IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

DYLAN BRANDT, et al., **PLAINTIFFS**

v. **CASE NO. 4:21-CV-00450-JM**

LESLIE RUTLEDGE, et al., **DEFENDANTS**

REPLY MEMORANDUM IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

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INTRODUCTION

Absent a preliminary injunction, transgender adolescents in Arkansas currently receiving gender-affirming medical care will have that care stripped away from them on July 28, 2021, when the Health Care Ban is set to take effect. These young people, including plaintiffs Dylan Brandt, Sabrina Jennen, and Parker Saxton, will suffer significant physical and psychological harm if they have to stop the treatment that has enabled them to manage their gender dysphoria, eliminated their debilitating distress, and ultimately, allowed them to thrive. Their parents will have to witness their children suffer and will, in many cases, be forced to consider leaving the homes and communities they love in order to take care of their children. And medical providers like Dr. Hutchison and Dr. Stambough will be placed in the untenable position of leaving their patients to suffer or risking their medical licenses.

The Health Care Ban is an unprecedented and sweeping prohibition on one, and only one, type of health care—care related to gender transition for minors. Defendants claim an interest in protecting the well-being of minors, citing purported concerns about the sufficiency of the evidence supporting the banned care and the risks associated with such care. But as explained in Plaintiffs' Opening Brief and below, all of the treatments prohibited by the Health Care Ban when provided to transgender adolescents for purposes of gender transition are explicitly permitted by the statute when provided to minors with intersex conditions for purposes of

conforming the minor's body to their sex assigned at birth. ARK. CODE ANN. § 20-9-1501(6)(A)(ii), (B).

Arkansas has not banned other medical care supported by similar or less evidence and involving similar or greater risks. (*See* Plaintiffs' Opening Brief (ECF No. 12, "Pls. Op. Br.") at 34-40.) It has banned health care that is related to "gender transition." This disconnect between the law and the asserted rationales fails any level of constitutional scrutiny, let alone the heightened scrutiny required of laws that discriminate based on sex and transgender status, burden parental autonomy rights, and restrict speech. *See Romer* v. *Evans*, 517 U.S. 620, 635 (1996) (invalidating state constitutional amendment under rational basis review because "[t]he breadth of the amendment is so far removed from these particular justifications that we find it impossible to credit them").

Not only does the Health Care Ban fail to align with or advance Defendants' claimed interests, it ultimately undermines Arkansas's interest in protecting children by denying access to medically necessary care for adolescents with gender dysphoria. And despite their repeated attempts to cast the prohibited treatment as "risky," "experimental," and "dangerous," the banned care is recognized as an appropriate and effective treatment for adolescents with gender dysphoria by every major medical and mental health professional organization in the United States. (*See generally* Brief of *Amici Curiae* American Academy of Pediatrics, *et. al.* (ECF

No. 30, "Medical Brief" or "Br. of Amici AAP, *et. al.*") at 8-10 (confirming that the American Academy of Pediatrics, the American Medical Association, the American Psychiatric Association, the American Academy of Child and Adolescent Psychiatry, the Endocrine Society, the Pediatric Endocrine Society, and several other national medical groups, along with Arkansas's pediatric and psychiatric professional groups, recognize that the treatment prohibited by the Health Care Ban is part of the accepted standards of care and the medical profession's consensus recommendation for the treatment of gender dysphoria in adolescents).)

In their response to Plaintiffs' Motion, Defendants argue that all of these medical professional organizations are wholly unreliable, have all been taken over by political forces acting to promote gender "ideology" and were either duped or acted unethically to enrich the "gender-transition industry" in supporting treatment protocols that they claim are ineffective, unnecessary, and harmful to patients. (Defendants' Combined Brief in Opposition (ECF No. 44, "Defs. Br.") at 11-30.) But despite their more than 1000-page filing, Defendants fail to offer evidence that supports their extraordinary narrative. Their arguments rely primarily on four erroneous claims: (1) there is no scientific support for existing treatment protocols; (2) most transgender youth affected by the law will naturally "outgrow" their transgender identity if not affirmed in their gender; (3) patients are treated without meaningful mental health evaluation and informed consent; and (4) gender-

affirming medical treatment is unique in the level of risk it poses to patients, necessitating a State ban on the care. But as discussed in Plaintiffs' Opening Brief and further explained below, none of these claims is defensible.

Ultimately, the existence of outlier views reflected in Defendants' expert witness declarations does not change the fact that all of the treatment banned by the Health Care Ban is well-accepted and routinely administered by the mainstream medical community in the United States. These protocols are so widely used and accepted that Defendants are forced to rely on two expert witnesses who have already been discredited by courts. (*See infra,* at 21-23.) They offer no evidence in support of the wholly unprecedented idea of removing health care that transgender minors are already relying on, and they minimize or patently deny the known risks that will flow from prohibiting patients from receiving such care.

Defendants have failed to meet their demanding burden of showing how Arkansas's sweeping ban on gender-affirming care for adolescents substantially advances any important governmental interests. Nor have they offered any evidence to refute Plaintiffs' showing of extraordinary irreparable harm should the law take effect. They scarcely acknowledge the Plaintiff families and ignore the evidence presented by the Doctor Plaintiffs of the seven transgender youth who have attempted suicide since public discussion of the Health Care Ban began, and the

numerous others expressing suicidal thoughts related to the prospect of losing gender-affirming care.

The preliminary injunction sought by Dylan, Sabrina, Parker, Brooke, and their parents to protect these children's ability to access medically necessary care, and by Drs. Hutchison and Stambough to ensure their ability to continue to provide lifesaving care to their patients, should be granted.

I. Response to Defendants' Proffered Evidence.

A. The Treatment Protocols for Gender Dysphoria Accepted by the American Medical Community Are Supported by Substantial Evidence.

Defendants claim a lack of evidence demonstrating the efficacy of gender-affirming medical care. (Defs. Br. at 15-16, 20-30.) But every major medical association in the United States agrees, "[a] robust body of scientific evidence supports the efficacy of this accepted standard of care." (Br. of Amici AAP, *et. al.*, at 12; *see also* Endocrine Society Guidelines (referencing studies); Exhibit 13 - Declaration of Jack Turban, MD, MHS ("Turban Decl.") ¶¶ 12-18.)

As Dr. Turban details in his declaration, there is a significant body of medical research demonstrating that transgender adolescents who receive gender-affirming care have improved health outcomes. (*See* Turban Decl. ¶¶ 13-14 (explaining the findings of eight studies regarding pubertal suppression and six studies regarding hormone therapy).) As just one example, one study "compared 89 transgender adults

who had accessed pubertal suppression during adolescence to 3405 transgender adults who wanted but were unable to access pubertal suppression during adolescence. After adjusting for confounding variables, the study found that those who accessed pubertal suppression had a statistically significant lower odds of lifetime suicidal ideation." (Turban Decl. ¶ 13.) In addition to this body of research, the clinical experience of doctors in the field also supports the safety and efficacy of this treatment. (*See* Declaration of Deanna Adkins, MD (ECF 11-11, "Adkins Decl.") ¶¶ 26, 36, 50; Declaration of Michele Hutchison, MD (ECF 11-9, "Hutchison Decl.") ¶¶ 6, 13.)[1]

Defendants' experts focus extensively on the limitations of a single study by Bränström and Pachankis to claim that the current treatment protocols in the United States are unsupported by evidence. But as Dr. Turban explains, this study has no relevance to this case because it focused mostly on surgeries that minors do not receive, *e.g.*, genital surgery, hysterectomy, and laryngeal surgery.[2] (Turban Decl.

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[1] Unless otherwise defined herein, all capitalized terms have the same meaning as in Plaintiffs' Opening Brief and Plaintiffs' Opposition to Defendants' Motion to Dismiss (ECF No. 33, "Opp. to Mot. to Dismiss").

[2] In addition, Defendants' experts ignore a follow-up study by Almazan and Keuroghlian, which utilized a more sound methodology and found that those "who accessed gender-affirming surgery had lower odds of past-month severe psychological distress and past-year suicidal ideation than those who desired but never accessed gender-affirming surgery." (Turban Decl. ¶ 35.)

¶ 34; *see also* Hutchison Decl. ¶ 8 ("Genital surgery is not indicated or provided for minors with gender dysphoria.").) Defendants' experts attack a single study that has no bearing on the care banned by the State while ignoring the substantial body of research relied on by the Endocrine Society in developing its Guidelines.[3] (Antommaria Supp. Decl. ¶¶ 6, 13-15; Turban Decl. ¶ 34.)

Defendants' experts also repeatedly cite and mischaracterize another study about surgeries unrelated to this case involving adolescents. They suggest the study by Dhejne *et al*. demonstrates that gender-affirming surgical interventions worsen mental health because, after surgery, transgender patients still had higher rates of suicide than the control group. But the control group was non-transgender people rather than transgender people who did not receive treatment, and transgender people face a range of stressors that affect their mental health, most prominently societal rejection. Thus, even after surgery, many transgender people still suffer elevated rates of mental health problems compared to cisgender people. (Turban Decl. ¶ 36.) The study authors themselves explained that "the results should not be interpreted such as sex reassignment *per se* increases morbidity and mortality. Things might have been even worse without sex reassignment." *Id*. Additionally, this particularly study was from 2011 and included participants who received surgery decades ago when the surgical techniques were less advanced and societal discrimination was much worse, and therefore has limited applicability to a more modern context. *Id*.

[3] Defendants' experts claim the medical community was influenced by political pressure rather than science in supporting gender-affirming care, noting advocacy work done by WPATH and the fact that some of the medical professional groups use a voting process in deciding policies. (*See*, *e.g.*, Declaration of Dr. Mark Regnerus (ECF No. 45-2, "Regnerus Decl.") ¶ 66; Declaration of Stephen B. Levine, M.D. (ECF No. 45-1, "Levine Decl.") ¶ 39, 56, 133.) Advocacy by medical professional groups on behalf of their patient populations is par for the course, as evidenced by the work of groups such as the American Diabetes Association. (Exhibit 14 - Supplemental Declaration of Deanna Adkins, MD ("Adkins Supp. Decl.") ¶ 9.) And while there is no

Additionally, Defendants' focus on various reviews of evidence in Finland, Sweden, and the U.K. is likewise misleading. These were not peer-reviewed, and they leave out significant data sets. For example, the Finnish review looked at only three studies and the Swedish review surveyed studies only up to 2019, leaving out significant recent studies. (*See* Turban Decl. ¶¶ 56-57.) Contrary to some of Defendants' experts' claims, these assessments of the literature did not lead several—or any—countries to halt gender-affirming care. (*See* Levine Decl. ¶ 67 (pointing to Sweden, Finland, and the U.K.).) While *one hospital* in Sweden did stop prospectively providing puberty blockers and hormone therapy to individuals under 18—however, the hospital did not discontinue care for those currently receiving treatment—no care has been prohibited in Finland or the U.K. as Defendants suggest. The Finnish policy permits such treatments on a case-by-case basis when medically indicated, which is consistent with how care is provided in the United States. (ECF No. 45-5.) And in the U.K., minors may receive such care with parental consent, which is likewise already required in the United States. *AB* v. *CD*

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basis to assume that members of professional groups involved in making recommendations about treatment vote based on political views rather than science, the Endocrine Society Guidelines were not the result of a vote. (Exhibit 15 - Supplemental Declaration of Armand H. Matheny Antommaria, MD, PhD, FAAP, HEC-C ("Antommaria Supp. Decl.") ¶ 12 (explaining that the Endocrine Society Guidelines are based on standardized methodology in evaluating the science); *see also* Adkins Decl. ¶ 29.)

and others [2021] EWHC 741, at ¶¶ 68-70 (Fam); *Bell* v. *Tavistock and Portman National Health Service Foundation Trust*, [2020] EWHC (Admin) 3274, at ¶ 47.

Defendants' experts also claim that the evidence relied on in the adoption of the treatment protocols is not of adequate quality. (Regnerus Decl. ¶¶ 52-55.) As discussed in Plaintiffs' Opening Brief (at 40-41), this characterization of the evidence is false, and much of pediatric medicine—including medical care the Health Care Ban explicitly permits for non-transgender patients—relies on evidence of similar quality. (*See* Declaration of Armand H. Matheny Antommaria, MD, PhD, FAAP, HEC-C (ECF 11-12, "Antommaria Decl.") ¶¶ 29-41; *see also* Turban Decl. ¶ 40.[4])

Defendants' experts' position appears to be that since the evidence does not meet the standard they claim is necessary, patients should not be provided the care

[4] Prof. Regnerus claims that gender-affirming medical care is "by definition" experimental because puberty blockers and hormone therapy have not been approved by the FDA specifically for the treatment of gender dysphoria. (Regnerus Decl. at ¶ 50.) But off-label use of medication does not make the use "experimental." (Antommaria Supp. Decl. ¶¶ 8-9.) In fact, many widely used standard of care treatments are off-label. *Id.* The reason for the widespread off-label use of drugs is that once a drug has received FDA approval for one indication, there are diminished incentives to get approval for other indications because doctors are free to use it for other purposes. *Id.* Additionally, the American Academy of Pediatrics has explained that "the term 'off-label' does not imply an improper, illegal, contraindicated, or investigational use." (Turban Decl. ¶ 40.)

unless and until such evidence exists, which would leave patients and their families without reasonable options for treatment, thus resulting in significant distress.

On the other hand, Defendants' experts are willing to offer their recommended course of treatment—providing non-gender-affirming psychotherapy (and no medical care)—yet offer no evidence at all demonstrating that this is effective. As Dr. Levine candidly recognizes, there is no such evidence. (Levine Decl. ¶ 35 ("To my knowledge, there is no credible scientific evidence beyond anecdotal reports that psychotherapy can enable a return to male identification for genetically male boys, adolescents, and men, or return to female identification for genetically female girls, adolescents and women."); *see also* Turban Decl. ¶ 46.) So while Defendants critique the protocols recommended by every major medical association in the United States as insufficiently supported by scientific evidence, the alternative they propose has even less evidence to support it.[5]

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[55] While the State's position in this case is that the banned treatments are not effective to treat gender dysphoria, this position is inconsistent with the State's decision to provide hormone therapy to some inmates to treat their gender dysphoria while in the custody of the Department of Corrections. (*See* Defs.. Br. at 73-74.)

B. The Science is Clear that Adolescents Do Not "Outgrow" Gender Dysphoria and Gender-Affirming Care Does Not Cause Youth to be Transgender.

Throughout Defendants' submissions they repeat the false claim that a majority of youth who identify as transgender will ultimately abandon their transgender identity and come to identify with their assigned sex at birth. (Defs. Br. at 1, 7-8, 20, 55, 63, 100.) Defendants' experts claim that because most transgender-identified youth will outgrow gender dysphoria and come to identify as the sex they were assigned at birth—what they refer to as "desistance"— gender-affirming care should be prohibited. (Levine Decl. ¶¶ 56-57; Declaration of Paul W. Hruz, M.D., Ph.D (ECF No. 45-3, "Hruz Decl.") ¶ 8; Regnerus Decl. ¶ 77.) Moreover, they assert that affirming minors' gender is harmful because that will cause them to persist in their transgender identity when they otherwise would desist. (Levine Decl. ¶¶ 56-57; Hruz Decl. ¶ 8; Regnerus Decl. ¶ 77.) Neither of these claims is accurate or borne out in the literature.

First, Defendants misrepresent a body of literature that suggests that a majority of *children* who express gender non-conforming behavior or transgender identity will ultimately come to identify as their assigned sex at birth. As Dr. Turban explains, Defendants and their experts conflate the terms "children" and "adolescents," which have distinct meanings when it comes to child and adolescent psychiatry. (Turban Decl. ¶ 21 ("'child' and 'children' refers to a child who has not

yet reached the earliest stages of puberty. The term 'adolescent' refers to a minor who has begun puberty.").) All of Defendants' claims about "children" ultimately coming to identify as non-transgender are based on studies with serious methodological limitations, but even putting those methodological limitations aside, those studies relate only to *pre-pubertal children*, none of whom would be receiving any of the prohibited treatment. (*Id.*; *see also* Hutchison Decl. ¶ 8 ("There are no medical treatments indicated or provided for pre-pubertal children with gender dysphoria.").) "[O]nce a transgender youth reaches the earliest stages of puberty, it is extremely rare for them to later identify as cisgender." (Turban Decl. ¶ 22.)

Relatedly, Defendants' experts also misrepresent the "watchful waiting" treatment modality that is followed by some practitioners largely outside of the United States.[6] They claim that this approach entails not offering gender-affirming medical interventions to transgender adolescents. But the "watchful waiting" model refers only to the treatment of pre-pubertal youth and is an approach in which one does not implement any interventions to try to push a pre-pubertal child to identify as cisgender, but also does not advise a social transition until puberty. (Turban Decl.

