223 (2020).
- National Collegiate Athletic Association, *Inclusion of transgender student-athletes*. https://ncaaorg.s3.amazonaws.com/inclusion/lgbtq/INC_TransgenderHandbook.pdf (August 2011).
- Neder, J.A. et al., *Reference values for concentric knee isokinetic strength and power in nonathletic men and women from 20 to 80 years old*. J. Orth. & Sports Phys. Therapy 29(2):116-126 (1999).
- Pate, R. and A. Kriska, *Physiological basis of the sex difference in cardiorespiratory endurance*. Sports Med 1:87-98 (1984).

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

- Pocek, S. et al., *Anthropometric Characteristics and Vertical Jump Abilities by Player Position and Performance Level of Junior Female Volleyball Players*. *Int J Environ Res Public Health*. 18: 8377-8386 (2021).
- Ramírez-Vélez, R. et al., *Vertical Jump and Leg Power Normative Data for Colombian Schoolchildren Aged 9-17.9 Years: The FUPRECOL Study*. *J Strength Cond Res*. 31: 990-998 (2017).
- Roberts, S.A., J.M. Carswell. *Growth, growth potential, and influences on adult height in the transgender and gender-diverse population*. *Andrology*. 9:1679-1688 (2021).
- Roberts, T.A. et al., *Effect of gender affirming hormones on athletic performance in transwomen and transmen: implications for sporting organisations and legislators*. *Br J Sports Med* published online at [10.1136/bjsports-2020-102329](https://doi.org/10.1136/bjsports-2020-102329) (Dec. 7, 2020).
- Roser, M., Cameron Appel and Hannah Ritchie (2013) "Human Height". Published online at OurWorldInData.org. Retrieved from: <https://ourworldindata.org/human-height> [Online Resource]
- Ross, J.G. and G.G. Gilbert. *National Children and Youth Fitness Study*. *J Physical Educ Rec Dance (JOPERD)* 56: 45 – 50 (1985).
- Sakamoto, K. et al., *Comparison of kicking speed between female and male soccer players*. *Procedia Eng* 72:50-55 (2014).
- Santos, R. et al. *Physical fitness percentiles for Portuguese children and adolescents aged 10-18 years*. *J Sports Sci*. 32:1510-8. (2014).
- Sattler, T. et al., *Vertical jump performance of professional male and female volleyball players: effects of playing position and competition level*. *J Strength & Cond Res* 29(6):1486-93 (2015).
- Sax L. *How common is intersex? a response to Anne Fausto-Sterling*. *J Sex Res*. 39(3):174-8 (2002).
- Scharff, M. et al., *Change in grip strength in trans people and its association with lean body mass and bone density*. *Endocrine Connections* 8:1020-28 (2019).
- Senefeld, J.W., et al. *Divergence in timing and magnitude of testosterone levels between male and female youths*, *JAMA* 324(1):99-101 (2020).
- Shah, K. et al. *Do you know the sex of your cells?* *Am J Physiol Cell Physiol*. 306(1):C3-18 (2014).

- Silverman, I., *The secular trend for grip strength in Canada and the United States*, J Sports Sci 29(6):599-606 (2011).
- Spierer, D. et al., *Gender influence on response time to sensory stimuli*. J Strength & Cond Res 24:4(957-63) (2010).
- Staiano AE, Katzmarzyk PT. *Ethnic and sex differences in body fat and visceral and subcutaneous adiposity in children and adolescents*. Int J Obes (Lond). 36:1261-9. (2012).
- Tack, L.J.W. et al., *Proandrogenic and antiandrogenic progestins in transgender youth: differential effects on body composition and bone metabolism*. J. Clin. Endocrinol. Metab, 103(6):2147-56 (2018).
- Tambalis, K. et al., *Physical fitness normative values for 6-18-year-old Greek boys and girls, using the empirical distribution and the lambda, mu, and sigma statistical method*. Eur J Sports Sci 16:6(736-46) (2016).
- Taylor, M.J. et al., *Vertical jumping and leg power normative data for English school children aged 10-15 years*. J Sports Sci. 28:867-72. (2010).
- Taylor RW, Gold E, Manning P, and Goulding A. *Gender differences in body fat content are present well before puberty*. Int J Obes Relat Metab Disord 21: 1082-1084, 1997.
- Taylor RW, Grant AM, Williams SM, and Goulding A. *Sex differences in regional body fat distribution from pre- to postpuberty*. Obesity (Silver Spring) 18: 1410-1416, 2010.
- Thibault, V., M. Guillaume et al., *Women and men in sport performance: the gender gap has not evolved since 1983*. J Sports Science & Med 9:214-223 (2010).
- Thomas, J.R. and K. E. French, *Gender differences across age in motor performance: a meta-analysis*. Psych. Bull. 98(2):260-282 (1985).
- Tomkinson, G. et al., *European normative values for physical fitness in children and adolescents aged 9-17 years: results from 2,779,165 Eurofit performances representing 30 countries*. Br J Sports Med 52:1445-56 (2018).
- Tomkinson, G. et al., *International normative 20 m shuttle run values from 1,142,026 children and youth representing 50 countries*. Br J Sports Med. 51:1545-1554 (2017).

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

Tønnessen, E., I. S. Svendsen et al., *Performance development in adolescent track & field athletes according to age, sex, and sport discipline*. PLOS ONE 10(6): e0129014 (2015).

Tønnessen, E. et al., *Reaction time aspects of elite sprinters in athletic world championships*. J Strength & Cond Res 27(4):885-92 (2013).

United Kingdom Sports Councils, *Guidance for transgender inclusion in domestic sport*. Available at [https://equalityinsport.org/docs/300921/Guidance for Transgender Inclusion in Domestic Sport 2021 - Summary of Background Documents.pdf](https://equalityinsport.org/docs/300921/Guidance%20for%20Transgender%20Inclusion%20in%20Domestic%20Sport%202021%20-%20Summary%20of%20Background%20Documents.pdf). September 2021.

United Kingdom Sports Councils, *International Research Literature Review*. Available at <https://equalityinsport.org/docs/300921/Transgender%20International%20Research%20Literature%20Review%202021.pdf>. September 2021.

USA Swimming Athlete Inclusion Procedures, last revision February 1, 2022, available at https://www.usaswimming.org/docs/default-source/governance/governance-lsc-website/rules_policies/usa-swimming-policy-19.pdf.

VanCaenegem, E. et al, *Preservation of volumetric bone density and geometry in trans women during cross-sex hormonal therapy: a prospective observational study*. Osteoporos Int 26:35-47 (2015).

Wiik, A., T. R Lundberg et al., *Muscle strength, size, and composition following 12 months of gender-affirming treatment in transgender individuals*. J. Clinical Endocrin. & Metab. 105(3):e805-813 (2020).

Women's Sports Policy Working Group, *Briefing book: a request to Congress and the administration to preserve girls' and women's sport and accommodate transgender athletes*. Available at womenssportspolicy.org. (2021).

World Rugby Transgender Guidelines. <https://www.world.rugby/the-game/player-welfare/guidelines/transgender> (2020).

World Rugby Transgender Women's Guidelines. <https://www.world.rugby/the-game/player-welfare/guidelines/transgender/women> (2020).

Wunderlich RE, Cavanagh PR. *Gender differences in adult foot shape: implications for shoe design*. Med Sci Sports Exerc. 33:605-1 (2001).

Appendix 1 – Data Tables

Presidential Physical Fitness Results¹⁴

Curl-Ups (# in 1 minute)

Age	Male		Female		Age	Male-Female % Difference	
	50th %ile	85th %ile	50th %ile	85th %ile		50th %ile	85th %ile
6	22	33	23	32	6	-4.3%	3.1%
7	28	36	25	34	7	12.0%	5.9%
8	31	40	29	38	8	6.9%	5.3%
9	32	41	30	39	9	6.7%	5.1%
10	35	45	30	40	10	16.7%	12.5%
11	37	47	32	42	11	15.6%	11.9%
12	40	50	35	45	12	14.3%	11.1%
13	42	53	37	46	13	13.5%	15.2%
14	45	56	37	47	14	21.6%	19.1%
15	45	57	36	48	15	25.0%	18.8%
16	45	56	35	45	16	28.6%	24.4%
17	44	55	34	44	17	29.4%	25.0%

¹⁴ This data is available from a variety of sources, including:
<https://gilmore.gvgsd.us/documents/Info/Forms/Teacher%20Forms/Presidentialchallenge-test.pdf>

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Shuttle Run (seconds)

Age	Male		Female		Age	Male-Female % Difference	
	50th %ile	85th %ile	50th %ile	85th %ile		50th %ile	85th %ile
6	13.3	12.1	13.8	12.4	6	3.6%	2.4%
7	12.8	11.5	13.2	12.1	7	3.0%	5.0%
8	12.2	11.1	12.9	11.8	8	5.4%	5.9%
9	11.9	10.9	12.5	11.1	9	4.8%	1.8%
10	11.5	10.3	12.1	10.8	10	5.0%	4.6%
11	11.1	10	11.5	10.5	11	3.5%	4.8%
12	10.6	9.8	11.3	10.4	12	6.2%	5.8%
13	10.2	9.5	11.1	10.2	13	8.1%	6.9%
14	9.9	9.1	11.2	10.1	14	11.6%	9.9%
15	9.7	9.0	11.0	10.0	15	11.8%	10.0%
16	9.4	8.7	10.9	10.1	16	13.8%	13.9%
17	9.4	8.7	11.0	10.0	17	14.5%	13.0%

1 mile run (seconds)

Age	Male		Female		Age	Male-Female % Difference	
	50th %ile	85th %ile	50th %ile	85th %ile		50th %ile	85th %ile
6	756	615	792	680	6	4.5%	9.6%
7	700	562	776	636	7	9.8%	11.6%
8	665	528	750	602	8	11.3%	12.3%
9	630	511	712	570	9	11.5%	10.4%
10	588	477	682	559	10	13.8%	14.7%
11	560	452	677	542	11	17.3%	16.6%
12	520	431	665	503	12	21.8%	14.3%
13	486	410	623	493	13	22.0%	16.8%
14	464	386	606	479	14	23.4%	19.4%
15	450	380	598	488	15	24.7%	22.1%
16	430	368	631	503	16	31.9%	26.8%
17	424	366	622	495	17	31.8%	26.1%

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Pull Ups (# completed)

Age	Male		Female		Age	Male-Female % Difference	
	50th %ile	85th %ile	50th %ile	85th %ile		50th %ile	85th %ile
6	1	2	1	2	6	0.0%	0.0%
7	1	4	1	2	7	0.0%	100.0%
8	1	5	1	2	8	0.0%	150.0%
9	2	5	1	2	9	100.0%	150.0%
10	2	6	1	3	10	100.0%	100.0%
11	2	6	1	3	11	100.0%	100.0%
12	2	7	1	2	12	100.0%	250.0%
13	3	7	1	2	13	200.0%	250.0%
14	5	10	1	2	14	400.0%	400.0%
15	6	11	1	2	15	500.0%	450.0%
16	7	11	1	1	16	600.0%	1000.0%
17	8	13	1	1	17	700.0%	1200.0%

Data Compiled from Athletic.Net

2021 National 3000 m cross country race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls	Difference	Boys	Girls	Difference	Boys	Girls	Difference
1	691.8	728.4		607.7	659.8		608.1	632.6	
2	722.5	739.0	#1 boy vs #	619.6	674.0	#1 boy vs #	608.7	639.8	#1 boy vs #
3	740.5	783.0	1 girl	620.1	674.7	1 girl	611.3	664.1	1 girl
4	759.3	783.5	5.0%	643.2	683.7	7.9%	618.6	664.4	3.9%
5	759.6	792.8		646.8	685.0		619.7	671.6	
6	760.0	824.1		648.0	686.4		631.2	672.1	
7	772.0	825.7	Average	648.8	687.0	Average	631.7	672.3	Average
8	773.0	832.3	difference	658.0	691.0	difference	634.9	678.4	difference
9	780.7	834.3	boys vs girls	659.5	692.2	boys vs girls	635.0	679.3	boys vs girls
10	735.1	844.4	6.2%	663.9	663.3	5.6%	635.1	679.4	6.3%

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2021 National 3000 m cross country race time in seconds

Rank	5 th grade			6 th grade			7 th grade		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	625.5	667.0	Difference	545.3	582.0	Difference	534.0	560.7	Difference
2	648.8	685.0	#1 boy vs #	553.2	584.3	#1 boy vs #	541.0	567.0	#1 boy vs #
3	653.5	712.9	1 girl	562.3	585.1	1 girl	542.6	581.8	1 girl
4	658.4	719.2	6.2%	562.9	599.8	6.3%	544.6	583.0	4.8%
5	675.3	725.2		571.5	612.9		546.0	595.0	
6	677.4	727.7		588.0	622.0		556.0	599.0	
7	677.6	734.0	Average	591.3	624.9	Average	556.0	604.3	Average
8	679.1	739.4	difference	593.0	626.0	difference	556.0	606.0	difference
9	686.4	739.4	boys vs girls	593.8	628.0	boys vs girls	558.6	606.8	boys vs girls
10	686.4	746.4	7.3%	594.1	645.6	5.8%	563.2	617.0	7.1%

2021 National 100 m Track race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	13.06	14.24	Difference #1	10.87	12.10	Difference #1	11.37	12.08	Difference #1
2	13.54	14.41	boy vs # 1	10.91	12.24	boy vs # 1	11.61	12.43	boy vs # 1
3	13.73	14.44	girl	11.09	12.63	girl	11.73	12.51	girl
4	14.10	14.48	8.3%	11.25	12.70	10.2%	11.84	12.55	5.9%
5	14.19	14.49		11.27	12.75		11.89	12.57	
6	14.31	14.58		11.33	12.80		11.91	12.62	
7	14.34	14.69	Average	11.42	12.83	Average	11.94	12.65	Average
8	14.35	14.72	difference	11.43	12.84	difference	11.97	12.71	difference
9	14.41	14.77	boys vs girls	11.44	12.88	boys vs girls	12.08	12.71	boys vs girls
10	14.43	14.86	3.6%	11.51	12.91	11.1%	12.12	12.75	5.7%

2021 National 200 m Track race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	24.02	28.72	Difference #1	21.77	25.36	Difference #1	20.66	25.03	Difference #1
2	24.03	28.87	boy vs # 1	22.25	25.50	boy vs # 1	22.91	25.18	boy vs # 1
3	28.07	29.92	girl	22.48	25.55	girl	23.14	25.22	girl
4	28.44	29.95	16.4%	22.57	25.70	14.2%	23.69	25.49	17.5%
5	28.97	30.04		22.65	26.08		23.84	25.78	
6	29.26	30.09		22.77	26.22		24.23	25.89	
7	29.34	30.27	Average	23.11	26.79	Average	24.35	26.03	Average
8	29.38	30.34	difference	23.16	26.84	difference	24.58	26.07	difference
9	29.65	30.41	boys vs girls	23.28	26.91	boys vs girls	24.59	26.10	boys vs girls
10	29.78	30.54	6.1%	23.47	26.85	13.1%	24.61	26.13	7.9%

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

2021 National 400 m Track race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	66.30	67.12	Difference #1	49.29	56.80	Difference #1	51.96	55.70	Difference #1
2	66.88	67.67	boy vs # 1	50.47	58.57	boy vs # 1	55.52	57.08	boy vs # 1
3	67.59	67.74	girl	52.28	60.65	girl	55.58	57.60	girl
4	68.16	68.26	1.2%	52.44	61.45	13.2%	55.59	57.79	6.7%
5	68.51	68.37		53.31	61.81		55.72	58.02	
6	69.13	71.02		53.65	62.03		55.84	58.25	
7	69.75	72.73	Average	53.78	62.32	Average	55.92	59.25	Average
8	69.80	73.25	difference	54.51	62.33	difference	57.12	59.27	difference
9	69.81	73.31	boys vs girls	55.84	62.34	boys vs girls	57.18	59.40	boys vs girls
10	70.32	73.48	2.4%	55.90	62.40	13.0%	57.22	59.49	4.2%

2021 National 800 m Track race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	152.2	157.9	Difference #1	120.8	141.4	Difference #1	127.8	138.5	Difference #1
2	155.2	164.6	boy vs # 1	124.0	142.2	boy vs # 1	129.7	143.1	boy vs # 1
3	161.0	164.9	girl	125.1	148.8	girl	130.5	144.2	girl
4	161.1	165.9	3.6%	125.6	151.3	14.5%	133.2	144.2	7.7%
5	161.2	168.5		126.5	151.6		136.2	144.9	
6	161.6	169.9		136.5	152.5		136.5	145.0	
7	161.8	171.5	Average	137.1	153.1	Average	136.7	145.2	Average
8	162.2	173.1	difference	138.5	153.7	difference	136.7	145.6	difference
9	165.3	173.4	boys vs girls	139.5	153.8	boys vs girls	137.0	145.6	boys vs girls
10	166.9	174.7	4.5%	140.2	154.2	12.6%	137.9	145.8	6.9%

2021 National 1600 m Track race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	372.4	397.6	Difference #1	307.4	319.3	Difference #1	297.3	313.8	Difference #1
2	378.3	400.9	boy vs # 1	313.7	322.2	boy vs # 1	298.4	317.1	boy vs # 1
3	378.4	405.6	girl	315.0	322.6	girl	307.0	319.9	girl
4	402.0	435.2	6.3%	318.2	337.5	3.7%	313.9	323.3	5.2%
5	406.4	445.0		318.4	345.2		319.2	325.3	
6	413.4	457.0		320.5	345.7		320.4	326.2	
7	457.4	466.0	Average	327.0	345.9	Average	321.1	327.0	Average
8	473.3	466.8	difference	330.3	347.1	difference	321.9	330.0	difference
9	498.3	492.3	boys vs girls	333.4	347.5	boys vs girls	325.5	331.1	boys vs girls
10	505.0	495.0	4.0%	347.0	355.6	4.7%	327.1	332.5	2.9%

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

2021 National 3000 m Track race time in seconds

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	794.2	859.9	Difference #1	602.3	679.2	Difference #1	556.6	623.7	Difference #1
2	856.3		boy vs # 1	644.9	709.7	boy vs # 1	591.6	649.5	boy vs # 1
3			girl	646.6	714.2	girl	600.8	651.6	girl
4			7.6%	648.2	741.9	11.3%	607.1	654.9	10.8%
5		No		648.4	742.7		609.1	662.9	
6	No	Further		652.8	756.6		611.5	664.1	
7	further	Data	Average	658.9	760.2	Average	615.7	666.3	Average
8	data		difference	660.1	762.5	difference	617.3	666.8	difference
9			boys vs girls	662.7	780.2	boys vs girls	618.4	673.2	boys vs girls
10			NA%	671.6	792.3	12.7%	620.6	674.4	8.2%

2021 National Long Jump Distance (in inches)

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	156.0	176.0	Difference #1	256.8	213.8	Difference #1	224.0	201.3	Difference #1
2	156.0	163.8	boy vs # 1	247.0	212.0	boy vs # 1	222.5	197.3	boy vs # 1
3	155.0	153.0	girl	241.0	210.8	girl	220.5	195.8	girl
4	154.3	152.0	-11.4%	236.3	208.8	20.1%	210.3	193.5	11.3%
5	154.0	149.5		231.5	207.0		210.0	193.3	
6	152.8	146.0		225.0	204.8		206.8	192.5	
7	151.5	144.5	Average	224.0	194.5	Average	206.0	192.3	Average
8	150.8	137.5	difference	224.0	192.5	difference	205.5	192.0	difference
9	150.5	137.0	boys vs girls	221.8	192.3	boys vs girls	205.0	191.3	boys vs girls
10		No	1.4%			13.2%			9.1%
	150.5	Further		219.0	187.5		204.5	189.0	
		Data							

2021 National High Jump Distance (in inches)

Rank	7-8 years old			9-10 years old			11-12 year old		
	Boys	Girls		Boys	Girls		Boys	Girls	
1	38.0	37.5	Difference #1	72.0	58.0	Difference #1	63.0	56.0	Difference #1
2	38.0	34.0	boy vs # 1	70.0	58.0	boy vs # 1	61.0	56.0	boy vs # 1
3	36.0	32.0	girl	65.8	57.0	girl	60.0	57.0	girl
4	36.0	32.0	1.3	62.0	56.0	24.1%	59.0	56.0	12.5%
5	35.8	32.0		62.0	56.0		59.0	56.0	
6	35.5			62.0	55.0		59.0	55.0	
7	34.0	No	Average	61.0	54.0	Average	59.0	54.0	Average
8	32.0	further	difference	60.0	54.0	difference	58.0	54.0	difference
9	59.0	Data	boys vs girls	59.0	No	boys vs girls	57.8	56.0	boys vs girls
10			21.6%		Further	12.5%			6.9%
	56.0			56.0	Data		57.8	56.0	

Appendix 2 – Scholarly Publications in Past 10 Years

Refereed Publications

1. Brown GA, Shaw BS, Shaw I. How much water is in a mouthful, and how many mouthfuls should I drink? A laboratory exercise to help students understand developing a hydration plan. *Adv Physiol Educ* 45: 589–593, 2021.
2. Schneider KM and Brown GA (as Faculty Mentor). What's at Stake: Is it a Vampire or a Virus? *International Journal of Undergraduate Research and Creative Activities*. 11, Article 4. 2019.
3. Christner C and Brown GA (as Faculty Mentor). Explaining the Vampire Legend through Disease. *UNK Undergraduate Research Journal*. 23(1), 2019. (*This is an on-campus publication.)
4. Schneekloth B and Brown GA. Comparison of Physical Activity during Zumba with a Human or Video Game Instructor. 11(4):1019-1030. *International Journal of Exercise Science*, 2018.
5. Bice MR, Hollman A, Bickford S, Bickford N, Ball JW, Wiedenman EM, Brown GA, Dinkel D, and Adkins M. Kinesiology in 360 Degrees. *International Journal of Kinesiology in Higher Education*, 1: 9-17, 2017
6. Shaw I, Shaw BS, Brown GA, and Shariat A. Review of the Role of Resistance Training and Musculoskeletal Injury Prevention and Rehabilitation. *Gavin Journal of Orthopedic Research and Therapy*. 1: 5-9, 2016
7. Kahle A, Brown GA, Shaw I, & Shaw BS. Mechanical and Physiological Analysis of Minimalist versus Traditionally Shod Running. *J Sports Med Phys Fitness*. 56(9):974-9, 2016
8. Bice MR, Carey J, Brown GA, Adkins M, and Ball JW. The Use of Mobile Applications to Enhance Learning of the Skeletal System in Introductory Anatomy & Physiology Students. *Int J Kines Higher Educ* 27(1) 16-22, 2016
9. Shaw BS, Shaw I, & Brown GA. Resistance Exercise is Medicine. *Int J Ther Rehab*. 22: 233-237, 2015.
10. Brown GA, Bice MR, Shaw BS, & Shaw I. Online Quizzes Promote Inconsistent Improvements on In-Class Test Performance in Introductory Anatomy & Physiology. *Adv. Physiol. Educ*. 39: 63-6, 2015
11. Brown GA, Heiserman K, Shaw BS, & Shaw I. Rectus abdominis and rectus femoris muscle activity while performing conventional unweighted and weighted seated abdominal trunk curls. *Medicina dello Sport*. 68: 9-18. 2015
12. Botha DM, Shaw BS, Shaw I & Brown GA. Role of hyperbaric oxygen therapy in the promotion of cardiopulmonary health and rehabilitation. *African Journal for*

- Physical, Health Education, Recreation and Dance (AJPHERD). Supplement 2 (September), 20: 62-73, 2014
13. Abbey BA, Heelan KA, Brown, GA, & Bartee RT. Validity of HydraTrend™ Reagent Strips for the Assessment of Hydration Status. *J Strength Cond Res.* 28: 2634-9. 2014
 14. Scheer KC, Siebrandt SM, Brown GA, Shaw BS, & Shaw I. Wii, Kinect, & Move. Heart Rate, Oxygen Consumption, Energy Expenditure, and Ventilation due to Different Physically Active Video Game Systems in College Students. *International Journal of Exercise Science:* 7: 22-32, 2014
 15. Shaw BS, Shaw I, & Brown GA. Effect of concurrent aerobic and resistive breathing training on respiratory muscle length and spirometry in asthmatics. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD). Supplement 1 (November),* 170-183, 2013
 16. Adkins M, Brown GA, Heelan K, Ansorge C, Shaw BS & Shaw I. Can dance exergaming contribute to improving physical activity levels in elementary school children? *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD).* 19: 576-585, 2013
 17. Jarvi MB, Brown GA, Shaw BS & Shaw I. Measurements of Heart Rate and Accelerometry to Determine the Physical Activity Level in Boys Playing Paintball. *International Journal of Exercise Science:* 6: 199-207, 2013
 18. Brown GA, Krueger RD, Cook CM, Heelan KA, Shaw BS & Shaw I. A prediction equation for the estimation of cardiorespiratory fitness using an elliptical motion trainer. *West Indian Medical Journal.* 61: 114-117, 2013.
 19. Shaw BS, Shaw I, & Brown GA. Body composition variation following diaphragmatic breathing. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD).* 18: 787-794, 2012.

Refereed Presentations

1. Brown GA. Transwomen competing in women's sports: What we know, and what we don't. American Physiological Society New Trends in Sex and Gender Medicine conference. Held virtually due to Covid-19 pandemic. October 19 - 22, 2021, 2021.
2. Shaw BS, Boshoff VE, Coetzee S, Brown GA, Shaw I. A Home-based Resistance Training Intervention Strategy To Decrease Cardiovascular Disease Risk In Overweight Children *Med Sci Sport Exerc.* 53(5), 742. 68th Annual Meeting of the American College of Sports Medicine. Held virtually due to Covid-19 pandemic. June 1-5, 2021.
3. Shaw I, Cronje M, Brown GA, Shaw BS. Exercise Effects On Cognitive Function And Quality Of Life In Alzheimer's Patients In Long-term Care. *Med*

- Sci Sport Exerc. 53(5), 743. 68th Annual Meeting of the American College of Sports Medicine. Held virtually due to Covid-19 pandemic. June 1-5, 2021.
4. Brown GA, Escalera M, Oleena A, Turek T, Shaw I, Shaw BS. Relationships between Body Composition, Abdominal Muscle Strength, and Well Defined Abdominal Muscles. Med Sci Sport Exerc. 53(5), 197. 68th Annual Meeting of the American College of Sports Medicine. Held virtually due to Covid-19 pandemic. June 1-5, 2021.
 5. Brown GA, Jackson B, Szekely B, Schramm T, Shaw BS, Shaw I. A Pre-Workout Supplement Does Not Improve 400 M Sprint Running or Bicycle Wingate Test Performance in Recreationally Trained Individuals. Med Sci Sport Exerc. 50(5), 2932. 65th Annual Meeting of the American College of Sports Medicine. Minneapolis, MN. June 2018.
 6. Paulsen SM, Brown GA. Neither Coffee Nor A Stimulant Containing “Pre-workout” Drink Alter Cardiovascular Drift During Walking In Young Men. Med Sci Sport Exerc. 50(5), 2409. 65th Annual Meeting of the American College of Sports Medicine. Minneapolis, MN. June 2018.
 7. Adkins M, Bice M, Bickford N, Brown GA. Farm to Fresh! A Multidisciplinary Approach to Teaching Health and Physical Activity. 2018 spring SHAPE America central district conference. Sioux Falls, SD. January 2018.
 8. Shaw I, Kinsey JE, Richards R, Shaw BS, and Brown GA. Effect Of Resistance Training During Nebulization In Adults With Cystic Fibrosis. International Journal of Arts & Sciences’ (IJAS). International Conference for Physical, Life and Health Sciences which will be held at FHWien University of Applied Sciences of WKW, at Währinger Gürtel 97, Vienna, Austria, from 25-29 June 2017.
 9. Bongers M, Abbey BM, Heelan K, Steele JE, Brown GA. Nutrition Education Improves Nutrition Knowledge, Not Dietary Habits In Female Collegiate Distance Runners. Med Sci Sport Exerc. 49(5), 389. 64th Annual Meeting of the American College of Sports Medicine. Denver, CO. May 2017.
 10. Brown GA, Steele JE, Shaw I, Shaw BS. Using Elisa to Enhance the Biochemistry Laboratory Experience for Exercise Science Students. Med Sci Sport Exerc. 49(5), 1108. 64th Annual Meeting of the American College of Sports Medicine. Denver, CO. May 2017.
 11. Brown GA, Shaw BS, and Shaw I. Effects of a 6 Week Conditioning Program on Jumping, Sprinting, and Agility Performance In Youth. Med Sci Sport Exerc. 48(5), 3730. 63rd Annual Meeting of the American College of Sports Medicine. Boston, MA. June 2016.
 12. Shaw I, Shaw BS, Boshoff VE, Coetzee S, and Brown GA. Kinanthropometric Responses To Callisthenic Strength Training In Children. Med Sci Sport Exerc.

- 48(5), 3221. 63rd Annual Meeting of the American College of Sports Medicine. Boston, MA. June 2016.
13. Shaw BS, Shaw I, Gouveia M, McIntyre S, and Brown GA. Kinanthropometric Responses To Moderate-intensity Resistance Training In Postmenopausal Women. *Med Sci Sport Exerc.* 48(5), 2127. 63rd Annual Meeting of the American College of Sports Medicine. Boston, MA. June 2016.
 14. Bice MR, Cary JD, Brown GA, Adkins M, and Ball JW. The use of mobile applications to enhance introductory anatomy & physiology student performance on topic specific in-class tests. National Association for Kinesiology in Higher Education National Conference. January 8, 2016.
 15. Shaw I, Shaw BS, Lawrence KE, Brown GA, and Shariat A. Concurrent Resistance and Aerobic Exercise Training Improves Hemodynamics in Normotensive Overweight and Obese Individuals. *Med Sci Sport Exerc.* 47(5), 559. 62nd Annual Meeting of the American College of Sports Medicine. San Diego, CA. May 2015.
 16. Shaw BS, Shaw I, McCrorie C, Turner S., Schnetler A, and Brown GA. Concurrent Resistance and Aerobic Training in the Prevention of Overweight and Obesity in Young Adults. *Med Sci Sport Exerc.* 47(5), 223. 62nd Annual Meeting of the American College of Sports Medicine. San Diego, CA. May 2015.
 17. Schneekloth B, Shaw I, Shaw BS, and Brown GA. Physical Activity Levels Using Kinect™ Zumba Fitness versus Zumba Fitness with a Human Instructor. *Med Sci Sport Exerc.* 46(5), 326. 61st Annual Meeting of the American College of Sports Medicine. Orlando, FL. June 2014.
 18. Shaw I, Lawrence KE, Shaw BS, and Brown GA. Callisthenic Exercise-related Changes in Body Composition in Overweight and Obese Adults. *Med Sci Sport Exerc.* 46(5), 394. 61st Annual Meeting of the American College of Sports Medicine. Orlando, FL June 2014.
 19. Shaw BS, Shaw I, Fourie M, Gildenhuis M, and Brown GA. Variances In The Body Composition Of Elderly Woman Following Progressive Mat Pilates. *Med Sci Sport Exerc.* 46(5), 558. 61st Annual Meeting of the American College of Sports Medicine. Orlando, FL June 2014.
 20. Brown GA, Shaw I, Shaw BS, and Bice M. Online Quizzes Enhance Introductory Anatomy & Physiology Performance on Subsequent Tests, But Not Examinations. *Med Sci Sport Exerc.* 46(5), 1655. 61st Annual Meeting of the American College of Sports Medicine. Orlando, FL June 2014.
 21. Kahle, A. and Brown, G.A. Electromyography in the Gastrocnemius and Tibialis Anterior, and Oxygen Consumption, Ventilation, and Heart Rate During Minimalist versus Traditionally Shod Running. 27th National Conference on Undergraduate Research (NCUR). La Crosse, Wisconsin USA. April 11-13, 2013

22. Shaw, I., Shaw, B.S., and Brown, G.A. Resistive Breathing Effects on Pulmonary Function, Aerobic Capacity and Medication Usage in Adult Asthmatics *Med Sci Sports Exerc* 45 (5). S1602 2013. 60th Annual Meeting of the American College of Sports Medicine, Indianapolis, IN USA, May 26-30 2013
23. Shaw, B.S. Gildenhuis, G.A., Fourie, M. Shaw I, and Brown, G.A. Function Changes In The Aged Following Pilates Exercise Training. *Med Sci Sports Exerc* 45 (5). S1566 60th Annual Meeting of the American College of Sports Medicine, Indianapolis, IN USA, May 26-30 2013
24. Brown, G.A., Abbey, B.M., Ray, M.W., Shaw B.S., & Shaw, I. Changes in Plasma Free Testosterone and Cortisol Concentrations During Plyometric Depth Jumps. *Med Sci Sports Exerc* 44 (5). S598, 2012. 59th Annual Meeting of the American College of Sports Medicine. May 29 - June 2, 2012; San Francisco, California
25. Shaw, I., Fourie, M., Gildenhuis, G.M., Shaw B.S., & Brown, G.A. Group Pilates Program and Muscular Strength and Endurance Among Elderly Woman. *Med Sci Sports Exerc* 44 (5). S1426. 59th Annual Meeting of the American College of Sports Medicine. May 29 - June 2, 2012; San Francisco, California
26. Shaw B.S., Shaw, I., & Brown, G.A. Concurrent Inspiratory-Expiratory and Aerobic Training Effects On Respiratory Muscle Strength In Asthmatics. *Med Sci Sports Exerc* 44 (5). S2163. 59th Annual Meeting of the American College of Sports Medicine. May 29 - June 2, 2012; San Francisco, California
27. Scheer, K., Siebrandt, S., Brown, G.A, Shaw B.S., & Shaw, I. Heart Rate, Oxygen Consumption, and Ventilation due to Different Physically Active Video Game Systems. *Med Sci Sports Exerc* 44 (5). S1763. 59th Annual Meeting of the American College of Sports Medicine. May 29 - June 2, 2012; San Francisco, California
28. Jarvi M.B., Shaw B.S., Shaw, I., & Brown, G.A. (2012) Paintball Is A Blast, But Is It Exercise? Heart Rate and Accelerometry In Boys Playing Paintball. *Med Sci Sports Exerc* 44 (5). S3503. 59th Annual Meeting of the American College of Sports Medicine. May 29 - June 2, 2012; San Francisco, California

Book Chapters

1. Shaw BS, Shaw I, Brown G.A. Importance of resistance training in the management of cardiovascular disease risk. In *Cardiovascular Risk Factors*. IntechOpen, 2021.

G. Brown

Expert Report, B.P.J. v. WV BOE et al.

2. Brown, G.A. Chapters on Androstenedione and DHEA. In: Nutritional Supplements in Sport, Exercise and Health an A-Z Guide. edited by Linda M. Castell, Samantha J. Stear, Louise M. Burke. Routledge 2015.

Refereed Web Content

1. Brown GA. Looking back and moving forward. The importance of reflective assessment in physiology education. (January 13, 2022)
<https://blog.lifescitrc.org/pecop/2022/01/13/looking-back-and-moving-forward-the-importance-of-reflective-assessment-in-physiology-education/>
2. Brown GA. The Olympics, sex, and gender in the physiology classroom. Physiology Educators Community of Practice, managed by the Education group of the American Physiological Society (August 18, 2021)
<https://blog.lifescitrc.org/pecop/2021/08/18/the-olympics-sex-and-gender-in-the-physiology-classroom/>

A complete CV is available at

https://www.unk.edu/academics/hperls/bio_pages/current-vita-gab.pdf

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

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

Plaintiff,

vs.

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

Defendants,

and

LAINY ARMISTEAD,

Defendant-Intervenor.

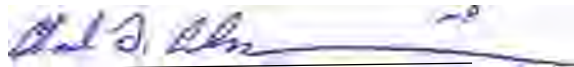
Case No. 2:21-cv-00316

Hon. Joseph R. Goodwin

DECLARATION OF DR. CHAD T. CARLSON, M.D., FACSM

I, Dr. Chad T. Carlson, 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 Dr. Chad T. Carlson, M.D., FACM prepared for *B.P.J. v. West Virginia*, 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.

Executed on February 23, 2022.



Chad T. Carlson, MD

**Expert Report of Dr. Chad Thomas Carlson, M.D., FACM
prepared for *B.P.J. v. West Virginia*
February 23, 2022**

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INTRODUCTION

Up to the present, the great majority of news, debate, and even scholarship about transgender participation in female athletics has focused on track and field events and athletes, and the debate has largely concerned questions of fairness and inclusion. However, the transgender eligibility policies of many high school athletic associations in the United States apply with equal force to all sports, including sports in which players frequently collide with each other, or can be forcefully struck by balls or equipment such as hockey or lacrosse sticks. 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,¹ soccer,² volleyball,³ softball,⁴ lacrosse,⁵ and even women's tackle football.⁶

¹https://www.espn.com/espnw/athletes-life/story/_/id/10170842/espnw-gabrielle-ludwig-52-year-old-transgender-women-college-basketball-player-enjoying-best-year-life (accessed 2/17/22)

²https://www.unionleader.com/news/education/nh-bill-limits-women-s-sports-to-girls-born-female/article_d1998ea1-a1b9-5ba4-a48d-51a2aa01b910.html;
<https://www.outsports.com/2020/1/17/21069390/womens-soccer-mara-gomez-transgender-player-argentina-primera-division-villa-san-marcos> (accessed 6/20/21)

³<https://news.ucsc.edu/2016/09/challenging-assumptions.html> (accessed 6/20/21);
<https://www.outsports.com/2017/3/20/14987924/trans-athlete-volleyball-tia-thompson> (accessed 6/20/21)

⁴<https://www.foxnews.com/us/californias-transgender-law-allows-male-high-schooler-to-make-girls-softball-team> (accessed 6/20/21)

⁵<https://savewomenssports.com/f/emilys-story?blogcategory=Our+Stories> (accessed 6/20/21)

⁶<https://www.outsports.com/2017/12/13/16748322/britney-stinson-trans-football-baseball> (accessed 6/20/21); <https://www.mprnews.org/story/2018/12/22/transgender-football-player-prevails-in-lawsuit> (accessed 6/20/21)

The science of sex-specific differences in physiology, intersecting with the physics of sports injury, leaves little doubt that participation by biological males in these types of girls' or women's sports, based on gender identity, creates significant additional risk of injury for the biologically female participants competing alongside these transgender athletes.

In 2020, after an extensive review of the scientific literature, consultation with experts, and modeling of expected injuries, World Rugby published revised rules governing transgender participation, along with a detailed explanation of how the new policy was supported by current evidence. World Rugby concluded that “there is currently no basis with which safety and fairness can be assured to biologically female rugby players should they encounter contact situations with players whose biological male advantages persist to a large degree,” and that after puberty, “the lowering of testosterone removes only a small proportion of the documented biological differences.” Hence, World Rugby concluded that biological men should not compete in women's rugby. (World Rugby Transgender Women Guidelines 2020.) World Rugby has been criticized by some for its new guidelines, but those criticisms have often avoided discussions of medical science entirely, or have asserted that modeling scenarios can overstate true risk. What cannot be denied, however, is that World Rugby's approach is evidence-based, and rooted in concern for athlete safety. 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 predicts that biologically male transgender athletes do constitute a safety risk for the biologically female athlete in women's sports.

In a similar vein, in 2021, the UK Sports Councils' Equality Group released new guidance for transgender inclusion in organized sports. This guidance was formulated after extensive conversations with stakeholders, a review of scientific findings related to transgender athletes in sport through early 2021, and an assessment of the use by some sport national governing bodies of case-by-case assessment to determine eligibility. Noteworthy within these stakeholder consultations was a lack of consensus on any workable solution, as well as concerns related to athlete safety and "adherence to rules which give sport validity." The Literature Review accompanying the guidance document further noted that "[t]here are significant differences between the sexes which render direct competition between males and females . . . unsafe in sports which allow physical contact and collisions." (UK Sports Councils' Equality Group Literature Review 2021 at 1.) Their review of the science "made clear that there are retained differences in strength, stamina and physique between the average woman compared with the average transgender woman....with or without testosterone suppression." (UK Sports Councils' Equality Group Guidance at 3.) This was also reflected in their ten guiding principles, stating that physical differences between the sexes will "impact safety parameters in sports which are combat, collision or contact in nature." (UK Sports Councils' Equality Group Guidance 2021 at 7.) Ultimately, UK Sport

concluded that the full inclusion of transgender athletes in women's sports "cannot be reconciled within the current structure of sport," stating that "the inclusion of transgender people into female sport cannot be balanced regarding transgender inclusion, fairness and safety in gender-affected sport where there is meaningful competition due to retained differences in strength, stamina and physique between the average woman compared with the average transgender woman..., with or without testosterone suppression." (UK Sports Councils' Equality Group Guidance 2021 at 6.) Finally, UK Sport affirmed the use of sex categorization in sport, along with age and disability, as important for the maintenance of safety and fairness. (UK Sports Councils' Equality Group Guidance 2021 at 7-8.)

Unfortunately, apart from World Rugby's careful review and the recent release of UK Sports Councils' guidance, the public discourse is lacking any careful consideration of the 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 when transgender policies are being considered. I first explain the nature and causes of common sports injuries. I then review physiological differences between male and female bodies that affect the risk and severity of injuries to females when biological males compete in the female category, and

explain why testosterone suppression does not eliminate these heightened risks to females. Finally, I explain certain conclusions about those risks.

CREDENTIALS

1. I am a medical doctor practicing Sports Medicine, maintaining an active clinical practice at Stadia Sports Medicine in West Des Moines, Iowa. I received my M.D. from the University of Nebraska College of Medicine in 1994 and completed a residency in family medicine at the University of Michigan in 1997.

2. Following my time in Ann Arbor, I matched to a fellowship in Sports Medicine at Ball Memorial Hospital in Muncie, Indiana, training from 1997 to 1999, with clinical time split between Central Indiana Orthopedics, the Ball State Human Performance Laboratory, and the Ball State University training room. I received my board certification in Sports Medicine in 1999, which I continue to hold. Since residency training, my practice has focused on Sports Medicine—the treatment and prevention of injuries related to sport and physical activity.

3. Since 1997, I have served in several clinical practices and settings as a treating physician, including time as team physician for both the University of Illinois and Ball State University, where I provided care to athletes in several sports, including football, ice hockey, basketball, field hockey, softball, gymnastics, soccer, and volleyball. In the course of my career, I have provided coverage for NCAA Power Five Conference championships and NCAA National

Championship events in basketball, field hockey and gymnastics, among other sports, as well as provided coverage for national championship events for U.S.A. gymnastics, and U.S. Swimming and Diving. I have also covered professional soccer in Des Moines.

4. Since 2006, I have been the physician owner of Stadia Sports Medicine in West Des Moines, Iowa. My practice focuses on treatment of sports and activity-related injury, including concussive injury, as well as problems related to the physiology of sport.

5. I have served in and provided leadership for several professional organizations over the course of my career. In 2004, I was designated a Fellow of the American College of Sports Medicine (ACSM). I have served on ACSM's Health and Science Policy Committee since 2010, and for a time chaired their Clinical Medicine Subcommittee. From 2009 to 2013, I served two elected terms on the Board of Directors of the American Medical Society for Sports Medicine (AMSSM), and during that time served as Chair of that body's Practice and Policy Committee. I was subsequently elected to a four-year term on AMSSM's executive committee in 2017, and from 2019-20, I served as AMSSM's President. AMSSM is the largest organization of sports medicine physicians in the world. I gained fellowship status through AMSSM in 2020—my first year of eligibility. My work for ACSM and AMSSM has brought with it extensive experience in public policy as relates to Sports Medicine.

6. In 2020, I was named as AMSSM's first board delegate to the newly-constituted Physical Activity Alliance. I am a named member of an NCAA advisory group on COVID-19, through which I provided input regarding the cancellation of the basketball tournament in 2020. I also serve as a member of the Iowa Medical Society's Sports Medicine Subcommittee and have been asked to serve on the Iowa High School Athletic Association's newly-forming Sports Medicine Advisory Committee.

7. I have served as a manuscript reviewer for organizational policy pronouncements, and for several professional publications, most recently a sports medicine board review book just published in 2021. I have published several articles on topics related to musculoskeletal injuries in sports and rehabilitation, which have been published in peer-reviewed journals such as Clinical Journal of Sports Medicine, British Journal of Sports Medicine, Current Reviews in Musculoskeletal Medicine, Athletic Therapy Today, and the Journal of Athletic Training. In conjunction with my work in policy advocacy, I have helped write several pieces of legislation, including the initial draft of what became the Sports Medicine Licensure Clarity Act, signed into law by President Trump in 2018, which eases the restrictions on certain practitioners to provide health services to athletes and athletic teams outside of the practitioner's home state. A list of my publications over the past ten (10) years is included as an appendix to this report.

8. In the past four years, I have not testified as an expert witness in a deposition or at trial.

9. I am being compensated for my services as an expert witness in this case at the rates of \$650 per hour for consultation, \$800 per hour for deposition testimony, and \$3,500 per half-day of trial testimony.

I. OVERVIEW

10. In this statement, I offer information and my own professional opinion on the potential for increased injury risk to females in sports when they compete against biologically male transgender athletes.⁷ At many points in this statement, I provide citations to published, peer-reviewed articles that provide relevant and supporting information to the points I make.

11. The principal conclusions that I set out in this white paper are as follows:

a. Government and sporting organizations have historically considered the preservation of athlete safety as one component of competitive equity.

b. Injury in sport is somewhat predictable based on modeling assumptions that take into account relevant internal and external risk factors.

⁷ In the body of this paper, I use the terms “male” and “female” according to their ordinary medical meaning—that is to say, to refer to the two biological sexes. I also use the word “man” to refer to a biologically male human, and “woman” to refer to a biologically female human. In the context of this opinion, I include in these categories non-syndromic, biologically-normal males and females who identify as a member of the opposite sex, including those who use endogenous hormone suppression to alter their body habitus. In contexts that are not focused on questions of biology and physiology, terms of gender are sometimes used to refer to subjective identities rather than to biological categories – something I avoid for purposes of a paper focused on sports science

c. Males exhibit large average advantages in size, weight, and physical capacity over females—often falling far outside female ranges. Even before puberty, males have a performance advantage over females in most athletic events. Failure to preserve protected female-only categories in contact sports (broadly defined) will ultimately increase both the frequency and severity of injury suffered by female athletes who share playing space with these males.

d. 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.

12. In this white paper, I use the term “contact sports” to refer broadly to all sports in which collisions between players, or collisions between equipment such as a stick or ball and the body of a player, occur with some frequency (whether or not permitted by the rules of the game), and are well recognized in the field of sports medicine as causes of sport-related injuries.⁸ The 1975 Title IX implementing regulations (34 CFR § 106.41) say that “for purposes of this [regulation] contact sports include boxing, wrestling, rugby, ice hockey, football, basketball, *and other sports* the purpose or major activity of which involves bodily contact.” Certainly, all of the sports specifically named in the regulation fall within my definition of “contact sport.” Mixed martial arts, field hockey (Barboza 2018), soccer (Kuczinski 2018), rugby (Viviers 2018), lacrosse

⁸ It is common to see, within the medical literature, reference to distinctions between “contact” and “collision” sports. For purposes of clarity, I have combined these terms, since in the context of injury risk modeling, there is no practical distinction between them.

(Pierpoint 2019), volleyball,⁹ baseball, and softball also involve collisions that can and do result in injuries, and so also fall within my definition.

II. A BRIEF HISTORY OF THE RATIONALE FOR SEPARATION OF SPORT BY SEX

13. World Rugby is correct when it notes that “the women’s category exists to ensure protection, safety, and equality” for women. (World Rugby Transgender Women Guidelines 2020.) To some extent, those in charge of sport governing bodies in the modern era have always recognized the importance of grouping athletes together based on physical attributes, in order to ensure both safety and competitive balance. Weight classifications have existed in wrestling since it reappeared as an Olympic event in 1904. Women and men have participated in separate categories since the advent of intercollegiate sporting clubs early in the 20th century. When Title IX went into effect in 1975, there were just under 300,000 female high school athletes, and fewer than 10,000 female collegiate athletes. With the changes that resulted from Title IX, it was assumed that newly-available funds for women in sport would ensure the maintenance of existing, or creation of new, sex-segregated athletic teams that would foster greater participation by women. This has been borne out subsequently; by the first half of the 1980’s these numbers had risen to 1.9 million and nearly 100,000 respectively. (Hult 1989.)

⁹ See <https://www.latimes.com/sports/story/2020-12-08/stanford-volleyball-hayley-hodson-concussions-cte-lawsuit>, and <https://volleyballmag.com/corinneatchison/> (both accessed 6/20/21).

14. The rationale for ongoing “separate but equal” status when it came to sex-segregated sports was made clear within the language of the original implementing regulations of Title IX , which, acknowledging real, biologically-driven differences between the sexes, created carve-out exceptions authorizing sex-separation of sport for reasons rooted in the maintenance of competitive equity. Importantly, the effect of these innate sex-based differences on the health and safety of the athlete were acknowledged by the express authorization of sex-separated teams for sports with higher perceived injury risk—i.e., “contact sports.” (Coleman 2020.)

15. In the almost half century since those regulations were adopted, the persistent reality of sex-determined differences in athletic performance and safety has been recognized by the ongoing and nearly universal segregation of men’s and women’s teams—even those that are not classically defined as being part of a contact or collision sport.

16. Now, however, many schools and sports leagues in this country are permitting males to compete in female athletics—including in contact sports—based on gender identity. In my view, these policies have been adopted without careful analysis of safety implications. Other researchers and clinicians have addressed questions of the negative impact of such policies on fairness, or equality of athletic experiences for girls and women, in published articles, and in court submissions. One recent review of track and field performances, including sprints, distance races and field events, noted that men surpass the

top female performance in each category between 1000 and 10,000 times *each year*, with hundreds or thousands of men beating the top women in each event. (Coleman & Shreve.) Although this was not their primary focus, World Rugby well-summarized the point when it observed that in a ranking list of the top thousand performances in most sports, every year, *every one* will have been achieved by a biological male. (World Rugby Transgender Women Guidelines 2020.) Although most easily documented in athletes who have gone through puberty, these differences are not exclusively limited to post-pubescent athletes either.