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[6] Dr. Levine cites a paper by Dr. James Cantor that criticized The American Academy of Pediatrics policy statement regarding the treatment of transgender youth. That criticism focused only on the treatment of pre-pubertal children and primarily defends the watchful waiting approach for these children. He does not criticize gender-affirming medical care for transgender adolescents. (Turban Decl. ¶ 23.)

¶¶ 31-32.) This approach is not relevant to transgender youth who have reached puberty (*i.e.*, adolescents) and in no way suggests any limitation on medical treatment for adolescents. In fact, the "watchful waiting" approach was developed by the same clinic in Amsterdam that was also the first to develop and recommend pubertal suppression for transgender adolescents. (*Id.*) In other words, this is a form of treatment that has no relevancy for the population of minors impacted by the Health Care Ban, but the Defendants nonetheless conflate the experiences of pre-pubertal children with those of adolescents in order to defend the Health Care Ban.[7]

Additionally, there is no data to support Defendants' claim that gender-affirming care for adolescents or social transition for pre-pubertal children increases the likelihood that a minor will be transgender in adulthood. As Dr. Turban explains, "recent research has shown . . . gender identification is not significantly different before and after a social transition." (Turban Decl. ¶ 24.) The fact that a significant percentage of pre-pubertal youth who undergo social transition or adolescents who initiate medical treatment ultimately continue to identify as transgender is because

[7] Defendants submitted declarations containing anecdotal experiences of adults who regretted earlier decisions to transition, and their experts suggest that regret and "de-transitioning" is common and a reason to prevent transition among adolescents. But as Dr. Turban explains, transition regret is exceedingly rare and even in the cases where it does happen it is often "social regret" (*e.g.*, related to discrimination and rejection) rather than "true regret." (Turban Decl. ¶ 25.)

they had a "stronger discordance between their sex assigned at birth and their gender identity to begin with," were properly evaluated, and were treated appropriately. (*Id*.) There is simply no data to support the contention that treatment makes people transgender.

Ultimately Dr. Levine's views and recommendations about care seem to be informed by his opinion that it is inherently harmful to be transgender because of the medical interventions that may be necessary to treat gender dysphoria over the course of one's lifetime, and his assumption that transgender people will be rejected by their families and unable to "attract a desirable mate." (Levine Decl. ¶¶ 8, 103 (opining that there is a "material risk" that transgender people "will not be perceived as attractive to either sex").) As Dr. Turban explains, there is absolutely no data to support Dr. Levine's assertions about transgender people's ability to form romantic relationships. (Turban Decl. ¶ 19.) But even if preventing people from growing up to be transgender were an appropriate goal—which it is not—that cannot be achieved by denying youth access to gender-affirming care. There is no way to make someone "not trans" and any attempts to do so are widely understood to be harmful and unethical. (Turban Decl. ¶ 46.)

C. Treatment Protocols Require Thorough Patient Assessment And Informed Consent Before Gender-Affirming Care Is Provided.

Defendants' experts suggest that gender-affirming medical care should be categorically banned because doctors rush to treat minors without thoroughly evaluating their patients, screening for and addressing other mental health conditions, and adequately informing their patients and their parents of the potential risks and benefits of the treatment. (*See* Levine Decl. ¶ 36; Hruz Decl. ¶¶ 73-74, 79.) This description is inconsistent with the protocols for assessing and treating gender dysphoria and the rigorous requirements that must be met before the initiation of gender-affirming medical treatments, recited in full in Plaintiff's Opening Brief. (*See also* Brief of Amici AAP, *et. al.*, at 10-11; Adkins Decl. ¶¶ 33-35, 49; Antommaria Supp. Decl. ¶¶ 16-23; Turban Decl. ¶¶ 38-39 (detailing the extensive requirements for evaluating minor patients for gender dysphoria diagnoses and treatment).)

To be diagnosed with gender dysphoria, the incongruence between a person's gender identity and sex assigned at birth must have persisted for at least six months and be accompanied by clinically significant distress or impairment in social, occupational, or other important areas of functioning. (Adkins Decl. ¶ 22.) The Endocrine Society Guidelines have extensive requirements before the initiation of pubertal suppression or hormone therapy to ensure that: (1) the treatment is needed

(evidenced by long-lasting and intense gender dysphoria that worsened with the onset of puberty); (2) that "any coexisting psychological, medical, or social problems" have been addressed; (3) that the patient and their family is informed of the risks with hormone treatment, "including potential loss of fertility" and options to preserve fertility, and has given informed consent; (4) that puberty has started (verified by a pediatric endocrinologist or similar clinician); and (5) that there are no medical contraindications to treatment. (Adkins Decl. ¶¶ 31-35.) For hormone therapy, the Endocrine Society Guidelines have additional requirements that the adolescent "has sufficient mental capacity to estimate the consequences of this (partly) irreversible treatment, weigh the benefits and risks, and give informed consent to this (partly) irreversible treatment," and that they have been "informed of the (irreversible) effects and side effects of treatment," and they and their parents have given informed consent. (*Id.*)

Defendants' experts' characterization of the work of doctors who treat youth with gender dysphoria is at odds with the accepted protocols and the experience of doctors like Dr. Hutchison and Dr. Adkins. (Adkins Supp. Decl. ¶ 11; Hutchison Decl. ¶ 4.) In Dr. Adkins' clinic, each patient is met first by mental health providers who explore the patient's medical and mental health history and identity. (Adkins Supp. Decl. ¶ 11.) All patients are treated by a multi-disciplinary team that includes a social worker, psychologist, psychiatrist, and endocrinologist. (*Id.*) Patients who

are found to have other mental health diagnoses are treated by the mental health team, and medical treatment for gender dysphoria is not initiated without written confirmation from the team that those conditions are well-managed and the patient is stable. (*Id.*) There is an extensive informed consent process going through every potential side effect and risk verbally, then in writing, then verbally a second time. (*Id.*; *see also* Hutchison Decl. ¶ 4 ("The Clinic has an interdisciplinary team, including mental health providers, to ensure each child receives appropriate and necessary care. We require all of our patients to be receiving mental health counseling while they are in treatment at the Clinic."); Stambough Decl. (ECF No. 11-10) ¶ 4.)[8] As Dr. Turban also explains, the WPATH guidelines have extensive requirements for evaluating patients and require that "before any physical interventions are considered for adolescents, extensive exploration of psychological, family, and social issues should be undertaken." (Turban Decl. ¶ 39.)

Defendants offer no evidence that failure to comply with the protocols for evaluation and informed consent is happening systematically. And even if it were, there are other mechanisms available to the State to address this other than categorically banning treatment and denying patients who need access to care.

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[8] Dr. Levine's comparison between the prohibited care and the Tuskegee experiments and "Nazi and Imperial Japanese wartime experimental research on prisoners" (Levine Decl. ¶ 112) is preposterous. (Antommaria Decl. ¶ 25.)

Defendants' experts' asserted concerns about unscrupulous practices by medical providers appear to be related to their focus on so-called "social contagion" or "rapid onset gender dysphoria." (Hruz Decl. ¶¶ 29, 69; Levine Decl. ¶ 14.) They say exposure to social media influencers talking about being transgender causes youth to identify as transgender, and that groups of teenage girls influence one another to identify as transgender. (Hruz Decl. ¶ 29; Levine Decl. ¶ 15.) Dr. Hruz says many girls come out as transgender after seeing YouTube "training" or "following school 'gender training' programs." (Hruz Decl. ¶ 29.) As Dr. Turban explains, the entirety of this discussion is a fringe view without any evidentiary support. (Turban Decl. ¶¶ 41-45.) This concept emerged in an article from Dr. Leah Littman where she discussed both the concept of "social contagion" and what she called "rapid onset gender dysphoria." A formal correction to the paper was issued, and it was explained that "[r]apid-onset gender dysphoria (ROGD) is not a formal mental health diagnosis" and "the term should not be used in any way to imply that it explains the experiences of all gender dysphoric youth." (Turban Decl. ¶ 41.) And the Littman paper that originated the term was based only on interviews of parents (and not adolescents) who reported that their child's transgender identity came on "suddenly." But as Dr. Turban explains, this is more likely explained by adolescents hiding their gender identity for fear of parental rejection, as has been the experience of many lesbian and gay people. (*Id.*) Ultimately, the increase in referrals to gender

clinics and an increase in the number of young people identifying as transgender is not explained by "social contagion" but rather by increased societal acceptance, effective medical treatment and insurance coverage, and general support. (*See* Turban Decl. ¶¶ 42-43.)[9]

But even if one were to accept Defendants' claim that there is a fad among adolescent girls to identify as transgender, individuals who do not have gender dysphoria and do not meet the requirements for treatment under the Endocrine Society Guidelines will not be provided treatment. (*See*, *e.g.*, Adkins Supp. Decl. ¶ 12; *see also supra* at 15-17 (discussion regarding the extensive mental health screening required to initiate treatment under existing guidelines).) And such a phenomenon would certainly not be a basis to deny medically needed care to adolescents who actually are suffering from gender dysphoria.

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[9] Defendants also point to changing demographics at gender clinics from majority transgender girls to majority transgender boys, apparently in an attempt to support the "social contagion" concept. But as Dr. Turban details, there is no data to suggest that changing demographics in gender clinics in any way relate to social contagion but rather reflect the historic ways that transgender women and girls had a more difficult time blending into society than transgender men and boys. (Turban Decl. ¶ 44.)

D. There Is Nothing About Gender-Affirming Medical Care for Adolescents that Warrants the Conclusion that Parents Are Incapable of Consenting, and Adolescents Assenting, to Such Treatment After Being Informed of the Risks and Benefits.

Defendants' experts suggest that the risks and consequences of gender-affirming medical care are uniquely harmful and should be treated differently than all other areas of pediatric medicine and be banned. Though minors and their parents are afforded the opportunity to assent, in the case of the minor, and consent, in the case of the parents, to all other medically accepted treatments once they are informed of the risks and benefits, including those that have significant risks, Defendants' position is that no one should have the ability to consent to gender-affirming care for minors. They specifically focus on the irreversibility of some treatments and the potential that the treatment may result in sterilization. But many permitted treatments have significant risks, which patients and their parents can consent to if they, with the advice of their doctors, deem the benefits to outweigh the risks. (Antommaria Decl. ¶¶ 45-46.) Defendants' experts' quarrel here is due, at least in part, to their failure to appreciate the harms in denying medical treatment for gender dysphoria—severe distress that can result in self-harm and suicidality. (Adkins Decl. ¶¶ 50-55; Hutchison Decl. ¶¶ 13-17; Sabrina Jennen Decl. ¶¶ 4, 11; *see* Levine Decl. ¶ 81 (characterizing the pain of gender dysphoria as "relatively minor").)

Though Defendants' experts warn of the risk of infertility related to gender-affirming hormone therapy, all patients are informed of this risk and options for

fertility preservation, and many transgender individuals are still able to conceive children after undergoing hormone therapy.[10] (Adkins Decl. ¶ 45; Adkins Supp. Decl. ¶ 17.) More generally, many medical interventions that are necessary to preserve a person's health and well-being can impact an individual's fertility (*e.g.* certain cancer treatments), but treatment is still provided after informed consent. (Adkins Decl. ¶ 45; Antommaria Supp. Decl. ¶ 23.)

As for Defendants' experts' laundry list of potential risks associated with gender-affirming hormones, they are rare when provided under the supervision of a clinician; they become more frequent when individuals are unable to be supervised by doctors and they obtain treatment on the black market. (Adkins Decl. ¶ 46.) And these very same risks are present when hormone therapy is used to treat non-transgender individuals (*id.*), which treatment is permitted by the law.

E. Defendants' Experts Offer Duplicative and Non-credible Testimony.

Defendants submitted expert reports from four expert witnesses who offered largely duplicative testimony repeating the claims discussed above. Prof. Regnerus

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[10] Alexis D. Light et al., *Transgender Men Who Experienced Pregnancy After Female-to-Male Gender Transitioning*, 124 Obstetrics & Gynecology 1120 (2014); Susan Maxwell et al., *Pregnancy Outcomes After Fertility Preservation in Transgender Men*, 129 Obstetrics & Gynecology 1031 (2017); Michael F. Neblett & Heather S. Hipp, *Fertility Considerations in Transgender Persons*, 48 Endocrinology & Metabolism Clinics N. Am. 391 (2019).

is a sociologist who studies sexual relationship behavior and decision-making. (Regnerus Decl. ¶¶ 1-2, Exhibit A (curriculum vitae).) He has no experience relevant to this case. The last time he testified on a topic about which he had no experience in a case involving LGBTQ+ issues, he was discredited by the Court. *See DeBoer* v. *Snyder*, 973 F. Supp. 2d 757, 766 (E.D. Mich. 2014) (marriage equality case), *rev'd on other grounds*, 772 F.3d 388 (6th Cir. 2014), *rev'd sub nom. Obergefell* v. *Hodges*, 576 U.S. 644 (2015). The Court found Prof. Regnerus's testimony "entirely unbelievable and not worthy of serious consideration" because "[t]he evidence adduced at trial demonstrated that his 2012 'study' was hastily concocted" for the purpose of opposing marriage equality litigation approaching the Supreme Court. *Id.*

Dr. Levine's testimony has also been discredited by several courts, all in cases in which he was offering testimony about the treatment for gender dysphoria. *See Norsworthy* v. *Beard*, 87 F. Supp. 3d 1164, 1188–89 (N.D. Cal. 2015) (finding Dr. Levine's testimony "not credible because of illogical inferences, inconsistencies, and inaccuracies," and noting that his report misrepresents the standards of care and "admittedly includes references to a fabricated anecdote"); *Edmo* v. *Idaho Dep't of Corr.*, 358 F. Supp. 3d 1103, 1126 (D. Idaho 2018), *order clarified*, No. 1:17-CV-00151-BLW, 2019 WL 2319527 (D. Idaho May 31, 2019), and *vacated in part on other grounds sub nom. Edmo* v. *Corizon, Inc.*, 935 F.3d 757 (9th Cir. 2019) (giving

Dr. Levine's opinions "virtually no weight"); *see also Hecox* v. *Little*, 479 F. Supp. 3d 930, 977 n.33 (D. Idaho. 2020).

As discussed above, Defendants' experts' declarations include numerous false and misleading claims and mischaracterizations of evidence. The physician experts are all outliers in their fields with respect to their views about treatment for adolescents with gender dysphoria. Drs. Levine and Hruz's departure from the medical consensus extends to even questioning the validity of the Diagnostic and Statistical Manual (DSM)'s gender dysphoria diagnosis. (Levine Decl. ¶ 13; Hruz Decl. ¶ 34.C.) [11] Dr. Lappert compares WPATH to a "cult," (Declaration of Dr. Patrick W. Lappert (ECF No. 45-4, "Lappert Decl.") ¶ 87), and all of the experts refer to widely accepted treatment protocols as part of a "transgender industry" or "transgender treatment enterprise." (*E.g.*, Levine Decl. ¶ 120 ("transgender treatment industry"); Regnerus Decl. ¶ 52 ("gender medicine industry"); Hruz Decl. ¶ 12C ("transgender industry"); Lappert Decl. ¶ 80 ("transgender treatment enterprise").) Dr. Hruz submitted an amicus brief in which he called parents who support gender-affirming care for their children child abusers. *See* Brief of Amici Curiae Dr. Paul R. McHugh, M.D., Dr. Paul Hruz, M.D., PH.D., & Dr. Lawrence S.

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[11] Dr. Turban also refutes some of Defendants' experts' claim that Gender Dysphoria is comparable to Body Dysmorphic Disorder, which is a form of Obsessive Compulsive Disorder. (Turban Decl. ¶ 51.)

Mayer, PH.D. in Support of Petitioner at 22, *Gloucester Cty. Sch. Bd.* v. *G.G. ex rel. Grimm*, 137 S. Ct. 1239 (2017) (mem.) (No. 16-273) ("[C]onditioning children into believing that a lifetime of impersonating someone of the opposite sex, achievable only from chemical and surgical interventions, is a form of child abuse.").