17. 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 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. This performance gap is well-documented in population-based physiologic testing data that exists in databases such as the Presidential Fitness Test, the Eurofit Fitness test, and additional mass testing data from the UK and Australia. Collectively, this data reveals that pre-pubertal males outperform comparably aged females in a wide array of athletic tests including but not limited to the countermovement jump test, drop jump test, change of direction

test, long jump, timed sit-up test, the 10 X 5 meter shuttle run test, the 20 meter shuttle run test, curl-ups, pull-ups, push-ups, one mile run, standing broad jump, and bent arm hang test. Dr. Brown further references studies showing a significant difference in the body composition of males and females before puberty. In sum, a large and unbridgeable performance gap between the sexes is well-studied and equally well-documented, beginning in many cases before puberty. In this white paper, I focus on some of these differences as they touch on the question of athlete safety.

III. UNDERSTANDING THE CAUSES OF SPORTS INJURIES

18. The causes for injury in sport are multifactorial. In recent decades, medical researchers have provided us an evolving understanding of how sports injuries occur, as well as the factors that make them more or less probable, and more or less severe. Broadly speaking, there are two ways of modeling injury: the epidemiological model, and the biomechanical model. These models are not mutually exclusive, but provide complementary conceptual frameworks to help us stratify risk in sport.

A. The epidemiological model of injury

19. From a practical standpoint, sports medicine researchers and clinicians often use the “epidemiological model” to explain, prevent and manage sports injuries. Broadly speaking, this model views an injury in sport as the product of internal and external risk factors, triggered by an inciting event. In other words, a given injury is “caused” by a number of different factors that are

unique to a given situation. (Meeuwse 1994.) When the interplay of these factors exceeds the injury threshold, injury occurs. One example of how this interplay might work would be a female distance runner in track who develops a tibial stress fracture, with identified risks of low estrogen state from amenorrhea (suppression of menses), an aggressive winter training program on an indoor tile surface, and shoes that have been used for too many miles, and are no longer providing proper shock absorption. Most risk factors ebb and flow, with the overall injury risk at any given time fluctuating as well. Proper attention to risk factor reduction *before* the start of the sports season (including appropriate rule-making) is the best way to reduce actual injury rates *during* the season.

20. As alluded to, the risk factors associated with injury can be broadly categorized as internal or external. Internal risk factors are internal to the athlete. These include relatively fixed variables, such as the athlete's age, biological sex, bone mineral density (which affects bone strength) and joint laxity, as well as more mutable variables such as body weight, fitness level, hydration state, current illness, prior injury, or psychosocial factors such as aggression.

21. External risk factors are, as the name suggests, external to the athlete. These include non-human risks such as the condition of the playing surface or equipment, athletic shoe wear, or environmental conditions. Other external risk factors come from opposing competitors, and include such

variables as player size, speed, aggressiveness, and overall adherence to the rules of the game. As already mentioned, these risks can be minimized through the proper creation and enforcement of rules, as well as the appropriate grouping of athletes together for purposes of competition. To the latter point, children don't play contact sports with adults and, in the great majority of cases, men and women compete in categories specific to their own biological sex. Certainly these categorical separations are motivated in part by average performance differences and considerations of fairness and opportunity. But they are also motivated by safety concerns. When properly applied, these divisions enhance safety because, when it comes to physical traits such as body size, weight, speed, muscle girth, and bone strength, although a certain amount of variability exists within each group, the averages and medians differ widely *between* the separated groups.¹⁰

22. Thus, each of these commonly utilized groupings of athletes represents a pool of individuals with predictable commonalities. Epidemiological risk assessment is somewhat predictable and translatable as long as these pools remain intact. But the introduction of outside individuals

¹⁰ In some cases, safety requires even further division or exclusion. A welterweight boxer would not compete against a heavyweight, nor a heavyweight wrestle against 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 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.

into a given pool (e.g. an adult onto a youth football team, or males into most women's sports) would change the balance of risk inside that pool. Simply put, when you introduce larger, faster, and stronger athletes from one pool into a second pool of athletes who are *categorically* smaller (whether as a result of age or sex), you have altered the characteristics of the second pool, and, based on known injury modeling, have statistically increased the injury risk for the original athletes in that pool. This, in a nutshell, is the basis for World Rugby's recommendations.

23. Most clinical studies of the epidemiology of sports injuries use a multivariate approach, identifying multiple independent risk factors and examining how these factors might interact, in order to determine their relative contribution to injury risk, and make educated inferences about causation. (Meeuwise 1994.)

24. In applying the multivariate approach, the goal is to keep as many variables as possible the same so as to isolate the potential effect of a single variable (such as age or biological sex) on injury risk, as well as to determine how the isolated variable interacts with the other analyzed variables to affect injury risk. Failure to consider relevant independent variables can lead to error. Researchers focusing on differences between male and female athletes, for example, would not compare concussion rates of a high school girls' soccer team to concussion rates of a professional men's soccer team, because differences in the concussion rate might be due to a number of factors besides sex, such as age,

body mass, relative differences in skill, speed, or power, as well as differences in training volume and intensity.

25. As indicated earlier, an injury event is usually the end product of a number of different risk factors coming together. (Bahr 2005.) A collision between two soccer players who both attempt to head the ball, for example, might be the inciting event that causes a concussion. Although the linear and angular forces that occur through sudden deceleration would be the proximate cause of this injury, the epidemiological model of injury would also factor in “upstream” risks, predicting the possibility of an injury outcome for each athlete differently depending on the sum of these risks. If the collision injury described above occurs between two disparately-sized players, the smaller athlete will tend to decelerate more abruptly than the larger athlete, increasing the smaller athlete’s risk for injury. Additional discrepancies in factors such as neck strength, running speeds, and muscle force generation capacity all result in differing risks and thus, the potential for differing injury outcomes from the same collision. As I discuss later in this white paper, there are significant statistical differences between the sexes when it comes to each of these variables, meaning that in a collision sport where skeletally mature males and females are playing against one another, there is a higher statistical likelihood that injury will result when collisions occur, and in particular there is a higher likelihood that a female will suffer injury. This again is the basis for the recent decision by World Rugby to disallow the crossover of men into women’s rugby,

regardless of gender identity. (World Rugby Transgender Women Guidelines 2020.) The decision-making represented by this policy change is rational and rooted in objective facts and objective risks of harm, because it takes real, acknowledged, and documented physical differences between the sexes (in many cases before adolescence), and models expected injury risk on the basis of the known differences that persist even after hormone manipulation.

B. The biomechanical model of injury

26. Sports medicine researchers and clinicians also consider a biomechanical approach when it comes to understanding sports injuries. In the biomechanical model of injury, injury is considered to be analogous to the failure of a machine or other structure. Every bone, muscle, or connective tissue structure in an athlete's body has a certain load tolerance. Conceptually, when an external "load" exceeds the load tolerance of a given structure in the human body, an injury occurs. (Fung 1993 at 1.) Thus, researchers focus on the mechanical load—the force exerted on a bone, ligament, joint or other body part—and the load tolerance of that impacted or stressed body part, to understand what the typical threshold for injury is, and how predictable this might be. (McIntosh 2005 at 2-3.) Biomechanical models of injury usually consider forces in isolation. The more consistent the movement pattern of an individual, and the fewer the contributions of unexpected outside forces to the athlete, the more accurate biomechanical predictions of injury will be.

27. Biomechanical modeling can be highly predictive in relatively simple settings. For example, in blunt trauma injury from falls, mortality predictably rises the greater the fall. About 50% of people who fall four stories will survive, while only 10% will survive a fall of seven stories. (Buckman 1991.) As complexity increases, predictability in turn decreases. In sport, the pitching motion is highly reproducible, and strain injury to the ulnar collateral ligament (UCL) of the elbow can be modeled. The load tolerance of the UCL of a pitcher's elbow is about 32 Newton-meters, but the failure threshold of a ligament like this in isolation is not the only determinant of whether injury will occur. During the pitching motion, the valgus force imparted to the elbow (gapping stress across the inner elbow that stretches the UCL) routinely reaches 64 Newtons, which is obviously greater than the failure threshold of the ligament. Since not all pitchers tear their UCLs, other variables innate to an athlete must mitigate force transmission to the ligament and reduce risk. The load tolerance of any particular part of an athlete's body is thus determined by other internal factors such as joint stiffness, total ligament support, muscle strength across the joint, or bone mineral density. Injury load can be self-generated, as in the case of a pitcher's elbow, or externally-generated, as in the case of a linebacker hitting a wide receiver. While load tolerance will vary by individual, as described above, and is often reliant on characteristics innate to a given athlete, external load is determined by outside factors such as the nature of the playing surface or

equipment used, in combination with the weight and speed of other players or objects (such as a batted ball) with which the player collides. (Bahr 2005.)

28. As this suggests, the two “models” of sports injuries described above are not in any sense inconsistent or in tension with each other. Instead, they are complementary ways of thinking about injuries that can provide different insights. But the important point to make regarding these models is that in either model, injury risk (or the threshold for injury) rises and falls depending on the size of an externally-applied force, and the ability of a given athlete to absorb or mitigate that force.

IV. THE PHYSICS OF SPORTS INJURY

29. Sports injuries often result from collisions between players, or between a player and a rapidly moving object (e.g. a ball or hockey puck, a lacrosse or hockey stick). In soccer, for example, most head injuries result from collisions with another player’s head or body, collision with the goal or ground, or from an unanticipated blow from a kicked ball. (Boden 1998; Mooney 2020.) In basketball, players often collide with each other during screens, while diving for a loose ball, or while driving to the basket. In lacrosse or field hockey, player-to-player, or player-to-stick contact is common.

30. But what are the results of those collisions on the human body? Basic principles of physics can cast light on this question from more than one angle. A general understanding of these principles can help us identify factors

that will predictably increase the relative risk, frequency, and severity of sports injuries, given certain assumptions.

31. First, we can consider **energy**. Every collision involves an object or objects that possess energy. The energy embodied in a moving object (whether a human body, a ball, or anything else) is called kinetic energy.

32. Importantly, the kinetic energy of a moving object is expressed as: $E_k = \frac{1}{2}mv^2$. That is, kinetic energy is a function of the mass of the object multiplied by the *square* of its velocity. (Dashnaw 2012.) To illustrate with a simple but extreme example: if athletes A and B are moving at the same speed, but athlete A is twice as heavy, athlete A carries twice as much kinetic energy as athlete B. If the two athletes weigh the same amount, but athlete A is going twice as fast, athlete A carries four times as much kinetic energy as athlete B. But as I have noted, the kinetic energy of a moving object is a function of the mass of the object multiplied by the square of its velocity. Thus, if athlete A is twice as heavy, and moving twice as fast, athlete A will carry eight times the kinetic energy of athlete B into a collision.¹¹

33. The implication of this equation means that what appear to be relatively minor discrepancies in size and speed can result in major differences in energy imparted in a collision, to the point that more frequent and more severe injuries can occur. To use figures that correspond more closely to average

¹¹ $2 \times 2^2 = 8$

differences between men and women, if Player M weighs only 20% more than Player F, and runs only 15% faster, Player M will bring *58% more kinetic energy* into a collision than Player F.¹²

34. The law of conservation of energy tells us that energy is never destroyed or “used up.” If kinetic energy is “lost” by one body in a collision, it is inevitably transferred to another body, or into a different form. In the case of collision between players, or between (e.g.) a ball and a player’s head, some of the energy “lost” by one player, or by the ball, may be transformed into (harmless) sound; some may result in an increase in the kinetic energy of the player who is struck (through acceleration, which I discuss below); but some of it may result in *deformation* of the player’s body—which, depending on its severity, may result in injury. Thus, the greater the kinetic energy brought into a collision, the greater the potential for injury, all other things being equal.

35. Alternately, we can consider force and *acceleration*, which is particularly relevant to concussion injuries.

36. Newton’s third law of motion tells us that when two players collide, their bodies experience equal and opposite forces at the point of impact.

37. Acceleration refers to the rate of change in speed (or velocity). When two athletes collide, their bodies necessarily accelerate (or decelerate) rapidly: stopping abruptly, bouncing back, or being deflected in a different

¹² $1.2 \times (1.15)^2 = 1.587$

direction. Newton's second law of motion tells us that: $F = ma$ (that is, force equals mass multiplied by acceleration). From this equation we see that when a larger and a smaller body collide, and (necessarily) experience equal and opposite forces, the smaller body (or smaller player, in sport) will experience more rapid acceleration. We observe this physical principle in action when we watch a bowling ball strike bowling pins: the heavy bowling ball only slightly changes its course and speed; the lighter pins go flying.

38. This same equation also tells us that if a given player's body or head is hit with a *larger* force (e.g., from a ball that has been thrown or hit faster), it will experience *greater* acceleration, everything else being equal.

39. Of course, sport is by definition somewhat chaotic, and forces are often not purely linear. Many collisions also involve angular velocities, with the production of rotational force, or torque. Torque can be thought of as force that causes rotation around a central point. A different but similar equation of Newtonian physics governs the principles involved.¹³ Torque is relevant to injury in several ways. When torque is applied through joints in directions those joints are not able to accommodate, injury can occur. In addition, rotational force can cause different parts of the body to accelerate at different rates—in some cases, very rapid rates, also leading to injury. For example, a collision where the

¹³ In this equation, $\tau = I\alpha$, torque equals moment of inertia multiplied by angular acceleration, where "moment of inertia" is defined as $I = mr^2$, that is, mass multiplied by the square of the distance to the rotational axis.

body is impacted at the waist can result in high torque and acceleration on the neck and head.

40. Sport-related concussion—a common sports injury and one with potentially significant effects—is attributable to linear, angular, or rotational acceleration and deceleration forces that result from impact to the head, or from an impact to the body that results in a whiplash “snap” of the head. (Rowson 2016.) In the case of a concussive head injury, it is the brain that accelerates or decelerates on impact, colliding with the inner surface of the skull. (Barth 2001 at 255.)

41. None of this is mysterious: each of us, if we had to choose between being hit either by a large, heavy athlete running at full speed, or by a small, lighter athlete, would intuitively choose collision with the small, light athlete as the lesser of the two evils. And we would be right. One author referred to the “increase in kinetic energy, and therefore imparted forces” resulting from collision with larger, faster players as “profound.” (Dashnaw 2012.)

V. GENDER DIFFERENCES RELEVANT TO INJURY

42. It is important to state up front that it is self-evident to most people familiar with sport and sport injuries that if men and women were to consistently participate together in competitive contact sports, there would be higher rates of injury in women. This is one reason that rule modifications often

exist in leagues where co-ed participation occurs.¹⁴ Understanding the physics of sports injuries helps provide a theoretical framework for why this is true, but so does common sense and experience. All of us are familiar with basic objective physiological differences between the sexes, some of which exist in childhood, and some of which become apparent after the onset of puberty, and persist throughout adulthood. And as a result of personal experience, all of us also have some intuitive sense of what types of collisions are likely to cause pain or injury. Not surprisingly, our “common sense” on these basic facts about the human condition is also consistent with the observations of medical science. Below, I provide quantifications of some of these well-known differences between the sexes that are relevant to injury risk, as well as some categorical differences that may be less well known.

A. Height and weight

43. It is an inescapable fact of the human species that males as a group are statistically larger and heavier than females. On average, men are 7% to 8% taller than women. (Handelsman 2018 at 818.) According to the most recently available Centers for Disease Control and Prevention (CDC) statistics, the weight of the average U.S. adult male is 16% greater than that of the average U.S. adult female. (CDC 2018.) This disparity persists into the athletic cohort.

¹⁴ For example, see <https://www.athleticbusiness.com/college/intramural-coed-basketball-playing-rules-vary-greatly.html> (detailing variety of rule modifications applied in co-ed basketball). Similarly, coed soccer leagues often prohibit so-called “slide tackles,” which are not prohibited in either men’s or women’s soccer. See, e.g., <http://www.premiercoedsports.com/pages/rulesandpolicies/soccer>.

Researchers find that while athletes tend on average to be lighter than non-athletes, the weight difference between the average adult male and female athlete remains within the same range—between 14% and 23%, depending on the sport analyzed. (Santos 2014; Fields 2018.) Indeed, World Rugby estimates that the typical male rugby player weighs 20% to 40% more than the typical female rugby player. (World Rugby Transgender Women Guidelines 2020.) This size advantage by itself allows men to bring more force to bear in a collision.

B. Bone and connective tissue strength

44. Men have bones in their arms, legs, feet, and hands that are both larger and stronger per unit volume than those of women, due to greater cross-sectional area, greater bone mineral content, and greater bone density. The advantage in bone size (cross-sectional area) holds true in both upper and lower extremities, even when adjusted for lean body mass. (Handelsman 2018 at 818; Nieves 2005 at 530.) Greater bone size in men is also correlated with stronger tendons that are more adaptable to training (Magnusson 2007), and an increased ability to withstand the forces produced by larger muscles (Morris 2020 at 5). Male bones are not merely larger, they are stronger per unit of volume. Studies of differences in arm and leg bone mineral density – one component of bone strength – find that male bones are denser, with measured advantages of between 5% and 14%. (Gilsanz 2011; Nieves 2005.)

45. Men also have larger ligaments than women (Lin 2019 at 5), and stiffer connective tissue (Hilton 2021 at Table 1), providing greater protection against joint injury.

C. Speed

46. When it comes to acceleration from a static position to a sprint, men are consistently faster than women. World record sprint performance gaps between the sexes remain significant at between 7% and 10.5%, with world record times in women now exhibiting a plateau (no longer rapidly improving with time) similar to the historical trends seen in men. (Cheuvront 2005.) This performance gap has to do with, among other factors, increased skeletal stiffness, greater cross-sectional muscle area, denser muscle fiber composition and greater limb length. (Handelsman 2018.) Collectively, males, on average, run about 10% faster than females. (Lombardo 2018 at 93.) This becomes important as it pertains to injury risk, because males involved in sport will often be travelling at faster speeds than their female counterparts in comparable settings, with resultant faster speed at impact, and thus greater impact force, in a given collision.

D. Strength/Power

47. In 2014, a male mixed-martial art fighter identifying as female and fighting under the name Fallon Fox fought a woman named Tamikka Brents, and caused significant facial injuries in the course of their bout. Speaking about their fight later, Brents said:

“I’ve fought a lot of women and have never felt the strength that I felt in a fight as I did that night. I can’t answer whether it’s because she was born a man or not because I’m not a doctor. I can only say, I’ve never felt so overpowered ever in my life, and I am an abnormally strong female in my own right.”¹⁵

48. So far as I am aware, mixed martial arts is not a collegiate or high school interscholastic sport. Nevertheless, what Brent experienced in an extreme setting is true and relevant to safety in all sports that involve contact. In absolute terms, males as a group are substantially stronger than women.

49. Compared to women, men have “larger and denser muscle mass, and stiffer connective tissue, with associated capacity to exert greater muscular force more rapidly and efficiently.” (Hilton 2021 at 201.) Research shows that on average, during the prime athletic years (ages 18-29) men have, on average, 54% greater total muscle mass than women (33.7 kg vs. 21.8 kg) including 64% greater muscle mass in the upper body, and 47% greater in the lower body. (Janssen 2000 at Table 1.) The cross-sectional area of muscle in women is only 50% to 60% that of men in the upper arm, and 65% to 70% of that of men in the thigh. This translates to women having only 50% to 60% of men's upper limb strength and 60% to 80% of men's lower limb strength. (Handelsman 2018 at 812.) Male weightlifters have been shown to be approximately 30% stronger than female weightlifters of equivalent stature and mass. (Hilton 2021 at 203.) But in competitive athletics, since the stature and mass of the average male

¹⁵ <https://bjj-world.com/transgender-mma-fighter-fallon-fox-breaks-skull-of-her-female-opponent/>

exceeds that of the average female, actual differences in strength between average body types will, on average, exceed this. The longer limb lengths of males augment strength as well. Statistically, in comparison with women, men also have lower total body fat, differently distributed, and greater lean muscle mass, which increases their power-to-weight ratios and upper-to-lower limb strength ratios as a group. Looking at another common metric of strength, males average 57% greater grip strength (Bohannon 2019) and 54% greater knee extension torque (Neder 1999). Research shows that sex-based discrepancies in lean muscle mass begin to be established from infancy, and persist through childhood to adolescence. (Davis 2019; Kirchengast 2001; Taylor 1997; Taylor 2010; McManus 2011.)

50. Using their legs and torso for power generation, men can apply substantially larger forces with their arms and upper body, enabling them to generate more ball velocity through overhead motions, as well as to generate more pushing or punching power. In other words, isolated sex-specific differences in muscle strength in one region (even differences that in isolation seem small) can, and do combine to generate even greater sex-specific differences in more complex sport-specific functions. One study looking at moderately-trained individuals found that males can generate 162% more punching power than females. (Morris 2020.) Thus, multiple small advantages aggregate into larger ones.

E. Throwing and kicking speed

51. One result of the combined effects of these sex-determined differences in skeletal structure is that men are, on average, able to throw objects faster than women. (Lombardo 2018; Chu 2009; Thomas 1985.) By age seventeen, the *average* male can throw a ball farther than 99% of seventeen-year-old females—which necessarily means at a faster initial speed assuming a similar angle of release— despite the fact that factors such as arm length, muscle mass, and joint stiffness individually don't come close to exhibiting this degree of sex-defined advantage. One study of elite male and female baseball pitchers showed that men throw baseballs 35% faster than women—81 miles/hour for men vs. 60 miles/hour for women. The authors of this study attribute this to a sex-specific difference in the ability to generate muscle torque and power. (Chu 2009.) A study showing greater throwing velocity in male versus female handball players attributed it to differences in body size, including height, muscle mass, and arm length. (Van Den Tillaar 2012.) Interestingly, significant sex-related difference in throwing ability has been shown to manifest even before puberty, but the difference increases rapidly during and after puberty. (Thomas 1985 at 266.) These sex-determined differences in throwing speed are not limited to sports where a ball is thrown. Males have repeatedly been shown to throw a javelin more than 30% farther than females. (Lombardo 2018 Table 2; Hilton 2021 at 203.) Even in preadolescent children, differences exist. International youth records for 5- to

12-year-olds in the javelin show 34-55% greater distance in males vs. females using a 400g javelin.¹⁶

52. Men also serve and spike volleyballs with higher velocity than women, with a performance advantage in the range of 29-34%. (Hilton 2021.) Analysis of first and second tier Belgian national elite male volleyball players shows ball spike speeds of 63 mph and 56 mph respectively. (Forthomme 2005.) NCAA Division I female volleyball players—roughly comparable to the second-tier male elite group referenced above—average a ball spike velocity of approximately 40 mph (18.1 m/s). (Ferris 1995 at Table 2.) Notably, based on the measurements of these studies, male spiking speed in *lower* elite divisions is almost 40% greater than that of NCAA Division I female collegiate players. Separate analyses of serving speed between elite men and women Spanish volleyball players showed that the average power serving speed in men was 54.6 mph (range 45.3–64.6 mph), with maximal speed of 76.4 mph. In women, average power serving speed was 49 mph (range 41–55.3 mph) with maximal speed of 59 mph. This translates to an almost 30% advantage in maximal serve velocity in men. (Palao 2014.)

53. Recall that kinetic energy is dependent on mass and the square of velocity. A volleyball (with fixed mass) struck by a male, and traveling an

¹⁶ <http://age-records.125mb.com/>.

average 35% faster than one struck by a female, will deliver 82% more energy to a head upon impact.

54. The greater leg strength and jumping ability of men confer a further large advantage in volleyball that is relevant to injury risk. In volleyball, an “attack jump” is a jump to position a player to spike the ball downward over the net against the opposing team. Research on elite national volleyball players found that on average, males exhibited a 50% greater vertical jump height during an “attack” than did females. (Sattler 2015.) Similar data looking at countermovement jumps (to block a shot) in national basketball players reveals a 35% male advantage in jump height. (Kellis 1999.) In volleyball, this dramatic difference in jump height means that male players who are competing in female divisions will more often be able to successfully perform a spike, and this will be all the more true considering that the women’s net height is seven inches lower than that used in men’s volleyball. Confirming this inference, research also shows that the successful attack percentage (that is, the frequency with which the ball is successfully hit over the net into the opponent’s court in an attempt to score) is so much higher with men than women that someone analyzing game statistics can consistently identify games played by men as opposed to women on the basis of this statistic alone. These enhanced and more consistently successful attacks by men directly correlate to their greater jumping ability and attack velocity at the net. (Kountouris 2015.)

55. The combination of the innate male-female differences cited above, along with the lower net height in women's volleyball, means that if a reasonably athletic male is permitted to compete against women, the participating female players will likely be exposed to higher ball velocities that are outside the range of what is typically seen in women's volleyball. When we recall that ball-to-head impact is a common cause of concussion among women volleyball players, this fact makes it clear that participation in girls' or women's volleyball by biologically male individuals will increase concussion injury risk for participating girls or women.

56. Male sex-based advantages in leg strength also lead to greater kick velocity. In comparison with women, men kick balls harder and faster. A study comparing kicking velocity between university-level male and female soccer players found that males kick the ball with an average 20% greater velocity than females. (Sakamoto 2014.) Applying the same principles of physics we have just used above, we see that a soccer ball kicked by a male, travelling an average 20% faster than a ball kicked by a female, will deliver 44% more energy on head impact. Greater force-generating capacity will thus increase the risk of an impact injury such as concussion.

VI. ENHANCED FEMALE VULNERABILITY TO CERTAIN INJURIES

57. Above, I have reviewed physiological differences that result in the male body bringing greater weight, speed, and force to the athletic field or court,

and how these differences can result in a greater risk of injury to females when males compete against them. It is also true that the female body is more vulnerable than the male body to certain types of injury even when subject to comparable forces. This risk appears to extend to the younger age cohorts as well. An analysis of Finnish student athletes from 1987-1991, analyzing over 600,000 person-years of activity exposures, found, in students under fifteen years of age, higher rates of injury in girls than boys in soccer, volleyball, judo and karate. (Kujala 1995.) Another epidemiological study looking specifically at injury rates in over 14,000 middle schoolers over a 20 year period showed that “in sex-matched sports, middle school girls were more likely to sustain *any* injury (RR = 1.15, 95% CI = 1.1, 1.2) or a time-loss injury (RR = 1.09, 95% CI = 1.0, 1.2) than middle school boys.” In analyzed both-sex sports (i.e., sex-separated sports that both girls and boys play, like soccer), girls sustained higher injury rates, and greater rates of time-loss injury. (Beachy 2014.) Another study of over 2000 middle school students at nine schools showed that the injury rate was higher for girls’ basketball than for football (39.4 v 30.7/1000 AEs), and injury rates for girls’ soccer were nearly double that of boys’ soccer (26.3 v. 14.7/1000 AEs). (Caswell 2017.) In this regard, I will focus on two areas of heightened female vulnerability to collision-related injury which have been extensively studied: concussions, and anterior cruciate ligament injuries.

A. Concussions

58. Females are more likely than males to suffer concussions in comparable sports, and on average suffer more severe and longer lasting disability once a concussion does occur. (Harmon 2013 at 4; Berz 2015; Blumenfeld 2016; Covassin 2003; Rowson 2016.) Females also seem to be at higher risk for post-concussion syndrome than males. (Berz 2015; Blumenfeld 2016; Broshek 2005; Colvin 2009; Covassin 2012; Dick 2009; Marar 2012; Preiss-Farzanegan 2009.)

59. The most widely-accepted definition of sport-related concussion comes from the Consensus Statement on Concussion in Sport (see below).¹⁷ (McCrorry 2018.) To summarize, concussion is “a traumatically induced transient

¹⁷ “Sport related concussion is a traumatic brain injury induced by biomechanical forces. Several common features that may be utilised in clinically defining the nature of a concussive head injury include:

SRC may be caused either by a direct blow to the head, face, neck or elsewhere on the body with an impulsive force transmitted to the head.

SRC typically results in the rapid onset of short-lived impairment of neurological function that resolves spontaneously. However, in some cases, signs and symptoms evolve over a number of minutes to hours.

SRC may result in neuropathological changes, but the acute clinical signs and symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.

SRC results in a range of clinical signs and symptoms that may or may not involve loss of consciousness. Resolution of the clinical and cognitive features typically follows a sequential course. However, in some cases symptoms may be prolonged.

The clinical signs and symptoms cannot be explained by drug, alcohol, or medication use, other injuries (such as cervical injuries, peripheral vestibular dysfunction, etc) or other comorbidities (e.g., psychological factors or coexisting medical conditions).”

disturbance of brain function and involves a complex pathophysiological process” that can manifest in a variety of ways. (Harmon 2013 at 1.)

60. Sport-related concussions have undergone a significant increase in societal awareness and concurrent injury reporting since the initial passage of the Zachery Lystedt Concussion Law in Washington State in 2009 (Bompadre 2014), and the subsequent passage of similar legislation governing return-to-play criteria for concussed athletes in most other states in the United States. (Nat’l Cnf. of State Leg’s 2018). Concussion is now widely recognized as a common sport-related injury, occurring in both male and female athletes. (CDC 2007.) Sport-related concussions can result from player-surface contact or player-equipment contact in virtually any sport. However, sudden impact via a player-to-player collision, with rapid deceleration and the transmission of linear or rotational forces through the brain, is also a common cause of concussion injury. (Covassin 2012; Marar 2012; Barth 2001; Blumenfeld 2016; Boden 1998; Harmon 2013 at 4.)

61. A large retrospective study of U.S. high school athletes showed a higher rate of female concussions in soccer (79% higher), volleyball (0.6 concussions/10,000 exposures, with 485,000 reported exposures, vs. no concussions in the male cohort), basketball (31% higher), and softball/baseball (320% higher). (Marar 2012.) A similarly-sized, similarly-designed study comparing concussion rates between NCAA male and female collegiate athletes showed, overall, a concussion rate among females 40% higher than that of

males. Higher rates of injury were seen across individual sports as well, including ice hockey (10% higher); soccer (54% higher); basketball (40% higher); and softball/baseball (95% higher). (Covassin 2016.) The observations of these authors, my own observations from clinical practice, and the acknowledgment of our own Society's Position Statement (Harmon 2013), all validate the higher frequency and severity of sport-related concussions in women and girls.

62. Most epidemiological studies to date looking at sport-related concussion in middle schoolers show that more boys than girls are concussed. There are fewer studies estimating concussion *rate*. This is, in part, because measuring injury rate is more time and labor-intensive. Researchers at a childrens' hospital, for example, could analyze the number of children presenting to the emergency department with sport-related concussion and publish findings of absolute number. However, to study concussion incidence, athlete exposures also have to be recorded. Generally speaking, an athlete exposure is a single practice or game where an athlete is exposed to playing conditions that could reasonably supply the necessary conditions for an injury to occur. Rates of athletic injury, concussion among them, are then, by convention, expressed in terms of injury rate per 1000 athletic exposures. More recently, some studies have been published that analyze the rates of concussion in the middle school population. Looking at the evidence, the conclusion can be made that females experience increased susceptibility to concussive injuries before puberty. For example, Ewing-Cobbs, et al. (2018) found elevated post-

concussion symptoms in girls across all age ranges studied, including children between the ages of 4 and 8. Kerr's 2017 study of middle school students showed over three times the rate of female vs male concussion in students participating in sex-comparable sports [0.18 v. 0.66/1000 A.E.'s]. (Kerr 2017.) This is the first study I am aware of that mimics the trends seen in adolescent injury epidemiology showing a higher rate of concussion in girls than boys in comparable sports.

63. More recent research looking at the incidence of sport-related concussions in U.S. middle schoolers between 2015 and 2020, found that the rate of concussion was higher in middle school athletes than those in high school. In this study, girls had more than twice the rate of concussion injury (0.49/1000 athletic exposures vs 0.23/1000 AE) in analyzed sports (baseball/softball, basketball, soccer and track), as well as statistically greater time loss. (Hacherl 2021 (Journal of Athletic Training); Hacherl 2021 (Archives of Clinical Neuropsychology).) The authors hypothesized that the increasing incidence of concussion in middle school may relate to "other distinct differences associated with the middle school sport setting itself, such as, the large variations in player size and skill."¹⁸

64. In addition, females on average suffer materially greater cognitive impairment than males when they do suffer a concussion. Group differences in

¹⁸ <https://www.nata.org/press-release/062421/middle-school-sports-have-overall-higher-rate-concussion-reported-high-school>.

cognitive impairment between females and males who have suffered concussion have been extensively studied. A study of 2340 high school and collegiate athletes who suffered concussions determined that females had a 170% higher frequency of cognitive impairment following concussions, and that in comparison with males, female athletes had significantly greater declines in simple and complex reaction times relative to their preseason baseline levels. Moreover, the females experienced greater objective and subjective adverse effects from concussion even after adjusting for potentially protective effect of helmets used by some groups of male athletes. (Broshek 2005 at 856, 861; Colvin 2009; Covassin 2012.)

65. This large discrepancy in frequency and severity of concussion injury is consistent with my own observations across many years of clinical practice. The large majority of student athletes who have presented at my practice with severe and long-lasting cognitive disturbance have been adolescent girls. I have seen girls remain symptomatic for over a year, and lose ground academically and become isolated from their peer groups due to these ongoing symptoms. For patients who experience these severe effects, post-concussion syndrome can be life-altering.

66. Some of the anatomical and physiological differences that we have considered between males and females help to explain the documented differences in concussion rates and in symptoms between males and females. (Covassin 2016; La Fontaine 2019; Lin 2019; Tierney 2005; Wunderle 2014.)

Anatomically, there are significant sex-based differences in head and neck anatomy, with females exhibiting in the range of 30% to 40% less head-neck segment mass and neck girth, and 49% lower neck isometric strength. This means that when a female athlete's head is subjected to the same load as an analogous male, there will be a greater tendency for head acceleration, and resultant injury. (Tierney 2005 at 276-277.)

67. When modeling the effect of the introduction of male mass, speed, and strength into women's rugby, World Rugby gave particular attention to the resulting increases in forces and acceleration (and injury risk) experienced in the head and neck of female players. Their analysis found that "the magnitude of the known risk factors for head injury are . . . predicted by the size of the disparity in mass between players. The addition of [male] speed as a biomechanical variable further increases these disparities," and their model showed an increase of up to 50% in neck and head acceleration that would be experienced in a typical tackle scenario in women's rugby. As a result, "a number of tackles that currently lie beneath the threshold for injury would now exceed it, causing head injury." (World Rugby Transgender Women Guidelines 2020.) While rugby is notoriously contact-intensive, similar increases to risk of head and neck injury to women are predictable in any sport context in which males and females collide at significant speed, as happens from time to time in sports including soccer, softball, and basketball.

68. In addition, even when the heads of female and male athletes are subjected to identical accelerative forces, there are sex-based differences in neural anatomy and physiology, cerebrovascular organization, and cellular response to concussive stimuli that make the female more likely to suffer concussive injury, or more severe concussive injury. For instance, hypothalamic-pituitary disruption is thought to play a role in post-concussion symptomatology that differentially impacts women. (McGroarty 2020; Broshek 2005 at 861.) Another study found that elevated progesterone levels during one portion of the menstrual cycle were associated with more severe post-concussion symptomatology that differentially impacted women. (Wunderle 2014.)

69. As it stands, when females compete against each other, they already have higher rates of concussive injury than males, across most sports. The addition of biologically male athletes into women's contact sports will inevitably increase the risk of concussive injury to girls and women, for the multiple reasons I have explained above, including, but not limited to, the innate male advantage in speed and lean muscle mass. Because the effects of concussion can be severe and long-lasting, particularly for biological females, we can predict with some confidence that if participation by biological males in women's contact sports based on gender identity becomes more common, more biological females will suffer substantial concussive injury and the potential for long-term harm as a result.

B. Anterior Cruciate Ligament injuries

70. The Anterior Cruciate Ligament (“ACL”) is a key knee stabilizer that prevents anterior translation of the tibia relative to the femur and also provides rotatory and valgus knee stability.¹⁹ (Lin 2019 at 4.) Girls and women are far more vulnerable to ACL injuries than are boys and men. The physics of injury that we have reviewed above makes it inevitable that the introduction of biologically male athletes into the female category will increase still further the occurrence of ACL injuries among girls or women who encounter these players on the field.

71. Sports-related injury to the ACL is so common that it is easy to overlook the significance of it. But it is by no means a trivial injury, as it can end sports careers, require surgery, and usually results in early-onset, post-traumatic osteoarthritis, triggering long-term pain and mobility problems later in life. (Wang 2020.)

72. Even in the historic context in which girls and women limit competition to (and so only collide with) other girls and women, the rate of ACL injury is substantially higher among female than male athletes. (Flaxman 2014; Lin 2019; Agel 2005.) One meta-analysis of 58 studies reports that female athletes have a 150% relative risk for ACL injury compared with male athletes, with other estimates suggesting as much as a 300% increased risk. (Montalvo 2019; Sutton 2013.) Particularly in those sports designated as contact sports, or

¹⁹ Valgus force at the knee is a side-applied force that gaps the medial knee open.

sports with frequent cutting and sharp directional changes (basketball, field hockey, lacrosse, soccer), females are at greater risk of ACL injury. In basketball and soccer, this risk extends across all skill levels, with female athletes between two and eight times more likely to sustain an ACL injury than their male counterparts. (Lin 2019 at 5.) These observations are widely validated, and consistent with the relative frequencies of ACL injuries that I see in my own practice.

73. When the reasons underlying the difference in the incidence of ACL injury between males and females were first studied in the early 1990s, researchers speculated that the difference might be attributable to females' relative inexperience in contact sports, or to their lack of appropriate training. However, a follow-up 2005 study looking at ACL tear disparities reported that, "Despite vast attention to the discrepancy between anterior cruciate ligament injury rates between men and women, these differences continue to exist." (Agel 2005 at 524.) Inexperience and lack of training do not explain the differences. Sex seems to be an independent predictor of ACL tear risk.

74. In fact, as researchers have continued to study this discrepancy, they have determined that multiple identifiable anatomical and physiological differences between males and females play significant roles in making females more vulnerable to ACL injuries than males. (Flaxman 2014; Lin 2019; Wolf 2015.) Summarizing the findings of a number of separate studies, one researcher recently cited as anatomical risk factors for ACL injury smaller ligament size,

decreased femoral notch width, increased posterior-inferior slope of the lateral tibia plateau, increased knee and generalized laxity, and increased body mass index (BMI). With the exception of increased BMI, each of these factors is more likely to occur in female than male athletes. (Lin 2019 at 5.) In addition, female athletes often stand in more knee valgus (that is, in a “knock-kneed” posture) due to wider hips and a medially-oriented femur. Often, this is also associated with a worsening of knee valgus during jump landings. The body types and movement patterns associated with these valgus knee postures are more common in females and increase the risk for ACL tear. (Hewett 2005.)

75. As with concussion, the cyclic fluctuation of sex-specific hormones in women is also thought to be a possible risk factor for ACL injury. Estrogen acts on ligaments to make them more lax, and it is thought that during the ovulatory phase of menses (when estrogen levels peak), the risk of ACL tear is higher. (Chidi-Ogbolu 2019 at 1; Herzberg 2017.)

76. Whatever the factors that increase the injury risk for ACL tears in women, the fact that a sex-specific difference in the rate of ACL injury exists is well established and widely accepted.

77. Although non-contact mechanisms are the most common reason for ACL tears in females, tears related to contact are also common, with ranges reported across multiple studies of from 20%-36% of all ACL injuries in women. (Kobayashi 2010 at 672.) For example, when a soccer player who is kicking a ball is struck by another player in the lateral knee of the stance leg, medial and

rotational forces can tear the medial collateral ligament (MCL), the ACL, and the meniscus. Thus, as participation in the female category based on identity rather than biology becomes more common (entailing the introduction of athletes with characteristics such as greater speed and lean muscle mass), and as collision forces suffered by girls and women across the knee increase accordingly, the risk for orthopedic injury and in particular ACL tears among impacted girls and women will inevitably rise.

78. 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. When males are permitted to enter into the pool of female athletes based on gender identity rather than biological sex, there is an increased possibility that a statistical outlier in terms of size, weight, speed, and strength—and potentially an extreme outlier—is now entering the female pool. Although injury is not guaranteed, risks to female participants will increase. And as I discuss later, the available evidence together suggests that this will be true even with respect to males who have been on testosterone suppression for a year or more. World Rugby relied heavily upon this when they were determining their own policy, and I think it is important to reiterate that this policy, rooted in concern for athlete safety, is justifiable based upon current evidence from medical research and what we know about biology.

VII. TESTOSTERONE SUPPRESSION WILL NOT PREVENT THE HARM TO FEMALE SAFETY IN ATHLETICS

79. A recent editorial in the *New England Journal of Medicine* opined that policies governing transgender participation in female athletics “must safeguard the rights of all women—whether cisgender or transgender.” (Dolgin 2020.) Unfortunately, the physics and medical science reviewed above tell us that this is not practically possible. If biological males are given a “right” to participate in the female category based on gender identity, then biological women will be denied the right to reasonable expectations of safety and injury risk that have historically been guaranteed by ensuring that females compete (and collide) only with other females.

80. Advocates of unquestioning inclusion based on gender identity often contend that hormonal manipulation of a male athlete can feminize the athlete enough that he is comparable with females for purposes of competition. The NCAA’s Office of Inclusion asserts (still accessible on the NCAA website as of this writing) that “It is also important to know that any strength and endurance advantages a transgender woman arguably may have as a result of her prior testosterone levels dissipate after about one year of estrogen or testosterone suppression therapy.”²⁰ (NCAA 2011 at 8.) Whether or not this is true is a critically important question.

²⁰ <https://www.ncaa.org/sports/2016/3/2/lesbian-gay-bisexual-transgender-and-questioning-lgbtq.aspx>

81. At the outset, we should note that while advocates sometimes claim that testosterone suppression *can* eliminate physiological advantages in a biological male, none of the relevant transgender eligibility policies that I am aware of prior to 2021 requires any demonstration that it has *actually* achieved that effect in a particular male who seeks admission into the female category. The Connecticut policy that is currently at issue in ongoing litigation permits admission to the female category at the high school level without requiring any testosterone suppression at all. Prior to their new policy, just announced in January 2022, the NCAA's policy required no demonstration of any reduction of performance capability, change in weight, or regression of any other physical attribute of the biological male toward female levels. It did not require achievement of any particular testosterone level, and did not provide for any monitoring of athletes for compliance. Moving forward, through a phasing process, the NCAA will ultimately require athletes in each sport to meet requirements of their sport's national governing body (NGB). If no policy exists, the policy of that sport's international governing body applies, or, finally, if no policy exists there, the 2015 policy of the International Olympic Committee (IOC) will apply. The 2015 IOC policy requires no showing of any diminution of any performance capability or physical attribute of the biological male, and requires achievement and compliance monitoring only of a testosterone level below 10nmol/liter—a level far above levels occurring in normal biological

females (0.06 to 1.68 nmol/L).²¹ Indeed, female athletes with polycystic ovarian disorder—a condition that results in elevated testosterone levels—rarely exceed 4.8 nmol/L, which is the basis for setting the testing threshold to detect testosterone *doping* in females at 5.0 nmol/L. Thus, males who qualify under the 2015 IOC policy to compete as transgender women may have testosterone levels—even after hormone suppression—*double* the level that would disqualify a biological female for doping with testosterone.²²

82. As Dr. Emma Hilton has observed, the fact that there are over 3000 sex-specific differences in skeletal muscle alone makes the hypothesis that sex-linked performance advantages are attributable solely to current circulating testosterone levels improbable at best. (Hilton 2021 at 200-01.)

83. In fact, the available evidence strongly indicates that no amount of testosterone suppression can eliminate male physiological advantages relevant to performance and safety. Several authors have recently reviewed the science and statistics from numerous studies that demonstrate that one year (or more) of testosterone suppression does not substantially eliminate male performance advantages. (Hilton 2021; De Varona 2021; Harper 2021.) As a medical doctor, I will focus on those specific sex-based characteristics of males who have

²¹ Normal testosterone range in a healthy male averages between 7.7 and 29.4 nmol/L.

²² In November 2021, the IOC released new guidelines, deferring decision-making about a given sport's gender-affectedness to its governing body. The current NCAA policy, however, still utilizes the 2015 IOC policy to determine an athlete's eligibility in event that the sport's national and international governing bodies lack policies to determine eligibility.

undergone normal sex-determined pubertal skeletal growth and maturation that are relevant to the *safety* of female athletes. Here, too, the available science tells us that testosterone suppression does not eliminate the increased risk to females or solve the safety problem.

84. The World Rugby organization reached this same determination based on the currently available science, concluding that male physiological advantages that “create risks [to female players] appear to be only minimally affected” by testosterone suppression. (World Rugby Transgender Women Guidelines 2020.)

85. Surprisingly, so far as public information reveals, the NCAA’s Committee on Competitive Safeguards is not monitoring and documenting instances of transgender participation on women’s teams for purposes of injury reporting. In practice, the NCAA is conducting an experiment which in theory predicts an increased frequency and severity of injuries to women in contact sports, while at the same time failing to collect the relevant data from its experiment.

86. In their recent guidelines, UK Sport determined that, “based upon current evidence, testosterone suppression is unlikely to guarantee fairness between transgender women and natal females in gender-affected sports.” (UK Sports Councils’ Equality Group Guidance 2021 at 7.) They also warned that migration to a scenario by NGBs where eligibility is determined through case-by-case assessment “is unlikely to be practical nor verifiable for entry into

gender-affected sports,” in part because “many tests related to sports performance are volitional,” and incentives on the part of those tested would align with intentional poor performance. (UK Sports Councils’ Equality Group Guidance 2021 at 8.)

87. Despite these concerns, this appears to be exactly the route that the IOC is taking, as reflected in their Framework on Fairness, Inclusion and Non-Discrimination on the Basis of Gender Identity, released in November of 2021.²³ In it, the IOC lists two disparate goals. First, that “where sports organizations elect to issue eligibility criteria for men’s and women’s categories for a given competition, they should do so with a view to . . . [p]roviding confidence that no athlete within a category has an unfair and disproportionate competitive advantage . . . [and] preventing a risk to the physical safety of other athletes.” (IOC Framework 2021 § 4.1.) At the same time, governing bodies are not to preclude any athlete from competing until evidence exists based upon “robust and peer-reviewed research that . . . demonstrates a consistent, unfair, disproportionate competitive advantage in performance and/or an unpreventable risk to the physical safety of other athletes” – research moreover that “is largely based on data collected *from a demographic group that is consistent in gender and athletic engagement with the group that the eligibility*

²³ The IOC Framework on Fairness, Inclusion and Non-Discrimination on the Basis of Gender Identity and Sex Variations is available at https://stillmed.olympics.com/media/Documents/News/2021/11/IOC-Framework-Fairness-Inclusion-Non-discrimination-2021.pdf?_ga=2.72651665.34591192.1645554375-759350959.1644946978

criteria aim to regulate.” (IOC Framework 2021 § 6.1) Finally, affected athletes may appeal any evidence-based decision-making process through a further “appropriate internal mediation mechanism, such as a Court of Arbitration for Sport.” (IOC Framework 2021 § 6.1.) Rather than cite any of the growing evidence that testosterone suppression cannot mitigate sex-based performance differences, the IOC’s new policy remains aspirational and opaque. And yet the research relating to hormonal suppression in transgender athletes, as confirmed by World Rugby and UK Sport, already speaks very clearly to the fact that males retain a competitive advantage over women that cannot be eliminated through testosterone suppression alone. What follows is a brief summary of some of these retained differences as they relate to sport safety.

A. Size and weight

88. Males are, on average, larger and heavier. As we have seen, these facts alone mean that males bring more kinetic energy into collisions, and that lighter females will suffer more abrupt deceleration in collisions with larger bodies, creating heightened injury risk for impacted females.

89. I start with what is obvious and so far as I am aware undisputed—that after the male pubertal growth spurt, suppression of testosterone does not materially *shrink* bones so as to eliminate height, leverage, performance, and weight differences that follow from simply having longer, larger bones, and being subsequently taller.

90. In addition, multiple studies have found that testosterone suppression may modestly reduce, but does not come close to eliminating the male advantage in muscle mass and lean body mass, which together contribute to the greater average male weight. Researchers looking at transitioning adolescents found that the weight of biological male subjects *increased* rather than decreased after treatment with an antiandrogen testosterone suppressor. (Tack 2018.) In one recent meta-analysis, researchers looking at the musculoskeletal effects of hormonal transition found that even after males had undergone 36 months of therapy, their lean body mass and muscle area remained above those of females. (Harper 2021.) Another group in 2004 studied the effects of testosterone suppression to less than 1 nmol/L in men after one or more years, but still found only a 12% total loss of muscle area by the end of thirty-six months. (Gooren 2004.)

B. Bone density

91. Bone mass (which includes both size and density) is maintained over *at least* two years of testosterone suppression (Singh-Ospina 2017; Figuera 2019), and one study found it to be preserved even over a median of 12.5 years of suppression (Hilton 2021; Ruetsche 2005).

C. Strength

92. A large number of studies have now observed minimal or no reduction in strength in male subjects following testosterone suppression. In one recent meta-analysis, strength loss after twelve months of hormone therapy

ranged from negligible to 7%. (Harper 2021.) Given the baseline male strength advantage in various muscle groups of from approximately 25% to 100% above female levels that I have noted in Section V.D above, even a 7% reduction leaves a large retained advantage in strength. Another study looking at handgrip strength—which is a proxy for general strength—showed a 9% loss of strength after two years of hormonal treatment in males who were transitioning, leaving a 23% retained advantage over the female baseline. (Hilton 2021.) Yet another study which found a 17% retained grip strength advantage noted that this placed the median of the group treated with hormone therapy in the 95th percentile for grip strength among age-matched females. (Scharff 2019.) Researchers looking at transitioning adolescents showed no loss of grip strength after hormone treatment. (Tack 2018.)

93. One recent study on male Air Force service members undergoing transition showed that they retained more than two thirds of pretreatment performance advantage over females in sit-ups and push-ups after between one and two years of testosterone-reducing hormonal treatment. (Roberts 2020.) Another recently-published observational cohort study looked at thigh strength and thigh muscle cross-sectional area in men undergoing hormonal transition to transgender females. After one year of hormonal suppression, this group saw only a 4% decrease in thigh muscle cross-sectional area, and a negligible decrease in thigh muscle strength. (Wiik 2020.) Wiik and colleagues looked at isokinetic strength measurements in individuals who had undergone at least 12

months of hormonal transition and found that muscle strength was comparable to baseline, leaving transitioned males with a 50% strength advantage over reference females. (Wiik 2020.) Finally, one cross-sectional study that compared men who had undergone transition at least three years prior to analysis, to age-matched, healthy males found that the transgender individuals had retained enough strength that they were still outside normative values for women. This imbalance continued to hold even after *eight* years of hormone suppression. 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 since baseline measures for this study were unavailable, the post-transition comparison may actually represent an overestimate of muscle mass regression in transgender females. (Lapauw 2008; Hilton 2021.)

94. World Rugby came to the same conclusion based on its own review of the literature, reporting that testosterone suppression “does not reverse muscle size to female levels,” and in fact that “studies assessing [reductions in] mass, muscle mass, and/or strength suggest that reduction in these variables range between 5% and 10%. Given that the typical male vs female advantages range from 30% to 100%, these reductions are small.” (World Rugby Transgender Women Guidelines 2020.)

95. It is true that most studies of change in physical characteristics or capabilities over time after testosterone suppression involve untrained subjects

rather than athletes, or subjects with low to moderate training. It may be assumed that all of the Air Force members who were subjects in the study I mention above were physically fit and engaged in regular physical training. But neither that study nor those studies looking at athletes quantify the volume or type of strength training athletes are undergoing. 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 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%. (Kvorning 2006.)

96. The point for safety is that superior strength enables a biological male to apply greater force against an opponent's body during body contact, or to throw, hit, or kick a ball at speeds outside the ranges normally encountered in female-only play, with the attendant increased risks of injury that I have already explained.

D. Speed

97. As to speed, the study of transitioning Air Force members found that these males retained a 9% running speed advantage over the female control

group after one year of testosterone suppression, and their average speed had not declined significantly farther by the end of the 2.5 year study period. (Roberts 2020.) Again, I have already explained the implications of greater male speed on safety for females on the field and court, particularly in combination with the greater male body weight.

CONCLUSION

Since the average male athlete is larger and exerts greater power than the average female athlete in similar sports, male–female collisions will produce greater energy at impact, and impart greater risk of injury to a female, than would occur in most female-female collisions. Because of the well-documented physiological testing and elite performance differences in speed and strength, as well as differences in lean muscle mass that exist across all age ranges, the conclusions of this paper can apply to a certain extent before, as well as during, and after puberty. We have seen that males who have undergone hormone therapy in transition toward a female body type nevertheless retain musculoskeletal “legacy” advantages in muscle girth, strength, and size. We have also seen that the additive effects of these individual advantages create multiplied advantages in terms of power, force generation and momentum on the field of play. In contact or collision sports, sports involving projectiles, or sports where a stick is used to strike something, the physics and physiology reviewed above tell us that permitting male-bodied athletes to compete against, or on the same team as females—even when undergoing testosterone

suppression—must be expected to create predictable, identifiable, substantially increased, and unequal risks of injuries to the participating women.

Based on its independent and extensive analysis of the literature coupled with injury modeling, World Rugby recognized the inadequacy of the International Olympic Committee’s policy to preserve safety for female athletes in their contact sport (the NCAA policy is even more lax in its admission of biological males into the female category). Among the explicit findings of the World Rugby working group were the following:

- Forces and inertia faced by a smaller and slower player during collisions are significantly greater when in contact with a larger, faster player.
- Discrepancies in mass and speed (such as between two opponents in a tackle) are significant determinants of various head and other musculoskeletal injury risks.
- The risk of injury to females is increased by biological males’ greater ability to exert force (strength and power), and also by females’ reduced ability to receive or tolerate that force.
- Testosterone suppression results in only “small” reductions in the male physiological advantages. As a result, heightened injury risks remain for females who share the same field or court with biological males.
- These findings together predict a significant increase in injury rates for females in rugby if males are permitted to participate based on gender identity, *with or without testosterone suppression*, since the magnitude of forces and energy transfer during collisions will increase substantially, directly correlated to the differences in physical attributes that exist between the biological sexes.

Summarizing their work, the authors of the World Rugby Guidelines said that, “World Rugby’s number one stated priority is to make the game as safe as

possible, and so World Rugby cannot allow the risk to players to be increased to such an extent by allowing people who have the force and power advantages conferred by testosterone to play with and against those who do not.” (World Rugby Transgender Guidelines 2020.) As my own analysis above makes clear, I agree with the concerns of UK Sport and the conclusions of World Rugby regarding risk to female athletes. Importantly, I also agree that it must be a high priority for sports governing bodies (and other regulatory or governmental bodies governing sports) to make each sport as safe as reasonably possible. And in my view, medical practitioners with expertise in this area have an obligation to advocate for science-based policies that promote safety.

The *performance* advantages retained by males who participate in women’s sports based on gender identity are readily recognized by the public. When an NCAA hurdler who ranked 200th while running in the collegiate male division transitions and immediately leaps to a number one ranking in the women’s division;²⁴ when a high school male sprinter who ranked 181st in the state running in the boys’ division transitions and likewise takes first place in the girls’ division (De Varona 2021), the problem of fairness and equal opportunities for girls and women is immediately apparent, and indeed this problem is being widely discussed today in the media.

²⁴ https://en.wikipedia.org/wiki/Cece_Telfer (accessed 6/20/21)

The causes of sports injuries, however, are multivariate and not always as immediately apparent. 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. 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 (Rider 2018), and many other sources likewise report this trend.²⁵

Faced with this rapid social change, it is my view as a medical doctor that policymakers have an important and pressing duty not to wait while avoidable injuries are inflicted on girls and women, but instead to proactively establish policies governing participation of biological males in female athletics that give proper and scientifically-based priority to safety in sport for these girls and women. Separating participants in contact sports based on biological sex preserves competitive equity, but also promotes the safety of female athletes by protecting them from predictable and preventable injury. Otherwise, the hard science that I have reviewed in this white paper leaves little doubt that eligibility policies based on ideology or gender identity rather than science, will,

²⁵ https://www.nytimes.com/2016/07/01/health/transgender-population.html?mc=aud_dev&ad-keywords=auddevgate&gclid=Cj0KCQjwkZiFBhD9ARIsAGxFX8BV5pozB9LI5Ut57OQzuMhurWThv BMisV9NyN9YTXIzWI7OAnGT6VkaAu0jEALw_wcB&gclsrc=aw.ds (accessed 6/20/21)

over time, result in increased, and more serious, injuries to girls and women who are forced to compete against biologically male transgender athletes. When basic science and physiology both predict increased injury, then leagues, policy-makers, and legislators have a responsibility to act to protect girls and women before they get hurt.

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BIBLIOGRAPHY

- Agel, J. et al., Anterior cruciate ligament injury in National Collegiate Athletic Association basketball and soccer: a 13-year review. *Am. J. Sports Med.* 33(4):524-531 (2005).
- Athletic Business, "College intramural playing rules vary greatly." <https://www.athleticbusiness.com/college/intramural-coed-basketball-playing-rules-vary-greatly.html>.
- Bahr, R. and T. Krosshaug, Understanding injury mechanisms: a key component of preventing injuries in sport. *Br. J. Sports Med* 39:324-329 (2005).
- Barboza, S.D. et al., Injuries in field hockey players: a systematic review. *Sports Med.* 48:849-66 (2018).
- Barth, J.T. et al., Acceleration-deceleration sport-related concussion: the gravity of it all. *J. Athletic Training* 36(3):253-56 (2001).
- Beachy, G. and M. Rauh, Middle school injuries: a 20-year (1988-2008) multisport evaluation. *J. Athl. Train.* 49(4):493-506 (2014).
- Berz, K. et al., Sex-specific differences in the severity of symptoms and recovery rate following sports-related concussion in young athletes. *The Physician and Sports Med.* 41(2):58-63 (2015).
- BJJ World, "Transgender MMA Fighter Fallon Fox Breaks Skull of Her Female Opponent." <https://bjj-world.com/transgender-mma-fighter-fallon-fox-breaks-skull-of-her-female-opponent/>.
- Blankenship, M.J. et al., Sex-based analysis of the biomechanics of pitching. 38th International Society of Biomechanics in Sport Conference (July 2020).
- Blumenfeld, R.S. et al., The epidemiology of sports-related head injury and concussion in water polo. *Front. Neurol.* 7(98) (2016).
- Boden, B.P. et al., Concussion incidence in elite college soccer players. *Am. J. Sports Med.* 26(2):238-241 (1998).
- Bohannon, R.W. et al., Handgrip strength: a comparison of values obtained from the NHANES and NIH toolbox studies. *Am. J. Occ. Therapy* 73(2) (March/April 2019).

- Bompadre, V. et al., Washington State's Lystedt Law in concussion documentation in Seattle public high schools. *J. Athletic Training* 49(4):486-92 (2014).
- Broshek, D.K. et al., Sex differences in outcome following sports-related concussion, *J. Neurosurg.* 102:856-63 (May 2005).
- Buckman, R. F. and Buckman, P.D., Vertical deceleration trauma: principles of management. *Surg .Clin. N. Am.* 71(2):331–44 (1991).
- Caswell, S.V., et al., Epidemiology of sports injuries among middle school students. *Brit. J. of Sports Med.* 51(4):305 (2017).
- Centers for Disease Control, CDC National Health Statistics Report Number 122, 12/20/2018.
- Centers for Disease Control, Nonfatal traumatic brain injuries from sports and recreation activities—United States, 2001-2005, *JAMA* 298(11):1271-72 (Sept 2007).
- Chevront, S.N. et al., Running performance differences between men and women: an update. *Sports Med.* 35(12):1017-24 (2005).
- Chidi-Ogbolu, N. and K. Baar, Effect of estrogen on musculoskeletal performance and injury risk. *Front. Physiol.* 9:1834 (2019).
- Chu, Y. et al., Biomechanical comparison between elite female and male baseball pitchers. *J. Applied Biomechanics* 25:22-31 (2009).
- Coleman, D.L. and W. Shreve, Comparing athletic performances: the best elite women to boys and [men](https://www.web.law.duke.edu/sites/default/files/centers/sportslaw/comparingathleticperformances.pdf). [web.law.duke.edu/sites/default/files/centers/sportslaw/comparingathleticperformances.pdf](https://www.web.law.duke.edu/sites/default/files/centers/sportslaw/comparingathleticperformances.pdf). (Accessed 06/20/21)
- Coleman, D. L. et al., Re-affirming the value of the sports exception to Title IX's general non-discrimination rule. *Duke J. of Gender and Law Policy* 27(69):69134 (2020).
- Colvin, A.C. et al., The role of concussion history and gender in recovery from soccer-related concussion. *Am. J. Sports Med*, 37(9):1699-1704 (2009).
- Covassin, T. et al., Sex differences and the incidence of concussions among collegiate athletes. *J. Ath. Training* 38(3):238-244 (2003).
- Covassin, T. et al., Sex differences in reported concussion injury rates and time loss from participation: an update of the National Collegiate Athletic

- Association Injury Surveillance Program from 2004-2005 through 2009-2009. *J. Ath. Training* 51(3):189-194 (2016).
- Covassin, T. et al., The role of age and sex in symptoms, neurocognitive performance, and postural stability in athletes after concussion. *Am. J. Sports Med.* 40(6):1303-1312 (2012).
- Dashnaw, M.L. et al., An overview of the basic science of concussion and subconcussion: where we are and where we are going. *Neurosurg. Focus* 33(6) E5 (2012).
- Davis, S.M., et al., Sex Differences in Infant Body Composition Emerge in First 5 Months of Life. *J. Pediatr. Endocrinol. Metab.* 32(11): 1235–1239 (2019)
- De Varona, D. et al., Briefing book: a request to Congress and the Administration to preserve girls’ and women’s sport and accommodate transgender athletes. Women’s Sports Policy Working Group (2021), available at <https://womenssportspolicy.org/wp-content/uploads/2021/02/Congressional-Briefing-WSPWG-Transgender-Women-Sports-2.27.21.pdf>.
- Dick, R.W., Is there a gender difference in concussion incidence and outcomes? *Br. J. Sports Med.* 43(Supp 1):i46-i50 (2009).
- Dolgin, J., Transgender women on college athletic teams – the case of Lindsay Hecox. *NEJM* 383(21):2000-2002 (2020).
- Ewing-Cobbs, et al., Persistent postconcussion symptoms after injury. *Pediatrics* 142(5):e20180939 (2018).
- Ferris, D.P. et al., The relationship between physical and physiological variables and volleyball spiking velocity. *J. Strength & Cond. Research* 9(1):32-36 (1995).
- Fields, J.B. et al., Body composition variables by sport and sport-position in elite collegiate athletics. *J. Strength & Cond. Research* 32(11):3153-3159 (Nov 2018).
- Figuera, T.M. et al., Bone mass effects of cross-sex hormone therapy in transgender people: updated systematic review and meta-analysis. *J. Endocrine Soc.* 3(5):943-964 (May 2019).
- Flaxman, T.E. et al., Sex-related differences in neuromuscular control: implications for injury mechanisms or healthy stabilization strategies? *J. Ortho. Research* 310-317 (Feb 2014).

- Forthomme, B. et al., Factors correlated with volleyball spike velocity. *AJSM* 33(10):1513-1519 (2005).
- Fung, Y.C., The application of biomechanics to the understanding of injury and healing. A.M. Nahum et al. (eds), *Accidental Injury*, Springer Science & Business Media: New York (1993).
- Gay, T., *Football physics: the science of the game*. Rodale Books (2004).
- Gilsanz, V. et al., Age at onset of puberty predicts bone mass in young adulthood. *J. Pediatr.* 158(1):100-105 (Jan 2011).
- Gooren, L.J.G. et al., Transsexuals and competitive sports. *Eur. J. Endocrinol.* 151:425-9 (2004).
- Hacherl, S.L., et al., Concussion rates and sports participation time loss in sex-comparable middle school sports. *Archives of Clinical Neuropsychology* 36:650 (2021).
- Hacherl, S.L., et al., Concussion rates in U.S. middle school athletes from the 2015-16 to 2019-20 school years. *J. Athl. Train.* 56(6s):S-21 (2021).
- Handelsman, D.J. et al., Circulating testosterone as the hormonal basis of sex differences in athletic performance. *Endocrine Reviews* 39(5):803-829 (Oct 2018).
- Harmon, K.G. et al., American Medical Society for Sports Medicine position statement: concussion in sport. *Br. J. Sports Med.* 47:15-26 (2013).
- Harper, J. et al., How does hormone transition in transgender women change body composition, muscle strength and haemoglobin? Systematic review with a focus on the implications for sport participation. *BJSM* 55(15):865-72 (2021).
- Herzberg, S.D. et al., The effect of menstrual cycle and contraceptives on ACL injuries and laxity: a systematic review and meta-analysis. *Orthop. J. Sports Med.* 5(7) (2017).
- Hewett, T.E. et al., Biomechanical measures of neuromuscular control and valgus loading of the knee predict anterior cruciate ligament injury risk in female athletes: a prospective study. *AJSM* 33(4):492-501 (2005).
- Hilton, E. N. and T.R. Lundberg, Transgender women in the female category of sport: perspectives on testosterone suppression and performance advantage. *Sports Medicine* 51:199-214 (2021).

- Hon, W.H.C. and S.H. Kock, Sports related fractures: a review of 113 cases. *J. Orthopaedic Surg.* 9(1):35-38 (2001).
- Howell, D.R. et al., Collision and contact sport participation and quality of life among adolescent athletes. *J. Athletic Training* 55(11):1174-1180 (2020).
- Hult, J.S., Women's struggle for governance in U.S. amateur athletics. *Int. Rev. for Soc. of Sports* 24(3):249-61 (1989).
- International Olympic Committee. IOC Framework on Fairness, Inclusion and Non-Discrimination on the Basis of Gender Identity and Sex Variations (2021).
- Janssen, I. et al., Skeletal muscle mass and distribution in 468 men and women aged 18-88 yr. *J. Appl. Physiol.* 89:81-88 (2000).
- Kellis, S.E. et al., The evaluation of jumping ability of male and female basketball players according to their chronological age and major leagues. *J. Strength and Conditioning Res.* 13(1):40-46 (1999).
- Kerr, Z., et al., Concussion rates in U.S. middle school athletes, 2015-16 school year, *Am. J. Prev. Med.* 53(6):914-18 (2017).
- Kirchengast, S., Sexual dimorphism in body composition, weight status and growth in prepubertal school children from rural areas of eastern Austria. *Collegium Antropologicum* 25(1):21-30 (2001).
- Kobayashi, H. et al., Mechanisms of the anterior cruciate ligament injury in sports activities: A twenty-year clinical research of 1700 athletes. *J. Sports Science & Medicine* 9:669-675 (2010).
- Kountouris, P. et al., Evidence for differences in men's and women's volleyball games based on skills effectiveness in four consecutive Olympic tournaments. *Comprehensive Psychology* 4(9) (2015).
- Kuczinski, A. et al., Trends and epidemiologic factors contributing to soccer-related fractures that presented to emergency departments in the United States. *Sports Health* 11(1):27-31 (2018).
- Kujala U.M., et al., Acute injuries in soccer, ice hockey, volleyball, basketball, judo, and karate: analysis of national registry data. *BMJ* 311(7018):1465-68 (1995).
- Kvorning, T. et al., Suppression of endogenous testosterone production attenuates the response to strength training: a randomized, placebo-

- controlled, and blinded intervention study. *Am. J. Physiol .Metab.* 291:E1325-E1332 (2006).
- La Fontaine, M.F. et al., Preliminary evidence for a window of increased vulnerability to sustain a concussion in females: a brief report. *Front. Neurol.* 10:691 (2019).
- Lapauw, B. et al., Body composition, volumetric and areal bone parameters in male-to-female transsexual persons. *Bone* 43:1016-21 (2008).
- Lin, C. et al., Sex differences in common sports injuries. *PM R* 10(10):1073-1082 (2019).
- Lombardo, M.P. and R. O. Deaner, On the evolution of sex differences in throwing. *Qu. Review of Bio.* 93(2):91-119 (2018).
- Los Angeles Times, "Volleyball star Haley Hodson had it all, until blows to her head changed everything." <https://www.latimes.com/sports/story/2020-12-08/stanford-volleyball-hayley-hodson-concussions-cte-lawsuit>.
- Magnusson, S.P. et al., The adaptability of tendon loading differs in men and women. *Int. J. Exp. Pathol.* 88:237-40 (2007).
- Marar, M. et al., Epidemiology of concussions among United States high school athletes in 20 sports. *Am. J. Sports Med.* 40(4):747-755 (2012).
- McCrory, P. et al., Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016. *BJSM* 51:838-847 (2018).
- McGroarty, N.K. et al., Sport-related concussion in female athletes: a systematic review. *Orthop. J. Sports Med.* 8(7) (2020).
- McIntosh, A.S., Risk compensation, motivation, injuries, and biomechanics in competitive sport, *Br. J. Sports Med* (39):2-3 (2005).
- McManus, A. and N. Armstrong, Physiology of elite young female athletes. *J Med & Sport Sci* 56:23-46 (2011).
- Meeuwse, W.H., Assessing causation in sports injury: a multifactorial model. *Clinical J. of Sports Med.* 4(3):166-70 (1994).
- Montalvo, A.M. et al., Anterior cruciate ligament injury risk in sport: a systematic review and meta-analysis of injury incidence by sex and sport classification. *J. Ath. Training* 54(5):472-482 (2019).

- Montalvo, A.M. et al., "What's my risk of sustaining an ACL injury while playing sports?": a systematic review with meta-analysis. *Br. J. Sports Med.* 53:10031012 (2019).
- Mooney, J. et al., Concussion in soccer: a comprehensive review of the literature. *Concussion* 5(3) (2020).
- Morris, J.S. et al., Sexual dimorphism in human arm power and force: implications for sexual selection on fighting ability. *J. Exp. Biol.* 223(Pt 2) (2020).
- National Collegiate Athletic Association, Inclusion of transgender student-athletes. https://ncaaorg.s3.amazonaws.com/inclusion/lgbtq/INC_TransgenderHandbook.pdf (August 2011).
- National Conference of State Legislatures, Report on traumatic brain injury legislation. <https://www.ncsl.org/research/health/traumatic-brain-injury-legislation.aspx#1> (2018).
- Neder, J.A. et al., Reference values for concentric knee isokinetic strength and power in nonathletic men and women from 20 to 80 years old. *J. Orth. & Sports Phys. Therapy* 29(2):116-126 (1999).
- New York Times, "Estimate of U.S. transgender population doubles to 1.4 Million adults." https://www.nytimes.com/2016/07/01/health/transgender-population.html?mc=aud_dev&ad-keywords=auddevgate&gclid=Cj0KCQjwkZiFBhD9ARIsAGxFX8BV5pozB9LI5Ut57OQzuMhurWThvBMisV9NyN9YTXIzWl7OAnGT6VkaAu0jEALw_wcB&gclid=c=aw.ds. (July 1, 2016).
- Nieves, J.W. et al., Males have larger skeletal size and bone mass than females, despite comparable body size. *J. Bone Mineral Res.* 20(3):529-35 (2005).
- Palao, J.M. et al., Normative profiles for serve speed for the training of the serve and reception in volleyball. *The Sport Journal* (July 2014).
- Pierpoint, L. et al., The first decade of web-based sports injury surveillance: descriptive epidemiology of injuries in US high school boys' (and girls) lacrosse (2008–2009 Through 2013–2014) and National Collegiate Athletic Association men's lacrosse (2004–2005 Through 2013–2014). *J. Athl. Training* 54(1):30-41 (2019).

- Preiss-Farzanegan, S.J. et al., The relationship between gender and postconcussion symptoms after sport-related mild traumatic brain injury. *PM R* 1(3):245-53 (2009).
- Rider, G.N. et al., Health and care utilization of transgender and gender nonconforming youth: a population-based study. *Pediatrics* 141:3 (March 2018).
- Roberts, T.A. et al., Effect of gender affirming hormones on athletic performance in transwomen and transmen: implications for sporting organisations and legislators. *BJSM* 0:1-7 (2020).
- Rowson, S. et al., Biomechanical perspectives on concussion in sport, *Sports Med. Arthrosc.* 24(3):100-107 (Sept 2016).
- Ruetsche, A.G. et al., Cortical and trabecular bone mineral density in transsexuals after long-term cross-sex hormonal treatment: a cross-sectional study. *Osteoporos. Int.* 16:791-798 (2005).
- Sakamoto, K. et al., Comparison of kicking speed between female and male soccer players. *Procedia Engineering* 72:50-55 (2014).
- Santos, D.A. et al., Reference values for body composition and anthropometric measurements in athletes. *PLOSOne* 9(5) (May 2014).
- Sattler, T. et al., Vertical jump performance of professional male and female volleyball players: effects of playing position and competition level. *J. Strength and Conditioning Res.* 29(6):1486-93 (2015).
- Scharff, M. et al., Change in grip strength in trans people and its association with lean body mass and bone density. *Endocrine Connections* 8:1020-28 (2019).
- Singh-Ospina, N. et al., Effect of sex steroids on the bone health of transgender individuals: a systematic review and meta-analysis. *J. Clin. Endocrinol. Metab.* 102(11):3904-13 (Nov 2017).
- Sutton, K.M. et al., Anterior cruciate ligament rupture: differences between males and females. *J. Am. Acad. Orthop. Surg.* 21(1):41-50 (2013).
- Tack, L.J.W. et al., Proandrogenic and antiandrogenic progestins in transgender youth: differential effects on body composition and bone metabolism. *J. Clin. Endocrinol. Metab.* 103(6):2147-56 (2018).
- Taylor, R.W., et al., Gender differences in body fat content are present well before puberty. *Int. J. Obes. Relat. Metab. Disord.* 21(11): 1082-4 (1997).

Taylor, R.W., et al., Sex differences in regional body fat distribution from pre- to postpuberty. *Obesity* 18(7): 1410-16 (2010).

Thomas, J.R. and K. E. French, Gender differences across age in motor performance: a meta-analysis. *Psych. Bull.* 98(2):260-282 (1985).

Tierney, R.T. et al., Gender differences in head-neck segment dynamic stabilization during head acceleration. *Med. and Sci. in Sports and Exercise, American College of Sports Medicine* 37(2):272-9 (2005).

UK Sports Councils' Equality Group, Guidance for Transgender Inclusion in Domestic Sport, <https://equalityinsport.org/docs/300921/Guidance%20for%20Transgender%20Inclusion%20in%20Domestic%20Sport%202021.pdf> (2021).

UK Sports Councils' Equality Group, International Research Literature Review, <https://equalityinsport.org/docs/300921/Transgender%20International%20Research%20Literature%20Review%202021.pdf> (2021).

Van Den Tillaar, R. and J. M. H. Cabri, Gender differences in the kinematics and ball velocity of overarm throwing in elite team handball players. *J. Sports Sciences* 30(8):807-813 (2012).

Viviers, P. et al., A review of a decade of rugby union injury epidemiology: 2007-2017. *Sports Health* 10(3):223-27 (2018).

[VolleyballMag.com](https://volleyballmag.com), "Hit by volleyballs: concussions have changed coach Corinne Atchison's life." <https://volleyballmag.com/corinneatchison/> (9/25/16).

Wang, L. et al., Post-traumatic osteoarthritis following ACL injury. *Arthritis Res. and Therapy* 22(57) (2020)

Wiik, A., T. R Lundberg et al., Muscle strength, size, and composition following 12 months of gender-affirming treatment in transgender individuals. *J. Clinical Endocrin. & Metab.* 105(3):e805-813 (2020).

Wikipedia, "Cece Telfer." https://en.wikipedia.org/wiki/Cece_Telfer.

Wolf, J.M. et al., Male and female differences in musculoskeletal disease. *J. Am. Acad. Orthop. Surg.* 23:339-347 (2015).

World Rugby Transgender Guidelines. <https://www.world.rugby/the-game/player-welfare/guidelines/transgender> (2020).

World Rugby Transgender Women Guidelines. <https://www.world.rugby/the-game/player-welfare/guidelines/transgender/women> (2020).

Wunderle, K. et al, Menstrual phase as predictor of outcome after mild traumatic brain injury in women. *J. Head Trauma Rehabil.* 29(5):E1-E8 (2014).

APPENDIX – LIST OF PUBLICATIONS

Publications of Dr. Chad Thomas Carlson, M.D., FACSM

Sports Medicine CAQ Study Guide, Healthy Learning, 2021 [editor].

SEXUAL VIOLENCE IN SPORT: AMERICAN MEDICAL SOCIETY FOR SPORTS MEDICINE POSITION STATEMENT. Published in *Curr Sports Med Reports* June 2020;19(6):232-4; *Clin J Sports Med* June 8 2020; *Br J Sports Med* 2020;0:1-3.

Traveling with Medication. *NCAA Sports Science Institute Bulletin*, 2015
<http://www.ncaa.org/sport-science-institute/traveling-medication>.

A SURVEY OF STATE MEDICAL LICENSING BOARDS: CAN THE TRAVELING TEAM PHYSICIAN PRACTICE IN YOUR STATE? 2013. *Jan* (47)1:60-62.

AXIAL BACK PAIN IN THE ATHLETE: PATHOPHYSIOLOGY AND APPROACH TO REHABILITATION. *Curr Rev Musculoskel Med*. 2009 (2):88-93.

THE NATURAL HISTORY AND MANAGEMENT OF HAMSTRING INJURIES. *Curr Rev Musculoskel Med* 2008 (1):120-128.

SPONDYLOLYSIS AND THE ATHLETE. *Athletic Ther Today*. 2007 (12)4:37-39.

“ACUTE SUBDURAL HEMATOMA IN A HIGH SCHOOL FOOTBALL PLAYER,” *J Athl Training*, 38;2(63), 2003.

THE RELATIONSHIP OF EXCESSIVE WEIGHT LOSS TO PERFORMANCE IN HIGH SCHOOL WRESTLERS – A PILOT STUDY; presented at the AMSSM national meeting, San Diego, CA, 2000; *Clinical Journal of Sport Medicine* 10(4):310, October, 2000.

CURRICULUM VITAE (ABBREVIATED)

Chad Thomas Carlson, MD

Work Address: Stadia Sports Medicine
6000 University Ave.
Suite 250
West Des Moines, IA, 50266
Phone (515) 221-1102

Active professional licenses: IA, NE, CA, TX, TN, NC, AZ, FL (telemed)

Board certified family medicine, ABMS 1998; recertified 2005, 2012

Board certified sports medicine, ABMS 1999; recertified 2009, 2019

EDUCATION:

- Fellowship: Sports Medicine -- Ball Memorial Hospital/Central Indiana Orthopedics, 1997-1999; Completed 4/99
- Residency: University of Michigan Department of Family Medicine, 1994-97
- University of Nebraska College of Medicine
M.D. obtained May 1994
- University of Nebraska at Lincoln
B.S. with majors in history (emphasis American) and biology obtained May 1990

EMPLOYMENT HISTORY:

- Physician Owner, Stadia Sports Medicine, West Des Moines, IA, 2006 - present
- Staff Physician, University of Illinois, 9/04-6/06
- Director, Carle Sports Medicine, Carle Foundation Hospital, Urbana, IL, 2001-2004; Team physician, University of Illinois.
- Private practice, Ionia County Hospital, Ionia, MI, 1999-2001.

HOSPITAL AFFILIATIONS:

- Iowa Methodist Hospital, Des Moines
- Mercy Medical Center, Des Moines

PROFESSIONAL HONORS/AWARDS:

- Appointed to Board of Directors, Physical Activity Alliance, 2020
- Appointed to joint AMSSM/NCAA COVID-19 Working Group, March 2020-present
 - Medical advisory panel, 2021 Women's Division I NCAA Basketball Tournament
- AMSSM Founders Award 2019, awarded once annually for the Sports Medicine Physician nationally who best exemplifies the practice of Sports Medicine
- Fellow designation, American Medical Society for Sports Medicine, 2019
- Elected to Executive Committee, American Medical Society for Sports Medicine, 2017-21
 - **President of AMSSM, 2019-2020**

- Practice/Policy Committee, AMSSM, 2007-2016 (Former Chair)
 - Author of US HR 921, the Sports Medicine Licensure Clarity Act, which passed the US House of Representatives and Senate in January 2017, and was signed into law by President Trump, 2017
- Appointed member of physician liaison group to the NCAA to discuss return to sport strategies in the COVID-19 pandemic, 2020
- Appointed to Board of Directors, Running the Race, 2018-present
- Sports Ultrasound Committee, Policy Co-Chair, AMSSM, 2015-2017
- Elected to Board of Directors, American Medical Society for Sports Medicine, 2009-2013.
- Member, Health and Science Policy Committee, ACSM, 2010-present
 - Chair, Clinical Medicine Subcommittee, HSPC, ACSM, 2012-2015
- Iowa Medical Society Leadership Development Committee, 2022
- Member of Sports Medicine Subcommittee for the Iowa State Medical Society, 2007-present
 - Iowa designate to National Youth Sports Safety Summit
 - New York City – 2015
 - Indianapolis – 2016
 - Kansas City – 2017
- AMSSM designate for the American Academy of Orthopaedic Surgeons' Knee Osteoarthritis Quality Measure review committee, 2014-2016
- Associate Editor, Current Reviews in Musculoskeletal Medicine, 2006-2010.
- Fellow, American College of Sports Medicine: Designated in 2004

SPECIAL QUALIFICATIONS:

- Prior legal consulting work in cases with both local and national reach
- Extensive training in office musculoskeletal injury
- Oversight of treadmill stress testing/metabolic stress testing
- Independent consultation regarding establishment of individual exercise programs consistent with revised ACSM guidelines
- Proficient at evaluation/management of bone mineral density problems at all ages
- Qualified procedurally for:
 - Ultrasound diagnostic testing and guided injections
 - Joint injection/aspiration
 - Percutaneous tenotomy (TENEX)
 - Rotator cuff barbotage
 - Lactate/Anaerobic threshold, $VO_{2\text{MAX}}$ / exercise testing
 - Laryngoscopy for vocal cord assessment
 - Compartment pressure assessment
 - Ultrasound-guided nerve blocks
- Extensive experience speaking to large national groups on issues pertaining to sports medicine, including, but not limited to:
 - Overuse Injury
 - Head and Neck Injuries on the Field
 - Exercise-Induced Asthma
 - The Shoulder Exam
 - Principles of Exercise Prescription
 - Traumatic Brain Injury in Sport
 - The Knee Exam
 - The Ankle Exam
 - The Hip Exam
 - The Pre-Participation Exam
 - Cardiopulmonary Exercise Testing for Determination of Training Zone Estimates and to Identify Causes of Exercise-Related Dyspnea
 - Athletic Amenorrhea
 - Advocacy in Sports Medicine
 - Medical Practice Economics

PUBLICATIONS/RESEARCH:

- Sports Medicine CAQ Study Guide, Healthy Learning, Monterey, CA. 2021.[editor].
- AXIAL BACK PAIN IN THE ATHLETE: PATHOPHYSIOLOGY AND APPROACH TO REHABILITATION. Curr Rev Musculoskel Med. 2009 (2):88-93
- SPONDYLOLYSIS AND THE ATHLETE. Athletic Ther Today. 2007 (12)4:37-39.
- THE NATURAL HISTORY AND MANAGEMENT OF HAMSTRING INJURIES. Curr Rev Musculoskel Med 2008 (1):120-128.
- A SURVEY OF STATE MEDICAL LICENSING BOARDS: CAN THE TRAVELING TEAM PHYSICIAN PRACTICE IN YOUR STATE? BJSM. 2013. Jan (47)1:60-62.
- SEXUAL VIOLENCE IN SPORT: AMERICAN MEDICAL SOCIETY FOR SPORTS MEDICINE POSITION STATEMENT
 - Curr Sports Med Reports June 2020;19(6):232-4.
 - Clin J Sports Med June 8 2020;
 - Br J Sports Med 2020;0:1-3
- “ACUTE SUBDURAL HEMATOMA IN A HIGH SCHOOL FOOTBALL PLAYER,” J Athl Training, 38;2(63), 2003
- Traveling with Medication. NCAA Sports Science Institute Bulletin, 2015 <http://www.ncaa.org/sport-science-institute/traveling-medication>
- THE RELATIONSHIP OF EXCESSIVE WEIGHT LOSS TO PERFORMANCE IN HIGH SCHOOL WRESTLERS – A PILOT STUDY; presented at the AMSSM national meeting, San Diego, CA, 2000 Clinical Journal of Sport Medicine 10(4):310, October, 2000

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 * Case No.

vs. * 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*

VIDEOTAPED DEPOSITION OF

JOSHUA SAFER, M.D.

March 24, 2022

Any reproduction of this transcript

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by the certifying agency.

Page 2

1 his official capacity as Attorney *
 2 General, and THE STATE OF WEST *
 3 VIRGINIA, *
 4 Defendants *
 5 * * * * *

VIDEOTAPED DEPOSITION OF
 JOSHUA SAFER, M.D.
 March 24, 2022

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Page 3

VIDEOTAPED DEPOSITION
 OF
 JOSHUA SAFER, M.D., taken on behalf of the Intervenor
 herein, pursuant to the Rules of Civil Procedure, taken
 before me, the undersigned, Nicole Montagano, a Court
 Reporter and Notary Public in and for the Commonwealth
 of Pennsylvania, taken via videoconference, on
 Wednesday, March 24, 2022 at 9:30 a.m.

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Page 4

A P P E A R A N C E S

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9 KATHLEEN R. HARTNETT, ESQUIRE
10 ANDREW BARR, ESQUIRE
11 JULIE VEROFF, ESQUIRE
12 ZOE HELSTROM, ESQUIRE
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14 COUNSEL FOR STATE OF WEST VIRGINIA
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16 ROBERTA F. GREEN, ESQUIRE
17 Shuman McCuskey Slicer, PLLC
18 1411 Virginia Street East
19 Suite 200
20 Charleston, WV 25301
21 COUNSEL FOR WEST VIRGINIA SECONDARY SCHOOL
22 ACTIVITIES COMMISSION
23
24

* * *

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1 from any condition that has been identified as a
 2 disorder of sexual development, am I correct that you
 3 consider yourself to have expertise in what constitutes
 4 a disorder of sexual development?
 5 A. I have some expertise. And the terminology is
 6 actually differences of sexual development or sexual
 7 differentiation or intersex are the terms that are more
 8 popularly used.
 9 Q. You would agree with me, would you not, that
 10 many respective sources up to the present would continue
 11 to refer to disorders of sexual development?
 12 ATTORNEY BLOCK: Objection to form.
 13 THE WITNESS: So there --- what I would
 14 say there is that --- the newer terminology has not ---
 15 has not yet permeated because there have not been
 16 revisions to all the documents that have been created.
 17 BY ATTORNEY BROOKS:
 18 Q. How about if we say DSD?
 19 A. DSD is a reasonably safe or DSD intersex is what
 20 some people do, yes.
 21 Q. Well, not all DSDs would be considered intersex
 22 conditions.
 23 Correct?
 24 A. You are right that some people try to parse

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1 those two terms even. And there is --- but I think
 2 those kinds of distinctions might be on the scope of
 3 what we are discussing.
 4 Q. Probably so. If we put on side individuals who
 5 suffer from anything that is characterized in the field
 6 as a DSD you would agree, would you not, that genetic
 7 makeup and specifically whether the individual possesses
 8 XX or XY chromosomes is a statistically meaningful
 9 indicator of athletic performance?
 10 ATTORNEY BLOCK: Objection to form.
 11 THE WITNESS: So no, and the --- it's ---
 12 I guess it depends what you mean is what it comes down
 13 to. So if you are --- if you are simply saying, well, a
 14 certain fraction of people of these chromosomes are
 15 going to be --- have this other characteristic, then
 16 maybe there are those kinds of associations. But if you
 17 are going to say that it's connected to the point where
 18 you could actually use one of those let's say observing
 19 a chromosome as an actual determination for a given
 20 individual, then I would say no.
 21 BY ATTORNEY BROOKS:
 22 Q. Is it your opinion that a gender identity itself
 23 is a --- or useful indicator of athletic performance?
 24 A. It is my opinion that gender identity itself is

Page 168

1 not a useful indicator of athletic performance.
 2 Q. You say at paragraph 44 of your report --- I
 3 will save that. I think that is a new Declaration and
 4 we will not take time to do that.
 5 Let me ask you to look at paragraph 24 of your
 6 rebuttal report. You say in paragraph 24 that none of
 7 Doctor Carlson's arguments support HB-3293 categorical
 8 ban of all girls who are transgender from all girls
 9 sports teams.
 10 Do you see that?
 11 A. I do.
 12 Q. And I should continue. I'm sorry. Doctor
 13 Carlson's safety argument relates solely to contact and
 14 collision sports and the physical characteristics
 15 developed during puberty, period. By referring to a
 16 categorical ban let me ask this. Do you agree that
 17 safety considerations could justify or may justify
 18 excluding natal males who experienced all or significant
 19 part of male typical pubertal development from
 20 participating in female division of contact or collision
 21 sports such as basketball and soccer?
 22 ATTORNEY BLOCK: Objection to form.
 23 THE WITNESS: So if the question is would
 24 I anticipate as an expert that there would be a safety

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1 explanation for banning transgender women from the
 2 female category, then I would --- I wouldn't --- I
 3 certainly --- let me think about which way to phrase it.
 4 I would have a hard time coming up with an example where
 5 I would use being transgender as a safety criterion as
 6 opposed to body habitus size or some other more
 7 objective criterion.
 8 BY ATTORNEY BROOKS:
 9 Q. Well, and I didn't say anything about gender
 10 status. Let me ask again. Would you agree that safety
 11 considerations could justify excluding natal males who
 12 have experienced all or a significant part of male
 13 typical pubertal development from participating in
 14 female division contact and collision sports such as
 15 basketball or soccer?
 16 ATTORNEY BLOCK: Objection to form.
 17 THE WITNESS: So you're saying that even
 18 if we otherwise decided that it would be okay for
 19 cisgender males to play with cisgender females, would I
 20 envision there being a safety reason to ban those
 21 cisgender males?
 22 BY ATTORNEY BROOKS:
 23 Q. All I asked had nothing to do with gender
 24 identity. Do you agree that the introduction onto the

* * *

1 transgender does not appear at all?
 2 A. House Bill --- that's this one?
 3 **Q. That is this one.**
 4 A. I was not aware that the word transgender does
 5 not appear at all.
 6 **Q. Are you tracking the other bills out there that**
 7 **are similar to House Bill 3293?**
 8 A. I am not personally tracking the other bills,
 9 no.
 10 **Q. Can you take a look at the Handelsman report**
 11 **that you have in front of you. I don't recall the**
 12 **exhibit number.**
 13 ATTORNEY WILKINSON: I think Exhibit 13
 14 --- oh, sorry, it's Exhibit 4, I think.
 15 THE WITNESS: I don't see.
 16 ATTORNEY WILKINSON: I can give you that.
 17 THE WITNESS: The stack got big.
 18 ATTORNEY TRYON: We can just bring it ---
 19 if you can't find it we can bring it up on the screen?
 20 THE WITNESS: Okay.
 21 I was given another copy, so we're good.
 22 I have it in front of me.
 23 BY ATTORNEY TRYON:
 24 **Q. Okay.**

1 for example gender identity. And the phrasing
 2 characteristic defined binary form is not necessarily
 3 true for each component of biological sex.
 4 **Q. So you disagree with the statement in the**
 5 **Handelsman report, is that --- did I state that fairly?**
 6 A. Right. I would characterize the statement as
 7 not exhaustive.
 8 ATTORNEY TRYON: Let me ask the court
 9 reporter if I have any time.
 10 COURT REPORTER: I have six minutes and
 11 58 --- six hours and 58 minutes.
 12 ATTORNEY TRYON: Well, I guess with my
 13 last two minutes I'll just say thank you for your time
 14 and I appreciate it. And I don't have any other
 15 questions. I don't know if any of the other Defendants
 16 do. I doubt it. But go ahead. If they do, go ahead.
 17 Kelly?
 18 ATTORNEY MORGAN: This is Kelly Morgan.
 19 I don't have any questions. Thank you so much.
 20 ATTORNEY TRYON: Roberta? Susan, you're
 21 next.
 22 ATTORNEY GREEN: This is Roberta Green on
 23 the behalf of the SSAC. No questions. Thank you.
 24 ATTORNEY DENIKER: Dr. Safer, this is

1 **On the second page?**
 2 A. On the second page.
 3 **Q. Okay.**
 4 **Under fairness and segregation in sports.**
 5 **Do you see that section?**
 6 A. I do.
 7 **Q. In the third full paragraph underneath there ---**
 8 **oh the formatting there is a little different than the**
 9 **copy that I have. Let's see. There's a paragraph that**
 10 **starts the terms sex and gender. There it is. The**
 11 **terms sex and gender are often confused as**
 12 **interchangeable. Now, I want you to focus on this next**
 13 **sentence. Sex is an objective specific biological**
 14 **state, a term with distinct fixed facets notably**
 15 **genetic, chromosomal, gonadal, hormonal and phenotypic**
 16 **including genital sex, each of which has a**
 17 **characteristic defined binary form. Did I read that**
 18 **correctly?**
 19 A. You read that correctly, yes.
 20 **Q. Do you agree with that statement?**
 21 A. I don't agree with that statement completely,
 22 no.
 23 **Q. What specifically do you find objectionable.**
 24 A. It's missing some components of sex, including,

1 Susan Deniker. I have no questions. Thank you for your
 2 time today.
 3 ATTORNEY TRYON: We are finished.
 4 VIDEOGRAPHER: This concludes this
 5 deposition. The current time reads 6:31 p.m. Eastern
 6 Standard Time.
 7 * * * * *
 8 VIDEOTAPED DEPOSITION CONCLUDED AT 6:31 P.M.
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IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
CHARLESTON DIVISION

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

Plaintiff,

v.

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

Defendants.

Civil Action No. 2:21-cv-00316

Hon. Joseph R. Goodwin

SUPPLEMENTAL DECLARATION OF KATELYN KANG

I, Katelyn Kang, declare under penalty of perjury of the laws of the United States of America that the following is true and correct, and state:

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

2. As set forth below, I have reviewed audio recordings and provided full transcripts of the West Virginia Legislature's testimony regarding H.B. 3293. Each transcript is accurately described in the respective Exhibit and transcribed to the best of my ability. Each transcript contains timestamps of testimony as available on the West Virginia Legislature's public recordings, or in the audio files provided below. I have also provided hyperlinks where the recordings are available for review. As of the date of this filing, each of the hyperlinks is in working order.

3. Attached hereto as Exhibit A is a true and correct transcription of testimony heard during the West Virginia House of Delegates Education Committee Meeting on or around March 18, 2021. A recording of the testimony is available for download at: <https://liquidfiles.cooley.com/link/02OaNUdHjag73hII87u1bQ> (last accessed June 7, 2021).

4. Attached hereto as Exhibit B is a true and correct transcription of testimony heard during the West Virginia House of Delegates Judiciary Committee Meeting on or around March 18, 2021. A recording of the testimony is available at: <https://liquidfiles.cooley.com/link/IBA66jDqugGj5EM04cqf2Q> (last accessed June 7, 2021).

5. Attached hereto as Exhibit C is a true and correct transcription of testimony heard during the West Virginia House of Delegates Hearing on or around March 25, 2021. A recording of the testimony is available at: https://www.youtube.com/watch?app=desktop&v=af_ikMx-PJU (last accessed June 7, 2021).

6. Attached hereto as Exhibit D is a true and correct transcription of testimony heard during the first part of the West Virginia Senate Education Committee on or around April 1, 2021. A recording of the testimony is available at: <http://sg001-harmony.sliq.net/00289/Harmony/en/PowerBrowser/PowerBrowserV2/20210330/-1/50887> (last accessed June 7, 2021).

7. Attached hereto as Exhibit E is a true and correct transcription of testimony heard during the second part of the West Virginia Senate Education Committee on or around April 1, 2021. A recording of the testimony is available at: <http://sg001-harmony.sliq.net/00289/Harmony/en/PowerBrowser/PowerBrowserV2/20210401/-1/50893> (last accessed June 7, 2021).

8. Attached hereto as Exhibit F is a true and correct transcription of testimony heard during the West Virginia Senate Hearing on or around April 8, 2021. A recording of the testimony is available at:

<http://sg001-harmony.sliq.net/00289/Harmony/en/PowerBrowser/PowerBrowserV2/20210408/-1/50919> (accessed June 7, 2021).

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

Executed on June 9, 2021

/s/ Katelyn Kang
Katelyn Kang, Esq.

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

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

Plaintiff,

v.

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

Defendants.

Civil Action No. 2:21-cv-00316

Hon. Joseph R. Goodwin

CERTIFICATE OF SERVICE

I, Andrew D. Barr, do hereby certify that on this 9th day of June, 2021, I electronically filed a true and exact copy of the ***Supplemental Declaration of Katelyn Kang*** with the Clerk of Court and all parties using the CM/ECF System.

/s/ Andrew D. Barr

Colorado Bar No. 49644

Admitted *pro hac vice*

EXHIBIT A

West Virginia House of Delegates Education Committee Discussion of H.B. 3293

March 18, 2021

Chairman Ellington: [00:00:00](#) And some of the potential witnesses today or testimony today. Um, clerk, uh, will take us out on quorum and we do have a quorum. So, uh, Vice Chair make a motion to accept the minutes from the previous meeting.

Vice Chair: [00:00:16](#) Uh, Mr. Chairman, I move the minutes as presented in the packet, be approved.

Chairman Ellington: [00:00:23](#) Uh, you heard the Vice Chair. Any, uh, questions, additions, deletions, directions? Chair here is now all in favor of accepting the minutes from the previous meeting, say aye.

Audience: [00:00:32](#) Aye.

Chairman Ellington: [00:00:34](#) Those opposed, nay. Ayes appear to have it. Ayes do have it. Minutes adopted. First on the agenda will be an originating bill. Is there any interest in the bill?

Counsel: [00:00:43](#) Chairman Ellington, I move the bill.

Chairman Ellington: [00:00:45](#) All right, Counsel. Counsel, explain the bill.

Counsel: [00:00:47](#) Thank you Chairman Ellington. This bill uh, mens' current code with regard to admission and, uh, participation in single-sex sports. Uh, the bill provides that the birth certificate required for admission to public school must confirm the pupil's sex at the time of birth and the birth certificate. If a birth certificate cannot be obtained, a signed physician's statement indicating the pupil's sex based solely on the pupil's unaltered internal and external reproductive anatomy must be submitted.

The sex confirmed at the time of admission shall be the pupil's sex for the purposes of participating in SSAC, single-sex interscholastic athletic events. Prior to the students' participation, uh, the SSAC must verify with the county board that each student participating in the single-sex athletics is participating according to, uh, sex listed according to, um, the county provision. And this requirement does not require, it does not apply to co, coed sports, and that's the bill, Mr. Chairman.

Chairman Ellington: [00:01:51](#) All right. Any questions of the bill of Counsel? Gentlemen from the, uh, was it 43rd?

Del. Thompson: [00:02:00](#) Yep.

Chairman Ellington: [00:02:01](#) I got it right this time.

Del. Thompson: [00:02:10](#) Thank you Chairman Ellington. Counsel, would this, if this was adopted, would this apply to, um, all ages, middle school and high school?

Counsel: [00:02:19](#) Middle school and high school, not elementary.

Del. Thompson: [00:02:21](#) Mm-hmm (affirmative).

Counsel: [00:02:21](#) So secondary.

Del. Thompson: [00:02:22](#) Okay. Um, how would, the way this bill is written and drafted, you mentioned birth certificate, but, um, so are we going to re-have to require a birth certificate for every time a student wants to play basketball or football?

Counsel: [00:02:41](#) No, if you, if you look at the, um, the originating bill, I'm on page one, "Birth certificate is required upon admission to public school." So this just requires that the sex be identified at that time. And then uh, that is the sex that the county would follow, when the student is participating in sports. So know that, that that's already done at the enrollment admissions stage.

Del. Thompson: [00:03:14](#) Okay. And correct me if I'm wrong on this, but would this preclude any student from actually participating in a sport?

Counsel: [00:03:25](#) It would preclude an opposite sex person from participating in, like in, in, in the opposite sex sport.