Ultimately, all of Defendants' experts are oriented towards ideological opposition to transgender people and recite discredited views that cannot justify an unprecedented intrusion by the State into widely accepted and life-saving medical care.[12]

LEGAL STANDARD

In issuing a preliminary injunction, the Court assesses: (1) the threat of irreparable harm to the moving party; (2) the balance between this harm and the injury that granting the injunction will inflict on the non-moving party; (3) the probability that the moving party will succeed on the merits; and (4) the public interest. *Turtle Island Foods, SPC* v. *Thompson*, 992 F.3d 694, 699 (8th Cir. 2021). The Court's consideration of these factors is flexible, and no single factor is in itself dispositive. Plaintiffs have put forth substantial evidence showing that they are likely to suffer irreparable harm if the Health Care Ban is allowed to take effect, that

[12] The brief filed by Alabama and other states as *amici curiae* (ECF No. 49) repeats the same erroneous arguments proffered by Arkansas and offers nothing to inform the Court's analysis here.

the balance of equities tips in Plaintiffs' favor, and that they are likely to succeed on the merits. The preliminary injunction standard does not, as Defendants claim, create an additional burden that Plaintiffs must meet to obtain a preliminary injunction. (Defs. Br. at 33.) Instead, as the Eighth Circuit explained in *Rounds*, it means "a party seeking a preliminary injunction of the implementation of a state statute must demonstrate more than just a 'fair chance' that it will succeed on the merits," and the district court must "make a threshold finding that a party is likely to prevail on the merits." *Planned Parenthood Minn., N.D., S.D.* v. *Rounds*, 530 F.3d 724, 731-32 (8th Cir. 2008). Plaintiffs have more than met this standard. (*See* Pls. Op. Br. at Argument, § II-IV and Exhibits 1-12; Sections II-IV, *infra*.)

ARGUMENT

I. Plaintiffs Have Established Standing to Bring All of Their Claims.

A. Plaintiffs Have Established Standing to Challenge the Ban on "Gender Transition Procedures."

Defendants ignore the operative language of the Health Care Ban in arguing that Plaintiffs lack standing to challenge the law's prohibition of gender-reassignment surgery for minors. (Defs. Br. at 36-37.) Defendants acknowledge that the section of the Health Care Ban that Plaintiffs are challenging is its prohibition of "gender transition procedures" (*id*. at 36) which includes "a *variety* of procedures." (*Id*.) Plaintiffs are receiving or imminently will be receiving the health care enumerated under the statute's definition of "gender transition procedures."

(Pls. Op. Br. at 13-19.) This is sufficient to establish standing to bring Plaintiffs' claims challenging the constitutionality of the Health Care Ban's prohibition of this category of treatment and to seek an injunction prohibiting Defendants from enforcing this section of the Health Care Ban. *Webb ex rel. K.S.* v. *Smith*, 936 F.3d 808, 814 (8th Cir. 2019). Defendants' argument that the Health Care Ban could have been drafted differently to "ban[] each of these procedures in separate provisions" (Defs. Br. at 36) is irrelevant. Plaintiffs are challenging the law that was passed, not a hypothetical law.[13]

B. Plaintiffs have Established Standing to Challenge the Private Right of Action.

Defendants' argument that Plaintiffs lack standing to challenge the Health Care Ban's private right of action relies solely on out-of-Circuit cases and ignores the in-Circuit cases cited in Plaintiff's Opposition to the Motion to Dismiss (at 9-10) that establish that "private rights of action . . . do not deprive this Court of jurisdiction to address the constitutionality of the laws" because they also "provide for criminal prosecution and/or civil licensing enforcement by defendants." *Hopkins* v. *Jegley*, 2021 WL 41927, at *50 (E.D. Ark., 2021) (citing *Planned Parenthood of*

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[13] *DaimlerChrysler Corp*. v. *Cuno*, is wholly inapposite. 547 U.S. 332 (2006). In that case, the plaintiffs argued they had standing to challenge a *state* tax law based on their status as *municipal* taxpayers. *Id*. at 349 (rejecting plaintiffs' "claim that their status as municipal taxpayers gives them standing to challenge the state franchise tax credit at issue here").

Southeastern Pennsylvania v. *Casey*, 505 U.S. 833, 887-88 (1992). Because the Health Care Ban contains a public enforcement mechanism, Plaintiffs have standing to challenge the law, including the private right of action.[14]

C. Plaintiffs Have Established Standing for the Doctor Plaintiffs' Equal Protection Claim.

Defendants assert that Plaintiffs ask this court to "expand the holding of decisions granting third-party standing to abortion practitioners so that it covers all doctors." (Defs. Br. at 39.) But Plaintiffs are not seeking to expand any doctrine; rather, they ask this Court to apply well-established principles under which courts "have generally permitted plaintiffs to assert third-party rights in cases where the 'enforcement of the challenged restriction *against the litigant* would result indirectly in the violation of third parties' rights.'" *June Medical Services L. L. C.* v. *Russo*, 140 S. Ct. 2103, 2118-19 (2020) (quoting *Kowalski* v. *Tesmer*, 543 U.S. 125, 130

[14] Defendants' reliance on *Okpalobi* v. *Foster*, 244 F.3d 405, 422 (5th Cir. 2001) and *Planned Parenthood of Greater Texas Surgical Health Services* v. *City of Lubbock, Texas*, 2021 WL 2385110, at *4 (N.D. Tex., 2021) is misplaced because both laws, unlike the Health Care Ban, involved only private enforcement. The holding of *Hope Clinic* v. *Ryan*, 249 F.3d 603, 605 (7th Cir. 2001) has not been adopted by any court in the Eighth Circuit. *See Planned Parenthood of Heartland* v. *Heineman*, 724 F. Supp. 2d 1025, 1039 (D. Neb. 2010) (distinguishing *Hope Clinic* and holding that "Plaintiffs have demonstrated that the named Defendants are a source of injury-in-fact" because the state "holds the power to impose fines on Planned Parenthood in an amount up to $10,000 per violation, and revoke Planned Parenthood's health care facility license").

(2004)). The Doctor Plaintiffs meet the third-party standing standard that the Supreme Court recently reaffirmed in *June Medical*. The Doctor Plaintiffs are "challenging a law that regulates their conduct," and the "'threatened imposition of governmental sanctions' for noncompliance eliminates any risk that their claims are abstract or hypothetical." *Id*. at 2119; *see also Reprod. Health Servs. of Planned Parenthood of St. Louis Region, Inc.* v. *Parson*, 1 F.4th 552 (8th Cir. 2021) (applying *June Medical* and holding that abortion provider had standing to sue on behalf of its patients), *reh'g en banc granted* (July 13, 2021). And because the Health Care Ban "imposes 'legal duties and disabilities'" on the Doctor Plaintiffs, they are the "'least awkward' and most 'obvious' claimants here." *June Med*., 140 S. Ct. at 2119 (quoting *Craig* v. *Boren*, 429 U.S. 190, 197 (1976)).

Defendants also incorrectly assert that the Doctor Plaintiffs have failed to show a "close relationship" with their patients or that those patients do not face a "hindrance" to bringing their own claims. (Defs. Br. at 41.) The only argument Defendants make in support of their assertion that the Doctors lack a "close relationship" is to repeat the argument that the Doctor Plaintiffs have a conflict of interest with their patients because they wish to expand their "lucrative" business providing gender-affirming care. (*Id*.) This argument fails for the reasons discussed in Plaintiffs' Opposition to the Motion to Dismiss (at 12), to which Defendants failed to respond.

Defendants similarly repeat their argument that the Doctor Plaintiffs lack standing because four transgender minors have also brought claims. (Defs. Br. at 42.) But it is often the case that both patients and physicians together have standing to challenge the law, and the fact that some transgender patients are plaintiffs does not negate the Doctor Plaintiffs' standing. For example, in *Doe* v. *Bolton*, a pregnant minor as well as physicians challenged a Georgia law restricting access to abortion. *Doe* v. *Bolton*, 410 U.S. 179, 179-80 (1973). The Supreme Court held that the minor plaintiff had standing and that the "physician-appellants, who are Georgia-licensed doctors consulted by pregnant women, also present a justiciable controversy and do have standing." *Id.*; *see also Hodgson* v. *Minnesota*, 497 U.S. 417, 429 (1990) ("[P]laintiffs include two Minnesota doctors . . . , four clinics providing abortion and contraceptive services . . . , six pregnant minors representing a class of pregnant minors, and the mother of a pregnant minor.").

Defendants ignore that transgender plaintiffs face significant hindrances in bringing their own claims, including that their claims will soon be mooted and transgender people have a heightened privacy interest given the longstanding harassment and discrimination they face. *Singleton* v. *Wulff*, 428 U.S. 106, 117 (1976) (third-party standing appropriate for doctors because patients "may be chilled from such assertion by a desire to protect the very privacy of her decision from the publicity of a court suit" and there is "imminent mootness . . . of any individual

woman's claim."). Defendants incorrectly assert that minors seeking gender-affirming care "do not face the same mootness problem faced by pregnant women." (Defs. Br. at 41 n.99). Each of the Doctor Plaintiffs' minor patients will turn 18 years old within a period of months or years, and therefore no longer be subject to the Health Care Ban. Moreover, the fact that some transgender minors affected by the Health Care Ban are plaintiffs in this case does not negate the significant hindrance for many others who desire to protect the privacy of their medical decisions and transgender status. *See Singleton*, 428 U.S. at 117 (the patients' hindrance need not be "insurmountable").

II. Plaintiffs Are Likely to Succeed on the Merits of Their Equal Protection Claim.

As Plaintiffs explain in their Opening Brief, by banning medical care only for "gender transition," thereby singling out for unique prohibition care designed to bring a patient's body into alignment with their gender identity rather than their sex assigned at birth, the Health Care Ban discriminates on the basis of transgender status and sex. (Pls. Op. Br. at 24-30, Opp. to Mot. to Dismiss at 16-24.) None of the interests advanced by Defendants justifies the Health Care Ban under any level of scrutiny.

A. The Health Care Ban Triggers Heightened Equal Protection Scrutiny Because It Discriminates on the Basis of Transgender Status and Sex.

Arkansas's Health Care Ban is subject to heightened scrutiny under the Equal Protection Clause because it discriminates based on transgender status and sex, including non-conformity with sex stereotypes, and because it bars treatment solely based on whether or not the State considers the treatment to be in alignment with a person's "biological sex." (*See generally* Statement of Interest of the United States (ECF No. 19) at 5-17 (arguing that the Health Care Ban is subject to heightened scrutiny because it discriminates on the basis of transgender status and sex).)

1. The Health Care Ban Discriminates Based on Transgender Status.

Defendants take great pains to argue that the Health Care Ban, which categorically prohibits care related to "gender transition," does not discriminate based on transgender status. Instead, they argue, the Health Care Ban discriminates only based on age and medical treatment because no minors are permitted to undergo "gender transition." (Defs. Br. at 46-52.) Plaintiffs' explain in their Opposition to Defendants' Motion to Dismiss why these arguments fail. (Opp. to Mot. to Dismiss at 19-22.) These arguments fail for the additional reasons outlined below.

First, the fact that the law classifies based on age does not mean that it does not also discriminate based on transgender status. A law that discriminates against a subset of people based on a protected characteristic still triggers heightened

scrutiny. *See*, *e.g.*, *Phillips* v. *Martin Marietta Corp.*, 400 U.S. 542, 543-44 (1971) (per curiam) (discriminating against women with children is sex discrimination even if women without children were not discriminated against).[15] The Health Care Ban's disparate treatment of individuals because of their age and transgender status is still transgender status discrimination even if only a subset of transgender individuals are targeted. (*See* Opp. to Mot. to Dismiss at 19-22.)

Second, Defendants' argument that the law involves a classification based on medical procedure fares no better. Defendants offer a litany of supposed justifications for the ban—that the treatment is provided off-label, that it treats a non-physiologically verifiable condition, that it is "experimental." (Defs. Br. at 47.) But how Defendants may attempt to *justify* the law is a separate inquiry from whether the law discriminates against a suspect class and does not change the fact that the law is singularly aimed at the subset of medical care that only transgender people

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[15] *See also B.K.B.* v. *Maui Police Dep't*, 276 F.3d 1091, 1101 (9th Cir. 2002) (citation omitted) (describing "the intersectional relationship between discrimination on the basis of" two characteristics such as "race and gender"), *as amended* (Feb. 20, 2002); *Sewell* v. *Monroe City Sch. Bd.*, 974 F.3d 577, 584 (5th Cir. 2020) (holding that Black boys could bring Title VI race discrimination claim based on school's hair policy even though Black girls and white boys were not targeted by the policy); *see also Bostock*, 140 S. Ct. at 1748 (noting that even where the confluence of two factors—in that case sex and sexual orientation and sex and transgender status—may result in a discriminatory decision, it is still discrimination based on the protected characteristic).

undergo. The Health Care Ban does not establish a generally applicable requirement that all medical treatment for minors satisfy some state-defined test of scientific rigor or physiological verification or FDA label-use. Rather, the *only* care prohibited by the Health Care Ban is care prescribed, administered, or referred for "gender transition." *See* ARK. CODE ANN. § 20-9-1502(a)-(b).[16] Where a law targets "gender transition"—a process that only transgender people undergo—it discriminates based on transgender status. *Karnoski* v. *Trump*, 926 F.3d 1180, 1201 (9th Cir. 2019) (holding that a policy banning individuals who have undergone "gender transition" from open military service discriminates on the basis of transgender status).

Third, Defendants' argument that the Health Care Ban does not discriminate based on transgender status because no child can undergo "gender transition" strains credulity. (Defs. Br. at 52, 74 (claiming that the Health Care Ban "appl[ies] evenhandedly to all" children).) It is not unlike arguments raised in defense of unconstitutional bans on marriage for same-sex couples. Marriage bans restricted civil marriage to one man and one woman. In defense of the bans, many states argued that they did not discriminate based on sexual orientation because no one, regardless of sexual orientation, could marry a person of the same sex. *See*, *e.g.*, *Baskin* v. *Bogan*, 12 F. Supp. 3d 1144, 1160 (S.D. Ind. 2014) ("Defendants respond

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[16] The Health Care Ban, 2021 ARK. ACTS 626, will be codified at ARK. CODE ANN. 20-9-1501-1504.

that the marriage laws do not discriminate against same-sex couples because they may marry just like opposite-sex couples may marry."), *aff'd*, 766 F.3d 648 (7th Cir. 2014). Courts rightfully rejected that argument, noting that by definition gay and lesbian people formed same-sex unions and therefore such bans facially targeted them based on their sexual orientation. *Id*.; *see also Latta* v. *Otter*, 771 F.3d 456, 476-77 (9th Cir. 2014) (holding that bans on marriage for same-sex couples discriminated on the basis of sexual orientation).[17]

Finally, Defendants' argument that the Health Care Ban does not discriminate based on transgender status because psychotherapy and social transition are permitted under the Act again erroneously assumes that all members of a class must be targeted in order to trigger heightened scrutiny. (Defs. Br. at 55; *see* Opp. to Mot. to Dismiss at 20-22.) In *Hennessy-Waller* v. *Snyder*, cited by Defendants, the Court's conclusion that the policy at issue did not discriminate based on transgender status turned on it being limited to insurance coverage for surgical treatment for

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[17] Defendants' reliance on *Pers. Adm'r of Mass.* v. *Feeney,* is misplaced. (Defs. Br. at 53, citing 442 U.S. 256, 271-72 (1979).) In *Feeney*, the Supreme Court held that veterans' preferences, though disproportionately excluding women, did not establish a sex-classification. *Feeney*, 442 U.S. at 280-81. One's veteran's status does not by definition correlate with sex, whereas a "gender transition" classification by definition correlates with one's transgender status. A man is not defined in relation to his veteran status, but a transgender person is defined in relation to gender transition—that is, the process by which one identifies and/or lives in accordance with a sex different from that assigned to the person at birth. (Adkins Decl. ¶ 19.)

minors, while allowing coverage for other medical treatments for gender dysphoria.[18] No. CV-20-00335, 2021 WL 1192842 at *9 (D. Ariz. Mar. 30, 2021). In contrast, Arkansas has banned all medical care related to "gender transition," thereby discriminating against transgender people as a class. *Karnoski,* 926 F.3d at 1201.

2. The Health Care Ban Discriminates Based on Sex.

In addition to triggering heightened scrutiny because it discriminates based on transgender status, the Health Care Ban triggers heightened scrutiny because it discriminates on the basis of sex. (*See* Pls. Op. Br. at 30-32; Opp. to Mot. to Dismiss at 23-24); *see also U.S.* v. *Virginia (VMI)*, 518 U.S. at 555 ("[A]ll gender-based classifications today warrant heightened scrutiny.") (internal quotation marks omitted). Defendants' argument that sex discrimination only occurs where one sex is disadvantaged as compared to another sex (Defs. Br. at 69-70) was explicitly rejected by the Supreme Court in *Bostock*. *Bostock* v. *Clayton Cty., Georgia*, 140 S. Ct. 1731, 1742 (2020) ("[L]iability is not limited to employers who, through the sum of all of their employment actions, treat the class of men differently than the class of women . . . the law makes each instance of discriminating against an

[18] In addition, *Hennessy-Waller* is not binding on this Court and is currently on appeal. *Hennessy-Waller* v. *Snyder*, 2021 WL 1192842, *appeal filed sub nom. D. H.* v. *Snyder*, No. 21-15668 (9th Cir. Apr. 19, 2021).

individual employee because of that individual's sex an independent violation."); *see also Waters* v. *Ricketts*, 48 F. Supp. 3d 1271, 1282 (D. Neb.) ("The 'equal application' of [marriage] laws to men and women as a class does not remove them from intermediate scrutiny."), *aff'd,* 798 F.3d 682 (8th Cir. 2015).