Del. Thompson: [00:03:33](#) Okay. So would this, like so if a, uh, a person who was born biologically male, um, let me rephrase. A person was born biologically female, but later in life, um, they have began the transition process to identify and become a male. With this bill, and they're taking testosterone, they are taking, they're under medical care and, uh, they're transitioning. So this bill would require them to play, even if they're taking testosterone, they'd be required to play, uh, girls basketball versus boys basketball, which is what they would identify with?

Counsel: [00:04:14](#) Right. If I understood, if the person was born as a female, yes. That person would under this, under this bill as it is, would have to apply.

Del. Thompson: [00:04:23](#) Even though they're, they're transitioning take it. They might even, they, uh, you know, they appear masculine, they are taking testosterone, they would have to play female sports?

Counsel: [00:04:34](#) Correct.

Del. Thompson: [00:04:35](#) Okay. Um, have any other states adopted this?

Counsel: [00:04:43](#) Uh, to my knowledge, no other states have. Um, well actually, I, I think there are a couple of states that may have passed similar laws. Um, but in most cases, a lot of those are pending. Uh-

Del. Thompson: [00:04:56](#) Am I correct in North Carolina? Did they, did they attempt to pass something similar to this?

Counsel: [00:05:05](#) Just a second.

Del. Thompson: [00:05:06](#) I believe so. Like maybe around like 2016 or 2017, I thought.

Counsel: [00:05:12](#) Uh, hmm. I don't, I don't know about North Carolina. I know there are other states that have, um, introduced various types of legislation. And I don't, that doesn't mean that I think there, there definitely are other states that have looked at different sides of the issue and, um, some have addressed it in policy or have attempted to address it in the legislation. But, um, I don't know specifically about North Carolina.

Del. Thompson: [00:05:37](#) So currently, um, students right now who identify, um, with an opposite sex of what they were assigned at birth, they can play whatever sport that they identify with. Is that correct?

Counsel: [00:05:51](#) Uh, I, the way I understand it is that, a student would participate in whatever way they're identified in WVEIS. And so that would actually be up to how the county identifies the students. So-

Del. Thompson: [00:06:06](#) So this would—

Counsel: [00:06:07](#) I'm not sure, I think the answer would be, it depends on how the county identified the student in WVEIS.

Del. Thompson: [00:06:11](#) Okay. Um, at, at the appropriate time Chairman Ellington, I don't know who would be appropriate to maybe to really clarify that question for me and is there, maybe the SSAC or, uh, maybe someone from the State Department to kind of get a better understanding of that particular question at the appropriate time.

Chairman Ellington: [00:06:31](#) Will do.

Del. Thompson: [00:06:31](#) Um, thank you. And then, uh, Counsel is, to your knowledge, um, would this apply to, uh, would this apply only, uh, like you said, secondary school in middle school and high school. Would this have any implications to collegiate sports?

Counsel: [00:06:54](#) No, it would not.

Del. Thompson: [00:06:55](#) Okay. Uh, no further questions at this time. I may have some later though.

Chairman Ellington: [00:07:01](#) All right. Gentleman from the 67th.

Del. Doyle: [00:07:04](#) Uh, thank you, Chairman Ellington. Uh, Counsel, to follow up on that. Um, the uh, and, and as background, um, some of us, some may be aware that this past football season Vanderbilt University had a female place kicker. Uh, she kicked in several games and is, am I correct that if we pass this bill, that would be prohibited, say for a high school football team in West Virginia, but it would be okay for a college team?

Counsel: [00:07:39](#) I believe that in an, I'm, maybe someone from the, um, department will be able to um, clarify this. But-

Del. Doyle: [00:07:39](#) Yeah, I, I-

Counsel: [00:07:47](#) Even under title, Title IX, if there is not a female sport that the female, that the females must be able to join a male team.

Del. Doyle: [00:07:59](#) So-

Counsel: [00:07:59](#) So I don't think that is correct.

Del. Doyle: [00:08:01](#) So if a high school had a female football team, uh, that person would have to kick for the female football team?

Counsel: [00:08:08](#) Correct.

Del. Doyle: [00:08:09](#) But would not be prohibited from kicking for the male football team? Uh, do you know of any high schools in West Virginia that have female football teams?

Counsel: [00:08:19](#) I don't.

Del. Doyle: [00:08:19](#) Thank you. Uh, and, and as background, what had happened here was, two of the place kickers for Vanderbilt, were injured. And the, the woman, uh, this woman was, was a first-rate soccer player and a number of the male football players went to the coach and said, "Listen, we need a kicker and she can do it." This would be prohibited for a high school in West Virginia. Is that correct if this bill passed?

Counsel: [00:08:44](#) I don't think so, no. Not according to Title IX.

Del. Doyle: [00:08:48](#) So you think Title IX might override this, uh, the, the statute?

Counsel: [00:08:55](#) When there is not a female sport, um, federal law-

Del. Doyle: [00:09:01](#) Okay.

Counsel: [00:09:01](#) States that a female-

Del. Doyle: [00:09:02](#) Okay.

Counsel: [00:09:02](#) Has to be allowed to play, then becomes a coed team. And so that, that and under this bill a coed team is not [crosstalk 00:09:09].

Del. Doyle: [00:09:08](#) So you're, you're . . . Yes, okay. So you are saying that federal law would trump this in that kind of a situation?

Counsel: [00:09:13](#) Yes.

Del. Doyle: [00:09:14](#) Thank you.

Chairman Ellington: [00:09:16](#) Further questions of Counsel, Gentleman from 16th.

Del. Hornbuckle: [00:09:20](#) Uh, thank you Mr. Chair. And so to piggyback off the, off the gentleman's question and the Gentleman from the 43rd. If there was a transgender male, uh, that started out life as a male, uh, one years old becomes a female and they're playing for their high school and they are competing in we'll just say, uh, swimming. And there is only a male team, will, will that individual be permitted to, to be on the, on the male team?

Counsel: [00:10:00](#) The individual was born male?

Del. Hornbuckle: [00:10:01](#) Mm-hmm (affirmative).

Counsel: [00:10:01](#) Yes.

Del. Hornbuckle: [00:10:04](#) And, and vice versa?

Counsel: [00:10:07](#) If there was, if there was a female?

Del. Hornbuckle: [00:10:09](#) Yes ma'am.

Counsel: [00:10:11](#) If there's not a female team, then that female would be allowed to participate on the male team.

Del. Hornbuckle: [00:10:16](#) So, so-

Counsel: [00:10:17](#) And then it would become coed.

Del. Hornbuckle: [00:10:19](#) Okay. So the, the, the, the, the, what the Gentleman from the 43rd said, uh, a, uh, the individual that started out as a female, uh, then became a male, was taking the hormones and all those

things, if there was no, uh, I guess there was only a, a female team, then they would, they would be able to be on that or a male team, I guess, any of the team they would have to be allowed, correct?

- Counsel: [00:10:43](#) Uh, I, I, I'm not, I didn't follow on-
- Chairman Ellington: [00:10:47](#) Clarify your question.
- Del. Hornbuckle: [00:10:48](#) The question would be, they, they would be permitted to, to participate on any team, if there was only one team. So regardless of the individual, if there was only a male team, they will be permitted to participate on a female team?
- Counsel: [00:11:01](#) The federal law is designed to help women excel in sports. So the, the way that it works if there's not a female team, that female can participate on the male, in the male sport, which then becomes coed, but it does not go the other way around.
- Del. Hornbuckle: [00:11:19](#) Okay. Okay. Thank you.
- Chairman Ellington: [00:11:26](#) Gentleman from the 19th.
- Del. Griffith: [00:11:31](#) Thank you Mr. Chairman. And I'm trying to think of scenarios here, whereby this might be um, unclear. And one is, there are many schools who have volleyball programs for girls only, would this mean that any boy who so claimed would be able to go out for the volleyball team, because there was no equivalent male team. Uh, would that be a possible scenario?
- Counsel: [00:12:01](#) No.
- Del. Griffith: [00:12:03](#) Why would that be? Uh.
- Counsel: [00:12:08](#) Currently, uh, a female sports are female sports, and males are not included in that. And this bill would preclude a person who was born male, who then identi—, that person would have to continue to play as a male.
- Del. Griffith: [00:12:23](#) Okay.
- Counsel: [00:12:24](#) Does that answer your question?
- Del. Griffith: [00:12:25](#) Yes. Thank you.
- Chairman Ellington: [00:12:27](#) [inaudible 00:12:27] the gentlemen that has been challenged before, and they were told they need to start a male team if they were gonna have the male play on it. So further questions to Counsel? Lady from 51st.

Del. Walker: [00:12:38](#) Thank you, Mr. Chairman. Thank you, Counsel. So I have a question, because we do have a foster care system here, and we do have trans individuals in that foster care system. And as you know and we all know, all of those documents don;t come with the student. So, if we had a trans student in a new foster home that did not have the documents, it takes even a while to get a, a doctor's visit scheduled with how we are, so with DHHR. So would the coach assume what this person's identity is, gender?

Counsel: [00:13:21](#) According to statute, uh, in order to be admitted in the current statute, I'm on page one, the pupil has to have either a birth certificate or an affidavit of why they don't, which I think would be the secondary case, the case in this with the foster child. Um, and then they need the signed, the, if they didn't have the birth certificate, would need the physician statement.

Del. Walker: [00:13:47](#) So we would not allow this child to play because we didn't have that documentation, and they may not have a, a doctor's appointment at that time?

Counsel: [00:13:57](#) I, in order to be admitted, that's, that's the way this bill reads.

Del. Walker: [00:14:02](#) So, and I'm not sure if you can answer this question for me. What do we do with children that are born with both sex organs?

Counsel: [00:14:15](#) I do not know.

Del. Walker: [00:14:17](#) At the appropriate time, Mr. Chair, if we have anyone to answer that question?

Chairman Ellington: [00:14:24](#) [inaudible 14:23] Any further questions Counsel? Gentleman from the 43rd.

Del. Thompson: [00:14:35](#) Thank you Mr. Chairman. Counsel, on page one of the bill under, uh, section two, line 10 and 11. "So a signed physician statement indicating the pupil's sex based solely on the pupil's unaltered internal and external reproductive anatomy." So if we, I'm assuming this is if that a birth certificate cannot be obtained?

Counsel: [00:15:02](#) Correct.

Del. Thompson: [00:15:03](#) So we're gonna subject the child to go to the, a doctor and essentially show them their genitalia to prove their, what genitals they have. Is that what this says?

Counsel: [00:15:16](#) And I'm assuming that doctors have those types of exams in a [crosstalk 00:15:21].

Del. Thompson: [00:15:22](#) Well, I'm sure, I'm sure they do for medical purposes, not just to, you know, show and tell. But, um, is that, is that what that reads that they would, they would have to show their genitals to a doctor to prove their?

Counsel: [00:15:35](#) I'm not a doctor. I don't know what a doctor would require.

Chairman Ellington: [00:15:46](#) I assume the Gentleman wants to ask the chair questions.

Del. Thompson: [00:15:49](#) Yeah. (laughs)

Chairman Ellington: [00:15:50](#) Um, there are ways to tell on exam what their gender is.

Del. Thompson: [00:15:55](#) Without?

Chairman Ellington: [00:15:57](#) Well, I mean, you do an exam, pediatricians do exams all the time.

Del. Thompson: [00:16:00](#) Right.

Chairman Ellington: [00:16:00](#) Children, and-

Del. Thompson: [00:16:01](#) I'm talking about like a—

Chairman Ellington: [00:16:02](#) Adolescents, you would do an exam and they do have a physical exams at those ages too. So yes, you would probably have to determine whether it was altered or not.

Del. Thompson: [00:16:11](#) By like physical—

Chairman Ellington: [00:16:12](#) Right.

Del. Thompson: [00:16:13](#) Observation? Okay. Uh, thank you Mr. Chair and Counsel.

Chairman Ellington: [00:16:21](#) Lady from the 30th, 41st?

Del. Tully: [00:16:24](#) The uh, Counsel, do you, are you aware if the WVSSAC requires a physical, sports physical for participation in sports at the secondary level in West Virginia?

Counsel: [00:16:37](#) I don't know if it's the SSAC or the county. Um, I'll, I'll defer to the department on that.

Del. Tully: [00:16:41](#) Okay. I believe it's the WVSSAC, 'cause I think it's a pretty standard form. Actually, I have it right here. And, um, it also talks about a physical exam and it talks about actually, when you do the physical exam for the G, the genital urinary system, it talks about like actually doing a physical exam for inguinal

hernias, which are down in the groin folds for those that don't know, and also looking for bilaterally descended testicles.

So there's, those students aren't gonna be put through probably an unnecessary exam that they wouldn't already get to play sports. Would that be a correct assumption based upon this?

- Counsel: [00:17:18](#) If, if that's what it says, yes.
- Del. Tully: [00:17:20](#) Thank you.
- Chairman Ellington: [00:17:22](#) Gentleman from 26th?
- Del. Evans: [00:17:28](#) Thank, thank you Mr. Chairman. Um, are there any girls in West Virginia currently playing the high school football?
- Counsel: [00:17:38](#) I believe that the Delegate just said that there was. Maybe that was a college. I'm not sure.
- Chairman Ellington: [00:17:44](#) [inaudible 00:17:44]. Yeah.
- Counsel: [00:17:44](#) I, I'm not sure.
- Del. Evans: [00:17:46](#) I believe there definitely are. I stood on the football field this year against a team that definitely had a girl on the football field. We went to Webster County at one time, Webster County had a kicker female. So, I guess it is true that girls can play male sports.
- Counsel: [00:18:04](#) Yes.
- Del. Evans : [00:18:05](#) But males cannot play female sports?
- Counsel: [00:18:09](#) That's currently the way, the current law—
- Del. Evans: [00:18:10](#) So how does this, how does this bill then affect them, or does it affect it at all?
- Counsel: [00:18:17](#) This bill would affect those that changed their sex after birth.
- Del. Evans: [00:18:22](#) Okay. So it has nothing to do with current sex or like, like I'm a guy, I'm not going to change that. So it would not affect me?
- Counsel: [00:18:30](#) It would not affect you.
- Del. Evans: [00:18:31](#) Okay, that's all I want to know. Thank you.
- Chairman Ellington: [00:18:34](#) Further questions to Counsel? I believe by leave of the committee, we had requests from the school system. Uh, Ms.

Sarah, would you like to come on up and . . . Ms. Stewart, you've been sworn in before. I think there was a question regarding the school system, as far as what's currently practiced. Um, Gentleman from 43rd, do you have questions and Sarah, if you would just state name and title for the people listening in on.

- Sarah Stewart: [00:19:05](#) Sarah Stewart, West Virginia Department of Education.
- Chairman Ellington: [00:19:09](#) Gentleman.
- Del. Thompson: [00:19:10](#) Thank you Mr. Chairman, thank you Sarah. I appreciate you being here again. Um, So my question was, currently what is in place? This bill, it's gonna change? Uh, currently right now, if a student who was born um, biologically female, but is a, a high school student and is transitioning, identifies as a male and is transitioning taking hormones, uh, and she wants to play or he wants to play basketball. How, how is that working right now? Is that a county by county decision? Is it a school decision? Uh, is there, what, what is currently working or in place?
- Sarah Stewart: [00:19:49](#) Let me be clear that I am a representative from the Department of Education and not a representative from the WVSSAC.
- Del. Thompson: [00:19:57](#) Correct, I understand that. And I, I, I might have a question for them about that as well, but from your perspective from that.
- Sarah Stewart: [00:20:02](#) I just, I wanted to make that clear and I, 'cause I don't want to speak for them. It is my understanding, that currently there is no specific rule that address, squarely addresses, transgender student participation in extracurricular activities. Um, there are Title IX considerations that do come into play with, um, coed sports.
- And if there is only one sport at a, at a, um, particular school that, that we have to be mindful of Title IX and make sure those opportunities are made available. I do believe there is also a rule that if separate teams are maintained, for example a girl's basketball team and a boy's basketball team, that they, I believe there is an SSAC rule, SSAC guidance that directs that, um, that you play on the, on this, um, whatever sex, um, that the, that the students is, that does not address however, any transgender student issues.
- Del. Thompson: [00:21:01](#) Okay. Does your department have any policy on transgender students at all or has that not been addressed?
- Sarah Stewart: [00:21:09](#) Uh, we, um, there is currently a Fourth Circuit decision that is being appealed to the, the United States Supreme Court, dealing with, um, guidance relating to transgender students. Um, as we are in the Fourth Circuit, we are bound at least at this point, by

that guidance. The department has not put out any specific guidance, but it will just be mindful of, of the courts' um, direction in that regard. And should that change, we'll appropriately revise and advise the counties appropriately.

- Del. Thompson: [00:21:39](#) If this bill is passed and we later learn, I don't know, whether the outcome of that court decision may or may not be, could this bill then potentially be in violation of that?
- Sarah Stewart: [00:21:47](#) I don't want to speculate on what the US Supreme Court would take.
- Del. Thompson: [00:21:54](#) Right. But not speculation, but is it a possibility that this bill would be in violation?
- Sarah Stewart: [00:21:59](#) It, it could be.
- Del. Thompson: [00:22:00](#) Okay. Has, has your office received, um, calls, concerns, complaints regarding anything remotely related to this about students participating in, in sports or extracurricular activities that you know, that they're . . .?
- Sarah Stewart: [00:22:17](#) Surrounding the conversation today, no, we have not.
- Del. Thompson: [00:22:20](#) Okay. Um, that's all I have for you Sarah. Thank you. I appreciate it.
- Chairman Ellington: [00:22:28](#) Gentleman, from the 16th.
- Del. Hornbuckle: [00:22:33](#) Thank you Mr. Chair. Um, and thank you for being here today. Uh, giving your legal expertise, um, would the WVSSAC have the ability, uh, uh, to set a guideline concerning transgender participation in sports on their own?
- Sarah Stewart: [00:22:50](#) I do not want to speak for whether or not the WVSSAC—I'm not um, comfortable talking to their authorizing statute and where, where their rulemaking ability lies and ends. Potentially they could, but I think it's a better question addressed to them.
- Del. Hornbuckle: [00:23:04](#) And are they here today? Oh, I guess not. Oh, thank you.
- Chairman Ellington: [00:23:11](#) I have a copy of the uh, SSA, WVSSAC um, physical exam certificate, um, Delegate from the 41st asked that it be submitted as a, as an addendum. So, if anyone wants to look at it, they can afterwards. Lady from the 51st.
- Del. Walker: [00:23:33](#) Thank you Mr. Chairman. Thank you, Sarah for being in here. So we just heard that . . . So, I have a question. When there's a transgender student that is entering K-12 public education, do

you require besides when that student first entered school, a birth certificate and that student is going through transition, do they need to report anything to the school system?

Sarah Stewart: [00:24:00](#)

No.

Del. Walker: [00:24:03](#)

Would that WVEIS, will WVEIS change the identification of the child, once they start their transition, if that child and parent wanted that to be changed?

Sarah Stewart: [00:24:13](#)

I do not believe at the state level that we have any hard rules or regulations regarding, um, if a, a transgender student wishes to change their designation in WVEIS. Um, I believe counties perhaps have encountered this and have handled it on the local level, um, and appropriately we have not received any complaints at our office regarding that.

Del. Walker: [00:24:40](#)

Okay. Thank you very much.

Chairman Ellington: [00:24:42](#)

Further questions? Gentleman from the 65th?

Del. Clark: [00:24:49](#)

Yes. I've got a current question in regards to, um, we're hearing a lot of talk about, uh, uh, a child born as a female and is transitioning to a male.

PART 1 OF 4 ENDS [00:25:04]

Del. Clark: [00:25:01](#)

In high school, on the Board of Education, is, is it a suspendable offense for taking performance enhancing drugs?

Sarah Stewart: [00:25:15](#)

Counties do have, um, illegal or controlled substance and illegal substance abuse policies. Um, I think it should be, I rel- I hesitate to speculate and make a broad statement. If you are taking something under the supervision of a physician, um, I, I, I'm not sure. Um, there would have to be a conversation between the county board and the parents about whether or not it was appropriate. But I'm hesitant to say that a, a student that is taking something that's prescribed by a physician could then be disciplined on the school level for that.

Del. Clark: [00:25:47](#)

Okay. Um, I reserve my right to ask the same question later.

Chairman Ellington: [00:25:52](#)

Okay. Further questions of, uh, Ms. Stewart? None. Thank you, Ms. Stewart. Further questions of Counsel? Other questions? Any amendments? Lady from the 51st, uh, questions or amendment?

Del. Walker: [00:26:13](#)

Question.

Chairman Ellington: [00:26:14](#) Okay. Of who? Counsel?

Del. Walker: [00:26:15](#) Yeah. Can we get, um-

Chairman Ellington: [00:26:19](#) Speak into your mic, please. I can't hear you.

Del. Walker: [00:26:21](#) Can we get someone from, uh, Fairness West Virginia? I have some questions for you. Thank you.

Chairman Ellington: [00:26:27](#) By leave of the committee. Would you state your name and title, sir? I know you've already been sworn in.

Andrew Schneider: [00:26:34](#) Thank you. Um, my name is Andrew Schneider, and I'm the Executive Director of Fairness West Virginia.

Chairman Ellington: [00:26:40](#) All right Mr. Schneider. Lady from the 51st has a question.

Del. Walker: [00:26:43](#) Thank you, Chairman Ellington. Thank you, Andrew, for being here.

Andrew Schneider: [00:26:45](#) Thank you.

Del. Walker: [00:26:46](#) Can you tell me if any trans women have dominated any sporting events?

Andrew Schneider: [00:26:53](#) Not one athlete who has transitioned has been successful at the highest levels of sport. The lack of success is a strong indication of the fairness of permitting transgender women to compete against cisgender women. In fact, the problem with these bills is that they, they say that all boys are stronger than all girls. And that is just incorrect.

Uh, the, look at a young woman from North Carolina named Heaven Fitch, who won the high school state wrestling championship last year. I bring this story up because Heaven is a ci- is a cisgender girl, and yet she beat a bunch of cisgender boys. Young girls have many skills that are better than young boys.

What counts as an advantage may shift dramatically depending on the sport. For example, factors such as height, weight, and reaction time all affect a participant's advantage depending on the sport.

A young woman on the volleyball team may be very tall, and yet few people would consider that to be an unfair competitive advantage in her sport. Similarly, a man on the swimming team may have a naturally high hemoglobin count, enabling him to

take in more oxygen, but he would not be barred from swimming for that reason.

Some cisgender women, like Olymp- Olympic athlete Caster Semenya, naturally produce high levels of testosterone compared to other cisgender women. All bodies are different, and there is no single physical trait that determines if a student will excel in a sport.

- Del. Walker: [00:28:27](#) Do you know if this has ever occurred in West Virginia? Have you received any calls from anyone in assistance with?
- Andrew Schneider: [00:28:38](#) We have not. This appears to be a, a solution in search of a problem. Uh, there is no, uh, as I said before, there is no, uh, pattern or examples of, uh, transgender women dominating school sports in West Virginia.
- Del. Walker: [00:28:59](#) Do you know how many, um, transgender persons that we have playing any sports in West Virginia, K through 12? Or secondary sports, sorry.
- Andrew Schneider: [00:29:11](#) I, I'm not aware of, that, that data, that number. Um, and I don't know who would, or if that, that kind of statistic is even kept, um, by our secondary schools. Um, but I would imagine there's not many, and clearly it's not an issue, because we, no one has received any complaints about it. I mean, these, these bills come from national organizations that-
- Chairman Ellington: [00:29:39](#) Um, limit to the question please.
- Andrew Schneider: [00:29:41](#) Okay, sorry.
- Del. Walker: [00:29:41](#) Thank you.
- Chairman Ellington: [00:29:42](#) I, I told you beforehand, we're not going into a prepared speech.
- Andrew Schneider: [00:29:45](#) Okay.
- Del. Walker: [00:29:47](#) Thank you, Mr. Schneider.
- Andrew Schneider: [00:29:47](#) Thank you.
- Chairman Ellington: [00:29:49](#) Further questions [inaudible 00:29:50]? Gentleman from the 16th?
- Del. Hornbuckle: [00:29:53](#) Thank you, Chairman Ellington. At the appropriate time, I'd like to ask somebody from the civil liberties group.

Chairman Ellington: [00:29:59](#) Any further questions for Mr. Schneider? All right. Mr. Baumwell, you, uh, have been sworn in. If you would name your name and title.

Eli Baumwell: [00:30:13](#) Uh, thank you, Chairman Ellington. My name is Eli Baumwell and I'm the policy director for the American Civil Liberties Union of West Virginia.

Chairman Ellington: [00:30:19](#) All right. Gentleman from the 16th has a question. Question? Gentleman from the, uh, 16th?

Del. Hornbuckle: [00:30:29](#) Thank you, Mr. Chair. Um, and thank you for being here today, sir. Uh, I got a couple of questions for you. We'll try to be brief. Uh, how will this, uh, affect the state's obligations under Title IX?

Eli Baumwell: [00:30:39](#) Uh, Delegate, I do believe, looking at this legislation, it does risk, um, a significant amount of federal funding under Title IX. Um, looking at federal courts, um, as I've looked at some of this legislation, Idaho was enjoined from this, and as Counsel mentioned, um, here in the Fourth Circuit, following the Bo-Bostock ruling, um, we have, we have got Fourth Circuit ruling saying that transgender individuals have to, have to be given, um, access to space based on their gender identity. That's Bo-coming from Bostock.

There's also now federal executive orders, um, following from those, those ruling in in alignment, rather, with those. Um, so we do risk violating Title IX based on these federal court rulings.

Del. Hornbuckle: [00:31:25](#) Uh, when you speak about violations, uh, per any civil law, are there any privacy concerns here with students?

Eli Baumwell: [00:31:32](#) There are potential privacy concerns. While students, um, may have to go under, undergo medical examinations to clear them for sports, um, having to disclose, um, whether it be their birth sex or any, uh, gender affirming therapy they might be undergoing is a violation of their potential, is a potentially violation of their privacy.

Del. Hornbuckle: [00:31:48](#) Okay. Uh, uh, legally could this have a negative impact on any other students?

Eli Baumwell: [00:31:55](#) This particular legislation is tailored solely to, um, athletics. Uh, looking at this particular, um, bill that just originated. Um, other, other pieces of legislation have been more broad, but this one is limited just to athletics.

Del. Hornbuckle: [00:32:11](#) Uh, has there been any case law on, uh, deni- denial of participation leading to any type of, uh, mental health issues with transgender youth?

Eli Baumwell: [00:32:21](#) Well, absolutely. There, there's been a lot of, um, research rather. I, I shouldn't say there's case law. But there is a lot of research into, um, the, the mental health of trans youth and what can be done to protect their mental health. And being treated, um, based by their gen- gender identity and being an op- given an opportunity to, um, participate in sports and participate in social activities has certainly been linked with better, uh, mental health outcomes, both in the short and long term.

Del. Hornbuckle: [00:32:53](#) All right. Thank you.

Chairman Ellington: [00:32:55](#) Further questions for Mr. Baumwell? None? Thank you, sir.

Eli Baumwell: [00:33:01](#) Thank you.

Chairman Ellington: [00:33:01](#) Further questions of any of the other witnesses? Gentleman from the 65th, who are you?

Del. Clark: [00:33:06](#) Do we have anybody from the, uh, West Virginia SSAC here?

Chairman Ellington: [00:33:09](#) Uh, unfortunately, they are over on our Senate colleagues' side, uh, working on a bill that's over there at the moment.

Del. Clark: [00:33:15](#) Okay.

Chairman Ellington: [00:33:17](#) Further questions? Any further questions of Counsel? Chair hears none. Any amendments? None? Chair recognized Vice Chair for motion.

Vice Chair: [00:33:29](#) Mr. Chairman, I move that originating House Bill relating to participation in single-sex secondary school winter scholastic athletic events be reported to the floor, with the recommendation that it do pass.

Chairman Ellington: [00:33:42](#) Gentleman uh, moved that, uh, House Bill originating on participation in single-sex secondary school ath- interco- interscholastic athletic events be reported to the floor with a recommendation it do pass. Is there any questions or discussion? Gentleman from the 43rd.

Del. Thompson: [00:34:00](#) I, I have a . . . Thank you, Chairman Ellington. I have a question. Would it be possible to, uh, lay this over until we could speak to someone from the, the SSAC? To like, actually hear from how that, s- since that is their, kind of, you know, what they kind of control and govern, since that would affect them?

Chairman Ellington: [00:34:19](#) Are you moving to lay it over?

Del. Thompson: [00:34:21](#) Yes.

Chairman Ellington: [00:34:22](#) If you move to lay it over, then I guess-

Del. Thompson: [00:34:23](#) Just one day. Or the next meeting.

Chairman Ellington: [00:34:25](#) Well, we don't have one day. (laughs) Um.

Del. Thompson: [00:34:29](#) We don't have one day?

Chairman Ellington: [00:34:30](#) Well, we don't have a meeting tomorrow.

Del. Thompson: [00:34:32](#) Oh, it's Wednesday. Thursday.

Chairman Ellington: [00:34:37](#) Gentleman moves that we lay this over. That takes a vote and it's non-debatable. So all in favor would say aye.

Del. Thompson: [00:34:43](#) Aye.

Chairman Ellington: [00:34:44](#) Those opposed, nay. I would say nays have a-

Del. Thompson: [00:34:49](#) Division?

Chairman Ellington: [00:34:50](#) Well, he had the s- he had the, uh, microphone, so [inaudible 00:34:53]. (laughs)

Del. Thompson: [00:34:56](#) Thank you. That worked. (laughs)

Chairman Ellington: [00:34:58](#) I could have used my microphone, too. So motion r-

Del. Thompson: [00:35:02](#) I did call division, though.

Chairman Ellington: [00:35:03](#) Motion, uh, rejected.

Del. Thompson: [00:35:05](#) Could I call div- I called division.

Chairman Ellington: [00:35:07](#) I think I had already called it, but. Well, okay, we'll call division. Is it sustained? All right, we have it sustained. The clerk will call, call the vote on that. So, if you vote yay, that means we lay it over. If you, uh, vote nay, that means it is rejected. All right.

Well, those that are in favor of the Gentleman's, uh, motion to lay it over, raise your hands. That's six. Yeah. There's six.

All right. Those, uh, those opposed to the Gentleman's motion, raise your hands. All right, six to thirteen. All right, motion rejected.

Any further amendments? Or actually, we're on discussion. Gentleman from the, uh, 60-uh-7th?

Del. Doyle: [00:36:27](#)

Uh, uh, thank you, Chairman Ellington. Um, I oppose the bill for, for, for two reasons. First, uh, in our questions of Counsel, uh, I think it became pretty obvious that, uh, we're on rather dangerous legal ground r- uh, relating to the feds if we pass this bill a- as it is written. So that is one.

A- also, uh, uh, the one, uh, person who testified, the gentleman from Fairness, mentioned, uh, something that I had heard before, as one of the arguments in favor of this, and that is that males are inherently stronger than females. And I, I just have a, a vignette I'd like to, uh, to go over. I've remembered this ever, ever since it happened.

When I was a, a rifle platoon leader in Vietnam, I had a guy in my platoon that weighed barely 100 pounds. He had no upper body strength whatsoever. And the rules were, we have two, what are called, uh, uh, uh, heavy machine guns there, uh, uh, uh, 7.62 machine guns, it's roughly a 30 caliber for those people who are not into metrics. And you had to carry that and 200 rounds of ammunition, and he couldn't carry it.

So, whenever it was his turn, somebody else just volunteered. I am a big time women's college basketball fan, and I'm telling you, every time I see a game, there are people out there playing that could have easily carried that machine gun and 200 rounds of ammunition.

So that's why, uh, I think is p- another part of the reason I think this is a bad bill, and I'm going vote no. Thanks.

Chairman Ellington: [00:38:06](#)

Anyone else wish to speak? Gentleman from the 43rd?

Del. Thompson: [00:38:11](#)

Thank you, Chairman Ellington. I also want to speak a- against this bill for a multitude of reasons. First, because, I mean, I would like to hear from the SSAC of how this would, you know, uh, impact their rules and impact and see, have a better understanding of how this would be implemented.

I'm also going speak against it for the reason, and I ask what I asked Counsel, pertaining to, if I have a daughter, and she's playing basketball, and she's on a basketball team, and with this bill, um, a person who was born female, identified as male, was taking testosterone, is transitioning, is going to be on the same

team as my daughter, outperforming her, because my daughter is not taking testosterone, this is not, this is not going to be fair to the children of West Virginia.

I under, were there, whatever side you fall on this, it's not, that's not fair. Uh, and also, I have a major problem, and as the, the Lady from the 41st mentioned about the, the sports physicals, I played basketball and baseball through middle and high school, and um, I, I had to do a physical every year, but I never once, uh, was subjected to, I guess I could've been, to the, the hernia check. So, I have a major problem with forcing children, middle school children or high school children, uh, to, for this purpose, to specifically . . . If it's for a medical reason, I totally understand it and get it, but just to par- just to prove their gender, I don't think that's right. And I don't think any of us would want our children subjected to that.

Uh, so for those reasons, I, uh, strongly, uh, do not support this bill, and I urge you all to do the same. Thank you.

Chairman Ellington: [00:39:55](#)

Anyone else wishing to speak to the bill? Lady from the 41st.

Del. Tully: [00:39:58](#)

I'm just want to give a point of clarification, actually, on the addendum, the thing that I provided from the WVSSAC that was the addendum. It was revised in May of 2016, so I don't know when the hernia checks, uh, first originated, but I don't . . . You probably graduated well after 2016, I would assume, sir.

Chairman Ellington: [00:40:22](#)

Anyone else wishing to speak to the bill? All right, before us is the motion. All those in favor would say aye. Those opposed, nay. Gentleman from the 53rd?

The Chair is undecided, so uh, let's do that again. All those in favor say aye. Those opposed, nay. (laughs) Got a loud group there. Okay. Division has been called. Yeah, I'm still undecided on that.

So, division. All those in favor, raise your hands. [inaudible 00:41:18] Those opposed, raise your hands. Fifteen, six? Fifteen to six. Motion adopted.

Next thing on the agenda is House Bill 2364. Any interest in the bill?

EXHIBIT B

West Virginia House of Delegates Judiciary Committee Discussion of H.B. 3293

March 18, 2021

- Chairman Capito: [00:41](#) . . . left on the agenda. The bill is 3293. We have a guest presenter with us. We're happy to have her back with the co- with the committee today. And whenever she is ready, she may proceed.
- Counsel: [00:56](#) I thank you Mr., Mr. Chairman. This committee substitute provides that for the purposes of participating in Single Sex Secondary School Interscholastic Athletic events, under the controlled supervision and regulation of the Secondary School Acti- Activities Commission, each county school district shall confirm that the sex of the people identified, on the pupil's original birth certificate provided on his or her admission to public school is the pupil's sex at the time of birth.
- If an original birth certificate was not provided or if the birth certificate provided does not indicate the pupil's sex at the time of birth, a signed physician's statement indicating the pupil's sex based solely on the pupil's unaltered, internal and external reproductive anatomy must be submitted prior to the pupil's participation in single sex secondary school interscholastic ac- ac- athletic events. Prior to the student's participation in single sex inter- secondary school interscholastic athletic events, the SSAC must verify with each county board that each student participating in Single Sex Interscholastic events is participating according to the student's sex at the time of birth. This requirement does not apply to co-educational, uh, sports. And that's a summary of the bill.
- Chairman Capito: [02:15](#) Thank you very much, Counsel. I appreciate that presentation. Are there questions for Counsel? Are there questions? The Lady from the 4th.
- Del. Zukoff: [02:26](#) Thank you Mr. Speaker. Do you know if there's any federal re- any federal, um, any federal courts looking at this, um, issue currently?
- Counsel: [02:36](#) Yeah. There is a case, uh. Grimm versus, I'm not sure I'm going to pronounce the, Glo- Glo- Gloucester County School Board. It's a Fourth Circuit case. It's, it has to do with, uh, a student, uh, transgender male's right to use a male bathroom.
- Del. Zukoff: [03:00](#) Okay. Nothing involving sports, though?
- Counsel: [03:06](#) It, it does not, uh, does not-
- Del. Zukoff: [03:07](#) Specifically?

Counsel: [03:08](#) . . . directly a- uh, state anything about sports.

Del. Zukoff: [03:11](#) Okay. Have we had this come up before the Department of Education? Have we had any issues around this, this bill that, transgender students participating in sports come before the Department of Education as a concern?

Counsel: [03:26](#) It is my understanding that there have been no problems on the county level.

Del. Zukoff: [03:26](#) Okay. I checked with mine and there weren't. That's why I was just curious if you knew from a statewide perspective.

Counsel: [03:28](#) That's what they'd indicated to me. There had been no problems.

Del. Zukoff: [03:39](#) Thank you.

Chairman Capito: [03:40](#) Gentleman from the 37th.

Del. Pushkin: [03:44](#) Thank you, Mr. Chairman. Thank you, counsel. Um, and I'm sorry I missed the first part of the, of your, uh, presentation of the, uh, of the bill here. But would this preclude a female student from participating in a male sport?

Counsel: [03:59](#) No.

Del. Pushkin: [04:00](#) It would not?

Counsel: [04:01](#) No. Under Title IX, a female has to be allowed to participate in a sport. So, if the, for instance, there are no female football, then the female would be allowed to play in, uh, football, um.

Del. Pushkin: [04:15](#) All right. And that would be, I mean the only case I can, cases in West Virginia I could think of would be in sports where there aren't female sports that, that the, that the girls participate in the boys sports. That's the only time I've ever heard of it even happen, anything like this happening in West Virginia.

Counsel: [04:29](#) It's my understanding there have not been any issues. I, and the, the re- the executive director of the SSAC is here if anyone wants to talk to him. But I believe there are only, the only solely female sports are volleyball and softball.

Del. Pushkin: [04:46](#) So this only affects those two sports?

Counsel: [04:46](#) Well, well it would affect the single sex. So, in other words, you have single sex—you have women's basketball and, and men's basketball or-

Del. Pushkin: [04:53](#) Yeah.

Counsel: [04:54](#) . . . and-

Del. Pushkin: [04:55](#) Okay.

Counsel: [04:55](#) . . . track-

Del. Pushkin: [04:55](#) I got you. I got you.

Counsel: [04:56](#) Two, two sets. Yeah.

Del. Pushkin: [04:56](#) I got you.

Counsel: [04:56](#) Yeah.

Del. Pushkin: [04:58](#) Okay, thank you.

Chairman Capito: [05:00](#) Further questions of Counsel? Further questions of Counsel? Chair, recognize Gentleman from the 17th.

Del. Lovejoy: [05:07](#) Thank you, Chairman Capito. Good afternoon, Counsel. Uh, you mentioned that Grimm case. I tried to read a little bit about it, uh, for today. So that was a Fourth Circuit case, um.

Counsel: [05:07](#) Mm-hmm (affirmative).

Del. Lovejoy: [05:17](#) The Fourth Circuit is a federal Circuit Court of Appeals. It includes the state of West Virginia, right?

Counsel: [05:23](#) Correct.

Del. Lovejoy: [05:24](#) And in that case, um, this was not a sports case but it, it dealt with the requirement to use facilities on a school ground with the sex assigned at birth. Is that fair?

Counsel: [05:39](#) It did.

Del. Lovejoy: [05:40](#) Okay.

Counsel: [05:41](#) Uh, the, the, uh, Grimm was born a female and wanted to us- and was transitioned to male, and wanted to use the male bathroom.

Del. Lovejoy: [05:50](#) So in that case, the court, the Fourth Circuit, um, found that the student's, uh, rights had been violated under Title IX, right?

Counsel: [06:02](#) Yes.

Del. Lovejoy: [06:03](#) And also, I think second, second basis was under, was it equal protection?

Counsel: [06:08](#) Yes.

Del. Lovejoy: [06:08](#) And so, what, what, you know, if we're to do something like this and we have a lawsuit come under Title IX, what are the consequences of a school board in West Virginia being found, like that case, to violate Title IX? I mean what, what's the, what are the consequences?

Counsel: [06:26](#) Well, uh, the schools receive federal funds. So that is, they're, they're required to follow the federal guidelines, which would include the Fourth Circuit. Um, there is also a recent executive order, um, and so the, the, the s- the board, or the department would, is required to follow federal guidelines. So, um, I think the practical effect would be that under the Fourth Circuit case, uh, which is currently there has been a writ filed before the Supreme Court and, um, Grimm has ex- has, uh, petitioned for additional time to answer. And that is the current procedural history right now with that. Um, so in other words, you know, the, the Supreme Court may or may not take the case. If they do, then Fourth court c-, Fourth Circuit would be controlling. If they did take the case, then of course they would issue an opinion.

Um, but un- as it stands right now, the department would be bound to if a transgender person wanted to use, for instance, a transgender female wanted to use a female bathroom, they would have to allow that transgender female to use the, the female bathroom under this Fourth Circuit case. But the, the bill, the, they would have to play a different sport.

Del. Lovejoy: [07:47](#) So, so let me understand the posture. The Fourth Circuit Court of Appeals has rendered a decision that as it stands now, found that school's policy in, in the bathroom context as opposed to the sports context, to violate Title IX.

Counsel: [08:04](#) And, and they did not, um, deal with sports specifically and the, that particular person was not involved in sports. So, it did not deal with locker rooms or sports because he was not involved in sports.

Del. Lovejoy: [08:14](#) But the basis of that opinion was the Bostock case, is that what it's called?

Counsel: [08:19](#) That was one of the cases that was, yes, quoted.

Del. Lovejoy: [08:22](#) Bostock was not, was neither a sports nor a bathroom case, right?

Counsel: [08:25](#) I haven't read that entire case. I just-

Del. Lovejoy: [08:28](#) But it's employment case. Yeah.

Counsel: [08:29](#) . . . did but, yeah. It, in a, I believe a Supreme Court case. Yes.

Del. Lovejoy: [08:31](#) Right.

Counsel: [08:32](#) Yes.

Del. Lovejoy: [08:32](#) Yes. And so, it's a, it's a, it's a 2020 case and it deals with employment discrimination and the Fourth Circuit applied the holdings in the employment discrimination decision of Bostock to apply to the restroom question. And so, if the Fourth Circuit were to also apply that to this situation, we could be passing a law that puts us in violation of Title IX?

Counsel: [09:00](#) I mean, it, it, there, there would be a, a question perhaps. I mean, it, there's a slippery, this, this is literally something that is changing every day across the United States. I mean, literally every time I'm, I go on the internet, there's something different happening. So, um, you know, who know, it's hard to say what a court is going to do. But, you know, it, it is, I think pretty safe to say that something like this would be up for, um, liti- litigation because it is being litigated-

Del. Lovejoy: [09:33](#) Yes.

Counsel: [09:33](#) . . . throughout the country daily. I mean-

Del. Lovejoy: [09:35](#) Yes. And we're going to have some guidance soon, won't we?

Counsel: [09:35](#) I'm, I-

Del. Lovejoy: [09:38](#) With Fourth Circuit, right?

Counsel: [09:39](#) Yeah. I mean, ma- uh, yeah. I guess we'll see what the Supreme Court-

Del. Lovejoy: [09:44](#) We have a decision from the Fourth Circuit-

Counsel: [09:44](#) Mm-hmm (affirmative).

Del. Lovejoy: [09:46](#) . . . and we're s- we're at, somebody's at the doorsteps of the United States Supreme Court saying, "We'd like you to take this up on a, on a writ of cert and that decision has not been made yet." But we will know the results of that decision by the US Supreme Court at some point in the, maybe near future, right?

Counsel: [10:02](#) We would, yes.

Del. Lovejoy: [10:04](#) Okay. Um, okay. In addition to losing federal funding if you're found to violate Title IX, um, is the successful claimant also entitled to money damages?

Counsel: [10:17](#) Uh, in this case, uh, I believe the way I read the case, uh, the, Grimm received \$1. I mean, it was not a money case.

Del. Lovejoy: [10:26](#) Well, did they also receive an award of attorney's fees?

Counsel: [10:28](#) Attorney's fees, yes.

Del. Lovejoy: [10:29](#) Yes, which were more than \$1.

Counsel: [10:30](#) I'm sure.

Del. Lovejoy: [10:31](#) Yeah, um. And so, if for instance, we pass a law that before the Supreme Court rules on the case up there, uh, on the writ, that also is found to violate Title IX, then we could lose our, our federal funding and be on the losing end of litigation in a fee shifting situation, right?

Counsel: [10:51](#) I-

Speaker 6: [10:51](#) One point of order, point of order, Chairman Capito.

Chairman Capito: [10:55](#) Gentleman will state his point of order.

Speaker 6: [10:56](#) Um, uh. My friend is, uh, asking Counsel, number one, to speculate and number two, to offer personal opinions. Uh, neither of which are technical in nature so, uh, I would ask the line of question be, uh, prohibited.

Chairman Capito: [11:12](#) [crosstalk 00:11:12] well I would just, I would just say the chair's ruling is that the, uh, the Gentleman will, will, will stick to the thrust of the bill. I think the Gentleman is asking counsel to make, uh, a legal assessment of a, of a Fourth Circuit opinion, um, and I think it's, uh, appropriate. Uh, and I think it's appropriate for her to make that distinction as Counsel, so I'll allow question to continue.

Del. Lovejoy: [11:32](#) Thank you Mr. Chairman. Um, and I'll try to keep it cleaner. If we pass a law that violates Title IX of the federal law, then the result of a violation is a loss of federal funding. That is a, that is a true statement of the law?

Counsel: [11:47](#) I don't know the particular, um, process for loss of funding. I mean, I would hope that, um, it wouldn't be, and you know, I

mean, I would say that there would be a process for that. I don't know. I don't think that-

- Del. Lovejoy: [12:00](#) Can I restate as, can or may? If I say that, would that be a fair statement, that you can lose your federal funding if you pass laws that violate Title IX?
- Counsel: [12:11](#) It's my understanding that the funding the federal government supplies is based upon the assumption that the laws that it enacts will be followed.
- Del. Lovejoy: [12:21](#) Okay. Thank you very much. Thank you, Mr. Chairman.
- Chairman Capito: [12:24](#) Further questions of Counsel? Gentleman from the 37th, did you have questions of Counsel?
- Del. Pushkin: [12:29](#) At the appropriate time I'd like to ask you now just to take leave of committee for a, a testimony from, uh [crosstalk 00:12:35]-
- Chairman Capito [12:34](#) At the appropriate time. Chairman from the 50th for counsel. I recognize Gentleman from the 50th.
- Del. Garcia: [12:40](#) Thank you, counsel. So, when I look at page two of, uh, let's see, what section is this, p- yeah, page two, line 26, subdivision E of section, it's on another page, 5C, um, it appears that—there's a proviso related to if somebody does not, is not able to provide a birth certificate or their birth certificate does not indicate a sex at the time of birth, correct?
- Counsel: [13:21](#) I'm, I'm sorry. Can you rephrase that again? I see where you-
- Del. Garcia: [13:23](#) Yeah, yeah.
- Counsel: [13:24](#) What was your question again? I'm sorry.
- Del. Garcia: [13:24](#) So, so that relates to—the proviso relates to a situation, um, if someone is unable to provide their original birth certificate or their birth certificate as it states here, does not indicate people's sex at the time of birth.
- Counsel: [13:39](#) So, yeah. If you look at page one, the first paragraph, when a student is admitted to a public school, they are to provide a birth certificate. So it goes, it's referring back to that birth certificate. But if, for, for it, but there's also, if the birth certificate cannot be provided, then they have to say, have to have an affidavit proviso. So in the case that their birth certificate was not a, supplied or the, the sex was not identified, then that proviso for

the, uh, doctor's affidavit, I mean doctor's statement would apply. Does that answer your question?

- Del. Garcia: [14:14](#) That do- well that doesn't and kind of continuing on further. So, if, if a birth certificate is not provided or if the birth certificate does not indicate the people's sex at the time of birth, I just want to make sure I'm understanding this correctly. So, the, the physician statement that they have to, I guess, they have to figure out about whether the person has unaltered internal and external reproductive anatomy?
- Counsel: [14:51](#) That's what it says, yes.
- Del. Garcia: [14:52](#) So, the, that means that anybody who can't fulfill, who can't provide their birth certificate has to undergo an examination, I would imagine some type of genital examination, by that doctor?
- Counsel: [15:10](#) Well, all of the students are required to have a physical exam to ta- I mean, to participate in sports.
- Del. Garcia: [15:17](#) But does that necessarily include . . . I mean, you know, again, internal and external reproductive anatomy. I, that, is that something that's normally part of a physical?
- Counsel: [15:33](#) I don't know.
- Del. Garcia: [15:35](#) And, and whether it's unaltered. That's, that's what this bill states.
- Counsel: [15:40](#) That it does, yes.
- Del. Garcia: [15:43](#) What happens if, if a student has both male and female reproductive anatomy?
- Counsel: [15:58](#) The bill doesn't address that.
- Del. Garcia: [16:03](#) That, and, and that's my understanding is, one or 2% of the population of the United States, that, that is, you know, that's, that happens. That's probably not a good, good question for counsel. That's, I didn't really ask a question, so I apologize. That's, that, those are, those are the questions that I have. Thank you.
- Chairman Capito: [16:25](#) Thank you. Further questions of Counsel? Further questions? I, I had the gent- gent- excuse me, I had the Lady from the 4th followed by the Gentleman from the 13th.
- Del. Zukoff: [16:35](#) Thank you, Mr. Chairman. Just one last question. You had mentioned when you're answering the Gentleman from the

17th's question that there's an executive order currently that addresses this issue. Could you give us-

- Counsel: [16:48](#) Oh, I'm sorry. It do- it, there's an executive order that has to do with, um, from, uh, March 8th.
- Del. Zukoff: [16:56](#) An executive order from?
- Counsel: [16:58](#) The President, President Biden.
- Del. Zukoff: [17:00](#) Okay. And what does that say?
- Counsel: [17:04](#) It is guaranteeing an educational environment free of discrimination on the basis of sex, including ori- sexual orientation and g- or gender identity.
- Del. Zukoff: [17:16](#) Okay. Thank you.
- Chairman Capito: [17:19](#) Gentleman from 13th.
- Del. Zukoff: [17:20](#) I didn't know that.
- Del. Pinson: [17:21](#) Yes, thank you Mr. Chair, thank you Counsel for your presentation of the bill that's before us. Uh, couple quick questions. I know the question was asked to you, has there been issues of this within the boundaries of our state and I believe that you answered that you weren't aware of any. I'm aware that we do have someone from the SSAC here that could either provide the same answer or their own opinion. Is that correct?
- Counsel: [17:51](#) Yes, someone, uh, the Executive Director is here.
- Del. Pinson: [17:54](#) Okay. I'll ask you this. In your preparation of the bill, were you able to find instances in other states where questions surrounding the legality of this same issue have been raised?
- Counsel: [18:15](#) Yes.
- Del. Pinson: [18:16](#) Okay. Uh, turning my attention now to the Gavin Grimm case out of Virginia, if I understood your assessment of, of that legal proceeding, the county school board, and I'm not going to try to pronounce it either, they were found to have violated Title IX based on the, the circumstances and the facts surrounding that particular case. Is that correct?
- Counsel: [18:53](#) Yes, they were.
- Del. Pinson: [18:55](#) And-

Counsel: [18:55](#) Under that case, yes. And under those circumstances, they were.

Del. Pinson: [18:55](#) So-

Counsel: [18:58](#) And equal protection.

Del. Pinson: [19:00](#) Thank you. And we, that case did not deal with the legality of transgender athletes at all. We're dealing with something completely separate from that. Is that correct?

Counsel: [19:14](#) It did not deal with sports and it said in there that, that issue was not raised because he did not play sports.

Del. Pinson: [19:21](#) Okay. That will be all. Thank you. Thank you, Mr. Chair.

Chairman Capito: [19:23](#) Further questions of Counsel. Further questions of Counsel. Uh, Counsel, question from the chair. Under, uh, I understand I think, uh, part, partially the holding in Grimm, um, that it, that, that the, the Grimm's equal protection rights were violated that he was not able to access the men's bathroom. Was, was he, is, is Grimm still able to access to women's bathroom?

Counsel: [19:51](#) Uh, initially they, uh, had him using the nurse's bathroom and, but there was, it was inconvenient. It sometimes made him late for classes. And so, then they fashioned a separate, um, bathroom for transgender, uh, people and, or, or they redid the stalls. I, I'm-

Chairman Capito: [20:15](#) Was he prohibited-

Counsel: [20:15](#) But they, they fashioned [crosstalk 00:20:17]-

Chairman Capito: [20:17](#) Was he prohibited from using the women's bathroom?

Counsel: [20:18](#) It, it, uh, he, this was a transgender male who was an original female.

Chairman Capito: [20:18](#) Right.

Counsel: [20:18](#) He was put-

Chairman Capito: [20:24](#) Right.

Counsel: [20:24](#) . . . prohibited from using the male bathroom.

Chairman Capito: [20:26](#) Right. Was he prohibited from using the female bathroom?

Counsel: [20:29](#) No.

Chairman Capito: [20:30](#) Okay. With the holding, is he permitted to use either bathroom still?

Counsel: [20:36](#) Uh, it, the holding-

Chairman Capito: [20:38](#) If you don't have that, I understand-

Counsel: [20:39](#) Let, I mean my, my, well let, let me say he's in college now. So-

Chairman Capito: [20:39](#) Okay.

Counsel: [20:43](#) . . . this went on for five years.

Chairman Capito: [20:44](#) Okay.

Counsel: [20:44](#) So, um, it's, it, he's not in high school anymore but-

Chairman Capito: [20:50](#) Okay.

Counsel: [20:50](#) . . . essentially he, if the, the, he was able to use the bathroom that he identified, that-

Chairman Capito: [20:56](#) I understand, I understand-

Counsel: [20:56](#) Yeah.

Chairman Capito: [20:57](#) . . . the thrust of the, of the whole thing.

Counsel: [20:57](#) Mm-hmm (affirmative).

Chairman Capito: [21:00](#) I just was curious. Questions?

Counsel: [21:00](#) Yeah.

Chairman Capito: [21:02](#) The Gentleman from the 37th desires leave of the committee to call a witness. Is that witness on the screen? Oh yeah, okay. Uh. (laughing) Are, are you, uh, able to hear us?

Cathryn Oakley: [21:15](#) I am able to hear you.

Chairman Capito: [21:17](#) Okay.

Cathryn Oakley: [21:17](#) Are you able to hear me?

Chairman Capito: [21:19](#) We can hear you. Would you please introduce yourself to the committee and, uh, who you are here representing?

Cathryn Oakley: [21:35](#) Yes, definitely. I'm [inaudible 00:21:35]. Hold on one second.

Chairman Capito: [21:35](#) Mark, go up and mute that.

Mark: [21:37](#) Should I mute that computer? Well, then she won't be able to hear us.

Chairman Capito: [21:39](#) Yes, you're right.

Cathryn Oakley: [21:40](#) Yeah, I can hear you. What, I'll turn my volume down while I'm introducing myself and then I'll turn it back up so I can hear you. Um, my name is Kathryn Oakley and I am the, uh, State Legislative Director and Senior Counsel at the Human Rights Campaign. Um, the Human Rights Campaign is the nation's largest organization working for equality for the LGBTQ community. Um, and I'm here on behalf of our more than three million members and supporters nationwide, including many in West Virginia, um, in opposition to the bill. And I stand ready to answer questions and, and also provide a brief statement if you allow.

Chairman Capito: [22:19](#) Thank you very much, Ms. Oakley. We appreciate you taking time on your Friday to be with us, as they say. So if you would, please raise your right hand. We'll swear you in. Then we'll allow questioning. Would you please raise your right hand? Do you swear to tell the truth, the whole truth and nothing but the truth?

Cathryn Oakley: [22:34](#) I do.

Chairman Capito: [22:38](#) Thank you very much. Chair recognize chairman from 37th for questions.

Del. Pushkin: [22:41](#) Thank you, Mr. Chairman.

Chairman Capito: [22:43](#) Hm? Oh.

Del. Pushkin: [22:44](#) Thank you, Mr. Chairman and, um, thank you for, uh, attending, uh, uh, the, uh, whatever service we're using now, uh, Ms. Oakley. Can you hear me?

Cathryn Oakley: [22:53](#) I can. Thank you so much for having me and, um, and to Mark for facilitating my being able to be here.

Del. Pushkin: [22:59](#) Okay. And, um, so you've, you, I guess you followed cases like this throughout the country, right? That's, that's part of your job at the Human Rights Campaign, is that correct?

Cathryn Oakley: [23:09](#) That's correct.

Del. Pushkin: [23:10](#) Okay. Have you, there was asked of Counsel and, and she didn't know of anybody. Do, do you know of any cases in West Virginia?

Cathryn Oakley: [23:18](#) I do not know of any cases in West Virginia.

Del. Pushkin: [23:21](#) Okay. Um, the, the, but you have . . . Well, first of all, uh, I guess this is based on a premise that a, um, a, uh, transgender athlete would have some sort of advantage over, uh, other participants. Do you, is, I'm trying, have you heard of an actual advantage being created by transgender athletes?

Cathryn Oakley: [23:46](#) Yeah. Thank you for that question. That's a really important question. And I'll preface this by saying that groups like the National Women's Law Center and, uh, the Women's Sports Foundation, Women Leaders in College Sports all support inclusive policies that allow transgender athletes to participate. Um, and I, that is because, uh, to, to your excellent point, um, transgender kids, and I, you know, particularly this conversation ends focusing on transgender girls, um, transgender girls, like all girls, uh, have a variety of different bodies. They have a variety of different talents. They have a variety of different interests.

Some of them will be tall, some of them are short. Some of them are fast, some of them are slow. Some of them will have excellent hand-eye coordination. Others of them will not. Um, and so, you know, the trans pop- the trans population is, is fairly small. Uh, if you are, really only concerned with trans girls, that's then half of that number. And then of course, of those, uh, trans girls, you're, you're talking about only a few that are going to be interested in sports, um, and have, you know, sort of the combination of interest of, of physical capability, um, mental drive, work ethic to be able to excel.

Del. Pushkin: [23:46](#) Mm-hmm (affirmative).

Cathryn Oakley: [25:00](#) And I think very much to your point, the reason that we do not actually see, uh, instances of problems, uh, in, in the states, um, even though 16 states allow trans youth to participate in sports consistent with their gender identity and have done so for many years, um, there, there are in fact not issues in the states. Um, there is one, uh, case of Connecticut which we can speak about that much has been made of.

Um, I think it's really been misrepresented what's happened in Connecticut. So, I'm happy to help, uh, diffuse some of the misinformation about that. Um, but there, this is just simply not a problem, particularly in elementary and secondary schools. Um, some of the bills that we're seeing, I know not this one, uh, deal also with collegiate athletics. So, I'll also just say that the NCAA

has had a policy for more than 10 years regulating, uh, trans, uh, participation in sports. And they also have not seen, you know, women's sports collapse as a result of, uh, people pretending to be girls in order to compete and excel.

Del. Pushkin: [26:06](#) Okay. Well I, I have a couple concerns about what the real consequences that, uh, this legislation could also have and that would, again, with my next question, um, do you have any statistics on like, about mental health issues or even suicide rates among the transgender teens?

Cathryn Oakley: [26:29](#) Yes. Um, you know, I want to preface this by saying that, uh, for transgender teens who are able to receive, um, age appropriate, medically necessary care, um, the numbers are quite different. And in fact, having just one supportive adult in a trans youth's life can make a tremendous difference. But yes, um, trans youths experience extremely high levels of anxiety and depression, um, and also have an extremely high rate unfortunately of suicide and suicidality. Um, particularly, as I say, when they are not, um, supported by adults in their lives.

Um, and we have also found by the way that there is, uh, there is true harm, um, even with bills that are, uh, are challenging trans identity, even when they're introduced but not passed.

Del. Pushkin: [26:29](#) Hm.

Cathryn Oakley: [27:24](#) The rhetoric around those bills can be extremely harmful to transgender youth who are hearing them at home.

Del. Pushkin: [27:33](#) So even though it's unlikely that, that there's going to be participation from transgender girls in sports because we haven't seen it in a whole lot of places, the bill itself could be harmful just for a group that's already extremely alienated, is what you're saying, right?

Cathryn Oakley: [27:48](#) That's exactly what I'm saying. It's that there's actually no harm here that's being addressed by a piece of legislation like this, but, uh, there's, there's no, there's no, uh, no purpose for it. But there is harm perpetrated by it.

Del. Pushkin: [27:48](#) That's what I was getting at.

Cathryn Oakley: [28:01](#) Um, and particularly should it pass, you know, it's targeting an extremely vulnerable group of youth uh-

Del. Pushkin: [28:06](#) Right.

Cathryn Oakley: [28:07](#) . . . who as you say, are already experiencing extreme amounts of discrimination. And I, I do think that when we hear this idea that

there might be boys who are pretending, um, to be transgender women in order to get an advantage, transgender girls in order to be at an advantage, um, given the amount of discrimination that transgender youth face, uh, it's, it's really, uh, extremely difficult to imagine that that's something that anybody would do.

Del. Pushkin: [28:31](#)

All right. Just a couple more questions. Um, I'm thinking now about, uh, like cisgender girls meaning a female, assigned a female at birth, identifies as a female, a female athlete, okay, who happens to be . . . Have you heard of any instances where it's a female athlete who just happens to be maybe tall, maybe, uh, more muscular than the other girls and the opposing team, or the opposing coach or opposing parents, uh, might make, uh, an accusation that, that, uh, she's not a girl? And then because of a law like this, they would like check into her background or something. Or, or it's been, being brought up because of a law like this. Have you heard of any instances of that, like that sort of thing happening?

Cathryn Oakley: [29:20](#)

Yeah. Well, it, so there, there's only, um, well now two laws, that are, have passed that are on the books about this. One of them was passed only last week and hasn't yet gone. Last week, I think it was signed. And it has not gone into effect. Um, the other is the, uh, is the similar law that passed in Idaho last year, the HB500. Um, that law has been enjoined. It was challenged, um, in, uh, in the Ninth Circuit and, um, is currently enjoined, suspended from going into effect. So, we haven't had any of these laws in place yet that would give rise to that kind of a, uh, situation.

Del. Pushkin: [29:57](#)

Ah-

Cathryn Oakley: [29:57](#)

However, certainly that would be a side effect of what these bills would do is allow for the harassment of cisgender-

Del. Pushkin: [29:57](#)

Yeah.

Cathryn Oakley: [30:06](#)

. . . girls who are simply bigger and stronger. And I'll say, I'm 5'10". You can't, probably can't tell over Zoom. Um, I've been 5'10" since I was in sixth grade. Uh, and I promise you that did not come with any kind of sports advantage, no matter what people might think. Um, but certainly, you know, this idea that cisgender girls might be harassed for, you know, going through puberty early or being the first ones to grow, uh, that is, that's absolutely, um, possible that, that, that this bill will enable, uh, harassment for those girls.

Del. Pushkin: [30:39](#)

Well your answer led me to one last question. First of all, I guess two if you count this one. You're an attorney with the Human Rights Campaign, right? You're a, you're a-

Cathryn Oakley: [30:39](#) Yes.

Del. Pushkin: [30:46](#) . . . you're an attorney? And you said this law hasn't been enacted anywhere 'cause it's in court. So, is it constitutional?

Cathryn Oakley: [30:53](#) No.

Del. Pushkin: [30:54](#) Okay. Thanks. That's all the questions I have, Mr. Chairman. Thank you very much.

Chairman Capito: [30:59](#) Further questions from Ms. Oakley? Further questions from, for Ms. Oakley? Ms. Oakley, thank you so much for being with us today. Uh, I'm sure there's nowhere else you'd rather be on a Friday afternoon.

Cathryn Oakley: [31:11](#) Never. Thank you so much. I appreciate it.

Chairman Capito: [31:14](#) Of course. Is there further desire by or of any member of the committee to call a witness, um, either that may be in the hallway or that might, uh, come to us virtually? Does any other member of the committee desire leave of the committee? Okay. If not, are there amendments to the bill? Are there amendments to the committee substitute? If not, chair recognizes Gentleman from the 32nd to move the committee substitute.

Del. Haynes: [31:45](#) Thank you, Chairman Capito. [inaudible 00:31:48] recommendation that we do that.

Chairman Capito: [31:47](#) You have heard the Gentleman's motion. Is there discussion? Gentleman from the 17th.

Del. Lovejoy: [31:52](#) Thank you, Mr. Chairman. [inaudible 00:31:53] full opposition to the bill. The timing of the bill is not the best. Um, I think that we have, this is another solution in search of the problem. But even more than that, we have legal guidance on this. We have a case from the Fourth Circuit in August of 2020 which tells you a law in this very area of Title IX. That decision is currently on appeal to the US Supreme Court. I don't know when they will rule but probably before, maybe before we get home or shortly thereafter we'll know whether the granted decision stands. Now, my friends have brought up some questions about that Grimm decision, and my good friend from the 13th said, "Well it's completely separate."

And I tell you that, that it is true the Grimm case does not deal with sports, but the Grimm case deals with the same issue. You have a school board that enacts a policy that says, students are required to use this facility, um, of the gender assigned at birth, okay. Um, and the Supreme Court, or excuse me, the Fourth Circuit struck it down, said you can't do that without violating

Title IX. So if you have a policy based on a law that says you have to use or play in the team of the gender assigned at birth, it's not that much of a leap in logic to think that the same thing would apply, especially since Grimm was based on Bostock, which is another 2020 case written by Justice Gorsuch that applied, um, uh, the Title VII of the Civil Rights Act, um, that said discrimination based on sexual orientation and gender identity in the employment context.

So, you know, if you don't think that's the way it's going to go, what's the harm in giving it a couple months to find out what the law's going to be? Save our schools from Title IX violations and, and all the stuff that, um, that comes along with it. And so, I, that's the legal ground. All right. But more than that, I want to talk about the human ground.

Um, I don't know if you know a lot of transgender youth. Um, there's a lot of misconception, there's a lot of myths, there's a lot of stories about what kind of people they are. Um, they get sometimes per- put on these labels as some kind. They're, they're trying to sneak into bathrooms or get unfair competitive advantages and kind of demonized. And we do that a lot. I submit that if you will spend some time talking to some and you p- I promise you, you have them in your district, you'll find that they're like every other kid. And maybe a little worse in the sense that they face things that none of us maybe understand.

They're not trying to get over on anything. They're trying to stay alive today. They're trying to make it through the day, uh, in a, in a world that frankly is, is a little more cruel maybe than it should be. So for me, if I have a child and, and I know several in my, in my district, that the one thing that they have that makes them feel like a part of something, like a human being with dignity and respect, is being on that team, or, or running in that practice, I'm not going to take it away from them and, and, and put them back into this, this, this category or subject them to a, what my friend talked, the, the external genitalia inspection. I'm just not going to do that. I don't think it's right. I don't think it's what we need to do for kids.

We've made it a long time being able to figure out how to play sports together and how to use bathrooms and all that. We don't need a law to tell us. Uh, but if you think we need a law, you'll have one here in, in a couple of months. So for those reasons Mr. Chairman, I, I can't support this bill and I hope that, that my friends will join me in opposition.

Chairman Capito: [35:25](#)

Further discussion. Gentleman from the 50th.

Del Garcia: [35:34](#)

Thank you Mr. Chairman. I'm speaking in opposition of this bill. As somebody who's represented female, uh, women who've been sexually assaulted in prisons, I didn't come to Charleston to force unwanted invasive sexual assaults of young girls, young boys. That's what this bill does. That's what you're doing if you vote yes on this. That's what the language says. That a doctor, that, this isn't a health, this isn't an examination for the purpose of seeing whether somebody's in good health. This is somebody, a doctor looking at whether there's unaltered internal and external reproductive anatomy.

That is disgusting. This bill singles out a group of people who face a challenging world. And I also didn't come down to Charleston to push somebody over the cliff if they're getting to the point of, of thinking about whether this life is worth living. That is crap. We shouldn't be doing this. Every single human being is made in the image of God. Every single one, whether you understand it or not. Whether you agree with how somebody lives or not, that's what we're talking about here today. I cannot support this bill.

Chairman Capito: [37:42](#)

Further discussion. Chair recognizes Lady from the 4th.

Del. Zukoff: [37:47](#)

Thank you Mr. Chairman. I'm also going to re- I'm also going to not support this bill for several reasons, both of which are, have already been mentioned from my friend from the 17th and the 50th. But I'm going to actually come at this from the aspect of a mother and my two daughters. And I raise my children to respect people as they are, not as some preconceived notion of what society thinks they should be. Or to ever put myself in a position that I could understand internally someone's mind, how they were made in the womb, how they came out feeling, how they felt about, you know, um, that they felt that they were always a boy.

I recently, and you all can look this up, there's a gentleman this week who just pre- he, he testified in the Missouri State Capital this week on a transgender bill similar. Has a, has a, um, child that was born as a boy, always identified as a male. And they, he and his, her mother made him dress as a boy, keep his haircut as a boy, um, had issues. And he had major issues. Was sad all the time, um, asked to dress in his sister's clothes and one day she was outside playing in the front yard with her brother and he called out to them to come to dinner. And she said, "No, it's time. I want to go across the street and play. Daddy, if I come in and change my clothes, can I go?"

And he realized what he was doing to that child by trying to make them something that they were not. And from a mother's perspective, I happened to be the mother of two very good

athletes. They're adults now. One of my daughters was a two time all-state softball pitcher and a two time all-state basketball guard when she was in high school. My other daughter was a swimmer and qualified every year for the state meets and she swam in college.

So, I can tell you my personal life for 20 years was running with those girls year-round, every sport they were in. They're, some of their best friends to this day as adults are the people that they participated in sports with. It helped them create lifelong friendships. They learned about leadership. They learned about how to get along with other people. All of the aspects that we find that sports, that we all love about sports.

And I think by taking these, taking, asking these children not to participate in the one thing that may bring them joy is just simply wrong. It's wrong for us to make that decision. This decision's going to be made for us very quickly. I think we have better things to do with our time in the West Virginia legislature than put this type of legislation forth. Thank you.

Chairman Capito: [40:33](#)

Is there further discussion? Chair recognizes the Gentleman from the 13th.

Del. Pinson: [40:39](#)

Thank you, Mr. Chair. I'll speak in favor of the bill that's in front of us today. Um, I don't think that maybe some of the dialog that, that has taken place over the last several minutes, several days, several weeks surrounding this topic is meant to be what it, what it has become. Uh, the bill that's in front of us today, uh, does not mean that individuals of this committee or of this body do not respect someone, do not have dignity for someone, despite whatever their gender might be.

The bill that's in front of us today is trying to place guardrails on the very sports that, that we're talking about, and the participation of those sports. Uh, we have spoke some today about the requests for a birth certificate in order for individuals to be able to participate in these sports. It's not been uncommon for us to request birth certificates for education and sports in the past for age-specific reasons. Just in a quick Google search, one can find that, uh, there is such a thing as age subjectivity where someone perceives themselves to be much younger or much older than they actually are.

And we would agree or at least hope we would agree that guardrails would need to be in place if someone, let's say my age, would want to participate in sports based on a different age. So, what, what we're doing here, and I hope that it's not lost in the dialog, but what we're doing here is talking about placing guardrails on these sports. It's not meant to be demeaning or

disrespectful. In fact, I would argue that for the individuals who are participating in their sports based on their natural-born gender, uh, I would argue that to them, it would seem that, that we are being very respectful to their natural-born gender. Thank you, Mr. Chair.

Chairman Capito: [43:19](#)

Chair recognizes the Gentleman from, the Gentleman from the 37th.

Del. Pushkin: [43:23](#)

Thank you Chairman Capito. Um, as one who has age subjectivity, I think I'm a lot younger than I actually am by the way, but, um, I apologize. You know, we're here at this late hour, uh, debating a bill that I complete, I feel is completely unnecessary. One of the, you know, my friend from the 13th's talking about guardrails. I'll tell you that most roads don't have guardrails because there's not a danger there. You put guardrails up where there's an actual, real danger of someone going off the side of the road but we don't have a single case of it. We are truly creating, looking for a solution in search of a problem and the solution itself is more problematic than the perceived problem.

We heard through testimony, this is one of the most alienated groups you can think of. Teens who are struggling with their own identity at the . . . All teens are struggling with their own identity. But especially, transgender teens who are, are incredibly alienated and struggling, we're going to, their legislature is, is up, here at 4:00 on a Friday, uh, deliberating this bill that's aimed directly at them for no apparent reason 'cause we don't even have any cases of it here.

So I would not, I mean I, I definitely wouldn't assign motives. I don't know what everybody's motives are. I'm sure there are some folks who really think this is a problem. I would beg of you to do some research and see and you'll find out it hasn't been a problem. And I think that there's a lot of us here who are wondering how they're going to vote. And they don't, they know it's not really a problem but they're still kind of not sure how they're going to come down on this vote. And I would just pray that you can muster up half the courage that these kids have who we're alienating with this bill. If you could muster up half the courage they have and vote this, this bill down 'cause it's completely unnecessary.

Chairman Capito: [45:15](#)

Is there further discussion on a motion? Is there further discussion? If not, the question before the committee is on the Gentleman from the 32nd's motion to report out the committee substitute for House Bill 3293 to the full house for the recommendation of the committee substitute do pass. All in favor, please signify by saying aye.

Audience: [45:31](#) Aye.

Chairman Capito: [45:32](#) All those opposed, please signify by saying no.

Audience: [45:34](#) No.

Chairman Capito: [45:36](#) Aye's appear to have it.

Audience: [45:38](#) Division.

Chairman Capito: [45:39](#) Division's been called. Please raise one hand if you are in favor. One hand if you are opposed. On the question of adoption, there are 16 yes's and five no's. The motion is adopted and the committee substitute for House Bill 3293 will be reported into the floor with a recommendation that it do pass. There are two subcommittees, uh, that are out there. Actually, there's three subcommittees that are out there. Um, and I believe some of those intend to perhaps meet next week. So, uh, listen for those announcements on the floor. Is there any further business to come before the committee? If not, everybody have a nice weekend. Gentleman from the 32nd.

Del. Haynes: [46:33](#) 9:30

Chairman Capito: [46:36](#) 9:30.

Del. Haynes: [46:37](#) And Mr. Chairman, I move we adjourn.

Chairman Capito: [46:40](#) All those in favor please signify by saying aye.

Audience: [46:43](#) Aye.

Chairman Capito: [46:43](#) All oppose, no. Aye's appear to have it.

EXHIBIT C

House of Delegates Discussion of H.B. 3293

March 25, 2021

- Clerk: [03:02:45](#) Committee substitute for House Bill 3293, relating to single-sex participation in interscholastic athletic events.
- Speaker: [03:02:54](#) Are there objections to having the bill explained in lieu of having it read? If not, the Gentleman from the 27th, Delegate Ellington to explain the bill.
- Del. Ellington: [03:03:01](#) Thank you, Mr. Speaker. Uh, this committee substitute provides that for the purposes of participating in single-sex secondary school interscholastic athletic events under the control, supervision, and regulation of the SSAC, that each county school district shall confirm that the sex of the pupil identified on the pupil's original birth certificate be provided upon his or her admission to public school is the pupil's sex at the time of birth. Now, if an original birth certificate was not provided or if the birth certificate provided does not indicate the pupil's sex at the time of birth, a signed physician statement indicating the pupil's sex based solely on the pupil's unaltered internal and external reproductive anatomy must be submitted prior to a pupil's participation in single-sex secondary school interscholastic athletic events. So prior to a student's participation in single-sex secondary school interscholastic athletic events, the SSAC must verify with each county board that each student participating in the single-sex interscholastic events is participating according to the student's sex at the time of birth. Now this requirement does not apply to coeducational secondary school interscholastic athletic events. In addition, this does not apply to elementary school or to higher education participation. Mr. Speaker, I urge the passage of the bill.
- Speaker: [03:04:41](#) The question before the House is, shall the bill pass? Is there debate on the bill? The Gentleman from the 3rd, Delegate Fluharty, is recognized.
- Del. Fluharty: [03:04:51](#) Thank you, Mr. Speaker. Will the gentleman yield?
- Del. Ellington: [03:04:55](#) Yes, sir.
- Del. Fluharty: [03:04:56](#) So, you know, you've heard, I'm sure you took some testimony up there in committee. Um, have you had, did

you have any testimony of the number of complaints that SSAC has received regarding anybody taking advantage of the single-sex sport system we currently have?

- Del. Ellington: [03:05:13](#) Uh, not in West Virginia.
- Del. Fluharty: [03:05:14](#) So not a single complaint received in West Virginia?
- Del. Ellington: [03:05:17](#) Not at this point in time.
- Del. Fluharty: [03:05:19](#) Well, was there any testimony that anticipated having complaints in the future?
- Del. Ellington: [03:05:23](#) There have been in other states.
- Del. Fluharty: [03:05:25](#) In other states. And how many have there been?
- Del. Ellington: [03:05:27](#) Uh, I don't have that number in front of me.
- Del. Fluharty: [03:05:29](#) You don't have that data. So can you tell me how many of in Ohio, for example, a neighboring state?
- Del. Ellington: [03:05:32](#) Uh, I don't have that. No. I do know that a number of states have adopted similar, uh, rules. I think there were 27 states that-
- Del. Fluharty: [03:05:42](#) Rules or laws?
- Del. Ellington: [03:05:42](#) . . . were looking at, or same, the same ty- a similar type of legislation.
- Del. Fluharty: [03:05:46](#) Okay. L- let's get to that. Um, first off, you mentioned it doesn't apply to grade schools, I believe. Correct?
- Del. Ellington: [03:05:53](#) This bill does not look at elementary school participation.
- Del. Fluharty: [03:05:59](#) Okay. At what grade would this be enforced?
- Del. Ellington: [03:06:02](#) This would be secondary school.
- Del. Fluharty: [03:06:03](#) Okay. So at what age are we talking? Is that sixth grade?
- Del. Ellington: [03:06:08](#) That would probably be from sixth on to 12th.
- Del. Fluharty: [03:06:11](#) Okay. So we're talking about at sixth grade, what are you, 11 years old at that, that point in time?

Del. Ellington: [03:06:17](#) Thereabouts.

Del. Fluharty: [03:06:18](#) So thereabouts 11. This will apply to 11-year olds thereabout.

Del. Ellington: [03:06:23](#) If they're in secondary school.

Del. Fluharty: [03:06:24](#) Okay. Let's talk about how that currently works now. I pulled the, the form that's currently used for athletic participation per the SSAC, um, and individuals can be examined. And the goal of that examination, I think you would agree with me as a physician, is to find out if that person is physically fit for athletic competition. Are you familiar with how these exams work?

Del. Ellington: [03:06:48](#) Uh, I have performed some of them in the past.

Del. Fluharty: [03:06:50](#) Uh, that was my, my next question. So you've performed these exams in the past, and there's criteria for it. Includes screening of the abdomen, respiratory, cardiovascular issues. Would you agree with me, the goal of the current physical exam is to make sure the per- the individual, uh, i- is going to safely participate in sports. Right?

Del. Ellington: [03:07:10](#) I would agree with that.

Del. Fluharty: [03:07:11](#) Okay. And there is through the p- through the screening process as a physician, uh, you're checking for things to, to make sure that individual, uh, will safely participate and there's no risk in that the examination you're doing and the questions you're asking, there's a medical goal at the end of the day for each step. Correct?

Del. Ellington: [03:07:31](#) I would agree with that.

Del. Fluharty: [03:07:32](#) Okay. Um, what is the medical goal of identifying whether somebody has an un- unaltered internal or ex- external reproductive anatomy?

Del. Ellington: [03:07:41](#) The medical goal on this bill is just stating that if, but if they do not have their gender assigned on their birth certificate that one would have to be provided by a physician statement.

Del. Fluharty: [03:07:52](#) Well, but through that process, you're not discovering whether they can actually participate safely in sports.

You're just discovering their anatomy, uh, their anatomy based upon whether they have unaltered internal or external reproductive anatomy. Right?

- Del. Ellington: [03:08:08](#) That's what this bill is stating.
- Del. Fluharty: [03:08:10](#) Okay. So there's no actual medical benefit to this exam going to this next level, is there?
- Del. Ellington: [03:08:17](#) Uh, I would disagree with that.
- Del. Fluharty: [03:08:18](#) Okay. Why? Tell me how.
- Del. Ellington: [03:08:20](#) Why? Because if you have an individual that may have, uh, different characteristics that makes their ability stronger or, um, physically stronger or ha- or their habitus is different, that maybe that might affect, uh, injury to other participating students in the same sport.
- Del. Fluharty: [03:08:40](#) So you're worried about other individuals playing the sport? Of course, we're not actually worried about it because you didn't have a single reference you could cite for me as taking place.
- Del. Ellington: [03:08:46](#) Well, that's why the single sex, uh, um, interscholastic, uh, activities are based on gender as far as if it's, uh, with girls versus boys, it's separate, as far as putting a boy that might be a lot stronger competing against a girl and injuring the girl.
- Del. Fluharty: [03:09:04](#) How long have you been practicing medicine?
- Del. Ellington: [03:09:06](#) I've been practicing medicine for about 30 something years.
- Del. Fluharty: [03:09:09](#) How many exa- of these exams do you believe you've done in those 30 something years?
- Del. Ellington: [03:09:12](#) Well, as far as physical exams for sports?
- Del. Fluharty: [03:09:15](#) Sure.
- Del. Ellington: [03:09:15](#) Oh, it's several years I did that, but not recently.
- Del. Fluharty: [03:09:18](#) Okay, several years. So, through the course of your 30 some years as a doctor, have you ever had, uh, any issue

with somebody you've examined going on and playing sports and injuring another person and coming back and, and, and you had the issue of whether you should have maybe checked their anatomy a little better?

Del. Ellington: [03:09:35](#) When you do a physical exam, you're checking anatomy. If you're looking at the genitalia, that's a different thing.

Del. Fluharty: [03:09:40](#) Okay. Well this requires, um, checking for unaltered internal anatomy. Do you do that currently?

Del. Ellington: [03:09:49](#) You can do that hormonally.

Del. Fluharty: [03:09:50](#) You can do it hormonally. Do you do it currently?

Del. Ellington: [03:09:53](#) I haven't had to do that for, uh, sports physicals, but I have done that for other exams.

Del. Fluharty: [03:09:58](#) Okay. So in your 30 some years of practicing medicine, and, and during that time providing physical examinations for sports, you've never had to check the internal organs?

Del. Ellington: [03:10:09](#) Not for sports physicals.

Del. Fluharty: [03:10:10](#) Okay. But you would under this bill, right, if there's no birth certificate?

Del. Ellington: [03:10:15](#) If I was the one that had to attest to the gender of the, uh, the individual.

Del. Fluharty: [03:10:19](#) Okay. So under current law, that's not taking place, but after we pass this today, you as a doctor would now be checking the internal organs to make sure they're unaltered?

Del. Ellington: [03:10:29](#) No, the- I, that's not what this bill is saying.

Del. Fluharty: [03:10:33](#) Well, excuse me?

Del. Ellington: [03:10:34](#) The bill is saying that if someone wants to prove what their gender is without their birth certificate, that they would have to have proof from a physician. That's not necessarily during the sports physical.

Del. Fluharty: [03:10:44](#) Well, let's talk about that proof that's required. It's not currently required under law. Okay. If there's no birth

certificate, the proof now required is for you, the physician, to check for unaltered internal and external reproductive anatomy.

- Del. Ellington: [03:10:57](#) Well, it's not necessarily for me. It could be for whatever physician they want.
- Del. Fluharty: [03:11:00](#) Okay. For any physician. Okay. If we're going to get, if we're going to play games like that.
- Del. Ellington: [03:11:03](#) I mean, they mostly have pediatricians and stuff that already know their anatomy.
- Del. Fluharty: [03:11:08](#) The point is, the point is, Doctor, the point is under the current practice, you're not going around checking for the internal organs as far as the examination related to anything SSAC-related for sports, are you?
- Del. Ellington: [03:11:22](#) Uh, internal organs can be checked, yes. If you think there's something cardiovascular, if-
- Del. Fluharty: [03:11:22](#) Is it a requirement?
- Del. Ellington: [03:11:27](#) Yes there is. If there is a cardiovascular problem, you refer them to a specialist for echos or other workup.
- Del. Fluharty: [03:11:33](#) But it's not currently a requirement as it would be if they're not-
- Del. Ellington: [03:11:36](#) If you feel that they're not medically competent to be able to participate, if there's injur- risk of injury to them, you refer them to something else or you deny their ability to participate.
- Del. Fluharty: [03:11:44](#) How exactly do you check whether pupils, an 11-year-old potentially, an 11-year-old, whether they have unaltered internal reproductive anatomy? Explain that process for us.
- Del. Ellington: [03:11:58](#) Uh, they would have exams by their provider.
- Del. Fluharty: [03:12:01](#) O- I- I want to know what the exam's like. Tell me.
- Del. Ellington: [03:12:04](#) I, I don't think that's in the pro view of what I'm trying to discuss here. I mean, I, I've done internal exams on people before in my practice that all vary in different ages.

Del. Fluharty: [03:12:15](#) All right, thanks for-

Del. Ellington: [03:12:16](#) I mean, I don't-

Del. Fluharty: [03:12:16](#) Your time.

Del. Ellington: [03:12:16](#) . . . know if that's pertinent to this part for-

Del. Fluharty: [03:12:18](#) Thanks for your time.

Del. Ellington: [03:12:19](#) You're welcome.

Del. Fluharty: [03:12:21](#) You can have a seat too, I'm done.

Speaker 22: [03:12:22](#) [crosstalk 03:12:22]

Speaker: [03:12:22](#) The gentleman did not sustain the point of order, so the gentle- the gentleman-

Del. Fluharty: [03:12:39](#) Very briefly, to the-

Speaker: [03:12:40](#) . . . is still recognized.

Del. Fluharty: [03:12:41](#) Briefly to the bill, you could tell that he was uncomfortable answering the questions about the actual exam. Imagine how uncomfortable it's, it's going to be for an 11-year-old who is subjected to it. You know, we had this bill on Friday. I thought about it all weekend. Fired up over it, because, you know, I was raised in a way that, if somebody's being bullied, you have a decision you can make. You could support the bully, you could take up for the person being bullied, or you could remain silent and let it go.

I'm not going to do that today. I would urge you not to do that today, because as of right now at this legislation, we are the bully. We are the bully, against kids. 11-year-olds. Picking on kids who are already suffering enough, struggling to get by just to be themselves. And because what we do now, we govern in these extremes. People make some Facebook posts and then you, you guys run out and print a bill.

That's what we do, we govern by Facebook commentary. It's, it's sad. It doesn't make any sense. I know this is going to pass, because you're more concerned with the reelection

campaign that you are with the real effects on children in this state. I don't get it. I mean, just read this. They have to check whether the pupil's unaltered internal and external reproductive anatomy has to be submitted before participation.

No evidence that it's an issue anywhere really, and it's certainly not an issue in West Virginia. No evidence of it. He couldn't even go through the exam process in detail because he was that uncomfortable with telling us what the details are. So, I'm voting no. It's an easy no vote for me because I'm not going to be the bully. I'm not going to allow the bully to continue to bully kids in silence. I'm just not going to do it.

It's absurd, and I think that's how West Virginians were raised to take up for kids who are being bullied. This does the exact opposite. I'm voting no.

- Speaker: [03:15:05](#) The gentleman from the 10th [inaudible 03:15:07]Conley is recognized.
- Del. Conley: [03:15:11](#) Thank you Mr. Speaker, may I speak to the bill?
- Speaker: [03:15:14](#) Yes, gentleman is recognized.
- Del. Conley: [03:15:18](#) Uh, I appreciate the, uh, the law that's been presented here, the bill that's been presented here I should say. Um, and it's a, a verification of a law that's already on the books. And, uh, let me just, uh, if you may bear with me, read from that book and read from, to you that law. It's, uh, King James' version, Genesis, chapter one. Starting with verse 26. And God said, "Let us make man in our image after our likeness, and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all of the Earth, and over every creeping thing that creepeth upon the Earth." So God created man in his own image, in the image of God, created him male and female-
- Speaker: [03:16:08](#) That point of order is raised. That point of order is raised. Gentleman will state the point.
- Del. Fluharty: [03:16:12](#) Talk about the bill please.
- Del. Conley: [03:16:12](#) I'm sorry?

Del. Fluharty: [03:16:13](#) That's not related to the bill. That's not related to the bill. His-

Speaker 25: [03:16:17](#) [inaudible 03:16:17]

Del. Fluharty: [03:16:18](#) Well-

Speaker: [03:16:18](#) Let's, let's-

Del. Fluharty: [03:16:20](#) He's not there now.

Speaker: [03:16:20](#) Let's go ahead and get to it. Gentle-

Speaker 25: [03:16:22](#) [inaudible 03:16:22]

Del. Conley: [03:16:24](#) . . . is, God created a man and a woman. To believe that there is a man that thinks they should be a woman or a woman that thinks they should be a man, is saying that my God made a mistake. And I've got news for all of you, my God does not make a mistake. So the bottom line is, if you're born a boy, a male, you're a male until you die. If you're born a female, you're a female until you die. So it's only fair that if you're born a male, you compete in male sports. If you're born a female, it's only fair that you compete in a female sport.

So therefor, I absolutely support this bill 100%. And I would certainly urge everybody else in here to do the same.

Speaker: [03:17:12](#) The gentleman from the 16th, Delegate Hornbuckle is recognized.

Del. Hornbuckle: [03:17:16](#) Uh, thank you Mr. Speaker. Would the chairman of education please yield?

Del. Ellington: [03:17:21](#) Yes sir.

Del. Hornbuckle: [03:17:22](#) Uh, thank you sir. Um, in regards to football, uh, whether it be middle school or high school. Uh, if there is not a girls' team, uh, are girls permitted to play on the football team?

Del. Ellington: [03:17:33](#) Under Title IX they are allowed to, but there are inherent risks to injury and they accept those risks.

Del. Hornbuckle: [03:17:39](#) But they are allowed to play?

Del. Ellington: [03:17:41](#) Yes they are.

Del. Hornbuckle: [03:17:42](#) Thank you sir.

Speaker: [03:17:47](#) The gentleman from the 50th, [inaudible 03:17:50] Garcia is recognized.

Del. Garcia: [03:17:52](#) Thank you Mr. Speaker. Each of us, when we put our name on the ballot, first question we were asked is, why do you want to go to Charleston? I didn't come to Charleston to create problems where they don't exist. We've heard that there's no complaints about this in the state of West Virginia, about this issue about some type of advantage, competitive advantage that, that, that individuals, that kids are making this decision just so they can do better at sports. That's not happening. But we are creating a problem. And I, I've talked to a lot of people, and, uh, last week, um, was, was talking to somebody about infrastructure and they said, "Infrastructure, who cares? How can I stay in a state like West Virginia when you pass bills like this? When you take up bills like this? How can we get our young people to stay, and how can we ever attract somebody to our state?"

You know, I also, I didn't come to Charleston to legalize or legitimize unwanted childhood sexual assault. That is what this is. That's absolutely what this is, along with a psychological attack, an emotional attack on some of our most vulnerable people in the state of West Virginia.

And the gentleman from the third said, "Unaltered internal and external reproductive anatomy." That type of examination, that's what we're talking about. That's what, you know, relating to single sex participa- no, no, no. Relating to legalizing a form of childhood assault. That's what we're doing. That's what this bill does.

That should make you uncomfortable. That should make you angry. I know it makes me angry, because these are, these are children. These are children. They live in a harsh world, a cruel world. You know, one in three transgender kids attempt to commit suicide. Did you know that? That was from a letter that we received from the American Academy of Pediatrics, that you have on your desk.

So, I did not come to Charleston to take any action that would make it more likely that anybody who is considering

whether or not this life is worth living anymore, to push them over the edge. I got, um, an email last Friday after we had our judiciary committee meeting, from somebody who works with a number of LGBTQ+ young people. And she was talking about how it had been a struggle to engage them in this legislative session.

And she said in her email, she said, “They care about this bill, but I have not dared to suggest they follow any of the video or audio discussions, out of fear for what they might hear their own representatives say about them.” Kind of like what we just heard from the gentleman from the 10th. I mean, do you know that, you know, 2%, 2% of people actually have both reproductive organs.

So, I don’t expect that I’m going to change anybody’s mind in here, but I do have the opportunity to speak to those children that are listening. And I would just say this, every, every child is a beautiful creature of God. And yes, created in God’s image, and beautiful exactly, exactly as they are, regardless of what anybody thinks that they should be like. Regardless of what, whether anybody understands. That doesn’t matter. That doesn’t matter.

I came to Charleston to do good. I came to Charleston to solve problems. I came to Charleston to protect others. I came to Charleston to speak out against what I see is wrong. And if that means that I don’t get to come back to Charleston, then so be it. [inaudible 03:22:56]

Speaker:	03:23:00	Gentlelady from the 51st, Delegate Walker.
Del. Walker:	03:23:04	Thank you Mr. p- Speaker Pro-Tem. Will the chairman of education please yield?
Speaker 23:	03:23:11	Gentleman yields.
Del. Ellington:	03:23:13	Yes ma’am.
Del. Walker:	03:23:14	Thank you Mr. Chairman. Can you tell me how many elementary students we have that are transgender in this state?
Del. Ellington:	03:23:29	I can’t tell you how many in this state. I can give you general numbers that I have on transgender.

Del. Walker: [03:23:36](#) No, that's okay sir. I, I just wanted in this state. Thank you. Do you know how many secondary transgender students-

Del. Ellington: [03:23:45](#) I do not, I do not have a breakdown on that. I just have .7% of U.S. teenagers-

Del. Walker: [03:23:49](#) That's, that's fine.

Del. Ellington: [03:23:50](#) Are transgender teens.

Del. Walker: [03:23:51](#) I appreciate you. I don't mean to cut you off. Just bear with me as I bear with you. So we, so do you know how many students that this bill would affect, if you can't tell me those numbers?

Del. Ellington: [03:24:04](#) I don't, and I don't think you can either.

Del. Walker: [03:24:05](#) In, in West Virginia. Okay.

Speaker 23: [03:24:08](#) Gentleman may state his point of order.

Speaker 24: [03:24:12](#) The, uh, chair of, uh, education has yielded the questions. Uh, uh, I think he should have an opportunity to, uh, answer the questions before, uh, proceeding to the next question. Thank you.

Speaker 23: [03:24:22](#) Gentleman's point is well taken to the lady. If you ask a question, please allow the gentleman to answer.

Del. Walker: [03:24:27](#) Thank you. Mr. Chairman, no disrespect at all, but if I'm asking for a certain state, could you just say you don't know and we can proceed? Cause I have a list of questions, thank you. Is there any other medical injury or diagnosis that can occur with someone that may cause for an internal or external, um, genitalia to be altered, besides if they choose to be, you know, besides going through the transgender surgeries?

Del. Ellington: [03:25:09](#) If you're saying that they choose gender-

Del. Walker: [03:25:10](#) No, if they-

Del. Ellington: [03:25:10](#) Corrective surgery, then-

Del. Walker: [03:25:12](#) Are there any other medical diagnosis that may cause external or internal body organs to be changed?

Del. Ellington: [03:25:20](#) Not to be changed, but to be ambiguous, then there-

Del. Walker: [03:25:20](#) Okay.

Del. Ellington: [03:25:23](#) There are genetic disorders, yes.

Del. Walker: [03:25:25](#) So there are genetic disorders?

Del. Ellington: [03:25:27](#) Yes.

Del. Walker: [03:25:30](#) So, if someone was doing this examination, that would need to, it could be an assumption that maybe this was a procedure?

Del. Ellington: [03:25:43](#) No. If, uh, at birth, if there was ambiguous genitalia they would do a karyotype to determine what their, uh, what their gender is or if there was some other genetic issues such as Turner's or Klinefelter syndromes, for example.

Del. Walker: [03:26:00](#) Can you give us some examples of altered internal or external reproductive?

Del. Ellington: [03:26:07](#) Well, altered would be if they're on medications as far as internal. External would be corrective surgeries.

Del. Walker: [03:26:15](#) So, when you speak about corrective surgeries, so maybe, um, breast removal if that person had cancer?

Del. Ellington: [03:26:21](#) Well someone would've ha- if they had that then yes, but there would be a provider that could attest to that surgery.

Del. Walker: [03:26:27](#) Thank you Mr Chairman. Can I speak to the bill Speaker Pro-Tem?

Speaker: [03:26:31](#) Gentlelady may proceed.

Del. Walker: [03:26:32](#) Thank you. I appreciate it. Colleagues. We just debated. Freedom. [inaudible 03:26:49] Same difference. I'm not the parent. I don't have a child who is transgender. And not all of us practice the same religion. And we need to be mindful of that while we share our truths, respectfully. But what is so disheartening about this bill is that a child can play a sport until they get to secondary education, where their classmates may not see their differences at all. Where that child may not have been bullied before, we're opening up an opportunity.

This flag sits on my desk for all the children and adults who are thankful to be alive, and for those who have died. Transgender people, especially transgender black people, are killed at high numbers. If we're going to talk about the rules and the respect and the good book, let's think about those individuals. If we're going to pass judgment, and this is your truth and this is your conviction, what are we saying to the children? This is not about adults. These, this is about children. Those numbers couldn't be answered but I have them. 1.0% of West Virginians at age 13 to 17-years-old identify as transgender. 1%. That's 1% that we're not going to allow in team sports, where we build team leadership and we build a bond. And we build athleticism, and we tell them right here, at secondary education, "You don't matter. You're not good enough."

Once again, I have to go back to when I went through my first year of being here. Cause we had a lot of truths today, and it shakes my soul. You called them butch, you called them the F word. You called them creatures, you called them a disgrace of God. You called them demons, you called them the devil. Well guess what I call them? Love.

I call them children. I call them future leaders. I call them trendsetters. I call them change makers. I call them to lead. I call them to use their voices. I call them to speak their pain. And I sit, uncomfortable in those moments, so they can have their own movement. Who is this bill helping, and who is it hurting? West Virginia, a place to live, work, raise a family if you choose, only if you're not transgender. Thank you, Mr. Speaker Pro-Tem.

Speaker:	03:31:33	Gentleman from the 43rd, Delegate Thompson.
Del. Thompson:	03:31:39	Thank you Mr. Speaker. Would the chair of education yield for a couple of questions?
Speaker:	03:31:44	Gentleman yields.
Del. Ellington:	03:31:45	Yes sir.
Del. Thompson:	03:31:46	Thank you Mr. Chairman. Um, so, you are a, an OBGYN by practice, correct?
Del. Ellington:	03:31:53	Yes sir.

Del. Thompson: [03:31:54](#) So, can you tell me, um, after conception, when do sex organs develop on a fetus? When do they start developing?

Del. Ellington: [03:32:03](#) The, the start, immediately, as far as the genetics.

Del. Thompson: [03:32:06](#) Okay. So within like, seven to 12 weeks, they're, they should be really kind of, uh, mostly somewhat formed, to an extent?

Del. Ellington: [03:32:13](#) Uh, seven to 12 weeks, the genetics is there, and different features over the course of their normal 40-week gestation develop.

Del. Thompson: [03:32:22](#) Okay. When do, when does the, the brain start really developing and the, the higher function level of the brain start developing?

Del. Ellington: [03:32:30](#) As they get much older when they're out.

Del. Thompson: [03:32:32](#) Okay. Um, so would it be-

Del. Ellington: [03:32:36](#) [inaudible 03:32:36]

Del. Thompson: [03:32:36](#) Correct to say that your sex organs are developing before your brain? Uh, higher function levels of your brain?

Del. Ellington: [03:32:42](#) Well, sex organs develop more during puberty.

Del. Thompson: [03:32:45](#) Okay, yes, true, but like, I'm talking about solely in utero. Like, whenever they're-

Del. Ellington: [03:32:49](#) E- you're talking about external characteristics?

Del. Thompson: [03:32:52](#) Yes.

Del. Ellington: [03:32:53](#) Well, there are external characteristics at birth, so they develop in utero.

Del. Thompson: [03:32:57](#) Okay.

Del. Ellington: [03:32:57](#) But the secondary sex characteristics develop during puberty.