Where the state "intentionally penalizes a person identified as male at birth for traits or actions that it tolerates in [someone] identified as female at birth . . . sex plays an unmistakable and impermissible role." *Bostock*, 140 S. Ct. at 1741-42. Under the Health Care Ban, care is prohibited based solely on whether or not the person receiving the care was assigned male or female at birth. (Pls. Op. Br. at 30-32.) Defendants' only response is that the care that people assigned male at birth receive is different from the care that people assigned female at birth receive. Even if that were true, it is beside the point. The Health Care Ban permits a person assigned male at birth to affirm his male gender identity through medical interventions but a person assigned female at birth is prohibited from affirming his male gender identity; likewise, a person assigned female at birth is permitted to obtain medical interventions to affirm her female gender identity but a person assigned male is not. *See* ARK. CODE ANN. § 20-9-1501(5). The Health Care Ban is triggered when the care facilitates the "process in which a person goes from identifying with and living as a gender that corresponds to his or her biological sex to identifying with and living as a gender different from his or her biological sex,

and may involve social, legal, or physical changes." *Id*. Accordingly, what the Health Care Ban prohibits is based exclusively on a person's "biological sex," and is therefore sex discrimination.[19]

That the Health Care Ban also discriminates based on one's non-conformity with stereotypes related to sex is made crystal clear by the law's exemption for care for individuals with intersex conditions, including surgery on intersex infants. ARK. CODE ANN. § 20-9-1502(c). The permissibility of care is dependent on whether it brings the body into alignment with what is considered to be "typical" for one's sex assigned at birth. ARK. CODE ANN. § 20-9-1501(4). "Tether[ing] Plaintiffs to sex stereotypes which . . . they seek to reject" is sex discrimination. *Kadel* v. *Folwell*, 446 F. Supp. 3d 1, 14 (M.D.N.C. 2020); (*See* Pls. Op. Br. at 31-32).

B. Classifications Based on Transgender Status Trigger Heightened Scrutiny.

As Plaintiffs explain in their Opening Brief, transgender people meet all of the indicia of a suspect class under the considerations utilized by the Supreme Court. (Pls. Op. Br. at 27-30); *see Grimm* v. *Gloucester Cty. Sch. Bd.*, 972 F.3d 586, 611-13 (4th Cir. 2020), *as amended* (Aug. 28, 2020), *cert. denied,* No. 20-1163, 2021 WL

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[19] There is no exception to heightened scrutiny for gender discrimination based on physiological or biological characteristics. *See Tuan Anh Nguyen* v. *INS*, 533 U.S. 53, 70, 73 (2001) (applying heightened scrutiny and upholding policy because it imposed only a "minimal" burden and was not "marked by misconception and prejudice" or "disrespect").

2637992 (U.S. June 28, 2021); *Karnoski*, 926 F.3d at 1200. Defendants devote ten pages to arguing that transgender people have not faced a history of discrimination, do not share any defining characteristics, and do not lack political power. (Defs. Br. at 57-67.) But their arguments distort both the test for a suspect class and the historical and contemporary realities facing transgender people.

The last century of American law and history is replete with examples of intentional and ongoing discrimination against transgender people. *See G. G.* v. *Gloucester Cty. Sch. Bd*., 853 F.3d 729, 730 (4th Cir. 2017), as amended (Apr. 18, 2017) (Davis., J., concurring) (recognizing that discrimination against transgender people is part of our country's "long and ignominious history of discriminating against our most vulnerable and powerless."). "[O]ne would be hard-pressed to identify a class of people more discriminated against historically . . . than transgender people." *Grimm*, 972 F.3d at 610 (internal quotations omitted). Defendants disagree with this conclusion but do not—and cannot—offer any counterargument or evidence that transgender people have not been subject to a range of government-mandated and private discrimination throughout history. *See*, *e.g*., *Transgender History: The Roots of Today's Revolution* (Berkeley: Seal Press, 2017) at 46-48 (identifying history of anti-cross dressing law that typically included language like: "If any person shall appear in a public place . . . in a dress not belonging to his or her sex . . . he should be guilty of a misdemeanor."); Joanne

Meyerowitz, *How Sex Changed: A History of Transsexuality in the United States,* Harvard Univ. Press 2002, at 246-53 (tracing history of anti-transgender laws and policies in the United States).

The fact that not all transgender people share the same experience does not change the fact that, for purposes of the Court's heightened scrutiny analysis, transgender people share "distinguishing characteristics." *Grimm*, 972 F.3d at 611-13. Transgender people are those who have a "gender identity and/or gender expression that differs from what is typically associated with their sex designated at birth." Endocrine Society Guidelines at Table 1; (Br. of Amici AAP *et al.* at 5). The relevant question is not whether every person in the class is the same or shares the same experience of identity; rather, the relevant question is whether they share a characteristic that "tend[s] to be irrelevant to any proper legislative goal." *Plyler* v. *Doe*, 457 U.S. 202, 216 n.14 (1982). And transgender people—who are simply trying to live their lives consistent with who they are—do share such a characteristic, and government action targeting them warrants judicial skepticism. (Pls. Br. at 28-29.)

Courts have explained that the "immutability" consideration is not about whether the trait is strictly immutable but rather whether it is a characteristic one could or should have to change. *See Latta* v. *Otter*, 771 F.3d 456, 464 n.4 (9th Cir. 2014) ("We have recognized that '[s]exual orientation and sexual identity are

immutable; they are so fundamental to one's identity that a person should not be required to abandon them.'"); *Love* v. *Beshear*, 989 F. Supp. 2d 536, 546 (W.D. Ky. 2014) ("As to immutability, the relevant inquiry is not whether a person *could*, in fact, change a characteristic, but rather whether the characteristic is so integral to a person's identity that it would be inappropriate to require her to change it to avoid discrimination."). As courts have recognized, the question is whether the trait is one a person should have to change in order to secure one's rights as an individual—even if such a choice could be made. *See Wolf* v. *Walker*, 986 F. Supp. 2d 982, 1013 ("[R]egardless whether sexual orientation is immutable, it is fundamental to a person's identity, which is sufficient to meet this factor.") (internal quotation marks and citations omitted). As Dr. Adkins explains, "[A] person's gender identity (regardless of whether that identity matches other sex-related characteristics) is fixed, is not subject to voluntary control, [and] cannot be voluntarily changed." (Adkins Decl. ¶ 21.)[20] Being transgender is not something that one could or should have to change in order to be protected from legal discrimination.[21] As Judge Wynn

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[20] *See also* American Psychological Association (2015) Guidelines for Psychological Practice with Transgender and Gender Nonconforming People. American Psychologist, 70 (9), 832-864. doi: 10.1037/a0039906 (explaining that gender identity is "deeply felt" and "inherent").

[21] Defendants' citations to various sources explaining people's experience of gender identity and their expression of it does not undermine this suspect classification consideration. (*See* Defs. Br. at 64.) As Dr. Adkins explains,

explained in *Grimm*, "[a] transgender person's awareness of themselves as male or female is no less foundational to their essential personhood and sense of self than it is for those [who are not transgender]. History demonstrates that this self-conception is unshakeable indeed." *Grimm*, 972 F.3d at 624 (Wynn, J., concurring).

The "political powerlessness" question is not, as Defendants argue (Defs. Br. at 65), solely about representation among elected officials, but rather about whether transgender people are "in a position to adequately protect themselves from the discriminatory wishes of the majoritarian public." *Windsor* v. *U.S.*, 699 F.3d 169, 185 (2d Cir. 2012), *aff'd sub nom. United States* v. *Windsor*, 570 U.S. 744, 770 (2013). As this legislative session in Arkansas alone demonstrates, they are not. This year Arkansas considered at least 8 bills aimed at limiting rights for transgender people, four of which became law. (Compl. ¶¶ 58-63.) In 2021, lawmakers across the country introduced over 100 bills restricting rights for transgender people and at least 13 became law,[22] despite the fact that transgender people already face staggeringly high rates of discrimination in employment, health care, education, and

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the fact that some people's understanding of their gender identity changes over time or have non-binary identities does not mean that someone's gender identity can be changed by external forces. (*See* Adkins Supp. Decl. ¶ 4.)

[22] Sam Levin, *In an extraordinary attack on trans rights, conservative state lawmakers proposed more than 110 anti-trans bills this year*, GUARDIAN (June 14, 2021), https://www.theguardian.com/society/2021/jun/14/anti-trans-laws-us-map.

housing. (*See* Brief of Amici AAP *et al.* at 7); *see also Grimm*, 972 F.3d at 611 ("The transgender community also suffers from high rates of employment discrimination, economic instability, and homelessness."). Transgender people are not in a position to protect themselves from discrimination even if some people are willing to support their rights.

As many courts have concluded, transgender people clearly meet all of the indicia of a suspect class. (*See* Pls. Op. Br. at 27-28 (citing cases).) Defendants rely heavily on the Supreme Court's decision not to extend suspect-class status to "disability" classifications in *City of Cleburne, Tex.* v. *Cleburne Living Ctr.*, 473 U.S. 432 (1985), (Def. Br. at 62-67), but "no hard-and-fast rule prevents this Court from concluding that a quasi-suspect class exists, nor have *Cleburne's* dicta prevented many other courts from so concluding." *Grimm*, 972 F.3d at 613.[23]

[23] Defendants also argue that because the Supreme Court and the Eighth Circuit have not explicitly recognized sexual orientation as a suspect classification, this Court should not find that transgender status meets the suspect classification test. (Defs. Br. at 57-58.) But many courts have held that transgender status classifications trigger heightened scrutiny including in circuits that have held that sexual orientation does not. *See*, *e.g.*, *Evancho* v. *Pine–Richland Sch. Dist.*, 237 F. Supp. 3d 267, 288 (W.D. Pa. 2017) (holding that transgender people constitute a quasi-suspect class); *Bd. of Educ. of the Highland Local Sch. Dist.* v. *U.S. Dep't of Educ.*, 208 F. Supp. 3d 850, 873 (S.D. Ohio 2016) (same); *M.A.B.*, 286 F. Supp. 3d at 718–19 (same).

C. The Health Care Ban Fails Heightened Scrutiny.

Heightened scrutiny imposes a "demanding" standard on the government to demonstrate an "exceedingly persuasive" justification for its differential treatment. *VMI*, 518 U.S. at 533. The government "must show at least that the [challenged] classification serves important governmental objectives and that the discriminatory means employed are substantially related to the achievement of those objectives." *Id*. (internal quotation marks and citations omitted). A court must assess the law's "actual purposes and carefully consider the resulting inequality to ensure that our most fundamental institutions neither send nor reinforce messages of stigma or second-class status." *SmithKline Beecham Corp.* v. *Abbott Lab'ys*, 740 F.3d 471, 483 (9th Cir. 2014). And in so doing, the court "retains an independent constitutional duty to review factual findings where constitutional rights are at stake." *Gonzalez* v. *Carhart*, 550 U.S. 124, 165 (2007).

As Plaintiffs extensively detail in their Opening Brief (at 32-43), the Health Care Ban's targeted and categorical prohibition on health care related to "gender transition" is not substantially related to any important governmental objectives. The relevant test under the Equal Protection Clause is whether "the discriminatory means employed" by the government "are substantially related to the achievement of those objectives." *Sessions* v. *Morales-Santana*, 137 S. Ct. 1678, 1690 (2017). Here, the claimed objectives of the ban are to (1) protect minors and (2) safeguard

the medical profession.[24] But the means that the government has employed—categorically banning medical treatment for gender transition in minors—do not substantially advance those objectives.

In defense of the Health Care Ban, Defendants raise a series of purported concerns about medical treatment for gender transition, but none of the concerns raised are unique to the care banned by the law and many of the concerns are based on a mischaracterization of the science. *See supra,* Section I (summarizing Defendants' mischaracterization of the scientific evidence supporting treatment guidelines for transgender minors).

First, Defendants argue that the Health Care Ban is justified because of a lack of evidence of the treatment's efficacy. (Defs. Br. at 78-82.) This argument ignores significant data about gender-affirming medical treatment. As Dr. Antommaria and Dr. Turban detail, there is a substantial body of research that has tested the efficacy and safety of treatment for transgender minors, which has formed the basis for the Endocrine Society Guidelines as well as the consensus within the American medical community about the recommended use of this care. (*See* Antommaria Decl. ¶¶ 32-36 (detailing studies); Turban Decl. ¶¶ 12-14 ; *see also* Br. of Amici AAP *et. al.* at

[24] Though Defendants separately enumerate these two governmental interests, the analysis they offer combines them, and Plaintiffs respond to the asserted justifications together.

12-15 (noting, among other things, that "multiple studies have revealed long-term positive outcomes for transgender people who have undergone puberty suppression") (internal citation omitted).) Defendants' argument also ignores the clinical experience of doctors who see the positive effects of treatment in their patients. (*See* Turban Decl. ¶ 18 (noting clinical experience from around the world showing the effectiveness of gender-affirming treatments for adolescents).) As Dr. Adkins explained of her experience treating over 400 transgender patients: "My patients who receive medically appropriate hormone therapy and who are treated consistent with their gender identity in all aspects of life experience significant improvement in their health." (Adkins Decl. ¶ 50.) Dr. Adkins' experience mirrors that of Dr. Hutchison in Arkansas who explained that for her 160 patients, gender-affirming treatments prevent them "from suffering the severe emotional and physical consequences of going through puberty that does not match their gender identity." (Hutchison Decl. ¶ 6.)

As for Defendants' assertion that the evidence showing the benefits of gender-affirming medical care is not of sufficient quality, as Dr. Antommaria explains, many treatments accepted within pediatric medicine are utilized with equal or lower quality evidence than what is available for the treatment of gender dysphoria. (*See* Antommaria Decl. ¶¶ 21, 39-40.) If Defendants' concern is about harm to minors through the administration of medication and treatment that has not been validated

by what they consider "high quality" evidence, banning *only* gender-affirming care is wildly underinclusive. *Republican Party of Minnesota* v. *White*, 536 U.S. 765, 780 (2002) (a law did not serve a government interest where it was "woefully underinclusive as to render belief in that purpose a challenge to the credulous").

And while Defendants critique the data supporting the accepted treatment paradigm for gender dysphoria in adolescents, the alternatives they propose—"watchful waiting" and psychotherapy alone—have not proven effective for adolescents by *any* scientific study. (Levine Decl. ¶ 35; Antommaria Supp. Decl. ¶ 15; Turban Decl. ¶¶ 31-32, 46.)

Second, Defendants claim that the Health Care Ban is justified because the prohibited treatment has "irreversible consequences." (Defs. Br. at 76.) As Dr. Adkins explains, claims of irreversibility are not true as to pubertal suppression, which only pauses puberty until a patient either initiates endogenous puberty or puberty through cross-sex hormones. (Adkins Decl. ¶¶ 31-32.) In any event, there are many treatments that minors undergo that are irreversible, and it therefore cannot be categorically true that medical treatment that is irreversible is inherently harmful. Indeed, the law explicitly contemplates that irreversible genital surgery may be performed on intersex infants. ARK. CODE ANN. § 20-9-1502(c). These interventions on intersex minors are permitted because they are seen to align with a person's "biological sex."

Third, many of the claimed risks of gender-affirming care that Defendants use to justify the ban are inaccurate and apply to other non-banned treatments. Regarding Defendants' claims that gender-affirming treatment is sterilizing, Dr. Adkins explains: "Many people undergo fertility preservation before any treatment that would compromise fertility. Many more transgender people may be treated with gender-affirming surgery that has no impact on fertility such as chest reconstruction. Many transgender individuals conceive children after undergoing hormone therapy." (Adkins Decl. ¶ 45.) Additionally, many other forms of treatment provided to minors can result in sterilization and are still provided with informed consent. (*Id*.; *see also* Antommaria Supp. Decl. ¶ 24.) Similarly, while Defendants' experts point to risks of loss of sensation and ability to breast feed due to chest surgery for transgender males, those risks apply equally to other types of chest surgeries for adolescents permitted under the law, including breast augmentation or reduction. (Antommaria Decl. ¶ 47.) As to other claims of health risks related to pubertal suppression and hormone therapy, Dr. Adkins explains that these are rare and well-managed except in cases where patients are unable to obtain care through clinicians and resort to the black market. (*See* Adkins Decl. ¶ 46; Adkins Supp. Decl. ¶ 16.)