Del. Thompson: [03:33:01](#) Okay. Um, then, I have a couple questions too. Uh, was the WVSSAC contacted about any of this? Because I know in

committee we didn't have a rep, because I did have some questions for him but I, we never-

Del. Ellington: [03:33:16](#) Yes, they, they were contacted, and as was stated during the committee meeting when you asked about that, they were over on our senate colleague's side. But yes, they were contacted and they responded that they abide by Title IX, uh, regulations, uh, for the school system.

Del. Thompson: [03:33:33](#) Uh, but I also wanted to ask them, and I don't know maybe if you heard, ha- have they heard of any complaints across the state of anyone qu- you know, uh, saying that this is a major problem they're facing in their schools? This is something that's really happening and it's just causing a big problem?

Del. Ellington: [03:33:47](#) No, they, you'd have to ask them more specifically, but no, they did not point that out to us.

Del. Thompson: [03:33:52](#) Okay. Um, and in the bill it says that, uh, it's based on a, your birth certificate. Um, who cont- who, who authorizes birth certificates? Is it, it's the state you were born in, right? So if you're born in West Virginia, West Virginia basically, you know, has authority over your birth certificates. If you're born in Ohio, Ohio, the county or city which you're born, they'll have the control of your birth certificate, correct?

Del. Ellington: [03:34:16](#) Birth certificate's filled out at the time of birth, and it's authorized at the hospital or facility where that happens.

Del. Thompson: [03:34:21](#) Okay.

Del. Ellington: [03:34:22](#) By the provider that delivered the person.

Del. Thompson: [03:34:24](#) So, in, in West Virginia, if a person would change their birth certificate to have their name altered to their new chosen name or, and their gender through a court order, a court decision, um, despite the fact that that has been changed, they would still have to play on the sport of their birth ass- that they were assigned at, at . . . or their, their gender assigned at birth. Is that correct?

Del. Ellington: [03:34:51](#) They would have to, uh . . . with this bill, they would have to abide by what their gender was at birth.

Del. Thompson: [03:34:58](#) Even if their birth certificate has been changed to reflect their new-

Del. Ellington: [03:35:00](#) Well, well apparently West Virginia does not allow birth certificates to be amended on the basis of sex alone.

Del. Thompson: [03:35:09](#) Are you 100% sure on that?

Del. Ellington: [03:35:11](#) Uh, that's what counsel has here. They have a West Virginia Supreme Court ruling on July 18th, 2020, ruled, uh, that the code section in 16525, which allows a birth cert- birth certificate to be amended does not authorize the sex on the birth certificate to be changed.

Del. Thompson: [03:35:31](#) So even a court order, you're saying, would not allow the birth certificate to be changed?

Del. Ellington: [03:35:35](#) Well a court order can change that, but not by West Virginia code for the original birth certificate.

Del. Thompson: [03:35:41](#) Okay. Um, I have no further questions but to speak on the bill now.

Speaker: [03:35:47](#) Gentleman may proceed.

Del. Thompson: [03:35:49](#) So, here we are again. We, uh . . . Here in Charleston we've had a lot of, you know, we have bills that all affect dif- us differently. Some of us are, you know, doctors, some of us are teachers, some of us are insurance salesmen. Some of us, we come from different industries, and we deal with different bills that affect those industries. But, but, a few of us, well the vast majority of us actually have never had to have bills that address who you are as a person, who you love, how you identify. I have for the past three years. I haven't had that privilege.

As my friend mentioned, West Virginia has 1%. That's the highest rate of transgender students in this n- in this country. And then you look at the demographics. I love demographics, I start looking at that stuff and analyzing it. And I look at it, and you start seeing that number, that percentage drop off significantly when they turn 18. Why? Why, is because they move away. Because we make, we enshrine transphobic language into laws.

They're not respected. They want to go somewhere where they feel safe, welcomed, loved, just left alone to live their lives. Now I, I'm personally appalled and disgusted that a little girl could potentially have to show a stranger her genitalia to, to prove what sex organs she has. Would you feel comfortable with your daughter, whether they are transgender or not, be subjected to that? Cause I wouldn't. It's disgusting.

We heard some other testimony too, of, you know, uh, this is about, you know, fairness, you know, to ensure that, you know, uh, there's no, uh, people assigned male at birth are playing in female sports and they have a better advantage. They're going to be stronger, just because they're born a male. I don't believe that. This isn't about that. This isn't about fairness. This isn't about health. This isn't about safety.

This is about putting those most at risk students, those most at risk kids who are already dealing with something so traumatizing, and telling them, "You can't play this sport." I, I, I know how this is going to go too, but to, to be honest I didn't come to Charleston. When I was campaigning I didn't come here, I didn't ask peop- people weren't asking me, "Hey Cody, please put some, uh, bills on the, the, in the law that, you know, are going to restrict, you know, rights for the LGBTQ+ movement. Please, that's what I really want."

They were asking, "Hey Cody, bring us some jobs. We need some jobs, some good careers. Let's fix our roads. Let's build our roads. Let's finish corridor H and Coalfields Expressway. Let's fix our healthcare, let's fix PEIA." Not one person ha- has ever asked me for legislation e- e- even similar to this. But, here we are. With that being said, I urge rejection to this bill. Thank you, Mr. Speaker.

Speaker: [03:40:07](#)

Gentleman from 36th, Delegate Pritt.

Del. Pritt: [03:40:13](#)

Thank you Mr. Speaker. Would the chair of education ye-yield once again please.

Speaker: [03:40:17](#)

Gentleman yields.

Del. Ellington: [03:40:18](#)

Yes sir.

Del. Pritt: [03:40:20](#) Just have a few questions for you. Now, with regards to the part about an examination being performed, it only applies if an original birth certificate was not provided or, if the birth certificate provided was, does not indicate the pupil's sex at the time of birth. Is that right?

Del. Ellington: [03:40:42](#) That is what is in the bill.

Del. Pritt: [03:40:43](#) And, um, to the best of your knowledge, are secondary school interscholastic athletics voluntary?

Del. Ellington: [03:40:51](#) Yes they are.

Del. Pritt: [03:40:52](#) They are voluntary, right?

Del. Ellington: [03:40:53](#) Yes.

Del. Pritt: [03:40:56](#) Okay. And so, based on this, we're not requiring that every single student undergo an examination like this, right?

Del. Ellington: [03:41:04](#) No, the, they just give the . . . they have to present their birth-current code pr- they have to present their cu- their birth certificate when they go enter the school system.

Del. Pritt: [03:41:14](#) Okay.

Del. Ellington: [03:41:14](#) And typically, you'll have the gender on that at the time of birth, so that's usually not an issue. Now, if they come in and they don't have a birth certificate, if they want to participate in interscholastic sports, then they have to give evidence of what their gender was at the time of birth. And that would be from their provider that has probably seen them many times before.

Del. Pritt: [03:41:39](#) So it's fair to say that this provision would only apply in a very, very, very limited number of situations, and if it does apply, it, the examination would be voluntary?

Del. Ellington: [03:41:51](#) Correct.

Del. Pritt: [03:41:52](#) Okay. No further questions. Thank you, Mr. Speaker.

Speaker: [03:41:57](#) Gentlelady from the 35th, Delegate Young.

Del. Young: [03:42:02](#) Thank you, Mr. Speaker. Will the chair of education continue to yield?

Del. Ellington: [03:42:06](#) Yes, ma'am.

Del. Young: [03:42:06](#) Thank you. I've got a couple, I'm going to jump around a little bit. Um, okay, so this was a, an originating bill in education?

Del. Ellington: [03:42:14](#) Yes it was.

Del. Young: [03:42:15](#) Okay, was there a stakeholders' meeting for the, for the purpose of the bill.

Del. Ellington: [03:42:19](#) Um, there are stakeholders I guess, uh, citizens of West Virginia.

Del. Young: [03:42:25](#) But you didn't have any meetings with like, the SSAC or any sort of transgender groups?

Del. Ellington: [03:42:32](#) I didn't.

Del. Young: [03:42:33](#) Okay. Um, and did this bill go through the health committee? Cause it seems like a lot about health.

Del. Ellington: [03:42:40](#) No, it didn't go through health. It was originated in, uh, in education.

Del. Young: [03:42:45](#) Was there a second reference?

Del. Ellington: [03:42:46](#) No.

Del. Young: [03:42:47](#) Okay. And, um . . . Oh- it went

Del. Ellington: [03:42:51](#) [crosstalk 03:42:51] Let me correct myself. No, it went to judiciary.

Del. Young: [03:42:54](#) Okay, thank you.

Del. Ellington: [03:42:54](#) Second reference.

Del. Young: [03:42:54](#) And-

Del. Ellington: [03:42:54](#) My apology.

Del. Young: [03:42:57](#) No problem. Um, I'm not on either of those committees, so some of this has probably already been asked by people in those committees. Um, would you agree that this bill is about participation and eligibility?

Del. Ellington: [03:43:09](#) Yes.

Del. Young: [03:43:10](#) So why is it not in a rule?

Del. Ellington: [03:43:14](#) We haven't developed the rule yet.

Del. Young: [03:43:16](#) So is this for a rule or is this-

Del. Ellington: [03:43:18](#) Yeah, they're, they're, they're all rules as far as participation in sports already. This is, this would, this bill would be amending that.

Del. Young: [03:43:27](#) How would this amend the rule?

Del. Ellington: [03:43:29](#) It would state that you have to be in the gender that you were assigned at birth to participate in a single-sex interscholastic sport.

Del. Young: [03:43:36](#) But isn't this code?

Del. Ellington: [03:43:37](#) In the secondary schools.

Del. Young: [03:43:39](#) I mean, we're changing code, not the rule.

Del. Ellington: [03:43:41](#) Yeah, but the SSAC would have their rules for that, yeah.

Del. Young: [03:43:46](#) Okay, and, um, within the rules, so are you familiar with, uh, 127CSR2, which is the eligibility rule?

Del. Ellington: [03:43:53](#) I don't have it in front of me but I'll take your word on what you have on it.

Del. Young: [03:43:57](#) Okay, and it says, when the rule . . . um, there will be a waiver granted when the rule causes extreme and undue hardship upon the student, so would there be a waiver if this would cause an undue hardship-

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Del. Ellington: [03:44:08](#) Yes.

Del. Young: [03:44:08](#) . . . On anybody?

Del. Ellington: [03:44:09](#) That's what the school system has. That's what they will probably abide by.

- Del. Young: [03:44:12](#) Good to hear. Um, okay. And also, I'm wondering what sports this applies to because like my friend from the 16th asked, there are some sports and that's in this rule too, that are everybody.
- Del. Ellington: [03:44:27](#) This is a single-sex sports, it co-educ- co-educational sports are exempted from it.
- Del. Young: [03:44:34](#) Okay. Um, I mean, what if the, what if the sports aren't co-educational? The rule says that if they're not like, uh, like if one school only has a sport for boys, then girls are allowed to play, so is that considered co-ed then? Like football or wrestling?
- Del. Ellington: [03:44:51](#) Well, if, uh, if a female participated on the boys team, then I guess it makes it co-ed, but that's what Title IX requires that if there was no female team, then they are allowed to play on the male team.
- Del. Young: [03:45:04](#) Okay. And how-
- Del. Ellington: [03:45:04](#) It's not necessarily true the other way around.
- Del. Young: [03:45:07](#) Okay. Would this affect that at all?
- Del. Ellington: [03:45:11](#) No. It just says whatever gender they've designated as they get to play on that team. So it doesn't prohibit them from participating on a team.
- Del. Young: [03:45:11](#) Okay.
- Del. Ellington: [03:45:18](#) If it's a co-educational team, they could play on anything.
- Del. Young: [03:45:21](#) Okay. Um, and so back to the birth certificate stuff that you and my friend over here were just chatting about. You said it's just, it's just an original birth certificate that has to be provided?
- Del. Ellington: [03:45:35](#) Birth certificate at birth. Yeah. Your original birth certificate at birth is what this mandates.
- Del. Young: [03:45:39](#) Do we let, um, kids participate in sports if they've changed their name on their birth certificate, maybe if they've been adopted or just change their name for whatever reason?
- Del. Ellington: [03:45:49](#) I'm sure they do.

Del. Young: [03:45:50](#) So that's allowed, we're just worried about their genitals.

Del. Ellington: [03:45:56](#) It's allowed as far as I, if they change their name or other conditions, just this bill is just staying that it's by the gender that was assigned to them at birth.

Del. Young: [03:46:06](#) Okay. And, um, I, it seems like if you don't have your birth certificate, which is in the bill but unchanged, you can get an affidavit, um, explaining the ineligibility. So there are students that go into the school system without a birth certificate. Right?

Del. Ellington: [03:46:24](#) Um, I'm sure there are.

Del. Young: [03:46:25](#) Okay. So they would not necessarily have that on hand. Um, and it sounds like that this is going to apply to anybody who doesn't have their birth certificate on hand. That so anybody who maybe filled out that affidavit or lost their birth certificate throughout time?

Del. Ellington: [03:46:41](#) If they wanted to participate in single-sex athletics.

Del. Young: [03:46:45](#) Okay. So like lots of foster kids might not have that kind of stuff. Right?

Del. Ellington: [03:46:48](#) Right.

Del. Young: [03:46:48](#) So anybody, anybody who doesn't have their birth certificate is going to have to get a genital check to play sports, single-sex sports?

Del. Ellington: [03:46:56](#) They would have to have with their provider attest to what their gender was.

Del. Young: [03:47:02](#) Okay. And, um, I'm really confused how this bill fits in with the WSSAC, uh, beliefs and objectives that are on their website.

Del. Ellington: [03:47:16](#) Their objectives I believe, is to have, uh, provide sports or activities for the students in a safe manner.

Del. Young: [03:47:24](#) Yeah. It says, "The commission seeks to present proper ideals of sportsmanship so that coaches, players, authorities, officials, and spectators may combine to any activity enjoyable and productive of physical and social

benefits to both sides involved in the contest, with partisanship and prejudice eliminated as far as possible.” I-

- Del. Ellington: [03:47:45](#) You have it there. I, I’ll take your word on that. Don’t disagree.
- Del. Young: [03:47:48](#) Okay. Thank you. Permission to speak to the bill.
- Speaker: [03:47:52](#) Lady may proceed.
- Del. Young: [03:47:53](#) Thank you so much, Mr. Speaker. Um, I think that this bill is all about partisanship and prejudice. We’re not eliminating it. We’re putting more in, I think it’s full of bigotry, and I don’t support it. Thank you.
- Speaker: [03:48:07](#) Gentleman from the 47th, Delegate Phillips.
- Del. Phillips: [03:48:12](#) Thank you Mr. Speaker. Um, like most issues we have in here, this engenders a lot of emotion on both sides. And I get a little emotional about this. Uh, last night, a young lady that I love very much had a breakout game in girls basketball and scored 19 points. And I’ve watched her work to earn her spot on that team, and work to earn her playing time on the court. And I, I know what she puts into it. She, uh, is going to the gym every day. She’s out running in the rain and the cold and the heat. And it means a lot to her. And, uh, so I was feeling very proud last night.

And, uh, then I got to thinking about this bill and I, uh, sat down and did a little research and came up with, uh, the 100-meter dash women’s world record holder is Florence Griffith Joyner, the United States. She set that in 1988, um, at a time of 10.49 seconds, that was eclipsed in 1989 by James Jett in 10.34 seconds. She also set the 200-meter record in 1988 at the Summer Olympics, and I’m old enough to remember that, um, her time on that was a 21.34. That was eclipsed in 2013 by Dante Price at time of 21.10.

The current world record holder in the High Jump is Stefka Kostadinova, probably mangled that, of Bulgaria, and her record set in 1987 is six foot, 10 and a quarter inches. The longest held record in the event. It was beat, beaten in, uh, 1998 by Nathan Fields with a seven foot three inches. And finally, the current female record holder in the mile is Stefan Hassan, who in, uh, July of 2019 set a new record at, uh, four, uh, four minutes, 12.33 seconds. That record was

beaten or was surpassed in 2011. And it was a time of four minutes, 8.8 seconds in the 1600 meter by, uh, Jacob Bertram.

And as we think about this, instead of feeling about it, we need to realize that there are innate physiological advantages for males. And that's why we have unisex sports, we have girls playing basketball and boys playing basketball instead of together, because it's not a fair competitive floor. And, uh, then I come in here today and we find this paper on our desk part of which says the vast majority of the people this law will harm are school kids who just want to play on a sports team. And I absolutely agree with that. That's 100% true. But it's going to harm all the kids playing on that sports team.

Um, it finishes up, it tries to address a problem that does not threaten anyone. And I don't agree with that because it does threaten the kids that, like the young lady I love so much, work incredibly hard to get their spot on the team, to get their playing time on the court. And for many of them to get a college scholarship and further their education. And we are seeing cases around the country of girls records being decimated by biological males who come in and, and wipe the rec- record books clean, and totally dominate competition.

And I know we've had, uh, some alternate feelings on that, but as long as we're thinking about this instead of feeling, I'll go back to all those records I read off. Those are women's current world records, the fastest woman in the world in three different sports and put her in the high jump. The records that I listed off that beat them, weren't Olympians. They weren't professional athletes. Those were the boys high school records in West Virginia. So if you think it's fair competition, you need to go back and tell that little girl that I love, why she's got to compete against a biological male. I'll be voting for the bill. Thank you.

Speaker: [03:52:17](#)

Gentleman from the 16th, Delegate Hornbuckle.

Del. Hornbuckle: [03:52:22](#)

Um, thank you, Mr. Speaker Pro-Tem. Ladies and gentlemen, there's a lot going on here today, there's a lot being said. And I personally, I really relate to the message and the great words by the Gentlemen from the 50th and the third. Now I know there's also some people in this body

that relate to the words of the gentlemen from the 47th and the 10th. But on this issue, I'm going to urge all of you, all of us, no matter what side you're on, to put the emotions on the table and to embody who all of us are, which are lawmakers.

We're lawmakers. Now, I want to share with this body that in the summer of 2020, Trump appointee Justice Gorsuch wrote the Bostock opinion. And in that Bostock opinion, talks about discrimination based on gender identity violates federal law in regards to employment. Well, with that, the Fourth Circuit, which we here in West Virginia are included in, they applied that to Virginia's bathroom bill, which was struck down.

So I would invite this body to understand that there is precedent here and upon passage of this bill potentially, it's not going to cut the muster. We're looking for a problem yet again. I would also implore our body about the good back and forth between myself and the chairman of education and also the gentlelady from the 35th. And speaking about Title IX issues. And if there is a football team and there isn't a girls football team, could the girl play on it? And she could. Then the chairman also said that, uh, that young lady would also assume the inherent risks that come with that.

And then that could also go either way. Now, in this case here, if we were to have a transgender child in this state, and they were denied the right to participate again, we're asking for a lawsuit. We're asking for extended litigation. Now that might not seem like much on the surface, but what we're going at here is we're going to hurt all the children involved. Understand we're going to hurt all the children involved, not just the LGBTQ+ community youth. Again, I want to stress the word youth, but the ones who are not a part of that community.

'Cause there could be potential suspensions of the season, Championships could be vacated, again, ongoing litigation. It could really hurt all of our youth. So I think we need to slow down here and understand, regardless of how you feel personally about this situation. Legally, we're asking for a battle and we're no longer going to be lawmakers, we're going to be law breakers. So I would urge you all to take your time and vote this bill down. Thank you.

Speaker: [03:55:28](#) Gentlelady from the fourth, Delegate Zukoff.

Del. Zukoff: [03:55:39](#) Maybe I should take that as a sign I'm not supposed to speak, but, um, I'm not going to. [inaudible 03:55:44], um, chair of education can you yield for a few questions.

Del. Ellington: [03:55:52](#) Yes, ma'am.

Del. Zukoff: [03:55:53](#) We haven't had this issue come up in West Virginia, but if it did come up prior to this law being enacted, how would it be handled?

Del. Ellington: [03:56:05](#) Probably by what we're doing now?

Del. Zukoff: [03:56:08](#) What? They wouldn't make a child sit out. I'm, I'm anticipating that they wouldn't make a child sit out until we met next year.

Del. Ellington: [03:56:16](#) [inaudible 03:56:16].

Del. Zukoff: [03:56:16](#) Who would come up, who would make that decision now, if this came up without the bill that we have before us.

Del. Ellington: [03:56:23](#) It would probably just be made on an individual basis by the school.

Del. Zukoff: [03:56:25](#) Okay. Um, and you mentioned earlier that there are some children who are born with both sex org- both hormones in both sex organs at birth. It's a very small-

Del. Ellington: [03:56:36](#) Uh, I said ambig- I said ambiguous, yeah.

Del. Zukoff: [03:56:38](#) Right. And very small group. What would happen? How would, how does that work about, um, determining the gender at birth and on the birth certificate?

Del. Ellington: [03:56:47](#) You, uh, you get, you could get their karyotype, which is their genetics.

Del. Zukoff: [03:56:51](#) Okay.

Del. Ellington: [03:56:51](#) And then you would assign a birth based on what they were at that time on the birth certificate.

Del. Zukoff: [03:56:57](#) Okay. And you said that, um, sex organs continue to flourish at puberty. What if that changed?

Del. Ellington: [03:57:05](#) That's second, that's secondary sex characteristics at puberty.

Del. Zukoff: [03:57:07](#) Okay. All right. Thank you. I just wanted to understand this is, this is all new to me. Um, like many of you on this floor, when I first saw this bill, I have to tell you that I was thinking that, "Man, it wouldn't be fair for girls to have to participate against boys." And then I did my research, as you all know that I love to do. Um, I want you to know that, uh, we heard during committee that the West Virginia Department of Education and the SSAC has not, have not received one issue, not one concern about this, this, this matter.

I called my local school district and I asked them, do we have many transgendered students? Because like many of you, I simply have never had other than one person who's a city council man who I dear. . . city council lady that who I dearly love in the city of Wheeling, who is a transgender person. I've never had contact with a chan- transgender person before. I had to educate myself about that. Now my children and my, my niece, who's a sophomore at WVU, had a lot to tell me because they accept those children for who they are. We talked about the bills and this about the bills in this, um, that we don't have, that this has really, I think, a solution looking for a problem.

One of many of the bills we've had this year. 16 states provide allowing transgender students to participate in high school sports without requiring medical proof. 10 states provide no guidance at all and allow schools to set their own requirements. We used to be all about local control in this building. That's changed. We have three states, Indiana, Kentucky, and Louisiana, that required general, gender confirmation surgery before they're allowed to play sports. And the rest of the States are all contemplating what to do about this. So at this point, we know what other states have done. We have that we have those, those options.

Um, so again, this has a s- a solution looking for a pro- a solution bill looking for a problem. Now I'm going to take my legislative hat off for a minute. I want to talk to you as a mother, a mother of two daughters. Two daughters who were exceptional athletes, like my friend talked about being his daughter's basketball. My oldest daughter was all state and two sports for two years. She was an outstanding

basketball point guard and an outstanding pitcher in softball. We traveled all around the country watching her play. I spent 25, 20, 20, 25 years of my life following my girls around to sport events. My youngest daughter is a swimmer. Made states every year.

Her freshman year through, through her senior year. And she swam collegiately. So when I talk about girls sports it's something I know a little bit about. And I can tell you that my daughter's participation in sports were because they loved it. With every essence of their being, they loved competing. They loved being on a team. They loved the camaraderie. They learned to cheer for each other. They really put their heart and soul into it because that's what they loved. And we're going to in this state allow transgendered students to participate in sports, and I don't know about you guys—we start Kitty kick and soccer at my area at three years old. We start tee-ball at three years old. We're pretty sports-oriented in the Northern panhandle.

So these children are participating by how they identify until they get to middle school. So the students that they, the children that are their friends, the children that they'd been playing with have been playing with them their entire life if they're really into sports, right? And then we're going to tell these transgender students who love to play sports, just like all of our children do, that you can no longer participate if you want to continue to play with your friends. Is that really the goal? Is that what we want to do as a legislature? Because I can tell you as a mother, I find that very difficult. And for those very reasons, I'll be voting against this bill. And I would urge you to search your soul and do the same. Thank you.

Speaker: [04:01:44](#) Gentlady from the 24th, Delegate Mazzocchi.

Del. Mazzocchi: [04:01:48](#) Thank you Speaker of Pro-Tem. This is not about freedom. This is about protection. To protect our little girls that are in school. I don't mind everybody playing together in a league. If there is the parents there and everybody, the parents can take, can take care of their children, can watch them. That is all beautiful. But in school at that age when they start at what? 11 or 12, 13, they are at a very important age. And they feel very, as a girl, they feel very conscious about their bodies. Not to say that those transgender children are not, but to be honest, I don't want all this

mixing and matching and whatever in our, um, in these locker rooms, I'm sorry.

The, there is no adult there to supervise. I don't want all this, this, this, whatever you're saying there. You're making a big problem out of nothing. I am sorry. This is not . . . we have boys and we have girls and we have some that are somewhere in between, and it's a very small minority. And why are we making this a big, huge deal? It is not a big, huge deal that everybody can play in a league. If you have ever played soccer, and I'm telling you, we have our, my family brought soccer into Logan County and my little girl played with the boys and played against the boys.

And we had one Sunday where the mamas played against the kids. And I'm telling you I wanted to play, and I did, because I did when Marco was small. All the mamas played with against the five-year old boys, and we mamas could only win because we had a 14-year-old boy getting in our team. But when Mara was, was, was 12 and 13, and she is playing against the boys, those boys are too big, too powerful, because they knocked me off. I was out, okay? But I wanted to play. But our children in our school had, they have no, no say so. I don't want him to be exposed to something that should not even be here. So I support this bill and I want to end this discussion because it's sickening.

I'm sorry. Everybody is a human being, but don't bring it up that ev- that we are calling your names. No one would call a name, someone a name. And I appreciate all your effort. And I want you to support this because we need to protect our little girls.

Speaker:	04:05:01	Gentleman from the 36th, Delegate Barach.
Del. Barach:	04:05:06	All right. Thank you very much, Mr. Speaker. Uh, will the chairman of the education committee yield for a couple of questions?
Speaker:	04:05:13	Gentleman, yield?
Del. Ellington:	04:05:14	Yes, sir.
Del. Barach:	04:05:15	Thank you so much doctor. I didn't mean to make you get up again.

Del. Ellington: [04:05:19](#) All good. I need the exercise.

Del. Barach: [04:05:21](#) We've had a lot of questions about this. I might've missed this one, but I'm just trying to figure out why this is such a big deal right now. Why, why do we need this bill?

Del. Ellington: [04:05:29](#) You're asking me that?

Del. Barach: [04:05:31](#) Yes.

Del. Ellington: [04:05:31](#) I was probably going to say it in the closing statement, but, uh, there have been instances throughout the country where this has been an issue as unfair competitive advantage. And this is something that is brought up in 27 other states, uh, that have done that. And also in the U.S. Congress, there are bills related to this same, same, uh, topic.

Del. Barach: [04:05:52](#) But 12 states, uh, do allow it. Is that not correct?

Del. Ellington: [04:05:56](#) That's their freedom to do so.

Del. Barach: [04:05:57](#) And the NC2A, the International Olympic Committee also allow this. Oh, that's pretty heavy, uh, those are pretty heavy hitters with sports.

Del. Ellington: [04:06:04](#) That's beyond the purview of this bill.

Del. Barach: [04:06:06](#) Yes. But I'm just saying that, that, if, if they feel that it's okay, uh, that that should be something that we could use for a guideline, I would think. And, um, uh, so this, this isn't about, I think what people are afraid of this, isn't about some boy saying, "Hey, guess what? I want to win a trophy. I'm going to put on a girl's jersey and say, I feel like a girl today and I am going to race against these people." When you're talking about transgender, we're talking about people that are, from what I understand, uh, to participate in a sport like that, you have to be going through the transition process, is not, that not correct?

Del. Ellington: [04:06:42](#) I don't think this says that. I think it was just, if they identify as transgender, they're going to want to play on whatever team they want to do.

Del. Barach: [04:06:49](#) From what I understand, you have to be going through the process and that involves quite a bit of, uh, medical change. Doesn't it?

Del. Ellington: [04:06:55](#) This does not say that.

Del. Barach: [04:06:56](#) But that's, I think what we're, we're dealing with though, isn't it?

Del. Ellington: [04:06:59](#) That's what some people are bringing up.

Del. Barach: [04:07:00](#) Okay. All right. All right. Well, thank you very much. All right. And I'm just going to go down in, on the record as saying, I think this is a bill based on, on, on not what, what people, what we need. This is based on judging people that are different than the rest of us. And I think we should look out for those people. I'm going to be voting no against this measure. And I hope you'll all, uh, follow suit with me. Thank you very much.

Speaker: [04:07:24](#) Gentleman from 39th, Delegate Ferrell.

Del. Ferrell: [04:07:30](#) Thank you, Mr. Speaker. The chairman of education, please yield.

Speaker: [04:07:36](#) Gentleman, yield.

Del. Ellington: [04:07:37](#) Yes, sir.

Del. Ferrell: [04:07:39](#) I know you had to address a lot of questions this afternoon. Sorry to have to add one more here at least. But what would you say the spirit of this bill is?

Del. Ellington: [04:07:48](#) Spirit I would say is fair competition and safety for all the students.

Del. Ferrell: [04:07:52](#) Exactly. Only I would have said safety and then fair competition. Because the number one issue I think comes back to safety.

Del. Ellington: [04:08:00](#) Right, I wasn't putting in a particular order.

Del. Ferrell: [04:08:02](#) Uh, second question is to follow up question. My colleagues from across the aisle made several, uh, I asked several questions about comparison to sports where girls were allowed to play football, or I actually, my first year teaching, uh, teaching and coaching, I had a girl play on the baseball team 'cause we didn't have a softball team at Dunbar High School and she played over there. But actually those are, would you say those are just exceptional

situations where a girl is playing up in competition. It's not a situation where I coached girls volleyball and a boy would come down and play on the girls volleyball team, correct?

Del. Ellington: [04:08:39](#)

Title IX does not allow that to happen.

Del. Ferrell: [04:08:41](#)

Right. The, the SSAC has rules against that. Correct?

Del. Ellington: [04:08:44](#)

And SSAC follows Title IX regulations.

Del. Ferrell: [04:08:49](#)

All right. Thank you. Thank you very much. Can I speak to the bill please? After 30 years in education, most of that coaching high school sports, middle school sports, covering all high school sports with my sports media network, having a daughter and a son both participating in sports, I think I know a little bit about sports and the involvement of it, and especially the differences between girls and boys sports. So I coached high school volleyball here in Kanawha Valley. The teams that . . . the net on a volleyball court for the girls is seven foot, four inches and a quarter. This is the same for the guys? No. It's eight foot.

It's my colleague, my colleague over here at Harrison County, she's enjoying this lunch, uh, coaches girls basketball up at Lincoln County or Lincoln High School. They use a smaller basketball because her hands are smaller. And we could go on and on about the differences that are already in place in order to try to, uh, address some sense of fairness. But more importantly, a lot of times just to, just as we said with volleyball, they don't allow the boys to come over and play down in, into the girls level because in a lot of cases, it could even be dangerous. Especially at the net and the swing and the velocity of the ball as it travels, it would be dangerous against the girls.

So, you know, first thing, it's a safety issue. And then second would be fairness issue that [inaudible]. So the spirit of this all, if we look at today is a really, you know, what are we trying to do here? Are we trying to be unfair to a small group of the population? It doesn't matter how small the group it is. You know, we don't want to be unfair to any group. But when we look at the overall population of what we have and, and the group of kids that we're dealing with, we just want to be fair.

We just want to be fair and we're just following guidelines put in place for, for some time. I have a daughter as I mentioned, she's running track this year for Sissonville High School. She's 103 pounds soaking wet. And I just wonder you know, and not that we've had a case here in West Virginia, but would anybody want 185 pound that identifies as transgender to compete against her in the 200? I don't think so. I don't think we would think that's fair. Has anybody spoken up for her today? I don't think so. I haven't heard it.

It's just, (laughs) it's almost like we're upside down. And I think that's what my constituents, when they reach out to me about this bill and about what they see going on in the other states, and I think we mentioned there's 27, maybe other states that are looking into the same matter. We're looking, we're looking at this backwards sometimes as we do a lot of things. And I think people are just fed up and were upset and we might, and hopefully we'll never have a case of this. I hope it's never a situation. I don't think anybody in this body hopes that it's ever a situation.

But we're just getting out in front of it. And I know my time, I spend a little bit time too, when I was, uh, teaching as summers as a lifeguard. One of the things we always did and we worked on was making sure we, you know, we prevented things before they happened. You get out ahead of it. And I know as a physician over there, doctor, you, you know, your, your practice is about preventing the problem instead of, you know, trying to treat it after the fact.

And I think that's all this bill is trying to do, is get out of front, address it. Hey, West Virginia just wants to be fair. We're not trying to discriminate against anybody, but we certainly don't want to hurt 103 pound freshman girl, trying to run track at a high school against a senior who weighs 185 pounds. So I'll be voting yes on this, on this bill. And I would urge you all to join me.

Speaker: [04:12:35](#) Gentleman from the 37th, Delegate Pushkin.

Del. Pushkin: [04:12:40](#) Thank you, Mr. Speaker. Would, uh, my colleague from the 39th, please yield?

Speaker: [04:12:46](#) Gentleman yields.

Del. Pushkin: [04:12:48](#) Thank you, sir. So you coach, uh, you're a high school coach?

Del. Ferrell: [04:12:53](#) I have been. Yes.

Del. Pushkin: [04:12:54](#) You have been. You coach girls sports?

Del. Ferrell: [04:12:56](#) Yes I have.

Del. Pushkin: [04:12:57](#) Have you ever had a transgender student go out for any of your sports teams?

Del. Ferrell: [04:13:02](#) Not to my knowledge.

Del. Pushkin: [04:13:03](#) Okay. You never had someone who was male at birth and then identifies as a female try to go out for one of your sports teams in order to gain some unfair advantage over the girls? You ever seen that, sir?

Del. Ferrell: [04:13:13](#) Not to my knowledge.

Del. Pushkin: [04:13:14](#) Thank you for yielding. That's all the questions that I have for you. Mr. Speaker, if I may address this. Um, my, my friend, my new friend from Logan's right. You know, we're making a big deal out of nothing because guess what? It hasn't happened. Even though West Virginia has the highest percentage of transgender youth, uh, possibly the most, you know, alienated, uh, folks in our, in our, in our state who we're going to further alienate today with this, with this debate, even though we had the highest percentage of these kids, none of them are going out for sports teams.

There aren't boys out there that are going to pretend to be transgender in order to get, uh, an advance, unfair advantage and excel in a, in a, in a girl sport. It's simply not happening. You know, if you truly believe it is, I suggest you do, uh, you know, a little more research than my friend from the 47th when you're, when you're looking up sports records and see it's not happening here. So the spirit of this bill is not about protection, it's definitely not about fairness.

What it's about is manufacturing some phony outrage that you can put on postcards in a couple of years and say, act like he did something for somebody. But you didn't do

anything for anybody. What you did was you hurt kids, the most alienated kids in our schools. That's who you hurt with this debate. And that's why I'm angry about it. See, it's, it, it's, it is a solution in search of a problem. However, the solution we're talking about is more problematic than the perceived problem that you're making up. And that's the problem I have with this bill.

So let's talk about a binary decision that we're getting ready to make. You can either press green or you can press red. You get two choices on this bill. And I imagine that there's two different types of green votes today. There are those of you who really believe that this is an issue, and we've got to protect these girls from this perceived threat that's not happening. There are those of you who believe that it's a, this is a real issue. For those of you that are going to vote green, because you really think it's a problem, you know, I pray for you to find wisdom and to someday realize that this isn't an issue.

Now, but those of you, and I think you might be in the majority, those of you who know this isn't an issue, but you're going to do it out of political expediency. For those of you who know that it's probably, it's more problematic, uh, for a girl who might be a little bit tall, maybe a little bit muscular, who's good at sports and in the opposing parents and coaches are going to make an issue because of this debate we had today and alienate that poor little girl. For those of you who know that's the bigger problem you're creating here, but you're going to vote anyway because of political expediency, even though you know it's not really happening here.

PART 8 OF 9 ENDS [04:16:04]

- Del. Pushkin: [04:16:00](#) Anyway, because of political expediency, even though you know it's not really happening here, I'm going to pray for you that you find half the courage of these children who you're alienating today, and you vote red and vote this mean-spirited bill down.
- Speaker: [04:16:20](#) Gentleman from the 46th, Delegate Burkhammer.
- Del. Burkhammer: [04:16:25](#) Thank you, Mr. Uh, Speaker Pro-Tem. And uh, I'd like the opportunity to speak to this, because e- every bill that we

take up, we have to ask ourself a question, is, is, who does it hurt? Who does it help?

And so it's been pointed out who we think this bill is going to hurt. And, uh, I'd like to thank my colleagues here that have brought up who that it's going to help. That's women. That's, that's my daughter, that, that is an athlete as well. And, and we can say, well, they don't need any help, that, that there's not an actual gap in, in gender. So as I watched Sports Center this morning, uh, yesterday was Equal Pay Day. And, uh, the U.S. soccer team, Megan Rapinoe, I think was her name, was at the White House, trying to close that gap, trying to continue to stand up for women.

You know, women didn't even have the right to vote until 1920. It's been 100 years ago, women couldn't even vote in our country. It wasn't until 1972 that Title IX was passed. And we've come so far in our country closing that gap. Our colleague from the 35th, before session started, talked about the women in this body right here.

I am proud that we've got a majority leader and an assistant majority leader woman. I'm proud of all the women that are in this body. And can you imagine in a time when that wasn't even capable? Because I can't.

And so today, I rise in support of all of the women here, of all of the little girls playing sports across this land. I stand for them. I stand for women. I support this bill. Thank you.

Speaker: [04:18:29](#) Are there those seeking further recognition before I recognize the Gentleman from the 27th to close debate? If not, Gentleman from the 27th to close the debate. Oh, excuse me. Gentlady from the 51st.

Del. Fleischauer: [04:18:43](#) Thank you, Mr. Speaker. My daughter is different. My daughter played sports. My daughter is beautiful. My daughter's intelligent, and she has left this state. And it's this kind of bill that will ensure that she will never come back. Please don't pass this bill. You are demonizing little children, and you're demonizing my baby. Don't do this!

Speaker: [04:19:24](#) Are there those seeking further recognition? If not, Gentleman from 27th close the debate.

Del. Ellington: [04:19:33](#)

Thank you, Mr. Speaker. This issue came to the surface in the United States regarding transgender a few years ago, when two transgender girls were allowed to compete in state track and field meets in Connecticut. They won a combined 15 girls' state indoor and outdoor championship races from 2017 to '19. That's one of the things that started national debate. As I mentioned, there are 27 states that have put in legislation regarding this. And yes, there are 17 states and, uh, District of Columbia that require inclusion. However, there are six states that have no policy regarding gender identity, or sports, regarding sports whatsoever, and we're one of those.

Now, as was stated before, Title IX does allow girls to have, to be able to participate in sports. They wanted to have some equality. If there is not a girls' team and in school, then they would be allowed to participate on boys' team. As I mentioned, the contrary was not always the case, because there were more boys' teams typically than girls' teams.

Now of course, we talked about the inherent risks of that. And someone accepts the risk when they participate in sports, any sport, but the key is to try to make it as safe as possible. But also to make it fair as possible.

So when we looked at this bill, we were looking at what was happening in our secondary, in our K-12 and higher ed. This bill was targeted mainly toward our secondary school age children. Children under that age typically play sports together. Most of you have, maybe had kids and played so had them play soccer on co-ed teams. Not an issue. Most of those kids are about the same size, same physique, not a big problem. However, when they reach puberty, that's when things change.

Now you can look at internal and external characteristics, but there are differences. We're not trying to be unequal according to the law. We're just trying to say that there are differences. The ability to play sports is still there, it's just a matter of what team they play on.

So this was targeted toward secondary school. That's where there were big differences. Anyone that's seen kids from middle school to high school, is a big variety in how, to what their habitus is. Some are tall, some are short, some

are heavy, some are thin, some have different abilities. Well, that's where they compete.

Once they get out of high school, on the college level, the NCAA has different rules. It also includes that they also if they are gender, trans- transgender female, they have to have hormone levels taken for a year before they're able to participate. So there are regulations in that. We wanted to stay away from that we were just dealing with secondary school. That's where the differences in the safety was. SSAC didn't have a big issue about it. They said, "We follow Title IX, we'll do what you tell us."

That's pretty much what we were told. They were hand's distance, staying away. So we looked at what is the gender, the birth certificate is something that they have to use to enter school. That would be their birth gender. If they did not present that, then they would have to have a certi- some certification from their physician saying what gender they were at birth. Doesn't mean they're going to be sexually assaulted, as some people are claiming. Mostly pediatri- pediatricians see these people. I've seen younger girls, I've seen younger boys when I was in training. Most of them aren't a big problem. Most of us gentlemen here have been through exams, especially of the genitalia when we did sports physicals. Anyone who's done hernia exams had to do that. There was not a problem there. And I didn't see any big outcry on that.

If someone had, was it to say a transgender female that had corrective surgery, obviously, someone performed that surgery, and could attest to what the gender was of that person. And you don't even need a physical exam to do that. You can do just the karyotype. There are a number of ways. Blood work, buccal smear, whatever, tells what their gender is. Very easy, non in- relatively non-invasive. So that's not a big issue. All these things that were proposed, that we're going to be torturing these kids and everything. That's not a big problem. It shouldn't be happening.

But we do want to make sure they're in the right part. We don't want to have an unfair advantage. I saw on the news the other day, they were showing, I think it was in Indiana, a girls' basketball team with a transgender girl that was about six foot six, taller than me, playing against all these young girls that were about a foot and a half shorter. I

mean, that is not a very fair advantage. So what this is trying to do is prevent problems coming here.

We have a policy in place. It says these kids can still play if they choose to. Now, if they don't want to participate in interscholastic sports, they don't have to have anything else further done to them. That's strictly voluntary. It's just giving a more fair advantage to them.

It also has nothing to do with locker rooms. It has nothing, you know, when they mentioned Fourth Circuit Court, all that had to do with bathrooms. That was an opinion on bathrooms. Supreme Court hasn't decided anything about locker rooms or sports. That has nothing to do with this bill. Doesn't apply. Maybe it will. As I mentioned, there's legislation in the U.S. Congress, both the House and the Senate, dealing with the same problem.

But until something like that supersedes what we do, it's up to us to decide where we want to go with it. So for the safety, the enjoyment of our kids, and also, I would also say, the emotional status of our students, it goes both ways. Kids that denied the prop, the ability to obtain a scholarship to college, or to be able to participate in an, in a state event or a national event because, uh, maybe some unfair competitive advantage from previous things. Those kids suffer too. So it's not just one sided, and there's a, we're not trying to discrim- we're just saying, if that's what your gender is, that's what your ability would probably be more appropriate for. That's what this bill tends to. So Mr. Speaker, I would recommend passage of this bill.

Speaker:

[04:26:27](#)

The question before the House is shall the bill pass. Those in favor of pass the bill will vote aye. Those opposed will vote no. The clerk will prepare the machine.

Has every member voted? Gentleman of the 58th, your vote's not registered. [inaudible 04:27:04] Gentleman wishes to be recorded as having voted in the affirmative.

Clerk will please close the machine and ascertain the result on that question. There were 78 ayes, 20 nays, and two members absent who are not voting. The majority of members having voted in the affirmative, the chair declares the bill passed. The clerk will please report the title.

Clerk: [04:27:25](#) Committee substitute [inaudible 04:27:28] 3293, relating to single-sex participation in interscholastic athletic events.

Speaker: [04:27:34](#) Are there amendments to the title? If not, the title as read by the clerk will be and remains the title of the bill. For what purpose does Gentleman from the 46th seek recognition?

Del. Burkhammer: [04:27:43](#) Thank you, Mr. Speaker. I move that this bill be effective from passage.

Speaker: [04:27:50](#) Let's finish the title amendment first. If there are no, if, if, are there amendments to the title? If not the title as read by the clerk will be and remain the title of the bill.

The Gentleman from the 46th, Delegate Burkhammer, moves that the bill be made effective from passage. The question before the House is the motion that the bill be made effective from passage. Those in favor of the motion will vote aye, those opposed will vote no. The clerk will prepare the machine.

Has every member voted? If so, the clerk will close the machine and ascertain the result on that question. There were 79 ayes, 19 nays, and two members absent and not voting. Two thirds of members having voted in the affirmative, the chair declares the bill effective from passage. The clerk will please report the action of the House to the Senate. Next bill on third reading.

EXHIBIT D

West Virginia Senate Education Committee Discussion of H.B. 3293

April 1, 2021

- Counsel: [05:42](#) Thank you Madam Chair. Um, House Bill 3293 as passed by the house requires each county school district to confirm that the sex on the birth certificate of every student participating in an SSAC event is a student's sex at the time of birth. If there is no original birth certificate, the student must provide a signed physician statement, and requires the SSAC to check for the county boards that every student is competing according to biological sex. The proposed committee amendment strikes out everything after the enacting clause and provides that the following be added to a new section, Section 18-2-25d. And, um, it adds legislative findings regarding the state's important government interest in ensuring equal athletic opportunity for biological females. Um, it provides definitions for biological sex, female and male. It requires all public secondary schools and public schools of higher education to designate teams according to biological sex using the male, men or boys, female, women or girls, and co-ed classifications, and, um, provides a cause of action for individuals and schools aggrieved and harmed by a violation of this section.
- Chairwoman Rucker: [06:57](#) Thank you Counsel. Are there questions for Counsel? Senator from Harrison.
- Senator Romano: [07:06](#) Madam Chair-
- Chairwoman Rucker: [07:06](#) Yeah.
- Senator Romano: [07:07](#) . . . um, who is available to speak on this issue today?
- Chairwoman Rucker: [07:11](#) So we have four, um, speakers that have volunteered to speak on this issue, um, at the appropriate time we can call them forward. Do you have any questions for Counsel?
- Senator Romano: [07:23](#) Well, I, I wanted to know the names. It will, it will affect my questions. Counsel, so if they can give the names and who they represent.
- Chairwoman Rucker: [07:29](#) We have Dr. Gilbert Goliath. We have Sissy Costner Boone. We have Chase Strangio, and we have Sydney Mc-

McEl- McElroy. I, I am sorry if I mispronounced anybody's name. Sorry.

Senator Romano: [07:42](#) So at least we are doing it in committee, do, do you know who they rep-

Chairwoman Rucker: [07:44](#) And I also see Sarah Stewart up there.

Senator Romano: [07:47](#) Do, do you know who they represent?

Chairwoman Rucker: [07:49](#) Um, I don't have all of that with me. I know, um, one of these individuals is a pediatrician. We have someone who's a deputy director for transgender science with the ACLU. Um, I believe someone is from Marshall, and I think, uh, we have a parent.

Senator Romano: [08:07](#) Okay. Cou- I do have some questions for Counsel. Thank you.

Chairwoman Rucker: [08:09](#) Okay. Uh, Senator Romano is recognized for questions to Counsel.

Senator Romano: [08:13](#) Counsel, I'm, I'm a little concerned about the difference between the original bills that came over from the House and the committee strike and insert or amendment, whatever we're calling it. The, the, the bill from the House as I read it requires that the board of education confirm the biological sex of the student prior to allowing them to participate in, in sports, correct?

Counsel: [08:35](#) Yes.

Senator Romano: [08:36](#) And it did not allow a parent or another school to challenge the biological sex of the student had, that had been so, um, um, so approved by the school board. In other words, there wasn't an outside challenge that students, uh, um, biological sex, is that correct?

Counsel: [09:01](#) No, not in that bill.

Senator Romano: [09:03](#) In the House bill. But now the, the, the amendment is, I think it's called on this—is it a strike and insert or amendment?

Counsel: [09:13](#) Both.

Senator Romano: [09:14](#) Same thing?

Counsel: [09:14](#) There's a strike and insert.

Senator Romano: [09:14](#) Okay.

Counsel: [09:14](#) Strike and insert amendment.

Senator Romano: [09:16](#) It replaces everything, I just want to be sure.

Counsel: [09:18](#) Yes.

Senator Romano: [09:18](#) The strike and insert allows, uh, anybody to challenge the biological sex of a student playing sports in our secondary school system.

Counsel: [09:31](#) Um, I don't think that the language allows anybody, um, line 54 says, any individual aggrieved by a violation of this section may bring an action against the county board of education. So I think the purpose here is if there's, um, a biological female that has, you know, lost the state championship to a biological male, that is the kind of person that could bring, um, an action.

Senator Romano: [09:56](#) Sure. But that's going to be anybody. Take it from a lawyer, anybody can be aggrieved. And I mean, I can state an, I can state an, an aggrievement sitting here. I'm just, I'm just saying anybody can be aggrieved. It really opens it up though to individuals, correct?

Counsel: [10:10](#) Y- you still would have the standing requirement and you would still have to show harm, um, you would still have to show that it's your particular interest, um, that is being protected by this bill.

Senator Romano: [10:21](#) Sure. That case is already in court though. It's already going to be a matter of public record, it's already going to be in front of the public, isn't it in order for those issues to be decided?

Counsel: [10:30](#) Yes.

Senator Romano: [10:31](#) Okay. That's my issue with the, the whole thing, and, and I'm sure I'm going to have a chance to get into it here in a second, but, uh, um, so why the differences, do you have, do you have any idea what the change, what motivated the

change? Let me ask you this, are we aware of any transgender student playing sports on a team that is opposite their biological birth?

Counsel: [10:54](#)

No, I'm not aware.

Senator Romano: [10:55](#)

Okay. Do, do you know why the change in the bill from the House bill, 'cause it really risks the bill going back. I mean, we could not get any bill if we allow this change, right?

Counsel: [11:05](#)

I, I think there was some concern on the burden that you're imposing on these county boards to have to check every single athlete that wants to participate. Um, and-

Senator Romano: [11:17](#)

Go ahead. I'm sorry. I didn't mean to interrupt.

Counsel: [11:17](#)

Sorry. Um, and also not every student is going to have access to a birth certificate. So here you are asking the student to establish their sex based on birth certificate, um, and there are lots of situations in which a student doesn't have a birth certificate, and if they don't have one that bill requires them to then go to a doctor and subject themselves to, um, a physical examination.

Senator Romano: [11:44](#)

Well, every child, every student is subject, and correct me if I'm wrong, I'm asking you the question. Isn't every child subject to a physical examination before they can play sports in, in our secondary school system?