As discussed by Dr. Antommaria, many medical interventions have significant risks, but patients and their parents, with the advice of their doctors, are permitted to weigh the risks and benefits and determine if treatment is appropriate.

(Antommaria Decl. ¶¶ 45-46.) And treatment protocols for gender-affirming medical care follow established principles of informed consent. (Antommaria Supp. Decl. ¶¶ 16-24.) Moreover, the Health Care Ban permits all of the banned treatments, including genital surgery, if provided to intersex minors, which carry all of the risks cautioned by Defendants they claim justify the Health Care Ban. (*See* Antommaria Decl. ¶ 49.)

Fourth, Defendants' experts erroneously suggest that most young people affected by the law will "outgrow" their transgender identity absent treatment. (Levine Decl. ¶ 8(e).) As stated above, Defendants and their experts conflate the terms "children" and "adolescents," which have distinct meanings. No medical treatment is provided under the accepted protocols until after the onset of puberty. While some practitioners, largely outside of the United States, follow the approach of "watchful waiting" for pre-pubertal *children*, there is no such approach applied to transgender adolescents because there is no evidence of a likelihood of "desistance" once individuals reach adolescence. (Turban Decl. ¶¶ 21-23, 31.)

Ultimately, throughout their defense of the Health Care Ban, Defendants either ignore or misleadingly dispute the body of evidence showing the significant harms of withholding or terminating treatment for minors with gender dysphoria. There is substantial scientific evidence that withholding gender-affirming treatment

for minors with gender dysphoria results in predictable and dire harms. (*See* Pls. Op. Br. at 43; Turban Decl. ¶¶ 12-14.)

D. The Health Care Ban Fails Any Level of Scrutiny.

Though the Health Care Ban's discrimination based on transgender status and sex triggers heightened scrutiny, the law fails under any level of scrutiny. As discussed above and in Plaintiffs' Opening Brief, the stated justifications for banning gender-affirming care for minors "ma[k]e no sense in light of how" Arkansas treats other types of care. *Bd. of Trustees of Univ. of Ala.* v. *Garrett*, 531 U.S. 356, 366 n.4 (2001) (citation omitted). But beyond that, "[t]he history of [the statute's] enactment and its own text demonstrate that" the purpose of the Health Care Ban was to express Arkansas's moral and social disapproval of transgender people. *Windsor*, 570 U.S. at 770. Under any standard of review, laws that have the "peculiar property of imposing a broad and undifferentiated disability on a single named group" are "invalid." *Romer* v. *Evans*, 517 U.S. 620, 632 (1996). And that is precisely what Arkansas's Health Care Ban does to transgender minors.

The Health Care Ban is "at once too narrow and too broad." *Id.* at 633. If the object of the law, as Defendants suggest, is to ban care that does not meet certain standards of evidentiary support, has potential side-effects or risk, or is in some way "irreversible," then the law is entirely too narrow, only covering a tiny subset of care that might fall into one of those categories. *See supra*, Section I. It is likewise too

broad as it reaches all gender-affirming care regardless of whether it falls into one of those categories. Ultimately, the purpose of the law is not to protect minors by limiting care that may cause particular harms, but rather to limit care that tends to affirm one's gender identity when it differs from that individual's assigned sex at birth. Indeed, this is spelled out in the text of the law itself. ARK. CODE ANN. § 20-9-1501(5). Given that every criticism that Defendants levy against gender-affirming care for transgender minors could be applied to a range of other pediatric medical treatments, there is no rational basis to single out this treatment.

Plaintiffs are therefore likely to succeed on the merits of their Equal Protection claims.

III. The Parent Plaintiffs Are Likely to Succeed on the Merits of Their Due Process Claim.

Defendants' Opposition ignores the parental autonomy claims that Plaintiffs have actually brought, as well as the factual evidence supporting those claims, and instead argue that "[w]hat Plaintiffs assert is a right to choose particular experimental medical procedures for their children, notwithstanding Arkansas's reasoned judgment, based on medical evidence, that these particular procedures should not be carried out on minors." (Defs. Br. at 89.) This mischaracterizes Plaintiffs' claim that the Health Care Ban infringes parents' long-standing right to direct the "care, custody, and control" of their children, *see, e.g.*, *Troxel* v. *Granville*, 530 U.S. 57, 65–66 (2000), a right which "includes a 'high duty' to recognize symptoms of illness

and to seek and follow medical advice." *Parham* v. *J.R.*, 442 U.S. 584, 602 (1979).[25] Defendants' assertion that Plaintiffs seek a "significant expansion of current substantive-due-process doctrine" (Defs. Br. at 90) is simply incorrect: the fundamental right of parents to direct their children's medical care is well-established. *Kanuszewski* v. *Mich. Dep't of Health and Human Servs*, 927 F.3d 396, 419 (6th Cir. 2019) ("[P]arents' substantive due process right to make decisions concerning the care, custody, and control of their children includes the right to direct their children's medical care.") (citation and internal quotation marks omitted).

Defendants also assert that Plaintiffs claim a right to parental autonomy that "empowers parents to make any choice whatsoever for their children." (Defs. Br. at 89.) But Plaintiffs have nowhere argued that the right to parental autonomy is without limit, and, to the contrary, have acknowledged that a state may limit a parent's right to seek medical care for their children if the law passes strict scrutiny. (*See* Pls. Op. Br. at 50 (citing *Jehovah's Witnesses in State of Wash.* v. *King Cnty. Hosp. Unit No. 1*, 278 F. Supp. 488, 504 (W.D. Wash. 1967)); *see also Parham*, 442 U.S. at 603 ("[A] state is not without constitutional control over parental discretion

[25] Defendants' argument that "[i]t will not suffice to say that parents have a right to make decisions regarding the care, custody, and control of their children, or even a right to seek and to follow medical advice" (Defs. Br. at 89 (internal quotation marks omitted) is puzzling, since that is the exact phrasing used by the Supreme Court.

in dealing with children when their physical or mental health is jeopardized."). Defendants' attempt to distinguish *Kanuszewski*, 927 F.3d at 419, on the basis that it held that "[t]his does not mean that parents' control over their children is without limit" is misplaced. (Defs. Br. at 92.) *Kanuszewski* recognized that a "parents' substantive due process right . . . to direct their children's medical care" was subject to a limitation: it can be limited by a law that survives strict scrutiny. *Id*. at 419.[26]

This is a burden Defendants cannot meet on the merits. Defendants make no showing that they will be likely to prove that the Health Care Ban serves a compelling state interest. (*See supra*, Sections II.C. and II.D.)[27] And Defendants

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[26] Defendants are incorrect in arguing that that *Parham* only involved procedural due process (Defs. Br. at 91)—it also discussed substantive due process, including in the sections quoted in Plaintiffs' briefs. *Parham*, 442 U.S. at 602 ("[P]arents generally 'have the right,' coupled with the high duty, to recognize and prepare [their children] for additional obligations" including "a 'high duty' to recognize symptoms of illness and to seek and follow medical advice.") (citing *Pierce* v. *Society of Sisters*, 268 U.S. 510, 535 (1925); *Meyer* v. *Nebraska*, 262 U.S. 390, 400 (1923)).

[27] Defendants' attempt to counter this conclusion by comparing the case at bar to *Planned Parenthood of Cent. Mo.* v. *Danforth*, 428 U.S. 52 (1976) is misplaced. (Op. Br. at 92.) In *Danforth*, the Court dealt with a statute that would have made it mandatory for a minor to obtain their parent's consent before receiving an abortion. The Court held that "the State does not have the constitutional authority to give a third party an absolute, and possibly arbitrary, veto over the decision of the physician and his patient to terminate the patient's pregnancy[.]" *Id*., at 74-75. Unlike *Danforth*, the Health Care Ban does not attempt to impose mandatory parental consent. Instead, it contains a categorical prohibition, despite parents, their children, and the children's health care providers all agreeing on the best course of action.

offer no support for their argument that the Health Care Ban "comes close to perfect" tailoring to the State's interest. (Defs. Br. at 94.) This could not be further from the truth. If the Health Care Ban takes effect, all transgender adolescents with gender dysphoria in Arkansas will be categorically prohibited from receiving gender-affirming care, irrespective of the individual patients' circumstances and regardless of whether it is medically indicated, medically necessary, or in that patient's best interest. Moreover, adolescents who are currently receiving such care will be immediately required to stop treatments, with no regard as to their safety or well-being. Such a tactic—which ignores an individualized approach to care and the best interests of the adolescent—not only belies Defendants' naked assertion that they have an interest in protecting minors, but also belies Defendants' assertion that the law is narrowly tailored. And the Health Care Ban leaves untouched numerous forms of medical care that raise the same concerns proffered by Defendants and, in fact, expressly allows treatments that raise those same concerns when provided to intersex children to conform their bodies to their "biological sex." ARK. CODE ANN. § 20-9-1501(6)(B). This is not merely imperfect tailoring; it is a complete disconnect between the stated concerns and law.

In Governor Hutchinson's words, the Health Care Ban creates "new standards of legislative interference with physicians and parents as they deal with some of the

most complex and sensitive matters concerning our youths."[28] (*See* Pls. Op. Br. at 9-10.) Rather than the State making these choices, legally-competent parents should be empowered to seek and follow these well-accepted medical treatments. By prohibiting them from doing so, thus exposing their children to unnecessary harm, the Health Care Ban violates the Due Process Clause.

Plaintiffs are therefore likely to succeed on the merits of their due process claim.

IV. Plaintiffs Are Likely to Succeed on the Merits of Their First Amendment Claim.

Defendants attempt to avoid the First Amendment's application to the law's ban on referring individuals under the age of 18 for gender-affirming care (the "Referral Prohibition") by ignoring the plain language of the Referral Prohibition, binding case law cited in Plaintiffs' briefs, and Plaintiffs' arguments in Plaintiffs' Opening Brief and in Plaintiffs opposition to Defendants' Motion to Dismiss (at 52-57 and 38-45, respectively).

A. The Referral Prohibition Prohibits Speech.

Defendants argue that the Referral Prohibition is not subject to the First Amendment because it "regulates conduct and not speech." (Defs. Br. at 95.) This is a false distinction because the "conduct" that is prohibited *is speech*. A referral is

[28] "Governor Asa Hutchinson Holds Pen and Pad Session with Local Media," April 5, 2021, at 9:16, http://www.youtube.com/watch?v=9Jt7PxWkVbE.

the act of providing information to assist a patient in seeing another health care provider for care, and it therefore is speech within the meaning of the First Amendment. *See Sorrell* v. *IMS Health Inc.*, 564 U.S. 552, 570 (2011) ("[D]issemination of information [is] speech within the meaning of the First Amendment.").

To support their argument that the Referral Prohibition does not regulate speech, Defendants turn to a discussion of "referrals" in the WPATH Guidelines. (Defs. Br. at 95.) After reading that source, Defendants say "referring" means to "provide documentation—in the chart and/or referral letter—of the patient's personal treatment history, progress, and eligibility" for a requested procedure. (Defs. Br. at 95.) But this still constitutes disseminating information, activity that the Supreme Court has found to fall within the core of the First Amendment's protections. *See Sorrell*, 564 U.S. at 570 (finding the "sales, transfer, and use of prescriber-identifying information" to be speech); *Bartnicki* v. *Vopper*, 532 U.S. 514, 527 (2001) ("[I]f the act[] of 'disclosing' . . . information do[es] not constitute speech, it is hard to imagine what does fall within that category.") (citation omitted).[29] Indeed, the very next sentence of the WPATH Guidelines notes that

[29] Plaintiffs cited *Sorrell* and *Bartnicki* in their Opposition to Defendants' Motion to Dismiss (at 40), but Defendants have not attempted to distinguish these binding precedents that establish that the Referral Prohibition targets speech.

"[h]ealth professionals who recommend hormone therapy share the ethical and legal responsibility for that decision with the physician who provides the service," demonstrating that a referral constitutes more than just a ministerial transfer of documents. (ECF No. 45-19 at 26.) *See Bartnicki*, 532 U.S. at 514 ("It is true that the delivery of a tape recording might be regarded as conduct, but given that the purpose of such a delivery is to provide the recipient with the text of recorded statements, it is . . . 'speech' that the First Amendment protects . . . .").

B. The Referral Prohibition Does Not Fall Within An Exception to Regulations of Speech.

Defendants next argue that the Referral Prohibition is valid because even if it prohibits speech, states are permitted to regulate such professional speech so long as the practice sought to be regulated is "tied to a procedure." (Defs. Br. at 96 (citing *Nat'l Inst. of Fam. & Life Advocs.* ("*NIFLA*") v. *Becerra*, 138 S. Ct. 2361, 2373, (2018).)

This argument misreads *NIFLA*'s clear holding. *NIFLA* holds that speech is only afforded less protection "in two circumstances—neither of which turn[] on the fact that professionals [are] speaking": (1) when laws "require professionals to disclose factual, noncontroversial information in their 'commercial speech'"; and (2) when the state regulates "conduct that incidentally involves speech." *NIFLA,* 138 S. Ct. at 2372. *NIFLA* simply does not hold that states are permitted to infringe the First Amendment when the speech in question is "tied to a procedure." In *NIFLA*,

the Court only discussed whether the speech at issue in the case was "tied to a procedure" in differentiating the regulation considered from informed consent requirements, which fall within the first exception outlined in *NIFLA*: "The notice does not facilitate informed consent to a medical procedure. In fact, it is not tied to a procedure at all." 138 S. Ct. at 2373.

Further, the Referral Prohibition does not fall within either of the two exceptions outlined in *NIFLA*. Defendants claim that it falls within the first exception—that it requires disclosure of factual, noncontroversial information—because it requires that "Practitioners in Arkansas must simply disclose that state law prohibits them from sending a child to another practitioner—presumably outside of Arkansas—to undergo a gender-transition procedure." (Defs. Br. at 96.) But the Health Care Ban does not require doctors to disclose anything, and the Referral Prohibition cannot be upheld on this basis. Nor does the Referral Prohibition regulate "conduct that incidentally involves speech"—it regulates speech itself. *See Sorrell*, 564 U.S. at 567 (explaining that incidental burdens include regulations such as "a ban on race-based hiring [that] require[s] employers to remove 'White Applicants Only' signs" or "an ordinance against outdoor fires [that] forbid[s] burning a flag") (internal quotations and citations omitted).

Defendants also argue that Plaintiffs have "misunderstood the relevance of *Rust* v. *Sullivan*, 500 U.S. 173 (1991)." (Defs. Br. at 97.) But *Rust* simply does not

hold, as Defendants suggest, that a law may forbid speech so long as a plaintiff is able to practice other procedures. As explained further in Plaintiffs' Opposition to Defendants' Motion to Dismiss, *Rust* did not concern whether the government could prohibit certain speech, but whether it could fund only certain speech. (Opp. to Mot. to Dismiss at 43.) *See also Planned Parenthood of Mid-Missouri & E. Kansas, Inc.* v. *Dempsey*, 167 F.3d 458, 461 (8th Cir. 1999) (explaining that *Rust* is about government funding of projects); *Conant* v. *Walters*, 309 F.3d 629, 638 (9th Cir. 2002) (*Rust* "did not uphold restrictions on speech itself. *Rust* upheld restrictions on federal funding for certain types of activity, including abortion counseling, referral, or advocacy"). Moreover, the Court in *Rust* found that the doctors could still engage in the same speech outside the context of the program. 500 U.S. at 176. Under the Referral Prohibition, there is no similar outlet for the doctors.

C. The Referral Prohibition Fails Strict Scrutiny.

As explained in Plaintiffs' Opening Brief, because the Referral Prohibition is a content-based regulation of speech, it is "presumptively unconstitutional" and is subject to strict scrutiny. *Reed* v. *Town of Gilbert*, 576 U.S. 155, 163 (2015). Defendants argue that the Referral Prohibition survives strict scrutiny for the same reasons that the Health Care Ban's prohibition of gender-affirming care for minors survives intermediate scrutiny. (Defs. Br. at 97.) For the reasons discussed above, these arguments fail, and they fail for two additional reasons.

First, Defendants assert that Arkansas's compelling interest here is to "protect[] children from experimental gender-transition procedures and safeguarding medical ethics." (Defs. Br. at 98.) But the Referral Prohibition purports to achieve this interest by limiting the information that is available to patients and their parents. As explained in Plaintiffs' Opening Brief, the Supreme Court has already held that the government does not have a legitimate interest in protecting against the "fear that people [will] make bad decisions if given truthful information," in this instance that gender-affirming care is available elsewhere. *See Thompson* v. *W. States Med. Ctr.*, 535 U.S. 357, 374; *see also Brown* v. *Ent. Merchants Ass'n*, 564 U.S. 786, 794 (2011) (while states can protect children from harm, that "does not include a free-floating power to restrict the ideas to which children may be exposed").

Second, Defendants also cannot show, as they are required, that the Referral Prohibition "could be replaced by no other regulation that could advance the interest as well with less infringement of speech" and is the least restrictive alternative. *See 281 Care Comm*. v. *Arneson*, 766 F.3d 774, 787 (8th Cir. 2014). Defendants argue that if Arkansas allowed doctors to refer patients for gender-affirming care, the Health Care Ban's "protections for children would be much less effective." (Defs' Br. at 98.) But, the First Amendment requires that speech restrictions be a "last—not first—resort." *Thompson*, 535 U.S. 373. Defendants do not explain why less

restrictive alternatives are unavailable. *See*, *e.g.*, *NIFLA*, 138 S. Ct. at 2376 (finding that, as a less-restrictive alternative to the notice requirement at issue in the case, the State "could inform the women itself" of their rights and health care options "with a public-information campaign").

Plaintiffs are therefore likely to succeed on the merits of their First Amendment claims.

V. Plaintiffs Will Suffer Irreparable Harm If the Act Takes Effect.

If the Health Care Ban is allowed to take effect, Plaintiffs will suffer serious and irreparable harm for which there is no adequate remedy at law. *See Gen. Motors Corp.* v. *Harry Brown's, LLC*, 563 F.3d 312, 319 (8th Cir. 2009). The Health Care Ban denies all transgender minors access to life-saving medical care, prevents parents from seeking out potentially life-saving health care for their children, and threatens the medical licenses of doctors who treat their patients according to accepted medical standards or refer their patients to other doctors for care prohibited by the law.

The harm of untreated gender dysphoria is severe. (Adkins Decl. ¶ 31.) But Defendants claim there is "no evidence" that denying gender-affirming care will cause irreparable harm to young transgender Arkansans, and say that Plaintiffs have cited "no authority" for the fact that the Health Care Ban will cause harm, or that

gender-affirming care relieves the distress caused by gender dysphoria. (Defs. Br. at 99-100.)

These claims by Defendants are meritless. They ignore the established consensus of medical associations in the United States on these issues. They ignore the facts discussed by Plaintiffs' experts, including those discussed at length in Plaintiffs' Opening Brief. They ignore the clinical experience of Dr. Adkins, Dr. Hutchison, and Dr. Stambough. (Adkins Decl. ¶¶ 23, 51-55; Hutchison Decl. ¶¶ 13-16; Stambough Decl. ¶¶ 11-13.) They ignore declarations from the minor and parent Plaintiffs specifying the benefits they have received from their care and the concrete and imminent harms each will face if the Health Care Ban goes into effect, causing all of them to consider leaving Arkansas and their extended families and communities in order to access medical care for their children if the law takes effect. (*See* Dylan Brandt Decl. ¶ 18 (ECF No. 11-1); Sabrina Jennen Decl. (ECF No. 11-3) ¶¶ 10-11; Parker Saxton Decl. (ECF No. 11-7) ¶¶ 10-15; Joanna Brandt Decl. (ECF No. 11-2) ¶¶ 17-18; Aaron and Lacey Jennen Decl. (ECF No. 11-4) ¶¶ 5-6, 12; Donnie Saxton Decl. (ECF No. 11-8) ¶¶ 12-14, 16.) And perhaps most troublingly, they ignore the fact that, since the legislature began discussing banning gender-affirming care, at least seven transgender youth in Arkansas have been hospitalized for an attempted suicide—a stark increase from before the Health Care Ban was first presented—and the fact that Dr. Hutchison has received distressing calls from

parents whose children have been expressing suicidal thoughts directly related to the prospect of losing their gender-affirming care. (Hutchison Decl. ¶ 13.)

Considering all of the psychological and potential physical harm in addition to the harm to Plaintiffs' constitutional rights under the First and Fourteenth Amendments, it is undeniable that allowing this law to go into effect will cause real and lasting harm to Plaintiffs and to many young transgender people and their families throughout Arkansas. In light of the severe and irreparable harms the Plaintiffs face under the Health Care Ban, a preliminary injunction is necessary.

VI. The Balance of Equities Tips in Plaintiffs' Favor, and an Injunction Serves the Public Interest.

The threat of harm to Plaintiffs far outweighs Defendants' interests in immediately enforcing the Health Care Ban, and preserving Plaintiffs' constitutional rights is in the public interest. A preliminary injunction is warranted where, as here, the balance of equities decidedly favors the moving party, in which case the court should preserve the status quo until the case can be decided on the merits. *Dataphase Sys., Inc.* v. *C L Sys., Inc*., 640 F.2d 109, 113 (8th Cir. 1981); *see also Nken* v. *Holder*, 556 U.S. 418, 435 (2009) (noting that when suit is brought against the government, the balance-of-equities and public-interest factors are synonymous).

In their brief, Defendants insinuate that granting a preliminary injunction would somehow disrupt the status quo, recasting the Health Care Ban's looming prohibition of gender-affirming care as the maintenance of the parties' pre-suit

posture. (*See* Defs. Br. at 99-102.) This recharacterization is not only illogical, it also disregards the law's denial of care that several of the minor Plaintiffs (and numerous other Arkansans) have already been receiving for months or years and ignores the long-standing availability in Arkansas of the exact same care that the State only now attempts to ban. A change from allowing such medically necessary care to prohibiting it does not maintain the status quo; it upends it. A preliminary injunction is necessary to maintain the current posture and prevent irreparable harm during the pendency of this case.

Even setting aside that a preliminary injunction would work only to preserve the status quo, Defendants have presented no evidence, nor did legislators ever point to a single example, of a young person in Arkansas being harmed by the lack of a ban on gender-affirming care for transgender youth. As described above, the harm to Plaintiffs from allowing the Health Care Ban to go into effect would be tangible, immediate, and irreparable. Whatever interest the State may have in enforcing the Health Care Ban during the pendency of this case pales in comparison to the certain and severe harm faced by Plaintiffs. And despite Defendants' unsupported assertions to the contrary, the "State has no interest in enforcing laws that are unconstitutional," meaning that "an injunction preventing the State from enforcing [the challenged statute] does not irreparably harm the state." *Little Rock Family Planning Servs.* v. *Rutledge*, 397 F. Supp. 3d 1213, 1322 (E.D. Ark. 2019).

Because Plaintiffs are likely to succeed in demonstrating that the Health Care Ban is unconstitutional, a preliminary injunction would best serve the public interest. *D.M. ex rel. Bao Xiong* v. *Minn. State High Sch. League*, 917 F.3d 994, 1004 (8th Cir. 2019) ("The public is served by the preservation of constitutional rights.") (citations omitted). The balance of equities favors injunctive relief to preserve the status quo until a final decision in this case.

VII. A Facial Injunction Is Required to Effectively Protect Plaintiffs from Harm.

Despite stating the correct standard to justify a facial injunction—that there is "no set of circumstances exists under which the Act would be valid," Defendants ask the Court to misapply that standard, arguing that it requires Plaintiffs to provide evidence that every transgender young person seeking gender-affirming care in Arkansas would be harmed by the Health Care Ban. (Defs. Br. at 103, citing *United States* v. *Salerno*, 481 U.S. 739, 745 (1987).) Here, there is "no set of circumstances" in which the Health Care Ban's prohibition of gender-affirming care "would be valid" because any application of the law would violate the Equal Protection rights of the affected transgender minor, their parent's fundamental right to parental autonomy, and their doctor's First Amendment rights.

Defendants are not arguing that the Health Care Ban is valid in any particular circumstance, but instead argue that Plaintiffs have failed to present evidence showing that all children who seek gender-affirming care would be irreparably

harmed by the Health Care Ban. This too is incorrect: Plaintiffs have presented expert evidence showing that the Health Care Ban facially prohibits the provision of gender-affirming care to all transgender minors in Arkansas, in turn causing irreparable harm in every such case in which such care is needed, and so a facial injunction is the only appropriate relief. (*See supra*, Section V (discussing irreparable harms).)

Undeterred, Defendants suggest that because the precise treatment offered might vary from person to person, the injunction standard requires a declaration from every single transgender Arkansan under 18 who might seek gender-affirming care. (Defs. Op. Br. at 103.) Such a requirement would create insurmountable hurdles to anyone seeking to enjoin a statute. The Supreme Court has repeatedly held that the scope of relief is determined by the scope of the violation. *See*, *e.g.*, *Milliken* v. *Bradley*, 418 U.S. 717, 744 (1974). In this case, the constitutional violation and the harm it causes extends to every transgender Arkansan under 18 who seeks gender-affirming care, since that care would be prohibited in every such case along the same unconstitutional grounds.[30]

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[30] Defendants also argue that it would be an abuse of discretion to enjoin enforcement of the Health Care Ban's prohibition of gender-reassignment surgery and private right of action. But, as discussed above (*supra* Sections I.A. and I.B.), Plaintiffs' claims properly challenge those provisions because gender-reassignment surgery is included under the Health Care Ban's

CONCLUSION

For the reasons set forth above, Plaintiffs respectfully request that the Court grant their Motion for a Preliminary Injunction and deny Defendants' Motion to Dismiss.

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Respectfully submitted,

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unconstitutional prohibition of "gender transition procedures" and because the Health Care Ban includes both public and private enforcement provisions.

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**Admitted pro hac vice*

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF ARKANSAS

DYLAN BRANDT, et al.,		
	Plaintiffs,	Case No.: 4:21-CV-00450-JM-01
	v.	
LESLIE RUTLEDGE, et al.,		
	Defendants.	

DECLARATION OF JACK TURBAN, MD, MHS
IN SUPPORT OF PLAINTIFFS' MOTION FOR A PRELIMINARY INJUNCTION

1. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

2. The purpose of this declaration is to respond to some of the points made in the declarations filed by Drs. Levine, Regnerus, Hruz and Lappert in Opposition to Plaintiffs' Motion for Preliminary Injunction.

3. I have actual knowledge of the matters stated in this declaration. In preparing this declaration, I reviewed the declarations and other supporting material filed by Defendants in Opposition to the Plaintiffs' Motion for Preliminary Injunction as well as the materials cited herein. I may rely on those documents as additional support for my opinions. I have also relied on my years of research and other experience, as set out in my curriculum vitae (Exhibit A), and on the materials listed therein. The materials I have relied upon in preparing this declaration are the same types of materials that experts in my field of study regularly rely upon when forming opinions on the subject. I may wish to supplement these opinions or the bases for them as a result

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of new scientific research or publications or in response to statements and issues that may arise in my area of expertise.

BACKGROUND AND QUALIFICATIONS

4. I am currently a Fellow in Child and Adolescent Psychiatry at Stanford University, where I research the mental health of transgender youth.

5. I received my undergraduate degree in neuroscience from Harvard College. I received both my MD and Master of Health Science degree from Yale University School of Medicine. I am writing in my capacity as a mental health researcher. I completed residency training in general psychiatry at The Massachusetts General Hospital and McLean Hospital (Harvard Medical School).

6. My research focuses on the mental health of transgender youth. While at Yale, I was awarded the Ferris Prize for my thesis entitled "Evolving Treatment Paradigms for Transgender Youth." In 2017, I received the United States Preventative Health Services Award for Excellence in Public Health based on my work related to the mental health of transgender youth. I have lectured on the mental health of transgender youth at Yale School of Medicine and Massachusetts General Hospital (a teaching hospital of Harvard Medical School). I have given grand rounds presentations on this topic around the country and have presented nationally and internationally on the topic.

7. I have served as a manuscript reviewer for numerous professional publications including *The Journal of The American Medical Association (JAMA)*, *JAMA Pediatrics, The Journal of The American Academy of Child & Adolescent Psychiatry*, *Pediatrics*, *The Journal of Adolescent Health*, and *The American Journal of Public Health*. I have served as lead author for textbook chapters on the mental health of transgender youth, including for *Lewis's Child &*

Adolescent Psychiatry: A Comprehensive Textbook and the textbook of The International Academy for Child & Adolescent Psychiatry and Allied Professionals. I am co-editor of the textbook, *Pediatric Gender Identity: Gender-affirming Care for Transgender and Gender Diverse Youth.*

8. I have published extensively on the topic of transgender youth, including seven articles in peer-reviewed journals in the past two years alone.

9. I have never testified as an expert at trial or in deposition. I am being compensated at an hourly rate of $250 per hour for preparation of expert declarations and reports, and $400 per hour for time spent preparing for or giving deposition or trial testimony. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

SUMMARY OF OPINIONS

10. In this declaration, I cite relevant literature to support my opinions that: (1) the views set forth by the state's experts in this case are outlier views not supported by the medical community at large, (2) all existing evidence indicates that gender-affirming medical interventions improve mental health outcomes for transgender adolescents and it would be dangerous and unethical to prohibit these medical services, (3) the state's experts have mischaracterized the risks of gender-affirming medical interventions, (4) the state's experts have inappropriately applied research about prepubertal children to adolescents who have reached puberty when explaining what they claim is a high likelihood of "desistence", (5) there is no evidence that gender-affirmation makes "persistence" in a transgender identity more likely, (6) the state's experts have omitted key literature regarding "detransition" and transition regret, while misrepresenting other studies, (7) the state's experts have misrepresented the "watchful

waiting model," which refers only to prepubertal children, who are not candidates for gender-affirming medical interventions under any existing guidelines, (8) the state's experts have misrepresented and omitted key research showing that gender identity has a strong innate biological basis, (9) the state's experts' discussion of gender-affirming genital surgery is incorrect and irrelevant to gender-affirming medical care for transgender youth, (10) the state's experts misrepresent the informed consent process for gender-affirming medical care for transgender adolescents, (11) the state's experts' assertion that gender-affirming treatments for transgender adolescents are "experimental" is incorrect, (12) the scientific current understanding regarding the increase in referrals to pediatric gender clinics and the shift in sex ratio does not focus on "social contagion," (13) gender identity conversion therapy has a clear definition and is dangerous and unethical, (14) some of the state's experts have demonstrated key gaps in their knowledge regarding the field of psychiatry, and (15) recent non-peer-reviewed reports from The United Kingdom, Sweden, and Finland do not accurately summarize the scientific evidence regarding gender-affirming medical care for adolescents with gender dysphoria.

THE VIEWS SET FORTH BY THE STATE'S EXPERTS ARE OUTLIER VIEWS NOT SUPPORTED BY THE MEDICAL COMMUNITY AT LARGE

11. The state's experts have claimed that gender-affirming medical interventions for transgender adolescents (pubertal suppression, gender-affirming hormone treatment, and gender-affirming top surgery) should be prohibited. Their views are not supported by any of the leading medical organizations and are expressly rejected by the following groups: The American Medical Association, The American College of Physicians, The American Academy of Family Physicians, The American College of Obstetricians and Gynecologists, The American Osteopathic Association, The American Psychiatric Association, The American Academy of Pediatrics, The American Osteopathic Association, The American Academy of Child &

Adolescent Psychiatry, The Endocrine Society, The Pediatric Endocrine Society, and The World Professional Association for Transgender Health.[1] The state's experts have set forth an implausible theory that these twelve national medical organizations (among others) have all come to the same incorrect conclusion and that these large national organizations of medical professionals are all "activist organizations" that, based on ideological views, are supporting treatments that are harmful to transgender adolescents.

ALL EXISTING EVIDENCE INDICATES THAT GENDER-AFFIRMING MEDICAL INTERVENTIONS IMPROVE MENTAL HEALTH OUTCOMES FOR TRANSGENDER ADOLESCENTS

12. All studies in medicine have strengths and limitations, and no one study design can answer all questions regarding an intervention. However, there have been a number of studies, several of which the state's experts failed to mention, showing that gender-affirming medical care is linked to favorable mental health outcomes. Each has strengths and limitations; however, taken together, these studies indicate that gender-affirming medical care improves mental health. I will briefly review several of them here.

13. First, in the realm of pubertal suppression, there have been eight studies. The first was a longitudinal study of 55 transgender adolescents that found a statistically significant decrease in depression following pubertal suppression.[2] The second was a longitudinal cohort study of 70 adolescents who received pubertal suppression that found improvements in internalizing psychopathology (anxiety and depression), externalizing psychopathology (e.g.,

[1] Links to the statements from these medical organizations have been collated in Turban, J. L., Kraschel, K. L., & Cohen, I. G. (2021). Legislation to Criminalize Gender-Affirming Medical Care for Transgender Youth. *JAMA*. 325(22): 2251-2252.