Counsel: [11:55](#)

Yes. But an examination for this purpose would likely exceed the scope of a typical examination. Um, because it-

Senator Romano: [12:01](#)

What makes you say, what do you base that on?

Counsel: [12:03](#)

Based on the original language in the bill which asks to check basically, make the decision based on the, the students, you know, reproductive systems and genitalia.

Senator Romano: [12:14](#)

No, no. I'm asking you, what, what makes you think that the physical e-exam would be any more invasive? You ever heard of, and I'm just asking you, is that from personal experience, or do you have something that tells you that it's more invasive 'cause I've had them, I've played sports, and trust me, they knew what gender I was when I left that doctor's office. I'm, I'm just wondering if you got some information that I don't.

Counsel: [12:34](#) Well, I don't want to speak on the experience in West Virginia. I do know what my personal experience has been as an athlete in another state, and I just don't know if that would be-

Senator Romano: [12:34](#) Sure.

Counsel: [12:34](#) . . . relevant.

Senator Romano: [12:45](#) Sure. Okay. But in this state, I mean, at least as far as I know, and I'd be interested to see if any of our speakers can speak to it. You know, I, I would, I would almost presume that the physical exam that you're required to undergo would confirm whether you were a male or female, but I, I could be wrong. But, uh, thank you counsel, good job. I'll at the appropriate time, uh, Madam Chair.

Chairwoman Rucker: [13:07](#) Uh, sure. At the appropriate time. Are there any other questions to Counsel? It looks like the appropriate time is now. Senator, um, from Harrison, uh, do you have someone you'd like to s- call forward?

Senator Romano: [13:25](#) You know, based on, on your-

Chairwoman Rucker: [13:26](#) List?

Senator Romano: [13:27](#) . . . sheet, I really don't have anybody. I, I would ask anybody that could speak to, um, whether or not, uh, there was sufficient, um, examination that the school board, that if somebody did not have a birth certificate so reflecting their gender, that through the routine examination of every athlete would be able to cover that. Is there anybody that's-

Chairwoman Rucker: [13:50](#) Mm-hmm (affirmative).

Senator Romano: [13:51](#) . . . willing to speak to that issue?

Chairwoman Rucker: [13:51](#) Pretty specific question there. (laughs)

Senator Romano: [13:51](#) What's that?

Chairwoman Rucker: [13:55](#) Pretty specific question there.

Senator Romano: [13:57](#) Well, it's, it's my pretty specific concern.

Chairwoman Rucker: [13:59](#) Um, I, I know, um, we have some, oh, a couple of volunteers. Okay. Um, sorry, I do not know your names. Um, is one of you a doctor? Okay. Could you please unmute yourself?

Dr. Sydney McElroy: [14:17](#) I am a family doctor.

Chairwoman Rucker: [14:19](#) Oh, okay. Um, well, so may, can you, we'll start with you ma'am, what is your name?

Dr. Sydney McElroy: [14:28](#) Hi, I'm Dr. Sydney McElroy. I'm a family physician with Marshall Health in Huntington.

Chairwoman Rucker: [14:34](#) Okay, thank you.

Dr. Sydney McElroy: [14:34](#) And-

Chairwoman Rucker: [14:34](#) Thank you for-

Dr. Sydney McElroy: [14:34](#) Yes.

Chairwoman Rucker: [14:37](#) . . . identifying yourself. Um, do you mind raising your right hand? We swear in all of our testimonies here.

Dr. Sydney McElroy: [14:42](#) Sure.

Chairwoman Rucker: [14:42](#) Please raise your right hand. Do you promise to tell the truth, the whole truth and nothing but the truth so help you God?

Dr. Sydney McElroy: [14:48](#) I do.

Chairwoman Rucker: [14:49](#) Thank you so much for joining us. Um, Senator from Harrison.

Senator Romano: [14:53](#) Thank you. Thank you Doctor for volunteering here. And, and Doctor, what, what I'm trying to determine, I don't know if, if you probably haven't had a chance to see these two bills we're discussing. One bill places, and I'm going to use the word burden, the burden on the school system to confirm the biological gender of the child, either through a birth certificate, and again, the other way that I always thought was relevant was the routine physical exam that every athlete's given before they participate. And the second bill, which essentially allows anybody to challenge

the biological gender of a child playing sports. I, I wondered if, can you speak to that?

Dr. Sydney McElroy: [15:34](#)

Sure. I, I have done hundreds of sports physicals in my career as a family physician, and I can tell you that while I'm imagining what you referenced earlier in a pre-participation sports physical, um, that you went through being a, sort of an examination of your genitalia. I, I, that was probably a check for an inguinal hernia, which has been part of sports physicals for some time, although more recent evidence has actually called into question if we even need to do that. But if we're talking about a cisgendered female or the, a patient that has a vagina, uh, a labia, we would not examine that as part of a pre-participation sports physical, that's not part of the routine examination. Um, and the original language of the bill that I found very concerning that it did not just say external reproductive anatomy, it said internal and external reproductive anatomy.

In order to prove internal reproductive anatomy for someone with a uterus and ovaries, we would have to at the very least place the patient in the lithotomy position, which is when we have them in stirrups, you've probably seen that, if someone's giving birth in a movie or something. Place her in stirrups and do a speculum exam, so use a, a device to widen the vaginal canal and see the bottom of the uterus, the cervix. And if you couldn't do that, then the next option would be some sort of radiological exam, whether that be a trans vaginal ultrasound where we insert a probe into the vagina or a CAT scan or an MRI which would expose them to radiation. So no, that, it would not be part of a standard pre-participation sports physical, or I should say, frankly, any physical exam that a child would undergo as part, I mean, young girls do not have pelvic exams done just so we can look for a uterus, that would be malpractice if we did that.

Senator Romano: [17:29](#)

I can't-

Dr. Sydney McElroy: [17:29](#)

This would not be a standard exam.

Senator Romano: [17:31](#)

I can't imagine it would have to go that in depth, but that's, me, believe me, I'm trying to, what, what I want to avoid is, I mean, tell me this, and, and you're family physician.

Dr. Sydney McElroy: [17:31](#)

Yes.

Senator Romano: [17:40](#)

What psychological effect do you think it would have on a young teenage boy or a young teenage girl to get singled out publicly as somebody who was, you know, playing a sport for which they're, um, they've crossed over from a gender perspective. I mean, what, can you tell me as a physician, what, what effect do you think that would have on them psychologically to have that kind of, of scrutiny placed upon them in their school and in their community?

Dr. Sydney McElroy: [18:09](#)

Well, I think that if, if, are you referencing the psychological effect of a transgender athlete being harassed or, or called out by members of the community?

Senator Romano: [18:19](#)

You know, you know, actually I'm not.

Dr. Sydney McElroy: [18:21](#)

Is that what you're asking me?

Senator Romano: [18:22](#)

I'm, I'm thinking back through my school years, and I'm thinking back to, uh, girls that might've been, um, you know, um, you know, built more masculine in nature than, than other girls and, and they were good athletes. And, and, you know, I'm, I'm wondering, and they're females. I mean, there was, at least when I grew up, there was never any doubt they were females, but I'm wondering what would happen if, if they were challenged because somebody felt aggrieved. You know, I w- I wonder if their-

Dr. Sydney McElroy: [18:50](#)

Sure.

Senator Romano: [18:51](#)

. . . if their gender was challenged, what effect do you think that would have on them psychologically?

Dr. Sydney McElroy: [18:55](#)

Uh, I, I think, I think that what you're referencing is exactly a lot of the problem with this. I think that there are so many variations in body type and size and all of those things, especially throughout the middle school, high school years, that to unnecessarily call attention to those differences, whether the student is transgender or cisgender as in the example your giving, would absolutely be embarrassing, uh, humiliating, would put that student through a, a terrible time. I mean, yes, that could be psychologically, and, and especially when you're talking about transgender students, these are kids that already 50% of them are going to

attempt suicide in their life. So they're already under undue stress and pressure.

Um, you know, they're six times more likely to have anxiety and depression. They are 84% of them are, are, you know, afraid of attending school because they feel unsafe there. So, yeah, I think that that's the whole problem is we're trying to define something, um, that could cause great harm instead of just allowing for natural differences between kids to let them all play, let them enjoy the benefits of sports. I think what you're speaking to is the, the problem with the bill in either form-

Senator Romano: [20:06](#)

And, and just to be clear-

Dr. Sydney McElroy: [20:06](#)

. . . it's damaging.

Senator Romano: [20:07](#)

I'm sorry. Go ahead doctor.

Dr. Sydney McElroy: [20:09](#)

It, it could be damaging to children either way. It could be absolutely psychologically damaging to children.

Senator Romano: [20:14](#)

And, and we're talking to, I mean, I'm not even getting to the transgender kids who already have tremendous psychological issues they're dealing with. I'm just talking about, you know, a young girl who, who maybe grew up a little faster than everybody else, maybe she's a little bigger than everybody else. I went to school with them. They were, you know, a couple of females in my classes I was afraid of, but, but they were females. But it would have been nothing to challenge their sexual, their gender, you know, if I wanted to, to challenge them because they were, you know, the star of the basketball team, or they were the, you know, the, the star of the soccer team, it would be nothing, and, and that would be devastating to a child that wasn't even having trans- transgender issues, that would just be a regular child, right?

Dr. Sydney McElroy: [20:55](#)

Yes. Yes. I agree.

Senator Romano: [20:56](#)

Well, let me see if anybody else has any other questions for you doctor. Thank you for coming on today.

Dr. Sydney McElroy: [21:01](#)

Oh, no problem. Thank you.

Chairwoman Rucker: [21:03](#) Thank you. Are there any other questions for our guest? It looks like not. Thank you so much for volunteering to come on today. And I know there was, uh, another light on, I believe, it, um, sir, could you identify yourself before the committee? Yes, sir. We, we can't hear you. Can you unmute yourself? Hmm. Sorry. We still hear no sound. Okay, let me look. Um, I, I don't know whether that was, um, Dr. Gilbert Goliath. I'm sorry, there is no sound at all. Yes, um, I, sir, we can't hear you. I don't know if you could try to work out your issue and we'll try to recognize you in a couple of minutes. Thank you.

Dr. Gilbert Goliath: [22:18](#) Okay.

Chairwoman Rucker: [22:18](#) Oh, there you are.

Dr. Gilbert Goliath: [22:20](#) Uh, you got me?

Chairwoman Rucker: [22:21](#) We can hear you now.

Dr. Gilbert Goliath: [22:23](#) Okay, great. Yeah, no, I concur with what Dr. McElroy said, uh, the psychological issues.

Chairwoman Rucker: [22:29](#) Sir, sir, hold on.

Dr. Gilbert Goliath: [22:30](#) Oh, I'm sorry.

Chairwoman Rucker: [22:31](#) Please identify yourself for the committee.

Dr. Gilbert Goliath: [22:33](#) Oh, my, my name is Gilbert Goliath. I'm a pediatrician.

Chairwoman Rucker: [22:37](#) Okay. Thank you. Would you please raise your right hand? Do you promise to tell the truth, the whole truth and nothing but the truth so help you God?

Dr. Gilbert Goliath: [22:45](#) Yes, I do.

Chairwoman Rucker: [22:46](#) Thank you so much. So now you may please go ahead and give us your thoughts.

Dr. Gilbert Goliath: [22:50](#) Okay. Sorry about that. So yes, I concur with what Dr. McElroy said about the psychological issues that these, uh, young people would go through if they were in a situation where the gender was questioned. And back to as far as the physical exam is, she was exactly right about, we don't do an intensive physical exam during this pre- uh, sports

participation, because with the males it's very easy to determine the sex, but a little bit more difficult for female, which we don't look at that part of the body, to the genitalia of the female, we look at the external vagina, but that's about the extent of it. So, as she also mentioned about having radiological studies that would need to be performed to prove the gender identity of that young person, uh, that's involved in this, if they plan on participating in a sport.

Chairwoman Rucker: [23:43](#)

Okay. Thank you. Um, I believe that the Senator from Harrison might want to ask you a few questions if that's okay. Senator-

Dr. Gilbert Goliath: [23:43](#)

Sure.

Chairwoman Rucker: [23:51](#)

. . . Senator from Harrison.

Senator Romano: [23:53](#)

Thank you. Thank you Madam Chair. Um, and I'm sorry, could you identify yourself for me again? I apologize.

Dr. Gilbert Goliath: [23:58](#)

Uh, Dr. Gilbert Goliath, pediatrician.

Senator Romano: [24:01](#)

Uh, thank you doctor, and thank you for being here. Where, where are you located?

Dr. Gilbert Goliath: [24:05](#)

In Char- South Charleston, West Virginia.

Senator Romano: [24:07](#)

Okay. My, my sister-in-law's a pediatrician, so I know you guys all hang together, but, uh, um, I, I'm really concerned, and, and I want you to speak to this, there's two bills before us. The one that came over from the House, which simply says that the board of education will, you know, confirm the gender through a birth certificate, and if there's not a birth certificate, take other steps necessary. The one that we're considering that we call a, uh, committee substitute or a strike and insert, um, allows anybody to challenge the gender of a student who's, uh, playing in a single-sex sport.

In other words, if you're a girls basketball team and you got somebody on that team that's doing really well, but they, you know, might be, you know, reasonably questioned, anybody could bring a suit and challenge the gender of that child. Can, as a pediatrician, can, can you speak to what we're doing to our children by, um, allowing them to be subject to such a challenge, uh, really from, you know,

supposedly anybody it's aggrieved, which really means anybody could bring that type of action to try to challenge that child's gender. What would that do to that child's, um, psychological wellbeing?

Dr. Gilbert Goliath: [25:22](#) It can be psychologically devastating, uh, and that leads into many of the aspects, uh, leading with depression, anxiety, and just other mental health issues, because it's, being in this state, it's a small community and everyone knows everything, and that can lead to the, uh, young person being ostracized not only from community, but even family members. So I think it takes a heavy, psychological toll on the individual that has gone through the situation.

Senator Romano: [25:52](#) And, and would children subjected to that kind of, uh, scrutiny and distress, would, would they be, uh, more likely to have psychological issues and, and, you know, possibly leading to, you know, uh, um, depression and other, you know, psychological maladies, maybe even suicide?

Dr. Gilbert Goliath: [26:11](#) Oh, of course, even kids who are not participating in sports, if they have their gender identity questioned, that itself without even being in part, in the sports, it, it hampers a child's psychological, uh, whole, uh, approach.

Senator Romano: [26:25](#) And, and, and doctor, if we had, if we had a choice, I, I hate, you know, one of these bill is going to pass. You know, I don't, unfortunately, I, I don't have the, the power to, to, we've never had a case of, I think a, a, the wrong gender playing the wrong sport, but we're going to pass this bill today, I think. Um, but if, if you had a choice between a bill where it was left to the, to the schools to confirm the gender of a child playing in a single, uh, gender sport, or you allow the public at large to be able to challenge the gender of a child, uh, which one would you choose?

Dr. Gilbert Goliath: [27:03](#) Well, the one thing is that you would have to want to anatomically identify the gender of the child to make the correct decision. So that's hard to, if, how would the general public be able to do that as opposed to the school, but either, with either one you would still need some type of examination-

Senator Romano: [27:19](#) The schools are going to look to-

Dr. Gilbert Goliath: [27:21](#) [inaudible 00:27:21]

Senator Romano: [27:21](#) Yeah. The schools are going to look to birth certificates, and it really doesn't say what happens if there's any doubt beyond that. But the, the other bill allows the public to challenge it if they're aggrieved in any way by the, the child who they suspect is not of the correct gender.

Dr. Gilbert Goliath: [27:37](#) Then you would have to go with the birth certificate at the present time.

Senator Romano: [27:41](#) Yeah. And, and that's what the first bill does with the school, but the second one allows a, a court suit to be filed, a public court suit that would name the child, I presume, so.

Dr. Gilbert Goliath: [27:41](#) Right.

Senator Romano: [27:50](#) So all right doctor. Well, thank you.

Dr. Gilbert Goliath: [27:55](#) All right. You're welcome.

Chairwoman Rucker: [28:00](#) Thank you. Um, the Senator from Boone.

Senator Stollings: [28:01](#) Thank you Madam Chairman. Uh, Dr. Goliath, uh, we've shared a lot of patients over the years, uh, it's, it's good to see you. (laughs)

Dr. Gilbert Goliath: [28:08](#) Good to see you.

Senator Stollings: [28:10](#) Uh, again, we've talked about the mental health, and then in some cases also there's hormonal regulation in some of these, uh, children. These hormonal regulations are not necessarily safe, is that correct or?

Dr. Gilbert Goliath: [28:27](#) Yes, that's right.

Senator Stollings: [28:29](#) Do you, are you aware of just how big an issue this is in West Virginia, uh?

Dr. Gilbert Goliath: [28:36](#) I have personally not had any patients myself that have undergone through this situation, but I have been reading a lot about, in other places that they've been dealing with this.

Senator Stollings: [28:51](#) And again, are you, are you, do you think you're, and the, uh, other physician, do you think you are in a, uh, in the

majority or the minority of the way, uh, healthcare providers, uh, think about this issue?

Dr. Gilbert Goliath: [29:06](#)

I would tend to believe I'm in the majority.

Senator Stollings: [29:10](#)

Yeah. And do you know of any, any associations that have come out either for or against this as far as a medical, uh, associations?

Dr. Gilbert Goliath: [29:21](#)

Well, as far as guidelines, of course, American Academy of Pediatrics they said we should support transgender individuals in all aspects of, uh, medical health and wellbeing, even in the area of sports. Uh, but that's not a guideline, that's just their opinion. Uh, I know personally people in both sides that feel that male is male when it comes to interacting with females because of the, just the difference in the body characteristics, the, uh, metabolism, the bone structure and the body mass. So that makes the difference regardless of what the transgender person feels they are.

Senator Stollings: [30:00](#)

Okay. Thank you. Thank you, Madam Chairman.

Chairwoman Rucker: [30:03](#)

Thank you Senator. Um, senior Senator from the floor.

Senator Tarr: [30:06](#)

Thank you Madam Chair. Uh, can I have a question to counsel please?

Chairwoman Rucker: [30:10](#)

Okay. Um, one second. Are there any other questions for Dr. Goliath? Thank you. Um, okay. Thank you so much doctor, we really appreciate you being available for the committee.

Dr. Gilbert Goliath: [30:25](#)

Thank you.

Chairwoman Rucker: [30:29](#)

Go ahead senior Senator from the floor.

Senator Tarr: [30:31](#)

Thank you Madam Chair. Counsel, in the section that lands on cause of action I think that some of the, that, uh, senators having con- some concern over the physicians. There's two parts to that, um, one says any individual, and then after that, number two, it's line 58, it says, any school that suffers any direct or indirect harm as a result of violation of this section. And so if, um, would you anticipate that if, if any individual I can see where if, if somebody is, um, uh, an aggrieved parent and they're

pushing because their child lost and maybe it's by, you know, a millisecond on a race, as opposed to somebody's lap somebody, you know, that's just has, obviously, obvious physical differences.

Um, and then on the second part it says, any school that suffers. So any school I imagine would be a much more tempered approach because I can't see a school that would want to risk harming any child, whereas an angry parent I could see possibly just, I used to coach, uh, tee-ball and little league baseball and that kind of stuff. So I know there's parents that will rip your head off, or call a strike wrong. Um, the, what my question is, is that on the, any individual piece of that, is there a way that, that we can change that to protect the child for one, or does the, any school part, uh, protect that child enough from, from having an accusation that would be false and just, um, something that is, um, adversarial?

Counsel: [32:09](#) I think maybe for the, any individual, you could probably use language that specifies that it is a student athlete, um, that was directly impacted. Um, I don't know if just relying on schools, um, would be sufficient.

Senator Tarr: [32:31](#) So my concern is not, and I think I know where the conversations going about, you know, if, if we're going to take out, um, a cause of action piece. But my concern is, you know, I've, I've got to read a few emails of some of the females where states that do have this problem now going on, where we have males that are participating in female sports, and there's some real harm and real reason to be aggrieved by these individuals. And so taking out the, I assume this is the teeth of the bill, it's the only place I see any teeth. So if we, if, if that is, that whole section were to be removed, is there anything that other than just saying, hey, we hope you don't do this, that this bill accomplishes?

Counsel: [33:12](#) It would basically leave it as status quo if you don't provide a, a cause of action.

Senator Tarr: [33:17](#) Okay. Thank you.

Chairwoman Rucker: [33:21](#) Thank you Senator. Um, Senator from Wetzel do you have questions for counsel?

Senator Clements: [33:25](#) No. Uh, I think I've just basically got it answered, but it says any individual aggrieved, does that, would that prevent or allow just any fan in the stands to file an action?

Counsel: [33:41](#) My interpretation would be that it's an individual that's directly aggrieved by a violation, and directly meaning that, it is your interest that this bill intends to protect, and here it's clear that the interest is biological females.

Senator Clements: [33:57](#) Well, I'm aggrieved 'cause my team lost.

Counsel: [34:01](#) Well, then you might fall under the school, um, provision.

Senator Clements: [34:06](#) Okay. That's, I'm just curious, it's not doesn't open it up to just anybody to come in then and file some type of action?

Counsel: [34:13](#) No.

Senator Clements: [34:13](#) Okay. Thank you.

Chairwoman Rucker: [34:17](#) Thank you. Um, Senator Romano, questions for counsel?

Senator Clements: [34:23](#) Madam Chair. Counsel, did, did we look at the WVSSAC's policy with regard to challenges such as we're contemplating in this bill?

Counsel: [34:34](#) I did talk to someone from WVSSAC and-

Senator Clements: [34:38](#) But did you look at the policy?

Counsel: [34:39](#) Yes.

Senator Clements: [34:39](#) Okay.

Counsel: [34:41](#) So the policy is basically just, you wait until there is a, an issue, from my understanding when also talking to the WVSSAC about their policy.

Senator Clements: [34:52](#) Well, to me this policy achieves what I think we were looking for, um, you know, that the school makes a determination of the high school student's eligibility including gender, and then it says, any member school may appeal the eligibility of a changed gender student on the grounds of a student's participation in interscholastic athletics would adversely affect competitive equity or safety of teammates or opposing players, such an appeals

heard by the WVSSAC board of directors, which is principals.

The identity of the student shall remain confidential in all discussions, documentation shall remain confidential. And the, and, and then it goes on with some other factors to be considered. I mean, it's, it's more of an equity determination, and maybe that's not what the intent of this bill is, but I think those first two paragraphs, you know, if, if we insist on having this, uh, this, um, comp sub or strike and insert that, you know, we, we allow this to remain in the schools and remain confidential, that would at least protect children from, from unwarranted accusations that are going to destroy their lives. It, was that considered at all by the, by the committee in, in creating this sub committee substitute?

Counsel: [36:06](#) Yes. And I think that's actually kind of why this bill changed from the first bill, because it seemed more likely that a student would be subjected to an invasive physical examination just because there might be more students who don't have birth certificates or students from c- you know, from other states coming in that don't have a birth certificate. Um, it just seemed more likely that a student would have to end up going to a doctor just to get clearance to play a sport.

Senator Clements: [36:37](#) Well, but, but-

Counsel: [36:38](#) This allows everyone-

Senator Clements: [36:39](#) . . . if we-

Counsel: [36:40](#) . . . to compete right now, and basically in a way affirms the WVSSAC policy, um, and doesn't really, uh, change the status quo, except that it expressly provides a, a cause of action for [crosstalk 00:36:54]

Senator Clements: [36:55](#) Let me ask you a question. I'm just asking you individually, and you don't have to answer if you're uncomfortable. But what would you rather do to be one of a class that because you don't have a birth certificate that you get a physical examination like every other kid does, or because somebody singled you out because they saw you play a great game last week and your hair's a little shorter, your shoulders are a little broadened, they accuse you of

being a, a boy, and therefore you're publicly exposed as, you know, someone whose gender is being challenged publicly. What would you prefer?

Counsel: [37:27](#)

I don't think my preference is relevant. (laughs)

Senator Clements: [37:29](#)

Well, that's a good an- I guess that's a palsy question, but I mean, you know, I, I mean, I just, I just see it to be vastly different in, in a public exposure, a public outing of, of somebody who, who's probably a girl and is going to get, you know, just, I'm really shocked that we want to do this. I really am. Thank you.

Chairwoman Rucker: [37:53](#)

Um, Senator from Mason.

Senator Grady: [37:58](#)

Um, so I'm listening to my, um, colleague from Harrison. Um, I have some of the same concerns when it comes to that, is the, the, the last thing we want to do is to, um, embarrass or single out, you know, a young lady. Um, and, and so, you know, looking at the cause of action, my question just is, if we take out where it says any individual aggrieved by a violation, um, what if it was, if the school, so we're talking about SSAC, we're talking about NCAA, we're talking about playing for a school. So the school that that student plays for, if they could, um, you know, if they could seek, let's see, if they would allege a violation, um, with another school board.

Counsel: [38:46](#)

Mm-hmm (affirmative).

Senator Grady: [38:46](#)

In your legal opinion, would that keep it more discreet and more not public, meaning, it wouldn't release the name of the, the individual athlete and it would just be between school boards, um, because that's the main concern is not releasing the name of these students. Um, and, you know, would that take care of that problem if, if it was from school to school or, in your opinion?

Counsel: [39:14](#)

I think it would definitely address that problem a little bit or mitigate that issue. Um, I don't know if there's any other lawyers in the room, but I'm not sure if necessarily a, an underage child needs to have their name on a lawsuit. Um, I don't know if they can be identified as Jane Doe in a lawsuit instead of their name. That might be relevant. Um.

- Senator Grady: [39:41](#) Okay. Um, so, uh, I'll see if anybody else has any other questions and I'll think on this for a few. Thank you so much.
- Chairwoman Rucker: [39:50](#) Thank you. Senator, uh, from Brooke. Sorry. Um, you guys have switched seats. Senator from Morgan.
- Senator Trump: [40:01](#) Thank you Madam Chairman. I, I can weigh in a little bit on this because I know that when, uh, it's probably about the last 20 or 25 years, uh, our Supreme Court has adopted a practice of whenever a case involves, uh, a minor child as a party, uh, and in cases where even, uh, the parties are the adults, but it relates to a private matter involving minor children, they've adopted a practice of using first and last initials to identify the litigants. So you see cases like, uh, AB versus JM, uh, reported all the time. Those are sort of how they report divorce cases now, and the appeals, the appeal decisions in cases where children are removed in a, an abuse or neglect situation from their parents' home, the cases are in re, the children of, you know, AB and JM and that sort of thing.
- Chairwoman Rucker: [41:06](#) Thank you very much, um, appreciate that. Um, Senator from Brooke.
- Senator Weld: [41:11](#) Madam Chair, uh, Counsel, I'm going to go to subsection D. So, saying that a government entity, any licensing or accredited, accrediting organization, or any athletic association or organization shall not entertain a complaint, open an investigation, or take other adverse action against the county board of education for maintaining separate athletics. This is, uh, we might have, I think there's an issue in drafting here, and I'll, I'll walk you through it.
- Counsel: [41:48](#) Okay.
- Senator Weld: [41:49](#) So first being that, if you go up to page two and c(1), this includes higher education, so the NCAA, NAIA, and JCAA. You come down to, now let's go back to sub D on line 51 it says, "or take any other adverse action against the county board of education." So was that, was that subsection meant to only pertain to junior high and, and, and, uh, high schools?
- Counsel: [42:42](#) No, I don't believe so. I think because we are dealing with a situation which we're asking both secondary public

schools and, uh, public higher education to comply with this, I think you would want to be able to protect public higher education from, um, any complaints for complying with this law.

Senator Weld: [43:01](#) So, so if we, even if, if that were changed then to reflect in addition to the county board of education to, and I don't know what proper term we would use. But, so if, if we're, if, if, if middle school and, and high school is, uh, you know, the, the athletic association or conference overseeing them is, how do we have, how would we have jurisdiction over telling the NCAA that they can't open an investigation, or that they can't take adverse action against a, a school?

Counsel: [43:53](#) I, I think because we're dealing specifically with a state law that applies to state institutions.

Senator Weld: [44:01](#) But do we have any jurisdiction at all to tell the NCAA you can't open an investigation against a school, or take any adverse action against a school? I mean, what, what jurisdiction would we have a- a- against them that they can't, that they can't open an investigation per se? And I see that, you know, on the state level, if, if, if it's a high school in West Virginia, we have the WVSSAC, or, I mean, it's, it's a different scenario, but. . .

Counsel: [44:46](#) It is a bit ambiguous, and so now I'm thinking whether this is meant to protect, protect against, you know, another government agency, or, um, anything that is related to the government from bringing an action against a school for doing this, and not necessarily a wholly private organization that's unrelated to government activity.

Senator Weld: [45:21](#) Okay. Thank you. Thank you, Madam Chair.

Chairwoman Rucker: [45:25](#) Thank you. Um, senior Senator from 4th.

Senator Tarr: [45:28](#) Thank you Madam Chair. Counsel. Um, on line 59 on the bill, and this is just, 'cause, uh, maybe this is a legal term, um, just like to have it explained. "Private cause of action," does, is private cause of action a, a certain type of cause of action, or is that just saying that the names are kept out, what does it mean by private?

Counsel: [45:47](#) It means that you as the citizen have, you have the right, this bill is creating a right for you, um, to, um, what's the word? Pursue a civil remedy, I suppose.

Senator Tarr: [46:06](#) Okay. So it just indicates a citizen?

Counsel: [46:10](#) Yeah.

Senator Tarr: [46:10](#) 'Cause that one's under school. I'm just curious, or is it, or is it that it's keeping stuff confidential? That's what I'm trying to just determine between.

Counsel: [46:28](#) Hmm.

Senator Tarr: [46:29](#) It's, it's not a confidentiality thing?

Counsel: [46:30](#) No, it's not.

Senator Tarr: [46:31](#) Okay. That's what I wanted to know. Okay. That's what, that's, that's, that's, that clarifies it enough for me. Thank you.

Chairwoman Rucker: [46:37](#) Thank you Senator. Um, Senator from Wood.

Senator Wood: [46:40](#) Thank you Madam Chairman. Counsel, uh, I'm sure you did a lot of research of schools where, uh, or at least some research, schools where you have males on, on girls teams, would you have, you have read about a lot of that, seen a lot of that, you have fair amount of knowledge. So at halftime when these girls go into the locker rooms and you have boys on the girls teams, do the, do the boys generally go with them, or do they go into a male locker room?

Counsel: [47:13](#) I'm not necessarily sure about, I'm just not really sure about that situation, um, just because this talks about a distinction and, you know, on the playing field and not in the locker rooms.

Senator Wood: [47:25](#) Did you read of any situations where the males went into the bathroom with the girls, the locker room with the girls?

Counsel: [47:34](#) Well, there is a Fourth Circuit case that would be binding on this jurisdiction where it wasn't in a sports situation, but a biological female transitioning to male, so he identifies as male, um, with, wanted to use the males restroom, and basically the county board told him not to, um, and the

court struck that down because they said that gender identity was not substantially related to your interest in protecting students' privacy. Um, but in the sports context, it's different because biological sex is substantially related to athletic outcomes and, um, and competitive sports and, um, contact sports.

- Senator Wood: [48:21](#) Okay. 'Cause I have shared my memory, uh, just recently seeing a grown man on a girls basketball team. I don't know, he's 50, who identifies as a female sitting in the locker room with these girls, this bill would prevent something like that, right? I mean, if you have no males allowed onto a, a female team, they obviously logically couldn't go-
- Counsel: [48:48](#) Well-
- Senator Wood: [48:48](#) . . . into the locker room if they're not on a team, right?
- Counsel: [48:51](#) I see what you're saying, but this bill just speaks not to the privacy issues and entering different lockers-
- Senator Wood: [48:57](#) But by-
- Counsel: [48:58](#) . . . but just competing on the field.
- Senator Wood: [48:59](#) Right.
- Counsel: [49:00](#) Um, and I don't think that we could even speak to the bathroom situation because that is completely different as the Fourth Circuit determined.
- Senator Wood: [49:08](#) But if no boys are on the girls team, obviously they couldn't go into the girl's locker room, am I right?
- Counsel: [49:14](#) If a biological male, um, identified as female and wanted to go into a female bathroom, under the Fourth Circuit, you could, that, that has to be allowed if there's no, um, if that distinction doesn't serve any privacy interest. In other words, if that as- if that individual could still go into the bathroom and privacy would be maintained because there are stalls in there, because there's barriers between the urinals, um, and that's a completely different situation from competition on the field.
- Senator Wood: [49:48](#) Right. Okay. Thank you. Thank you Madam Chair.

Chairwoman Rucker: [49:52](#) Thank you. We are approaching, um, the end of our allotted time. So at this time I'm going to, um, consider a motion by the Vice Chair to recess and for us to come back 10 minutes after Health Committee tonight. Um, thank you all. And our guests who are on virtually, if you want to come back, um, we will send you another Team invite. Uh, Senator from Raleigh.

Vice Chair: [50:20](#) Thank you Madam Chair. I move that we recess until 10 minutes after the Health Committee.

Chairwoman Rucker: [50:29](#) Okay. It just went blank. Um, so the motion is to recess until, um, 10 minutes after floor session and, um, the committees and after Health. All those in favor say, aye.

Speakers: [50:42](#) Aye.

Chairwoman Rucker: [50:44](#) All those opposed say, no.

Speakers: [50:45](#) No.

Chairwoman Rucker: [50:45](#) In the opinion of the chair, the ayes have it. Thank you.
(silence)

EXHIBIT E

West Virginia Senate Education Committee Discussion of H.B. 3293, pt. 2

April 1, 2021

Chairwoman Rucker: [00:10](#)

(silence).

Committee on Senate Education will come to order. We will return to the order of business, which was discussion of, um, House Bill 3293, the proposed, um, strike and insert amendment.

Counsel, will you please explain changes that have been made, um, since we last met.

Counsel: [00:32](#)

Yes, so we have a new proposed strike and insert amendment and it's basically, it's very similar to the last one except that it removes protection for educational institutions against adverse action, um, it adds clarifying language to the cause of action provision, um, and addresses privacy concerns, um, and then it also requires the promulgation of rules pursuant to this section.

Chairwoman Rucker: [01:05](#)

Thank you, counsel. Are there any questions? Is there discussion? Amendments?

I will recognize the Vice Chair Roberts for a motion.

Vice Chair Roberts: [01:26](#)

Madam Chair, I move adoption of the amendment explained by counsel.

Chairwoman Rucker: [01:31](#)

The question is to agree on the language on the amendment as explained by counsel. All those in favor say aye.

Multiple: [01:39](#)

Aye.

Chairwoman Rucker: [01:40](#)

All those opposed say no.

In the opinion of the chair, the ayes have it. I declare the motion adopted. I will recognize the Vice Chair Roberts for another motion.

Vice Chair Roberts: [01:50](#)

Chairwoman Rucker, I move that the committee substitute for House Bill 3293 be reported to the full Senate with the recommendation that it be passed as amended.

Chairwoman Rucker: [02:02](#) The question is on the motion that the committee substitute for House Bill 3293 as amended be reported to the full Senate with the recommendation that it be passed. All those in favor say aye.

Multiple: [02:13](#) Aye.

Chairwoman Rucker: [02:14](#) All those opposed say no.

In the opinion of the chair, the ayes have it. Committee substitute for House Bill 3293 as amended will be recorded. If there is no further business to come before the committee, I will ask the Vice Chair Roberts for a motion.

Vice Chair Roberts: [02:14](#) I move we adjourn.

Chairwoman Rucker: [02:29](#) The question is on adjournment. All those in favor say aye.

Multiple: [02:33](#) Aye.

Chairwoman Rucker: [02:34](#) All those opposed say no.

The ayes have it. Have a good evening.

(silence).

EXHIBIT F

West Virginia Senate Discussion of H.B. 3293

April 8, 2021

- Clerk Cassis: [01:13:45](#) Engrossed Committee Substitute for House Bill 3293 relating to single-sex participation in interscholastic athletic events, third reading of the bill.
- President Blair: [01:13:55](#) Question is on passage of the bill, Senator from Jefferson.
- Senator Rucker: [01:13:58](#) Thank you Mr. Chairman. House Bill 3293 as amended by Senate Education provides legislative findings regarding the state's important government interest in ensuring equal athletic opportunity for biological females. It defines biological sex, female and male. It requires all public secondary schools and state institutions of higher education to designate teams according to biological sex. It prohibits biological males from competing on teams designated for biological females, where selection for such team is based upon competitive skill or the activity involved in a contact sport. Provides a cause of action for students aggrieved and harmed by violation of this section and requires the promulgation of rules. Happy to answer any questions, I urge passage.
- President Blair: [01:14:49](#) Question is on passage of the bill, is there discussion? Senator from Harrison.
- Senator Romano: [01:14:55](#) Thank you Mr. President, will the Senator from Jefferson yield?
- President Blair: [01:14:57](#) Will the Senator yield? Senator yields.
- Senator Romano: [01:15:01](#) Thank you Senator. Senator, you know, I appreciate the changes that were made to the committee's strike and insert, um, after we had some discussion, but I- I did want to kind of ask you a couple questions on what the result of that would be. An indiv- any individual and I-I think it says a student, doesn't it? A minor student or their parent 'cause the- the parent would have to the-the actual, um, challenge of a violation by somebody who may be chan- transgender, um, playing a sport. The-the challenge would come from a student, isn't that correct? I mean a student would be allowed to challenge another player as to whether they're playing in a s- a single-sex sport under the appropriate gender.

- Senator Rucker: [01:16:01](#) I-I don't believe that it specifies it has to be a student and I want to to point out that, um, the State Board of Education and the Higher Education Policy Commission would have to promulgate rules. There is under the cause of action, it does say that a student aggrieved by a violation of this section may bring an action, but I don't think it specifies that a challenge has to be made by a student.
- Senator Romano: [01:16:25](#) I'm going to read it, it says any student aggrieved by a violation of this section may bring an action against a county board of education or state institution of higher education.
- Senator Rucker: [01:16:34](#) Yes, that-that's if there's a violation, um, for not following the state code, but I- were you referring to just challenging whether or not someone was of the right biological?
- Senator Romano: [01:16:47](#) Well let me be clear, my issue is that private individuals can bring an action. It says student, but that would have to come from a parent of a student I presume 'cause most students in secondary education are minors and they would have to have an adult on their behalf represent them.
- Senator Rucker: [01:17:04](#) I-I assume that if they're minors that their parents would have to do it on their behalf.
- Senator Romano: [01:17:09](#) And- and, you know, I- I- again, I appreciate the fact that you've tried to add some confidentiality to this by the student not being identified in the- in the pleading, but if- if a student would be challenged, that student would have to be notified and, you know, some action taken to determine their gender, I presume, would that be accurate?
- Senator Rucker: [01:17:34](#) That would be accurate and that would probably be specified in the rules that are developed by the Board of Education and Higher Education Policy Commission.
- Senator Romano: [01:17:42](#) Well, I'm- I'm sticking with secondary education now 'cause I want to ask you, what effect do you think that would have on a 14, 15, 16 year old girl that might be a tomboy, but a hell of an athlete and- and an opposing, uh, player or parent of an opposing player challenges them or somebody on the same team challenges them because she's the star of the- of the- of the club and- and they want them all, they want that person off of the club. What- what psychological effect do you think that will have on that

child, on that poor girl or poor boy that might be a little bit, you know, not, maybe not, you know, manly enough for somebody and they challenge their- their gender.

Senator Rucker: [01:18:23](#) So, I want to to point out that, um, what we allow for in here is that a student who feels aggrieved by a violation can bring an action against a county board of education or a state institution, not against an individual.

Senator Romano: [01:18:37](#) But- but it's got to involve the individual. I mean, how-how's the county board of education going to defend itself unless it has that individual pulled out, sent to a physician or some other reputable person to determine what their gender is?

Senator Rucker: [01:18:52](#) Well, I'm- I'm not a lawyer, but if the State Board of Education and the Higher Education Policy Commission set rules for implementation and the county board of education or state institution does not follow those rules, then they won't be able to defend themselves. But if they're following the rules, I think they- they would be protected because they're following the rules.

Senator Romano: [01:19:13](#) But- but if that child is identified in any way, if that child is singled out, if nobody else knows but that child, what effect do you think that's going to have on that child's psychological wellbeing?

Senator Rucker: [01:19:25](#) I don't see where we're singling out any particular student and what I do see is that we're defending, um, women's sports for women, for girls, and we're giving an opportunity for our institutions to, um, have that as their policy, as we are told to do because of Title IX.

Senator Romano: [01:19:47](#) Well, let me ask you this, was there any evidence that there had ever been any transgender student play for the, uh, single-sex team opposite what their biological birth record indicated? Did we have one case in West Virginia that you know of?

Senator Rucker: [01:20:05](#) Not that I know of.

Senator Romano: [01:20:06](#) Okay, do- do you not see that- that what we've done here is open up the opportunity for unfair attacks against boys and girls who, if they're a girl, they may be a little too tomboyish, if they're a boy maybe they're a little too

effeminate, but- but they were opening them up for attack from people who may want to embarrass them even without justification.

- Senator Rucker: [01:20:42](#) Thank you, um, so I just want to point out two things in response. Um, one is that the, um, court still would need to determine that there's standing that, um, for that student who is making the allegation, um, so it's not like it's an automatic process. And second of all, I just want to point out that this bill is not about transgender individuals, it is about women and girls sports and our, um, our interest in protecting sports for women and girls. And, uh, like again, I want to point out Title IX actually gives the state that responsibility.
- Senator Romano: [01:21:24](#) Is it limited to just girls sports? I thought it applied to both sexes. Am I wrong about that? It appears to be for both sexes, Senator.
- Senator Rucker: [01:21:43](#) Yeah.
- Senator Romano: [01:21:44](#) Unless I'm missing something.
- Senator Rucker: [01:21:45](#) No, I'm sorry just one second 'cause before I answer you I just want to make certain that my answer's correct.
- Senator Romano: [01:21:50](#) That's fine and it really doesn't matter Senator, you don't need to dwell on that, but if you can find it quickly, it'll be helpful.
- Senator Rucker: [01:21:57](#) Sure, no problem. Okay, so in page 3, lines 40 to 42, athletic teams or sports designated for females, women or girls, shall not be open to students of the male sex or selection for such team is based upon competitive skill or the activity involved as a contact sport.
- Senator Romano: [01:21:57](#) Thank you.
- Senator Rucker: [01:22:17](#) And currently I just want to point that, um, girls have been allowed to participate in sports for men, for boys, um, in certain circumstances and that is because they do not always have access to all of the different athletic opportunities. And that is exactly the reason for Title IX and exactly the reason for why we want to protect girls and women sports.

- Senator Romano: [01:22:42](#) Sure, sure, I do too, I- I don't-
- Senator Rucker: [01:22:43](#) It is usually- it is usually not a problem when it comes to girls wanting to participate- participate in men's sports, but I just want to point out we're trying to protect girls and women sports.
- Senator Romano: [01:22:54](#) And I do too and it makes it a little easier for this argument because now all we have to worry about is the poor tomgirl who grows up and, you know, might look a little boyish, do you not think she is going to be open to attack by an opposing team or a teammate for- on the ba- basis of gender? Wrongly? I mean it could be wrongly, but- but if the school board has to defend itself, do you not think they're going to have to- that- that little girl is not going to know that somebody challenged her, challenged her gender?
- Senator Rucker: [01:23:25](#) So I- I appreciate the hypothetical situation that could occur and as someone who used to be a tomboy and had this, you know, discussion earlier with my staff, um, as the only girl and having four brothers that I grew up with, I- I was an absolute tomboy, I did not like wearing skirts believe it or not and I was very much, um, into athletics and sports. I can tell you that it is still pretty obvious if you are-
- Senator Romano: [01:23:54](#) I'm sorry, they still what, I missed that.
- Senator Rucker: [01:23:55](#) It is still pretty obvious if you are of the biological sex and the other issue I want to point out, it's- the way that we wrote this bill and we did it very carefully, it is only if there is, you know, a concern. One of the reasons for why, um, it is in our interest to protect women's and girls' sports is because there is a very big physical difference and advantage for biological males. Um, there's been, um, and I'm not going to be able to cite it off memory, but, you know, I was the captain of my cross-country team and I was really good. And, um, we would run together both the boys and the girls and even though I was the fastest girl on the girls' team, the slowest boy on the boys' team could still, um, beat me.
- So, I mean, that's just one of many examples I could cite and there is an inherent interest that we have in the state to give girls an opportunity, to give women an opportunity. It makes a difference in their ability to get scholarships, it

makes a difference in their developing of leadership and I will tell you that it was something that is, um, in- inherently of the interest of this state because we do believe in women and girls. There was a statistic that I saw somewhere that said that a high percentage of executives, women executives, CEOs were involved in athletics.

So it just goes to show you that having those opportunities for women and girls is very important in order for us to right the many ways in which women have been disadvantaged.

Senator Romano: [01:25:40](#)

Well Senator, this isn't about opportunity for girls to play without interference from boys 'cause we've never had one of those cases. We've never had any boy try to play on a girls' team. The- the question is, how would you have felt when you were a tomboy growing up if somebody had challenged your gender, what would that have done to your self-esteem, what would that have done to your psychological outlook because there's nothing in this bill that says it has to be a serious concern, it just says that you have a cause of action if you've been aggrieved by a violation.

So you're going to get to file the case, you're going to get to file it in court and sure it's going to say, you know, Jane Doe versus MH, but that child for the school board to defend themselves, they're going to have to have that child examined. That child's going to know that somebody challenged her gender.

Senator Rucker: [01:26:30](#)

I don't think it's going to necessarily have to be an examination and that is one of the reasons to have rules be established. It could be as simple as a birth certificate, it could be as simple as an affidavit signed by the physician, I- I don't think we need to, you know, over complicate it and I'm certain-

Senator Romano: [01:26:46](#)

Yeah, it may be-

Senator Rucker: [01:26:46](#)

... I'm certain that the HEBC and the Board of Education will choose the simplest method.

Senator Romano: [01:26:50](#)

It- it may be as simple as an affidavit, it may be as serious as a pelvic exam with a child's feet up in stirrups being examined by an OBGYN.

Senator Rucker: [01:27:01](#) Well, it's a really good thing that as the legislative body, we're going to be able to see those rules when they get developed.

Senator Romano: [01:27:06](#) Well, I- I- I'm concerned about it, the rules don't have anything to do with the court challenge section. It does say that the, but- but you know that WVSSAC already has rules in place to prevent boys from being on women's teams?

Senator Rucker: [01:27:20](#) Actually they do not. Um, what we have and I've been grateful, um, that we've had a member that's been able to get us all copies of it. So what this document is, is an internal policy for the board of directors to have in case there were to be a question so that they would have something to guide their decision-making, but it is not a rule and they have not established any rules regarding transgender.

Senator Romano: [01:27:46](#) You don't- you don't think an internal directive to the- to the board of directors is a rule that they're going to follow?

Senator Rucker: [01:27:50](#) No it's not and it has not been voted on or approved by their members.

Senator Romano: [01:27:54](#) Are you aware of any instance where there's been a situation where there's been a male on a female team in West Virginia?

Senator Rucker: [01:28:01](#) Well, I already answered that, that I- I did not know of- of any West Virginia, but I have heard in other states.

Senator Romano: [01:28:07](#) I'm sorry then how do we know they're not going to follow-

Senator Rucker: [01:28:09](#) I always want to point out. I'm sorry.

Senator Romano: [01:28:10](#) How do you know they're not going to follow their internal directives?

President Blair: [01:28:13](#) Gentleman will state his point of order.

Senator Trump: [01:28:17](#) Thank you Mr. President, I- I couldn't hear, uh, the answer that was being given to the question, I think the, uh, questioner had moved on to a second question, I don't think the Chairman had completed her answer.

Senator Romano: [01:28:31](#) Well, I apologize ch- Mr. President, I thought she completed it.

President Blair: [01:28:34](#) The- the- the Gentleman's, uh, po- the- the Gentleman's point of order is well taken, questions will be asked and answers will be given.

Senator Romano: [01:28:40](#) I apologize Senator, I thought you had finished. Go right ahead.

Senator Rucker: [01:28:43](#) No problem, I just wanted to point out that one of the considerations about this internal policy, if you read it, and it was actually highlighted in the copy that we got today, you know, it makes it in this internal policy that the school, the school, the individual school, we're talking about our public schools, would have had the responsibility of dealing with this situation if it were to arise and it would definitely open them up for legal challenge. So, this is one of the reasons for why I think it's important and we did pass a bill earlier that we have some say in these rules because we certainly do not want to put our public schools in a situation where they are going to be, um, sued. And I'm sorry, you may now, if I hope that's okay and you may now ask your second, your other question.

Senator Romano: [01:29:33](#) I- I think we got to the second question. Let me ask you then because this includes higher education too, doesn't it?

Senator Rucker: [01:29:40](#) Yes it does.

Senator Romano: [01:29:40](#) That's our colleges and universities around the state, correct?

Senator Rucker: [01:29:44](#) Yes, the public, yes.

Senator Romano: [01:29:46](#) The NCAA has very, very, uh, detailed rules on the handling of a situation of a male- a male participating in female sports, don't they?

Senator Rucker: [01:30:00](#) No, actually you're- you're not correct, um, and it's something that I did talk about, um, or at least was brought up in the committee, I have their policy with me somewhere in here. Um, it is a guidance, um-

Senator Romano: [01:30:15](#) It is a what?

Senator Rucker: [01:30:15](#) A guidance, they developed guidance for institutions who want to allow for transgender participation and it is a very, uh, they attempt to be specific and they give certain criteria if you're going to allow a transgender male to participate in women sports. But it is not a rule and it not a policy.

Senator Romano: [01:30:36](#) Are you aware of guidance not being followed by higher education in West Virginia?

Senator Rucker: [01:30:41](#) Not in West Virginia, but there are actually, um, many states that have, um, different, uh, policies and rules that are diverged from what the NCAA policy is, so it has happened before.

Senator Romano: [01:30:53](#) Certainly you agree that our statute isn't going to look anything like the NCAA rules or guidance, whatever you want to call them.

Senator Rucker: [01:31:04](#) No, it- it's not really addressing their guidance, it is actually, um, creating a protection for women's sports in the state of West Virginia and of course it is the state's authority to enforce Title IX in the state and to determine what their, um, interest is in protecting women's and girls' sports.