[2] De Vries, A. L., McGuire, J. K., Steensma, T. D., Wagenaar, E. C., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, *134*(4), 696-704.

disruptive behaviors), and global functioning.[3] Of note, some of the patients in this study appear to have also been included in the first study. The third was a study that compared 89 transgender adults who had accessed pubertal suppression during adolescence to 3405 transgender adults who wanted but were unable to access pubertal suppression during adolescence.[4] After adjusting for a range of potentially confounding variables, it found that those who accessed pubertal suppression had a statistically significant lower odds of lifetime suicidal ideation. The fourth was a study that compared 272 adolescents who had not yet received pubertal suppression with 178 transgender adolescents who had already been treated with pubertal suppression. Those who had received pubertal suppression had statistically significant lower "internalizing psychopathology" scores (a measure of anxiety and depression) than those who had not received pubertal suppression.[5] The fifth was a longitudinal cohort study of 50 adolescents who received pubertal suppression, gender-affirming hormones, or both, and that found a statistically significant decrease in depression for transgender females following pubertal suppression.[6] The sixth study was a longitudinal cohort study of 148 adolescents who received gender-affirming hormones, pubertal suppression, or both.[7] When examining all participants together, it found improvements

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

[4] Turban, J. L., King, D., Carswell, J. M., & Keuroghlian, A. S. (2020). Pubertal suppression for transgender youth and risk of suicidal ideation. *Pediatrics*, *145*(2).

[5] van der Miesen, A. I., Steensma, T. D., de Vries, A. L., Bos, H., & Popma, A. (2020). Psychological functioning in transgender adolescents before and after gender-affirmative care compared with cisgender general population peers. *Journal of Adolescent Health*, *66*(6), 699-704.

[6] Achille, C., Taggart, T., Eaton, N. R., Osipoff, J., Tafuri, K., Lane, A., & Wilson, T. A. (2020). Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: preliminary results. *International journal of pediatric endocrinology*, *2020*(1), 1-5.

[7] Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body dissatisfaction and mental health outcomes of youth on gender-affirming hormone therapy. *Pediatrics*, *145*(4).

in body dissatisfaction, depressive symptoms, anxiety symptoms. It appeared to be underpowered to detect differences for individual interventions. The seventh was a longitudinal cohort study of 44 patients that appeared to be underpowered to detect improvements in mental health.[8] However, on qualitative interviews, participants tended to have improved mood following treatment. The eighth was a study of 201 transgender adolescents in which 100 received pubertal suppression along with psychotherapy and 101 received psychotherapy alone. The study found a statistically significant increase in global functioning for those who received pubertal suppression. Additionally, patients receiving pubertal suppression had greater improvements in global functioning compared to those who did not receive pubertal suppression, though this difference was not statistically significant, likely due to the study being underpowered. To my knowledge, these are all of the studies to date that have examined the impact of pubertal suppression on the mental health of transgender adolescents.[9] Taken together, these studies strongly indicate that pubertal suppression improves the mental health of transgender adolescents.

14. In the realm of gender-affirming hormone treatment (e.g., estrogen or testosterone), there have been six studies to date. The first was the study by deVries et al. mentioned above. In addition to examining the impact of pubertal suppression, this study of 55 transgender adolescents found that before and after gender-affirming hormones and surgery,

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

[9] One additional study, Staphorsius et al. 2015 *Psychoendocrinology*, measured Child Behavior Checklist scores and found that adolescents on pubertal suppression had lower scores than those receiving pubertal suppression, suggesting better mental health for those receiving pubertal suppression. However, as this study was primarily focused on cognition, it did not conduct statistical comparisons between the two groups and thus I do not include it here.

participants had a statistically significant decrease in internalizing psychopathology (i.e., anxiety and depression).[10] The second study was a longitudinal cohort study of 47 transgender adolescents and found a statistically significant decrease in suicidality following gender-affirming hormone treatment.[11] The third study was the study by Kuper et al. mentioned above, a longitudinal cohort study of 148 adolescents who received gender-affirming hormones, pubertal suppression, or both.[12] When examining all participants together, it found statistically significant improvements in body dissatisfaction, depressive symptoms, and anxiety symptoms. It appeared to be underpowered to detect differences for individual interventions. The fourth was the study by Achille et al. mentioned above, which found statistically significant improvements in depression for all participants (pubertal suppression and gender-affirming hormones) but appeared to be underpowered to detect differences for individual interventions.[13] The fifth was the study by Lopez de Laura et al. of 23 adolescents who received gender-affirming hormones and found a statistically significant decrease in anxiety and depression.[14] The sixth was the study by Kaltiala et al. of 52 adolescents who received gender-affirming hormones and found statistically significant decreases in need for specialist level psychiatric treatment for depression

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[10] De Vries, A. L., McGuire, J. K., Steensma, T. D., Wagenaar, E. C., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, *134*(4), 696-704.

[11] Allen, L. R., Watson, L. B., Egan, A. M., & Moser, C. N. (2019). Well-being and suicidality among transgender youth after gender-affirming hormones. *Clinical Practice in Pediatric Psychology*, *7*(3), 302.

[12] Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body dissatisfaction and mental health outcomes of youth on gender-affirming hormone therapy. *Pediatrics*, *145*(4).

[13] Achille, C., Taggart, T., Eaton, N. R., Osipoff, J., Tafuri, K., Lane, A., & Wilson, T. A. (2020). Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: preliminary results. *International Journal of Pediatric Endocrinology*, *2020*(1), 1-5.

[14] de Lara, D. L., Rodríguez, O. P., Flores, I. C., Masa, J. L. P., Campos-Muñoz, L., Hernández, M. C., & Amador, J. T. R. (2020). Psychosocial assessment in transgender adolescents. *Anales de Pediatría (English Edition)*, *93*(1), 41-48.

(decreased from 54% to 15%), anxiety (decreased from 48% to 15%), and suicidality or self-harm (decreased from 35% to 4%).[15]

15. The state's experts have focused on a Cochrane review abstract from 2020 examining gender-affirming hormone therapy among transgender women. All this abstract revealed was that there are no randomized-controlled trials (RCT) examining gender-affirming interventions for transgender women. As Dr. Antonmarria noted in his statement, it would be unethical to conduct a randomized-controlled trial of gender-affirming medical interventions for transgender adolescents, given the principle of equipoise, which dictates that one may not randomize a patient to placebo when there is strong evidence that the intervention being offered to the treatment arm is superior. No Institutional Review Board (IRB) would approve such an RCT in this field. Furthermore, studies of gender-affirming medical interventions cannot be double-blinded, given their obvious impacts on physical development. Dr. Regnerus's assertion that "[there] would be no obstacle to randomized trials *without* placebo groups to compare different types, dosages, and methods of administrations of active treatments" is irrelevant, as such a trial would only tell investigators if one dose or administration of an intervention were superior to another. It would not answer the question regarding the efficacy or effectiveness of the class of medications in general, which is the relevant question.

16. The state's experts have made a range of assertions regarding the existing evidence base for gender-affirming medical care that warrant particular attention. The first is regarding Turban et al. 2020, in which Dr. Levine states, "It has been rigorously criticized for not emphasizing that both those treated and not treated with puberty blockers had high suicidal

[15] Kaltiala, R., Heino, E., Työläjärvi, M., & Suomalainen, L. (2020). Adolescent development and psychosocial functioning after starting cross-sex hormones for gender dysphoria. *Nordic Journal of Psychiatry*, *74*(3), 213-219.

ideation rates." This result is not surprising. The study showed that rates of lifetime suicidality are lower for those who accessed pubertal suppression, suggesting, as the other studies above do, that pubertal suppression improves the mental health of transgender adolescents. But one would not expect past-year suicidality rates to drop to the rates of the general population, given that transgender people who receive pubertal suppression are still exposed to other variables that negatively impact mental health (harassment, discrimination, etc.). In reference to the same study, Dr. Levine states, "It has been rigorously criticized for not emphasizing that… more children on these drugs were hospitalized for suicidal plans than the untreated." This statement reflects a basic misunderstanding of statistics: one does not draw conclusions from raw frequencies when no statistically significant differences are present. The study found no statistically significant difference in rates of suicide attempts requiring hospitalization between the two groups, owing to this outcome being relatively infrequent, which limits statistical power. Dr. Hruz goes on to present an unusual conspiracy theory, that "a handful of political advocates could have faked the entire study." For this to be possible, these presumed "political advocates" would have needed to fill out the over 27,000 responses to the study used. They would also, presumably, need to be privy to the study design for a study that was conducted 4 years after they completed the survey. They also would have needed to realize that questions that were asked during remote portions of the survey would later be linked for analysis. For context, the study questionnaire is 117 pages long and the relevant questions (i.e., exposure to pubertal suppression and measures of suicidality) are separated by 58 questions.

17. Dr. Hruz criticizes deVries et al. 2011 by stating, "It is also important to note that gender dysphoria itself did not diminish in study subjects." When he states, "gender dysphoria," he is referring to the Utrecht Gender Dysphoria Scale, which measures one's discordance

between their gender identity and their sex assigned at birth (e.g., "I wish I had been born as my affirmed gender"). It would not be expected to decrease following treatment. As noted above, the study did find statistically significant improvement in a number of relevant mental health outcomes including internalizing psychopathology (i.e., anxiety and depression) and externalizing psychopathology (e.g., disruptive behaviors).

18. All existing published data, along with clinical experience from around the world, points to the fact that gender-affirming medical interventions improve mental health for transgender adolescents. To take these treatment options away from families and their physicians in unconscionable and dangerous. This is the very reason that the twelve major medical organizations listed above have opposed legislative bans on gender-affirming medical care for transgender adolescents.

THE STATE'S EXPERTS HAVE MISCHARACTERIZED THE RISKS OF GENDER-AFFIRMING MEDICAL INTERVENTIONS

19. The state's experts have incorrectly asserted that gender-affirming medical interventions result in a range of adverse outcomes. They asserted that gender-affirming medical interventions negatively impact sexual functioning when, in reality, research has shown that sexual functioning (along with romantic development) improves.[16] They note that pubertal suppression results in delayed bone mineralization; however, a recent peer-reviewed article in the journal *Pediatrics* calculated the actual risk of an adverse clinical outcome from this (e.g., a fracture) to be extremely low (1-2% over 5-10 years and only with prolonged use of pubertal suppression past what is generally recommended by current guidelines).[17] They claim that

[16] Bungener, S. L., de Vries, A. L., Popma, A., & Steensma, T. D. (2020). Sexual experiences of young transgender persons during and after gender-affirmative treatment. *Pediatrics*, *146*(6).
[17] Pang, K. C., Notini, L., McDougall, R., Gillam, L., Savulescu, J., Wilkinson, D., ... & Lantos, J. D. (2020). Long-term puberty suppression for a nonbinary teenager. *Pediatrics,* 145(2).

pubertal suppression and hormone therapy result in infertility, but such a categorical declaration is demonstrably untrue. Pubertal suppression does not impair fertility; research has shown that patients who received pubertal suppression for another pediatric indication, precocious puberty, had no impaired fertility.[18] Similarly, a 2019 study found that fertility was similar between transgender men who had been on testosterone treatment and cisgender women.[19] That being said, there is a possibility (though still unproven) that going directly from early pubertal suppression onto gender-affirming hormones may impair fertility. For that reason, both the WPATH Standards of Care and The Endocrine Society Guidelines recommend that all pediatric patients be counseled regarding and offered fertility preservation prior to starting gender-affirming medical interventions. Dr. Levine has also made some unusual and frankly offensive statements including, "transgender individuals commonly become strongly narcissistic, unable to give the level of attention to the needs of another that is necessary to sustain a loving relationship" that are not substantiated by extant research. He provides no quantitative data to support his assertion. As noted above, gender-affirming medical interventions resulted in improved romantic development for transgender people. The state's experts also stated that estrogen treatment for transgender women increases cardiovascular risk. However, a 2021 scientific statement from The American Heart Association noted that this risk is not established, "The use of gender-affirming hormone therapy may be associated with cardiometabolic changes,

[18] Neely EK, Lee PA, Bloch CA, Larsen L, Yang D, Mattia-Goldberg C, et al. (2011) Leuprolide acetate 1-month depot for central precocious puberty: hormonal suppression and recovery. *Int J Pediatr Endocrinol.* 2010(1):398639.

[19] Leung, A., Sakkas, D., Pang, S., Thornton, K., & Resetkova, N. (2019). Assisted reproductive technology outcomes in female-to-male transgender patients compared with cisgender patients: a new frontier in reproductive medicine. *Fertility and Sterility*, *112*(5), 858-865.

but health research in this area remains limited and, at times, contradictory."[20] They additionally highlight a range of other factors that may cause higher rates of cardiovascular adverse events among transgender people, including depression, anxiety, and higher rates of smoking. The state's experts report that gender-affirming medical care increases breast cancer risk. Studies have shown that transgender men (assigned female at birth) actually have lower incidences of breast cancer than cisgender women (also assigned female at birth).[21] This same study examined data from 2,260 transgender women (assigned male at birth) and identified 15 (0.7%) had developed breast cancer, suggesting a higher incidence ratio than would be expected for cisgender men (also assigned male at birth); however, a second larger study did not detect an increased risk of breast cancer among transgender women compared to cisgender men.[22] Of note, these studies did not examine whether study participants were taking gender-affirming hormones. In summary, there is no evidence that gender-affirming medical interventions increase breast cancer risk. The state's experts assert that pubertal suppression adversely impacts brain development; however, research has shown that pubertal suppression does not negatively impact executive functioning.[23] Additionally, a 2020 systematic review and meta-analysis concluded

[20] Streed Jr, C. G., Beach, L. B., Caceres, B. A., Dowshen, N. L., Moreau, K. L., Mukherjee, M., ... & Singh, V. (2021). Assessing and Addressing Cardiovascular Health in People Who Are Transgender and Gender Diverse: A Scientific Statement from the American Heart Association. *Circulation*. [ePublication ahead of Print]

[21] de Blok, C. J., Wiepjes, C. M., Nota, N. M., van Engelen, K., Adank, M. A., Dreijerink, K. M., ... & den Heijer, M. (2019). Breast cancer risk in transgender people receiving hormone treatment: nationwide cohort study in the Netherlands. *BMJ*, *365*.

[22] Brown, G. R., & Jones, K. T. (2015). Incidence of breast cancer in a cohort of 5,135 transgender veterans. *Breast Cancer Research and Treatment*, *149*(1), 191-198.

[23] Staphorsius, A. S., Kreukels, B. P., Cohen-Kettenis, P. T., Veltman, D. J., Burke, S. M., Schagen, S. E., ... & Bakker, J. (2015). Puberty suppression and executive functioning: an fMRI-study in adolescents with gender dysphoria. *Psychoneuroendocrinology*, *56*, 190-199.

that "current evidence does not support an adverse impact of gender-affirming hormone therapy on cognitive performance in birth-assigned either male or female transgender individuals".[24]

20. Every decision in medicine involves weighing risks and benefits of treatment. Physicians and families must be allowed to discuss the risks and benefits of potential treatment options and choose the intervention that is most likely to improve the health and well-being of an adolescent. To take away gender-affirming medical interventions as options for these families is dangerous and unethical. For many transgender adolescents, gender-affirming medical interventions are life-saving.

THE STATE'S EXPERTS HAVE INAPPROPRIATELY APPLIED RESEARCH ABOUT PREPUBERTAL CHILDREN TO TRANSGENDER ADOLESCENTS WHO HAVE REACHED PUBERTY WHEN EXPLAINING WHAT THEY CLAIM IS A HIGH LIKELIHOOD OF "DESISTENCE"

21. Though the terms "children" and "adolescents" are sometimes used synonymously in common parlance, it is vital that the court understand that these terms have specific and distinct meanings in the context of child and adolescent psychiatric research. In this field, "child" and "children" refers to a child who has not yet reached the earliest stages of puberty. The term "adolescent" refers to a minor who has begun puberty. The state's experts inappropriately applied studies of prepubertal children (who are not candidates for gender-affirming medical interventions under any existing clinical guidelines) with studies of adolescents (who, depending on age and other factors, may be candidates for various forms of gender-affirming medical interventions).

[24] Karalexi, M. A., Georgakis, M. K., Dimitriou, N. G., Vichos, T., Katsimpris, A., Petridou, E. T., & Papadopoulos, F. C. (2020). Gender-affirming hormone treatment and cognitive function in transgender young adults: a systematic review and meta-analysis. *Psychoneuroendocrinology*, *119*, 104721.