Senator Romano: [01:31:26](#) I mean I've- I've got the NCAA guidance here, it's a- it's a pretty detailed, uh, set of instructions and- and- and also includes education for our schools. And- and- and again, I'm not faulting you for trying to make sure that girls only have to play girls in single-sex sports, I'm certainly not faulting you. My overriding concern is what effect it's going to have on a 16 or 17 year old girl who may be a little tomboyish who be a heck of an athlete and who gets challenged by a parent of- of the same team or a parent of an opposing team.

And- and you're right, it may be nothing more than showing their birth certificate and then the school complies, but it's going to scar that young lady for the rest of her life. Mr. President, I just want to take a second to say I do not oppose the amendment, it's a heck of a lot better than the original bill, but I will speak in opposition to this bill at the appropriate time, thank you Mr. President.

President Blair: [01:32:30](#) Was there further discussion? Junior Senator from the 8th.

Senator Lindsay: [01:32:33](#) Thank you Mr. President if the, uh, the Senator from Jefferson would yield.

President Blair: [01:32:37](#) Will the Senator from Jefferson yield? The Senator yields.

Senator Lindsay: [01:32:42](#) Thank you, thank you Senator, good morning.

Senator Rucker: [01:32:42](#) Good morning.

Senator Lindsay: [01:32:45](#) I just, I wasn't planning to address this until we- we took up the bill, but I was the individual who put the, uh, West Virginia, I'm going to go ahead and read it into the record. The transgender policy of the West Virginia Secondary School Activities Commission, this is what it says at the top, in the event a member school or its governing authority determines to permit transgender students to participate in inter sch- scholastic athletics, the WVSSAC has adopted the following policy to govern such participation.

I don't, that doesn't sound like just an internal document that schools can decide to follow or not or that the WVSSAC can decide to follow or not.

Senator Rucker: [01:33:30](#) It's not an internal document of the schools, it's an internal document of the WVSSAC Board of Directors. And we called, um, Bernie Dolan to specifically verify because we had asked in committee, someone had asked for, you know, what is the WVSSAC policy regarding transgender and we were told there wasn't any, so we specifically looked into it. So this is an internal, um, policy for the board of directors that they created in case there were to be a situation in which they want to address this participation of transgender students.

Senator Lindsay: [01:34:05](#) But I read that- I'm sorry, I thought you were finished.

Senator Rucker: [01:34:05](#) No problem.

Senator Lindsay: [01:34:08](#) I read that correctly, the WVSSAC has adopted this policy, right?

Senator Rucker: [01:34:15](#) I don't- I don't know what to tell you, Bernie Dolan says this is an internal- an internal policy for the board of directors, it is not one that has been adopted by the WVSSAC as a rule.

- Senator Lindsay: [01:34:26](#) Okay, what- I think we're- we're- we're playing games with language here. It does say that the WVSSAC has adopted this policy, correct?
- Senator Rucker: [01:34:37](#) That- that is what it says on the top of here.
- Senator Lindsay: [01:34:39](#) Okay.
- Senator Rucker: [01:34:39](#) But above it- it says WVSSAC Board of Directors and I'm just letting you know what Mr. Dolan said.
- Senator Lindsay: [01:34:47](#) I'm sorry? And- and as far as I know, Bernie Dolan did not testify to- to your, uh, belief as far as the significance of this policy, right?
- Senator Rucker: [01:34:59](#) No, he did not testify.
- Senator Lindsay: [01:35:00](#) Because we were told by the West Virginia SSAC that this is their policy and this is what they have the schools follow, so I just want to make sure the record's clear because again, we're playing with words here just to suggest to minimize the import of this policy. But regardless of what you believe this policy is or isn't, I just want to make sure I understand that number one it says the "transgender student school shall make the initial determination as to whether a student may participate in inner scholastic athletics and gender- in a gender that does not match the gender assigned to him." So the school makes that first determination, correct?
- Senator Rucker: [01:35:42](#) According to this internal document, yes.
- Senator Lindsay: [01:35:45](#) Sure and if there's a- if there's a conflict with, not a conflict, but if a party is upset with that determination, then it goes to the West Virginia SSAC Board of Directors on appeal, correct?
- Senator Rucker: [01:35:59](#) I- I'm not a 100% certain, again I point out that I'm not a lawyer and I would assume that if there is a problem or a conflict that that is what would normally happen.
- Senator Lindsay: [01:36:10](#) Well, that's what the policy says, right?
- Senator Rucker: [01:36:13](#) Well, actually what I see here is that they would, um, give the school the authority to determine how to handle it.

Senator Lindsay: [01:36:23](#) Sure. But any such appeal will be heard by the WVSSAC Board of Directors, that's what it says.

Senator Rucker: [01:36:31](#) If there's an appeal, yes.

Senator Lindsay: [01:36:32](#) Okay and then the Board of Directors decision that says in in sub-paragraph C, "the Board's deliberations will be limited to the question of whether the transgender student represents a threat to competitive equity or the safety of teammates or opposing players". You see that?

Senator Rucker: [01:36:49](#) Yes.

Senator Lindsay: [01:36:50](#) So it takes into consideration the safety of- of players and the equity of the issue, correct?

Senator Rucker: [01:36:56](#) Correct.

Senator Lindsay: [01:36:57](#) And it's specific to every circumstance.

Senator Rucker: [01:37:01](#) It's very similar to what we're passing in this legislation today if it were to pass.

Senator Lindsay: [01:37:04](#) Well then why would we take, why would this body, if it's similar, why would this body take the decisions away from the school and the- and the West Virginia SAC- AC and the appeals process?

Senator Rucker: [01:37:17](#) As I pointed out before, this actually opens up the schools for legal action and it is, um, as I pointed out, not a rule, it is an internal document that they are using if the circumstances were to come up. But it is in the state's interest and obviously this is a policy decision, but it is in the state's interest to protect women and girls' sports and what this bill does would essentially be following this model of protecting women and girls' sports, um, for the future of West Virginia and for the future of our girls.

Senator Lindsay: [01:37:54](#) Well this policy does not o- from the West Virginia SSAC does not only protect women, it protects all students. Transgender, uh, or- or- or- or all- all students under the sun, not just boys, girls but transgender as well, right?

Senator Rucker: [01:38:14](#) Are you- okay, you're asking me if I believe it's doing that?

- Senator Lindsay: [01:38:17](#) This policy that's been adopted by the West Virginia SSAC?
- Senator Rucker: [01:38:22](#) I believe that our state law would, if, again, this becomes law, it would also do the same.
- Senator Lindsay: [01:38:28](#) Well then what's the purpose of the law then other than the political advantages potentially, but if we already have a policy in place as determined by the West Virginia Secondary School Activities, what are we doing here on this bill?
- Senator Rucker: [01:38:42](#) A- again, I want to point out that this has not been adopted as a rule for the schools, the member schools to follow and it does not provide protection, um, for our schools.
- Senator Lindsay: [01:38:55](#) Mr. President, may I speak to the amendment?
- President Blair: [01:38:59](#) You can speak to the bill.
- Senator Lindsay: [01:39:05](#) Oh, it's already been, oh, okay. Mr. President, I apologize, I thought we were on the amendment. Um, but I'll, may I ask unanimous consent to speak to the bill.
- President Blair: [01:39:16](#) Yes. Approved.
- Senator Lindsay: [01:39:19](#) Thank you, thank you, Mr. President. Um, ladies and gentlemen, let's clear as black and white as this page, I'm going to read it into the record again because I think it's worth noting why we don't need HB 3293. "In the event a member school or its governing authority determines to permit tra- transgender students to participate inner-interscholastic athletics, the WVSSAC has adopted the following- following policy to govern such participation." And actually- it's actually called the "WVSSAC transgender student policy." It's specific to the student that is seeking to play a sport, it's a process that seeks to make sure not just for female students, but for all students whether or not the transgender student represents a threat to competitive equity or safety of teammates or opposing players.
- So we're here discussing a bill that is already solved if- if the- if the s- if the intentions are true for this bill, a problem that's already solved. I would suggest to you a problem that doesn't exist 'cause we, as a caucus, spoke to

representatives of the West Virginia Secondary School Activities Commission and they said there wasn't a case on a high school level as far as transgender students. Then in fact if it comes up at all, it comes up in the middle school level. So we're talking fifth, sixth, seventh, and eighth grade, clearly no-one's working for a- a- a college scholarship on that level. The- if I could just share just a few things too as well in addition to that, um, you know, I've said before, like many of you, I've played sports ever since I was eight or nine years old, athletic sports, organized sports. Um, I played on good teams, bad teams, I played on teams where I was the star, I played on teams where I was a- I- I rode the bench pretty hard. One specifically was when I started playing baseball, I played junior league baseball here at Capitol Midwestern in Charleston and I was horrible. I was a horrible player, my brother and I played for Hardee's.

And we only got to play, uh, the last two innings of the game because that's the o- when you're bad, when you're not good at that pat- at- at that sport, that's what ends up happening 'cause you're- you're- you're required to play. The last game of the season, I always played right field for the la- last game of the season my coach put me on third base and I played the entire game and I couldn't catch a ball. Balls went by me all the time, I couldn't field the ball. I was so bad that the coach's wife was screaming from the bleachers to take me out of third base. That's how bad I was, honestly.

And so afterwards, obviously I went home and shed a tear or two, but then we had a, I went back to the, we had a wall in our neighborhood where I could just throw a tennis ball with a mitt because I was convinced that I would come back and play third base the next year. We actually played for an expansion team, Mario's Pizza, the next year. City Councilman Adam Noth played on the same team so we were all All-Stars.

Anyway, I started every game at third base, I completed every game at third base, I was practically an All-Star in that regard, I still couldn't hit a lick, but I was good enough to- to run the base paths. The point of this story is because sports allowed me to overcome my difference, overcome my infirmities. It challenged me for the first time in my life to show that I could overcome these barriers.

And that's a good lesson to learn. I- I like to consider myself a one, uh, uh, a great athlete, but there's no way I was ever going to be an Olympian or play in a pro sport, but that's not what sports is about, it's an outlet. It allows students to overcome challenges. That's an important lesson. Not only that, teams or the groups, if you played on teams, are usually the first groups of people that you're accepted in, that you're welcomed in, the camaraderie. That's just- that's just as important as playing the sport.

Why would we pass legislation, when there's already a policy in place that swoops down and takes that opportunity away from a student, middle school students, I add. 'Cause again, what we heard from WVSSAC was we see this is in middle school, not in high school. And let me remind the body as well because this was said in support of a measure earlier this session, the phrase "our students," remember our students, our children, they're black and white, they're rich and poor, they're abled and disabled, they're gay and straight and they're transgender. Why would we pursue a policy that separates those individuals? There's just no need for it.

PART 3 OF 5 ENDS [01:45:04]

Senator Lindsay:

[01:45:02](#)

Again, because the outlet of sports is so important to a young person's life because it allows them to overcome the challenges, because it allows them to be accepted in a group and we're talking about a specific set of students that are already having issues as- as it is. I can't imagine the pressure of a middle school student who identifies as a different gender trying to get along in their school. I'm all for women sports, but that's not what this bill is. This bill specifically says on page two, "classifications based on gender identity serve no legitimate relationship to the state of West Virginia's interest of promoting equal athletic opportunities."

So to sell it to the public, we talk about women, but what this bill does is it separates children at their weakest time and there's just no public policy and support of it, there's no benefit to it, all it does is seek to divide. And gives us, the- the public, the nation, another reason to joke about West Virginia for pursuing such a policy in the first place. Vote for our children, vote no on this bill, thank you.

President Blair: [01:46:22](#) Further discussion. Senior Senator from the 4th.

Senator Tarr: [01:46:28](#) Thank you, would the Senator yield Chair Lady.

President Blair: [01:46:31](#) Senator from Jefferson yield, Senator yields.

Senator Tarr: [01:46:34](#) All right, thank you Mr. President and thank you for yielding. So, I was just going back and forth between discussion here between what's considered policies and I think rules and regulations of the SSAC. And I understand that the policy that was laid on our desk, you're saying, is the internal policy, do internal policies or rules and regulations of the SSAC govern sports in West Virginia?

Senator Rucker: [01:46:59](#) No.

Senator Tarr: [01:47:01](#) So, the- the internal policy and the reason I was looking here is that, you know, I went to SSAC's website as this came up and I was looking, I thought, well, I want to look at this policy. What I found is it says that rules and regulations, the constitution and bylaws of the WVSSAC are the rules and regulations of the commission. So, what we had before us is an internal policy and you're saying that it's not the internal policy that governs sports, but it's the rules and regulations that governs the sport.

Senator Rucker: [01:47:33](#) That is correct.

Senator Tarr: [01:47:34](#) That's correct? Okay. Um, well, what I found, just appreciating you answering my question, I'll just speak to the bill if that's okay. Mr. President, you know, I just- I just did, um, went in and looked at the constitution and rules and regulations of the WVSSAC that is current on their website here and I did a word search for transgender and it came up zero. This policy which is not what governs sports in West Virginia in- has nothing to do with the rules and regulations that govern sports in West Virginia.

Because when you look at the rules and regulations of WVSSAC, "transgender" which is mentioned in this policy, one, at least two, three, four, five and so on times is nowhere in the rules and regulations whatsoever of the WVSSAC that governs athletics. And the other thing is I think that, you know, one- the Senator that spoke here a second ago talking about having such a trouble in a sport is one of the issues we're talking about. Because you know

what, I may not be very competitive in a male sport, but what I could do is identify as female or say that I do and go dominate in a female sport because of the physical advantage that is just naturally given to a male over a female. So and which is what this bill's about, so Mr. President I rise in support of this bill.

President Blair: [01:49:09](#)

Further discussion, Senator from Bane. Senator from Bane.

Senator Stollings: [01:49:17](#)

Thank you Mr. President. I'm not sure if this body is concerned about what this bill does or could do to a transgender person in West Virginia. But the West Virginia State Medical Association, the West Virginia Chapter of the American Academy of Pediatrics, the West Virginia Psychological Association and the West Virginia School Psychologist Association and the American Academy of Pediatrics on a national level are very concerned about what this would do to a transgender person, student, in West Virginia. They say many trans youth already face an uphill battle in nearly every part of their lives. 84% of transgender youth feel unsafe at school. Nearly half trans youth attempt suicide, think about that. And the trans community is increasingly the target of violence and harassment. This bill will further ostracize young transgender people from their peers. The West Virginia Chapter of the American Academy of Pediatrics opposes House Bill 3293. Their organization works toward all children and adolescents regardless of gender identity or expression.

Receiving care to promote optimal physical, mental, and social wellbeing. Any discrimination based on gender identity or expression damages the socio-emotional health of children, families, and society. Again, transgender youth in West Virginia are high at risk- higher risk of suicide than their cisgender peers and this bill will only further the discrimination transgender youth experience. They again ask us to reject this- this bill. Transgender already face higher risk of suicide and depression and again it would further harm too many of West Virginia's most vulnerable.

So whether we are concerned about the unintended consequences of this bill, the people that are specialists and people that are on the frontline clearly, clearly have an issue. So it is with that regard and the fact that I think the SSAC does cover and does have a policy, should this ever

become an issue. So we're creating legislation for a problem that doesn't exist and it does have unintended negative consequences. I urge a no-vote.

President Blair: [01:52:30](#)

Senator from Brooke.

Senator Weld: [01:52:32](#)

Thank you Mr. President, to stand today and explain my vote on this issue. This is, it's a difficult one, it's an odd one. It's not an issue when I first ran for the legislature in 2014, if- if you had said this was a bill that you- you'd be debating and taking up, but I- I wouldn't have even understood the concept to be honest with you, Mr. President, it's- it's a tough issue. We're talking about young kids, high school kids, and college athletes, just a tough issue.

And so I understand the concept as I've started to research it, I still don't understand the whole transgender issue, I don't, I'll fully admit, it's- it- it's just not something that I fully understand. But what I do understand, Mr. President, is the law and so I started to do some research on this issue 'cause it's just something that I didn't know about. So one of the things that I found was that recently, uh, South Dakota had a- a similar piece of legislation and their- their governor Kristi Noem who was a- a- an ardent supporter of- of the legislation before it- it came to her, had to send it back to the legislature.

And- and- the- the bill that they had pertained to higher education, to NCAA, uh, National Junior College Athletic Assassination, NAIA and so, but I- I'm going to read Kristi Noem's statement. The NCAA is a private association, that means they can do what they want to do. If South Dakota passes a law that's against their policy, they will likely take punitive action against us. That means they can pull their tournaments from the state, they could pull their home games, they can even prevent our athletes from playing in their league.

South Dakota's chances of winning a lawsuit against the NCAA are very low. Competing on the national stage means compliance with the nation governing bodies that oversee college athletics. While I certainly do not always agree with actions these sanctioned bodies take, I understand that college- collegiate athletics requires such a system, a 50-state patch work is not workable. The

NCAA's policy is that after a year of hormone suppression therapy, which is something that I do not understand Mr. President, an individual can then play the sport that they want to play and so it's a policy of inclusion after that year.

This would be a policy that at no point becomes inclusionary in the higher education levels. And so we would be against the policy of the NCAA. And- and Governor Noem was accused of catering to the NCAA when she- on that- when she took the veto action and I may likely be accused of doing the same. But I'm not, but I'm a realist and I know the law and I can understand the law.

And the last thing that I want to do Mr. President is have this negatively affect any of our college athletic teams here in the state of West Virginia. I was a college athlete myself, it's hard, it's a lot of work. It's not like high school, there's much more into it, you get one day off, you get Sundays off. And so I couldn't take any action here that would potentially put into jeopardy the hard work that our college athletes put into a season. Because the NCAA, right or wrong, could say WVU, West Liberty, Fairmont, Marshall, whomever, you're no longer in the league, you can't play in the game or we're not going to- you're not going to be a tournament host site.

They could and I don't agree with it, but they could because they're a private entity, we have no jurisdiction over them whatsoever. We don't. And another thing Mr. President is a particular part of this bill that legally I think presents a lot of challenges, could present a lot of challenges for our colleges and universities and I'll read from the bill. "Any student aggrieved by a violation of this section may bring an action against the county board of education or state institution of higher education allegedly responsible for the alleged violation."

"The aggrieved student may seek injunctive relief and actual damages as well as reasonable attorney's fees and court costs if the student substantially prevails." So West Liberty State University, the girls' basketball team plays Notre Dame College, it's- it's in Ohio. So that team has a transgender female on it and she's complied with the NCAA's policy the year. So she comes to- to West Virginia to play West Liberty, well she can't because of the state's policy. So she has been aggrieved by this law, so does she

now have a c- a cause of action, she's an aggrieved person. She's a student who's aggrieved by this section, does she now have a cause of action against West Liberty State University?

On the other side of that, they don't play the game at all. On high school it's- it's a lot different, we've got a lot of high schools in the state of West Virginia. If- if- if Brooke High didn't play Soonbill Big Red, I'm sure they could pick up another school in- in West Virginia to play against. But we only have so many Division I colleges in the state of West Virginia, we only have so many Division II colleges in the state of West Virginia.

We're going to have to start dropping games because the policies don't align and that's my concern here Mr. President is I'm looking down the road prospectively of what could happen by the inclusion of higher education in this. And again, don't get me wrong, I don't think that- that people who have a- a distinct physical physiological advantage who are members of an opposite sex should be allowed to play sport with them. It's unfair. But by including higher education in this, we've added another layer of complexity to an issue that is already extremely complex, extremely difficult, Mr. President, this is something that I couldn't have- have ever imagined that I would deal with as a legislator. When I moved to Washington D.C. in 2003 from- from Wellsburg in Fairmont, the world was a completely different place, it's a lot different than anything I was used to.

And while that kinda prepped me for- for something like this, it really, it- it didn't to the point where I was going to have to make decisions on it. So I don't- I don't make this decision lightly because I agree with the concept, but I also take it as someone who has to look at the reality based in law and that's what's happening underneath this piece of legislation. Thank you, Mr. President.

President Blair: [02:01:07](#)

Senator from Harrison.

Senator Romano: [02:01:10](#)

Thank you Mr. President. You know, I- I like the Senator from Brooke struggle with this bill 'cause, you know, I don't have any desire for a 250 pound boy to be playing girls sports, but let me be clear, this isn't about men and women's and girls' locker rooms or any of that stuff, this is

just a bill about sports. And it's not even about transgender kids from my perspective, it's about your daughter, it's about your niece, your grandniece who might be a little tomboyish and who's going to get called out because we have a provision in here giving private citizens a right to challenge their gender. Can't imagine how devastating that would be to a 14, 15- or 16-year-old girl. You know, I used to get called sissy sometimes, it- it was hard, you know, you get bullied, it's hard when- when people pick on you, imagine if it's the authority. Imagine if it's your school authority that has to bring you in, question you, question your parents, perhaps submit you to a physical examination because some jealous parent who has a kid on your team doesn't like that you get all the accolades and all the newspaper clippings.

Or an opposing team who thinks they can vie for a state championship if you're not on the girls' basketball team and wants to put a little wrench in the winds of a certain school. That's what we're going to allow here, that's what we're going to encourage people to do, we've given private individuals the opportunity to challenge the gender of our children. How reckless. You know, and I hear everybody mincing words about policies and rules and, you know, is it in place, you know why it's only a policy of the WVSSAC, 'cause we've never had one case of a boy trying to play sport, women's sports in- in our high schools.

Not one case, but yet they've gone as far as to write detailed policies on how they're going to handle it if that ever becomes an issue. I don't even want to get started into what we're doing to the outside world, my God we look as backwards as the states that have lost the All-Star games and- and all kinds of sporting and- and entertainment events because we're backwards. We look like a bunch of rednecks from West Virginia and this feeds right into it. You know, I was always proud to be from here, I always used to tell people when I lived in DC and they'd make fun of my drawl or something that, you know, no better place to live than West Virginia 'cause if you need something, your neighbors are going to help you, if you're in trouble, your friends are going to back you and it's a great place to live.

It's not getting like that anymore, we're pushing anybody different than us out, we're telling the world we don't want

you here. We only want who's left here and it gets to be fewer and fewer every year. Now I know somebody salivating in some election room right now, oh we're going to beat them to death, beat them to death with the boys and the girls bathroom advertisement if they vote against this bill. I can assure you that I will spend any amount of money in this state to make sure that everybody know that this bill's about their daughters, it's about their grandchildren, it's about their nieces, it's about them getting attacked because they may be a little tomboyish in high school.

And that that's what the outcome of this bill is going to be and that it was a bill to try to set people up in an election. We're not worried about boys playing girl sports, it's never happened here, how can we be worried about something that's never happened? How could we have a bill that is this bad, makes us look this backwards on- about something that has never happened? In a- in an issue where there's policies written and ready to be employed if it ever does come up and we have the audacity and the arrogance to tell the NCAA what we should be doing in our higher education's scholastic athletics, they're probably chuckling right now listening to this debate if they even bothered to take the time to tune in.

Mr. President, this bill isn't going to do anything to move West Virginia forward, it's going to move West Virginia directly to the back of the room, I urge a no-vote.

President Blair: [02:06:13](#)

Senator from Marion.

Senator Caputo: [02:06:16](#)

Thank you Mr. President, uh, I wish I could be as eloquent sometimes as my friend from Brooke and my friend from Harrison, but I had been sitting here listening to this debate and I'm sorry, I don't struggle at all with a no-vote on this, Mr. President. I struggle none. I have really come to the conclusion that this is a solution looking for a problem. I've sat here and listened to possible challenges, possible court hearings, possible production of birth certificates and gender challenges and maybe even up to and including a physical exam to determine someone's gender.

You know, businesses and professional teams all over the country are shying away from places that have policies like we're looking at in this chamber. Now it's- it's a solution

looking for a problem, Mr. President, but you know, I think one thing we're all losing sight of here is the problem's not the kids, the problem's not the student athletes. I look around this room and there's not a whole lot of youth in here, I hope I don't offend anybody, but there is not a whole lot of youth in here.

When's the last time you sat down and talked to the young people in this state? Are you still campaigning at the McDonald's, having coffee in the mornings with our wonderful retired folks in our neighborhood or are you talking to the kids? They want a more inclusive society, my kids don't give a rat's behind what color you are, what your sexual orientation is, what you do in your personal life. The youth of today want to put that behind us, maybe that's the problem. We're the representatives here, but maybe that's problem, well maybe we're talking to the wrong people.

Maybe we're not talking to the future of West Virginia, maybe we ought to start wondering why our kids want to leave here. And maybe we ought to start admitting to ourself why nobody's coming here. We gotta be honest with each other, we talk a- a pretty big game, we talk about moving West Virginia forward and Mr. President I believe you were sincere when you said you want 400,000 people to move to West Virginia. I've known you for a long time and I believe you were sincere.

But here's a news flash, we're not going to get there by telling people if you don't look like us, if you don't love like us, if you don't think like us, you got a problem in West Virginia. I think we gotta be honest with each other, we're telling people they're not welcome here. I think that may be ought to be on the sign, not welcome to West Virginia but not welcome to West Virginia if you don't think like us because that's what the message is we're sending. You know Mr. President, Tina and I worked really hard raising our kids to treat everybody the same and not look at the differences maybe of what we do and what we look like, but to treat everybody the same but more importantly, our kids taught us to be that way.

Our kids think it's crazy that we're having this debate right now. My daughter tells me all the time, I can't believe you guys are still talking about this kind of stuff and she's right, she's absolutely right Mr. President. Mr. President I know

you don't get out on the West Wing much, at least clear out there where I'm at, but there's a sign in my office and it says all kinds welcome here. But more importantly, Mr. President, that sign lives in my heart, lives in my heart that all kinds of people are welcome in my beautiful state, I just wish that the rest of the members that I serve with would welcome people here in the same fashion. Thank you, Mr. President.

President Blair: [02:11:35](#)

Senator from Ohio.

Senator Ihlenfeld: [02:11:37](#)

Thank you Mr. President. I want to share with you all words from a very successful businessman. Quote, our purpose is changing business for good and that means using our business to make a positive impact in the lives of our employees as well as our customers. Businesses are starting to see that they have important roles to play in standing up for LGBTQ rights, especially, especially in places where those rights are being violated. This CEO went on to say that he believes making sure customer bases are as diverse and inclusive as possible will help businesses to thrive.

And I think the same thing can be said about state economies, the more inclusive we are, the more likely it is that our economy will thrive. You want to know what CEO said those words? It's a gentleman by the name of Richard Branson, Sir Richard Branson. Y'all know who he is? He's the CEO of Virgin Atlantic, Virgin Galactic, Virgin Mobile, Virgin Oceanic, Virgin Radio, and the owner and CEO of Virgin Hyperloop. You know what Virgin Hyperloop is? Think if you're from Grant and Tucker County you do. I know the man downstairs knows what Virgin Hyperloop is.

They plan to build a certification center on an 800-acre track in Grant and Tucker Counties that will bring thousands of construction jobs here and millions of dollars in economic impact to our state. Richard Branson is one of the most pro-LGBTQ CEOs in the entire world. And I point this out to you because I don't know how to reach some of you. Some and I don't want to paint too broad of a brush, but some in this room don't seem to care that this bill is cruel, that it's narrow-minded, that it's mean spirited, that it's unnecessary, that it's purely political. Maybe you do care about that part of it.

So I'll go back to a point I've tried to raise in this room this session that might resonate- might resonate and it's purely economical. And I don't like doing that because the economic reasons aren't the first, second, or third reasons why this is a bad bill, but it might resonate with some of you. By voting yes for this bill, you are willing to risk a project that WVU's Bureau of Economic and Business Research predicts will have an annual \$48 million impact on our state, annually, \$48 million with that Hyperloop project. You're willing to risk that, you're willing to risk that Sir Richard Branson is going to see what we do here and change his mind about building that certification center.

On top of that you're willing to risk all that the NCAA does for us to add on to what the Senator from Brooke said. Two years ago, one of the greatest sporting events that I've witnessed in West Virginia occurred in Morgan Town, the NCAA baseball regional. We were able to host it at that brand new beautiful stadium, there were record crowds. Over 4000 people which is big for a baseball game packed that stadium on the first night, they had sell-out crowds throughout that tournament. The economic impact on the Morgan Town region was in the millions of dollars.

We won't be able to host events like that anymore if we pass a bill like this. The head of the NCAA just made a statement the other day that made it very clear that states that pass bills like this are not ones where he wants to hold tournaments and we can't control what they do. At the tournament level or below. And besides the risk of losing all that I've mentioned, we risk businesses that might want to have a retreat here, that might want to open an office here, that might want to have a headquarters here.

Do you realize what a hard job you're making for Chelsea Ruby, Mitch Carmichael, Ed Gaunch, Michael Grany, you're making their job so difficult to promote tourism and economic development with bills like this. And I think some of you are probably thinking, well, the governor will just veto it so I can vote for it and then he'll take care of it. That's not how it works, number one, we don't know what the governor's going to do with this bill, gosh I hope he would veto it if it passes. But number two, we're still sending a message that this body, this Senate and also the House supports policies like this.

So, I would ask you, Mr. President, are we pro-business, are we really pro-business, are we really trying to grow this state? I'm not sure that we are when we have bills like this running, I'm surprised this bill is even running. I don't have control over what hits committees, I don't have control what hit- about what hits the floor, but you do Mr. President, you could stop bills like this if you cared enough to look the future, if you really wanted 400,000 people to come here, you could do something about it. You yourself could stop it, but you've decided to let this bill run and put it up on the board and ignore what it would do to our state if it passes.

Let me finish by saying this on a more personal note. I have a lot of friends and relatives, loved ones who have moved away from West Virginia because they're gay, because they don't feel welcome here, because they have felt ostracized and I don't blame them, I probably would do the same and that's sad to say. My loved ones who fit into that category not only are wonderful and caring people, but they're also really smart people, they've got really good jobs and they have nice houses, they drive nice cars, they make good money.

But guess what, they don't pay real estate tax in West Virginia, they don't pay sales tax in West Virginia, they don't pay income tax in West Virginia, they pay it in the state where they feel welcome, where they have felt like they needed to move, uh, where they feel love and accepted and- and part of the community. And that's part of the problem, the more people that we say are not welcome, the fewer are going to come here, the harder it's going to be to fulfill the dreams that I think we all have that, uh, the- these bold plans that we have and as I've said before I respect these bold plans, but the more we discuss and vote and pass bills like this, the harder it's going to be to get out of the- the economic slump that we find ourselves in.

And so just like my friend from Marion said, I would challenge you all when you make your vote to think about the younger generation, to think about millennials, to think about Generation Z. I think about my kids many times when I place a vote, to think about whether what we're doing would want- cause them to want to stay here and live here and work here or not. Uh, we can certainly campaign at the McDonald's, uh, with people that our age, uh, but we

need to think about those who are up and coming, 16, 18, 25, think about what's important to them and I- I would suggest that they care about inclusion very much so and I would ask all of you to consider that when you place your vote. Thank you, Mr. President.

President Blair: [02:19:57](#) Thank you.

PART 4 OF 5 ENDS [02:20:04]

Senator Maroney: [02:20:03](#) Thank you Mr. President. Um, this bill has nothing to do with gay people or those that are gay, and to imply that is, I think, misleading. The bill, the bill it talks about, it's about transgenders. It's about, there's a safety issue involved here in sports. Uh, the Senator from hi- or from, uh, Brooke stood up, uh, half hour ago, and I didn't, I've never spoke to him about this bill. And basically everything he said was things I was thinking. He said it better. He did more research, but they're all, they're all along the lines of my thought process. And from, from a high school sport standpoint or, or middle school standpoint, thi- this bill makes sense. We, I think we need to step in as a state. Uh, I don't, I've heard five or six times with a solution for a problem we don't have. Well, it, it's becoming a problem. Okay. It's, it's, it's happening in other places. I, I'd prefer to have solutions proactively than reactive. I think, I think it's time we address it. It's a tough issue to address. I think we address it. Uh, the, the, the high school component of this bill in, in the middle school, that everything below the college level of this bill, I agree with wholeheartedly. Uh, and I don't have a problem with voting yes for that part of the bill.

Uh, I have a big problem with, uh, with the college part of this bill. I think it's shortsighted and doesn't look into the depth of the issue, uh, as far as the, uh, potential ramifications. See, they've, they've solved their problem or, or they've, by addressing it, they've addressed the problem directly. They have a policy. It requires, the policy includes medical therapy, a year long, a hormonal suppression therapy. And for us to step in and, and, and try to dictate that when we don't have to, because they've already handled it and including that part, that's enough to make me vote no for the bill. We don't have this.

We don't have this, we don't have a case in, or, or no, no one can cite an example of this in West Virginia as of now. So therefore, maybe we can, we've got six months, eight months before we're back down here. They wouldn't get it right next time. Uh, well, this needs to be addressed at the scholastic level in my opinion. I would vote yes all day long. Uh, I think we, I think sometimes, uh, our emotions or our strong feelings on issues cloud sometimes real impact in judgment and in, in, in carrying it out a little bit too far.

I think we carried this too far further than we had to by including the colleges. Uh, you know, again, and I'm going to to close the way I started this. This bill has nothing to do with gay people or homosexuality. Uh, I have a cousin that's gay. I have, I know plenty of friends. I mean, I, there was no way at all that, that should be misinterpreted as with a vote on this bill. That was, that was misleading. Thank you.

President Blair: [02:23:10](#)

Junior Senator from 4th.

Senator Grady: [02:23:13](#)

Thank you, Mr. President. I'm standing here, um, with my makeup on my face and my jewelry shining, and, and I look, uh, you know, really, really girly. And I wasn't always that way. I was a tomboy that I've heard several of my colleagues talk about up until I was about 19-years-old before I ever decided that I would try makeup. And I'd like to fix my hair up and maybe wear dresses. Um, I used to, uh, play, uh, I played any sport that I could get my hands on. Uh, if you gave me a ball, I could beat almost all the boys in my class, all my friends in my neighborhood.

Funny story, just real quick. Um, my guy friends, my, they were in my neighborhood and I went to school with would call my brother to play home and derby or something, and they would say, "Don't tell your sister, but we're going to meet at the school at three o'clock." You know, and I would drive down the road and, and see, uh, on my bicycle and see that they were there and thought, "I wasn't invited. Why wasn't I invited?" And they said, "It's because you always beat me."

You know, and that's it, but I was a tomboy and, and I, and I had a lot of friends that were tomboys, you know, and, and making that as, those insinuations of it's going to

expose, uh, make tomboys feel out of place, just different things like that, I think that's incorrect. Um, I think I'm still you know, now I'm, I'm looking at it as a mother of girls, a former athlete. I'm a former athlete who has state championships, national championships, world championships under my belt in different sports, and a coach of girls.

You know, and I, and I look at it and, and I've talked to girls, I've talked to girls who are high school athletes, I've talked to girls who are college athletes, and they're in support of this. You know, when we look at sports, every implement that we use in sports, from the governing rules, um, of the games to tape measures, clocks, um, the court or field dimensions, um, all those things, they're all used to define the boundaries of fair play.

The most basic and fundamental of such of those requirements is age and sex. It has been less than one generation. One generation since women won the hard fought battle of Title IX. What that means is my mom didn't have the fair, the f- the fairness that Title IX supplied. One generation. You know, Title IX was important because it created equal sports programs for women at the high school level and the college level. Mr. President, this bill is not anti-LGBTQIA. It does not discriminate. It simply ensures that our female competitors will continue to have those protections, and it protects the integrity of women's sports. For my girls, your girls, and all the girls in West Virginia, I fully support this bill, and I hope that you will too. Thank you.

President Blair: [02:26:14](#)

Senator from Greenbrier.

Senator Baldwin: [02:26:16](#)

Thank you. Thank you, Mr. President. I'm not standing up to speak in hopes to change anybody's mind about their vote. Um, and I'm not standing up to speak expecting to affect the outcome of the vote at all. I'm just speaking as a coach and as a dad and as a pastor, because I got a couple things that I just feel compelled to say, and we've had a good debate here today. I appreciate that out of the body. The first thing that I just have to say, it's been said here, but it was said briefly, and I think folks need to be sure they heard this.

As the Senator from Boone said before, half of trans kids strongly consider suicide. Half of trans kids strongly consider suicide. That's reported by Forbes magazine based on the 2020 study by the Trevor Project. 60% of trans kids physically harm their own bodies. 60% harm themselves. Half strongly consider suicide. Why? Why? Why would so many trans kids harm themselves and attempt suicide? I would echo what the Senator from Brooke said, this is not something I understand, this is not something that I have lived through, but what I understand from talking to folks who have lived through it is that it's because they don't feel like they fit in. They're bullied, relentlessly. They are not included in anything other kids are included in because they're so obviously different. A lot of people wear their shame on the inside. Trans kids don't have that luxury. They look different. They live in bodies that they often hate, and the isolation that causes leads half, one out of every two trans kids to strongly, to strongly consider suicide. The other thing that I just feel compelled to say is that I've heard people make a religious argument for this bill, and I've heard people say, "Well, God doesn't make mistakes." And I fully agree. God does not make mistakes, but we do all the time.

Every person was made in the image of God, and God didn't make a mistake when God did that. Every person is made in the image of God, and God compels us to love one another just as we've been loved. Even those who are different, I might go s- go so far as to say, especially those who are different from us. And we've just come through Holy Week, we've just come through Easter, spending a lot of time back home in our churches, talking about the way that Jesus spent his time in ministry. And you all know the stories. Jesus didn't hang out with people like us. He didn't really like people like us. He hung out with sinners and outcasts, people that the world's shamed and ridiculed.

In particular, Jesus spent a lot of time with lepers, people who looked different, and because they looked different, they were despised. They were despised so much that they were outcast. The lepers of today's society are transgendered citizens. They are mocked, they're beaten, they are ridiculed, just for being different. People have basic needs. Kids have basic needs that are amplified even further because they are kids. You've got to have support

and acceptance at base. If you don't have that support and acceptance, you're not going to be able to move forward.

You know, we read some of those stories this past Holy Week of, um, Jesus healing the lepers by restoring them to their community. He made them physically well, but what he really did for them is he allowed them to go back home and he allowed them to be accepted for who they were. Mr. President, I thank you for the time to just share some things that are on my heart. Again, not speaking trying to influence anybody. Just had some things that I needed to share, but I have to say, I not only cannot support a bill that further alienates trans kids, but I am compelled to stand on this floor, even if nobody else is listening and having their side conversations and they've already decided about this a long time ago, to stand up and say that our children deserve better.

When we debated the Tebow bill, I supported that. I stood with my colleagues from the other side of the island, supported that because it gave all, all kids an opportunity to play. I don't see how this is any different. We need to let kids be kids. Half of trans kids strongly consider suicide, half. And if this bill passes, I shudder, I shudder to think how that would impact this incredibly vulnerable segment of society. So, let's err on the side of kindness to those who are most vulnerable, let's err on the side of grace, let's err on the side of inclusion. Thank you, Mr. President.

President Blair:	02:32:52	Is there further discussion before I recognize the Senator from Jefferson to close debate. Senator from Monongalia[inaudible 02:32:59].
Senator Beach:	02:32:59	Mr. President, I move we table the bill, please.
President Blair:	02:33:02	Motion is tabled the bill. Those in favor we'll vote aye. Those who've opposed will . . . Excuse me. Those who wish to table the bill will say aye.
Audience:	02:33:15	Aye.
President Blair:	02:33:16	Those who oppose say no.
Audience:	02:33:18	No.

President Blair: [02:33:20](#) The no's appear to have it. The no's do have it. The motion is rejected. Senator from Raleigh.

Senator Roberts: [02:33:31](#) Thank you, Mr. President. I think that the narrative shifts around from the actual bill itself. The bill is designed to protect girls in women's sports. It is not something that is designed to hurt people, it's designed to protect people. I received a couple of emails that kind of lay it out and people should understand. These are actually both from Raleigh County. The first one says, "I am a lesbian in favor of the sports bill. Dear West Virginia legislators. I am a US citizen originally from the Philippines, living in West Virginia with my wife and child. I am urging you today to vote for the sports bill and uphold one aspect of what it is to be born female.

There are too many groups on both sides of the aisle, trying to politicize a subject that should be 100% science and common sense. Due to the trans movement, what it is to be a female and to be safe in this country is being erased. The entire trans movement is an attack upon woman—womanhood. I urge you to save our young women from allowing biological males into sports locker rooms, et cetera with our girls. I don't understand why we cannot create a third category for the trans to compete with each other instead of harming and taking away opportunities from females."

A second email says, "Dear West Virginia legislators. My name . . ." Oh, and I shouldn't say her name, uh, but she lives in West Virginia in Raleigh County. "I am a married lesbian in the process of adopting my daughter. Please vote yes today to protect my daughter from having to compete against boys. This is a needed bill and large segments of the LGB community support the bill." She makes some other statements there, but I think you get the sentiment.

And I think that the focus is not on the potential or the hypothetical of what might happen that hasn't apparently happened already in West Virginia, but the focus is upon the thousands of girls in sports at all levels in West Virginia that are at risk for injury based on the differences between the biological sexes. And that is very important that this is to protect them, it is not meant to harm others and it's the right thing to do and I support this bill. Thank you.

President Blair: [02:36:49](#) Further discussion. Senior Senator from the 6th.

Senator Maynard: [02:36:53](#) Thank you Mr. President. Voting no on this bill is a vote to disintegrate school sports as we know it. Today lines are no longer being drawn, no boundaries. They say, so it's all inclusive. But Mr. President, if this bill is not passed, it will not prepare future generations when, because of the lines will be blurred. Besides religious reasons, besides safety issues, if we sell out to the national, uh, sports associations in sanctioning bodies, uh, if that's the price we put on our, um, safety issues and what we think is right, then, uh, I think we're just selling ourselves out. Mr. President, I'll urge passage of the bill.

President Blair: [02:37:35](#) Is there further discussion before I recognize the Senator from Jefferson. Senior Senator from the 17th.

Senator Takubo: [02:37:43](#) Thank you Mr. President. I, um, uh, you know, I think we, we've, we've blurred the lines quite a bit on this one. Um, you know, at the end of the day, uh, the LGBT, everybody tries to make this about, uh, all kinds of different issues. I think it's well-known, I've always been a sponsor, uh, actually lead sponsor of the fairness bill. Uh, you know, I put a flyer on everybody's, um, desks about tonight. Uh, there's going to be a, um, a thank you to legislators at 5:30, Bible Center Church. Come have dinner, no asks.

Um, can I have church afterwards? Well, the church I go to says, "Hey, listen, everybody's broken. And, and the Bible clearly says, there's nobody without sin more than me." So, uh, I'm not getting on any moral high ground and people are trying to take this bill and turn it into that. I don't think that's it at all. Um, it, it comes down to basic, uh, science, like many comments have been made. There's a bigger body mass, you know, up to 10, 11, you know, probably, probably girls have a advantage over boys, but you know, when you get to junior high and high school, there's a reason why you have varsity and JV even amongst the boys because the body mass, uh, is larger and, and people can get hurt. There are clear advantages.

And so, um, to me, this bill is just a clear definition now. Is it a solution looking for a problem? Yes, I think it is. Do I think that any of this has really happened in West Virginia? Do we probably need any this bill for anything in West Virginia? Probably not. Um, but do I 100% firmly believe

that boys should play boy sports and girls should play? Absolutely. Now, uh, to be honest, I really have no issue with a girl playing a boys' sport because again, the body mass issue is not there.

If you've got the athletic ability for a girl to play, uh, boys baseball or, or I really wouldn't have any issue with that. But the, the fact of the matter is, you know, where the masters tournament is on, uh, you know, the top, uh, female golfer, I remember just few years ago, tried to play against the guys in the tournament got killed, and she had, she was like the number one women's golfer eight or nine years in a row. So there's a clear difference. And so that's what the bill does.

Now as a Senator, I have to look at all aspects of the bill and how it relates to my state. Um, when the college aspect got put into this, that's what gave me the heartburn because colleges, the NCAA, they already address this. They do have policies for this. And, and I think Kristi Noem, uh, is probably in the exact same boat that I am. She's 100% in agreement that, that the policy should be boys don't play girls athletics. However, NCAA is trying to do that patchwork of 50 states. They have to be compliant. I don't think that they're some crazy organization. They're having to deal with a lot of different personalities across the country with all these 50 different states, and, and they just want to run a good athletics program for the students, for the athletes, for the country.

And so as a Senator, do I look at this section of the bill and say, could that cause some major problems? I could see somebody trying to pull us out as an example and come football season for W and Marshall and all the college athletes in our state that are trying to move forward, that this could create some major hiccups again for a problem we really don't have. And so I can also see us coming back here and having to try to unwind all of this in some kind of special session or something.

So for that reason, uh, I am going to be a no vote, but I want to make it very clear that the principle of the bill I'm 100% in favor of. I just think we should have left it to the high school athletics alone if a bill was going to be ran. I certainly wouldn't have done it, but, uh, it is my duty as a senator when a bill comes up and, and, uh, I have not been,

uh, voted by my constituents to, to take a pass, I'm expected to vote. So my vote will be read. I just want to make it clear as to the intent of why I'll be voting nay today. Thank you, Mr. President.

President Blair: [02:41:53](#)

Is there a further discussion? Senator from Jefferson to close debate.

Senator Rucker: [02:42:00](#)

Thank you, Mr. President. And I appreciate, um, the robust debate and everyone's expressing their opinion. This is obviously, you know, something that touches people. Um, and before I get to just a final explanation of what this bill does, I just need to, you know, respond to some of the things that were said, and I'm going to start, if that's okay, with the claims about the NCAA. So I have here before me a printout of their, um, transgender policy, and this is going to be from the very first page.

It says, "The purpose of this resource is to provide guidance to NCAA athletic programs about how to ensure transgender student athletes fair, respectful, and legal access to collegiate sports teams based on current medical and legal knowledge." It provides best practice and policy recommendations. It's a recommendation. It's giving them guidance, and further in this policy, it talks about how the science is not settled. There is ongoing research and, you know, this issue of transgender athletes is something that can change based on the science that we, um, as we do more research, as we find out more and as more of this is happening.

In terms of science, because folks really like to point out how we should follow the science, males have larger lungs and denser alveoli in the lungs enabling faster oxygen intake, uptake. They have larger hearts and per stroke pumping volume and more hemoglobin per unit of blood, and increased number of muscle fibers and increased muscle mass. And I'm not going to go through all this. They have larger bones, longer bones, increased mineral density in their bones. U.S. adult males on average are five inches taller than U.S. adult women, and I have pages of this, but I'm not going to read through all of that.

The reality is that the reason for why we're having this discussion Mr. President is because it matters. It matters. There is a difference between men, biological men and

biogo- biological women. This bill does not target transgender and it is not about prohibiting transgender. It does not affect male sports, it does not affect coed sports of which there's a lot of those. It only talks about women's sports and the history of women's sports in the United States. It's a very short one.

Historically, the NCAA had zero interest in women's sports. It wasn't until Title IX that they became interested. The first NCAA men's basketball tournament was in 1939. Do you know when the first NCAA women's basketball tournament was? Not till 1982, 10 years after Title IX was adopted, and nearly 50 years after men. The only reason for Title IX is because women deserve a chance to participate. And there were folks making that point from the side that doesn't plan to support this bill. They were making the point about how s- athletics is about overcoming challenges.

If you pair men and women together, there is a difference in how well they can compete against each other. It doesn't mean they can't do it, and they do. And we have coed sports and we have women participating in men's sports, but there is a difference. And these athletic opportunities, these opportunities to be part of a team, these opportunities to shine, they make a difference in their lives forever, and we've already mentioned it. And others have actually said the same thing. You know, you're talking about scholarships, you're talking about opportunities to get into schools, you're talking about opportunities to demonstrate leadership and cooperation and be part of a team. It is exactly that, that we are wanting to protect for our women and our girls.

This isn't against anyone. It is for, for the policy of helping our girls, helping our women have the opportunity. That is what Title IX was about and that is what the policy has been. This bill does nothing more than codify what is already well-established under federal and state common law. The biological females and biological males are not similarly situated in certain circumstances, and one of those circumstances is in sports.

One of the things I want to make sure I respond to is the discussion as to whether or not where it might be hurting our state somehow, by having this policy of protecting our

girls and our women. I must tell you that to me, if you say that you do support women, that you do support our girls, if you say that you want to give them an opportunity, and we have bills, we have bills even this year have been introduced about trying to provide an opportunity for a class that has been historically disadvantaged. Well, this is, this is one of these bills. This is one of the bills that you can support because you want to ensure continued opportunities.

We cannot direct the NCAA. We have no authority over them. We don't. This bill doesn't do that. This bill is about our state institutions, and it is actually our authority to enforce Title IX. That is our authority. We the states are supposed to enforce Title IX. The only student who could bring a cause of action are those who are aggrieved and who have standing. So in conclusion, we really have talked this a lot and we have brought in a whole bunch of different issues into it. But what the reality of this is, is that it is the best interest of the state to protect women and girls and protect the opportunity for them to participate in sports. Supporting this is simply doing that. I urge passage.

- President Blair: [02:49:30](#) Question for the Senate is shall the bill pass, all those in favor will vote yay, those who oppose will nay. The clerk should prepare the machine. Has every member voted? Has every member voted? If so, the clerk close machine and ascertain the results. On this question, 18 yays, 15 nays, one absent, not voting. More than a majority of those present voting, having voted in the affirmative. I declare the bill passed. The clerk has a Title Nine.
- Clerk Cassis: [02:50:10](#) Senator Rucker move to amend the title of the bill.
- President Blair: [02:50:13](#) The questions on adoption of the title amendment, all those in favor say aye.
- Audience: [02:50:16](#) Aye.
- President Blair: [02:50:17](#) Those who oppose, no. The ayes appear to have it, the ayes do have it, uh, declare the title amendment adopted. The clerk will communicate the action of the Senate to the house. Senior Senator from the 17th.
- Senator Takubo: [02:50:29](#) Thank you Mr. President, and I move the Senate stand in recess until 3:00 PM.

President Blair: [02:50:32](#) Senior Senator from 17 means repeat recess till 3:00 PM.
All those in favor say, aye.

Audience: [02:50:37](#) Aye.

President Blair: [02:50:38](#) Those who oppose, nay. The ayes have it. We'll recess till
3:00 PM.

PART 5 OF 5 ENDS [02:50:50]