22. This distinction is most important in the realm of "desistence" studies (i.e., studies that look at how many transgender youths will later identify as cisgender). The state's experts point to studies of gender non-conforming *prepubertal* children and highlight that the majority of these children will not grow up to be transgender. These studies have been criticized for a range of methodological limitations, but most importantly here, they do not apply to transgender minors who have reached the earliest stages of puberty (i.e., "adolescents"). Once a transgender youth reaches the earliest stages of puberty, it is extremely rare for them to later identify as cisgender. Dr. Adkins correctly cited the book chapter by Dr. deVries, Dr. Zucker, and me in this regard. Dr. Hruz, in contrast, pulled the following sentence from this same chapter, "The natural history of gender identity for *children* [emphasis added] who express gender nonconforming or transgender identities is an area of active research." Once again, this is a reference to prepubertal children, not adolescents. Similarly, the quote the state's experts use from The American Psychological Association referencing "working with [transgender and gender nonconforming] children" refers to children, not adolescents.

23. Dr. Levine cites a paper by Dr. James Cantor in *The Journal of Sex & Martial Therapy* that criticized The American Academy of Pediatrics policy statement regarding the treatment of transgender youth.[25] However, the paper *does not* criticize the use of pubertal suppression, gender-affirming hormones, or gender-affirming surgery for transgender adolescents. The paper is focused only on the treatment of prepubertal children, who are not candidates for gender-affirming medical interventions under any existing guidelines. The paper primarily defends the "watchful waiting" approach to prepubertal children that I describe later, in

[25] Cantor, J. M. (2020). Transgender and gender diverse children and adolescents: fact-checking of AAP policy. *Journal of Sex & Marital Therapy*, *46*(4), 307-313.

which a social transition is delayed until puberty begins. The paper is irrelevant to discussions regarding the interventions targeted by Arkansas's SAFE Act, namely, pubertal suppression, gender-affirming hormones, and gender-affirming surgery for transgender adolescents.

THERE IS NO EVIDENCE THAT GENDER-AFFIRMATION MAKES "PERSISTENCE" OF A TRANSGENDER IDENTITY MORE LIKELY

24. The state's experts spend a considerable portion of their statements discussing social transition. This refers to when a transgender child or adolescent takes on a gender expression (i.e., a name, pronouns, clothes, etc.) that matches their gender identity. This is a non-medical intervention that is irrelevant to Arkansas's SAFE Act. However, it is worth noting that the assertions made by the state's experts are false, including this statement from Dr. Levine: "In contrast, there is now data that suggests that encouraging social transition dramatically changes outcomes and often 'locks in' a patient's journey into a life course of dependence on experimental hormone 'treatments.'" This assertion is premised on the presumption that a social transition will make a child identify more strongly as transgender. However, recent research has shown that this is false – gender identification is not significantly different before and after a social transition.[26] This research highlights that the state's experts have misinterpreted the results of Steensma et al., which showed that "persistence" of a transgender identity is associated with a prepubertal social transition. The study by Rae et al. makes clear that this association is because those who undergo a social transition had stronger discordance between their sex assigned at birth and their gender identity to begin with, and the social transition itself does not increase their gender discordance. The state's experts proceed to point to studies showing that over 98% of transgender adolescents who start pubertal suppression go onto gender-affirming hormones,

[26] Rae, J. R., Gülgöz, S., Durwood, L., DeMeules, M., Lowe, R., Lindquist, G., & Olson, K. R. (2019). Predicting early-childhood gender transitions. *Psychological Science*, *30*(5), 669-681.

again suggesting that pubertal suppression increased these adolescent's gender incongruence. However, they make the same mistake again – the high percentage of adolescents going onto gender-affirming hormones indicates that these adolescents had a strong transgender identity to begin with. It is a logical fallacy to state that 98% of adolescents on puberty blockers proceeding onto gender-affirming hormones is evidence that puberty blockers increase the likelihood of persistence; rather all existing evidence suggests that the adolescents who started pubertal suppression to begin with were the those who were, through medical and mental health screening, determined, prior to starting pubertal suppression, to have a low likelihood of future desistence. If a higher number of these adolescents *did not* go onto gender-affirming hormones, these same experts would surely express concern that the evaluation protocols prior to starting pubertal suppression were insufficiently thorough. All existing evidence suggests that gender-affirmation does not impact "persistence" rates. That being said, I do wish to highlight that a small percentage of adolescents (around 2%) will not go onto gender-affirming hormones, which I will explain in further detail.

THE STATE'S EXPERTS HAVE OMITTED KEY LITERATURE REGARDING "DE-TRANSITION" AND TRANSITION REGRET, WHILE MISREPRESENTING OTHER STUDIES

25. The state's experts assert that a large number of adolescents who undergo gender-affirming medical or surgical interventions go on to regret treatment; however, this assertion is not backed up by extant evidence. In 2018, Amsterdam's VUMC Center of Expertise on Gender Dysphoria published the rates of regret among their cohort of 6,793 transgender patients who had undergone gender-affirming medical and/or surgical interventions.[27] Among transgender women

[27] Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., ... & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study (1972–2015): trends in prevalence, treatment, and regrets. *The Journal of Sexual Medicine*, *15*(4), 582-590.

who underwent gender-affirming surgery, 0.6% experienced regret. Among transgender men who underwent gender-affirming surgery, 0.3% experienced regret. Several of those who experienced regret were classified as having "social regret" rather than "true regret," defined in the study as still identifying as transgender but deciding to reverse their gender-affirming surgery due to factors like "the loss of relatives [being] a large sacrifice." The study also reported that only 1.9% of adolescents who started pubertal suppression did not choose to go onto gender-affirming hormones. In a second study of 143 transgender adolescents who started pubertal suppression, 5 (3.5%) decided not to proceed with further gender-affirming medical treatments.[28] One of these adolescents noted that pubertal suppression helped them to better understand their gender identity, and they ultimately identified with their sex assigned at birth. One birth-assigned female had ongoing chest dysphoria but chose to live with a female gender expression regardless, though was dreading breast development and menstruation. One stopped due to unspecified "psychosocial reasons" but continued to identify as transgender. One identified as gender non-binary and felt they no longer needed treatment. One came to identify with his sex assigned at birth. There was no indication that any of these adolescents regretted pubertal suppression. Cases of initiating then discontinuing gender-affirming hormones like estrogen or testosterone continue to be at the case report level, suggesting that this is a rare occurrence. In one of these case reports, a patient similarly noted that a trial of estrogen helped them to better understand their gender identity, which had evolved to non-binary, and they did not regret the trial of estrogen therapy.[29]

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[28] Brik, T., Vrouenraets, L. J., de Vries, M. C., & Hannema, S. E. (2020). Trajectories of adolescents treated with gonadotropin-releasing hormone analogues for gender dysphoria. *Archives of Sexual Behavior*, 49(7), 2611-2618.

[29] Turban, J. L., Carswell, J., & Keuroghlian, A. S. (2018). Understanding pediatric patients who discontinue gender-affirming hormonal interventions. *JAMA Pediatrics*, *172*(10), 903-904.

26. In a peer-reviewed manuscript that was named Best Clinical Perspectives Manuscript of the year by *The Journal of The American Academy of Child & Adolescent Psychiatry*, Dr. Alex Keuroghlian and I created a framework for understanding transgender adolescent patients who discontinue gender-affirming medical interventions.[30] We explained that this may be due to external factors (e.g., pressure from family, societal rejection, harassment by peers) or internal factors (e.g., a change in the understanding of one's gender identity or confusion regarding gender identity). We highlighted that discontinuation of gender-affirming medical interventions does not always coincide with a change in understanding of one's gender identity or with transition-related regret. Our team later published a study highlighting that a substantial number of currently identified transgender people (13.1%) have "de-transitioned" at some point in their life, with the majority (82.5%) citing external factors like family rejection, societal stigma, or harassment.[31] Given that these people *currently* identify as transgender, it highlights that many people who "de-transition" choose to transition again in the future. This harkens to the history of the "ex-gay" movement in which many homosexual individuals reported that they were "cured" of their homosexuality, only to later reveal that they were still homosexual but felt pressured by their communities to say for many years that they were not.

27. Dr. Levine does not cite the landmark study by Wiepjes showing that regret following gender-affirming interventions is rare. Instead, he cites a study that he falsely claims, "identified 16,000 case reports world wide on the Internet." If one reads the cited manuscript

[30] Turban, J. L., & Keuroghlian, A. S. (2018). Dynamic gender presentations: understanding transition and" de-transition" among transgender youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *57*(7), 451-453.
[31] Turban, J. L., Loo, S. S., Almazan, A. N., & Keuroghlian, A. S. (2021). Factors Leading to "Detransition" Among Transgender and Gender Diverse People in the United States: A Mixed-Methods Analysis. *LGBT Health,* 8(4), 273-280.

closely, they will see that this is not the case.[32] Rather, the manuscript notes that there is a group on the social media platform Reddit called r/detrans and that this group contains 16,000 members. Dr. Hruz, presumably misreferencing this16,000 figure, erroneously states that, "the authors claim to have identified 60,000 case reports of detransitioners world-wide on the Internet." The authors of the paper note that one can find "several" studies of detransition in that group, but there is no indication that all 16,000 members of the group have detransitioned. In fact, in reading r/detrans, one will find posts expressing concern that the group has been dominated by members who have not actually detransitioned but rather by "people who are wanting to prey on their vulnerability and use them as political pawns."[33] The state's experts cite a second paper that recruited participants from r/detrans.[34] Though the state's experts imply that this study of 237 individuals was of minors who medically transitioned, only 65% of those in the study had transitioned medically, and only 25% had medically transitioned as minors. It's important to additionally note that this was an anonymous survey recruited on this r/detrans social media group in which there has been expressed concern that members of the group are not people who have detransitioned but rather people who wish to use detransition narratives for political motivations, such as removing access to gender-affirming medical care for transgender adolescents.

28. There is undoubtedly a small number of people who start gender-affirming medical interventions and later stop them. A minority of these appear to regret the treatment.

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[32] Expósito-Campos, P. (2021). A typology of gender detransition and its implications for healthcare providers. *Journal of Sex & Marital Therapy*, 47(3), 270-280.
[33] Post by a member of the Reddit group r/detrans, available at: https://www.reddit.com/r/honesttransgender/comments/k6fidf/rdetrans_is_just_an_antitrans_sub_now/?utm_source=share&utm_medium=web2x&context=3. Accessed: July 12, 2021.
[34] Vandenbussche, E. (2021). Detransition-related needs and support: A cross-sectional online survey. *Journal of Homosexuality*, 1-19.

However, it is of course not reasonable to outlaw an intervention that helps the vast majority of people because a small minority will regret treatment.

29. On the topic of de-transition, it is important to note that internal and external factors are not always clearly delineated. There have been reports of transgender people who have joined so-called "trans-exclusionary radical feminist groups," where they are told that being transgender is not a valid identity and are encouraged to stop gender-affirming medical care. There have been reports of such factors leading to internal confusion about one's gender identity and subsequent "de-transition." Two people recently shared their stories of this in *Slate*, comparing the experience to the "ex-gay" movement of the past in which people were forced by external pressures to report they were no longer gay, but later came out as still identifying as gay.[35] As one person in the Slate article says, "No one really changes. They learn to keep their desires under control."

30. In summary, all existing research suggests that regret following gender-affirming medical interventions is rare. As with all medical interventions, gender-affirming medical interventions cannot claim a 100% success rate. However, for the vast majority of adolescents, these interventions improve mental health. It is unreasonable and dangerous to take this option away from families and physicians as they work together to examine existing evidence and their individual case to determine what pathway is most likely to result in favorable mental health outcomes for an adolescent.

[35] Urquhart, Evan. An "Ex-Detransitioner" Disavows the Anti-Trans Movement She Helped Spark. *Slate*. February 1, 2021. Available at: https://slate.com/human-interest/2021/02/detransition-movement-star-ex-gay-explained.html.

THE STATE'S EXPERTS HAVE MISREPRESENTED THE "WATCHFUL WAITING" MODEL, WHICH REFERS TO PREPUBERTAL CHILDREN WHO ARE NOT CANDIDATES FOR GENDER-AFFIRMING MEDICAL INTERVENTIONS UNDER ANY EXISTING GUIDELINES

31. The state's experts repeatedly claim that the "watchful waiting" model of treating gender dysphoria involves not offering gender-affirming medical interventions to transgender adolescents. This is false. The "watchful waiting" model refers to the treatment of pre-pubertal youth, who are not offered gender-affirming medical interventions under any existing medical guidelines.[36] In fact, the "watchful waiting" model was first described by clinicians at The Center for Expertise for Gender Dysphoria at VUMC in Amsterdam, the very clinic that first developed the use of pubertal suppression for transgender adolescents. It refers to an approach in which one does not implement any interventions to try to push a prepubertal child to identify as cisgender but also does not advise a social transition until puberty. The approach notes that it is not relevant to transgender youth who have reached puberty (i.e., adolescents), who they note should be considered for pubertal suppression and potentially gender-affirming hormones and surgery later in life.[37] Furthermore, the "watchful waiting" approach is not generally practiced in the U.S. Nor do clinicians in the U.S. "push" children into a social transition. Rather, the approach in the U.S., which has increasingly become the most common approach for treating prepubertal transgender children, is to allow a child to direct their own gender exploration without any push from clinicians or parents toward any one gender identity (cisgender, transgender, or otherwise).

32. The state's experts repeatedly misrepresent the watchful waiting approach in an attempt to create the sense that controversy exists regarding the provision of gender-affirming

[36] De Vries, A. L., & Cohen-Kettenis, P. T. (2012). Clinical management of gender dysphoria in children and adolescents: the Dutch approach. *Journal of Homosexuality*, *59*(3), 301-320.
[37] *Id.*

medical interventions when it does not. As noted above, there is broad consensus within the clinical and research community that gender-affirming medical interventions may be appropriate for transgender adolescents (not children).

THE STATE'S EXPERTS HAVE MISREPRESENTED AND OMITTED KEY RESEARCH SHOWING GENDER IDENTITY HAS A STRONG INNATE BIOLOGICAL BASIS

33. There is now a substantial body of literature showing that transgender identity has a strong innate biological basis. However, the state's experts omit much of this research and misrepresent other elements of the existing literature. For example, Dr. Hruz proposes that, "Identical twin studies where siblings share genetic compliments and prenatal environmental exposure but have differing gender identities" have argued against the strong biological basis for transgender identity. On the contrary, twin studies have been some of the strongest pieces of evidence showing that gender identity has a strong biological basis. Researchers have examined identical twins (with the same DNA) and fraternal twins (with different DNA) and found that identical twins of transgender people are far more likely to be transgender than fraternal twins of transgender people, pointing to a strong genetic link.[38] Functional neuroimaging studies have shown that transgender adolescents have patterns of brain activation more similar to those of their gender identity than those of their sex assigned at birth.[39] Sophisticated gene sequencing studies have suggested that genes involved in estrogen processing play a role in the development

[38] See, for example, Coolidge, F. L., Thede, L. L., & Young, S. E. (2002). The heritability of gender identity disorder in a child and adolescent twin sample. *Behavior Genetics*, *32*(4), 251-257.

[39] Burke, S. M., Cohen-Kettenis, P. T., Veltman, D. J., Klink, D. T., & Bakker, J. (2014). Hypothalamic response to the chemo-signal androstadienone in gender dysphoric children and adolescents. *Frontiers in Endocrinology*, *5*, 60.

of gender identity among transgender people.[40] Though the precise etiology of gender identity has yet to be identified, these studies together all establish that there is a strong innate biological basis for gender identity among transgender people. The psychosocial theories the state's experts present (that transgender identity is a result of trauma, parental factors, or social contagion) are not supported by scientific evidence. The one piece of evidence the state's experts present is a survey study by Dr. Littman, which I will discuss in subsequent sections.

THE STATE'S EXPERTS' DISCUSSION OF GENDER-AFFIRMING SURGERY IS INCORRECT AND IRRELEVANT TO GENDER-AFFIRMING MEDICAL CARE FOR TRANSGENDER YOUTH

34. The state's experts claim that the "error rate" for gender-affirming surgery is unknown. However, as described above, a large cohort study from The Netherlands showed that rates of regret following gender affirming surgery are low (0.3-0.6%), and many of these cases do not represent "true regret" as explained above. The state's experts also spend a considerable amount of time discussing a paper in *The American Journal of Psychiatry* by Bränström and Pachankis. This paper is not particularly relevant, as the majority of the surgeries described in the paper are not surgeries offered to minors under any existing medical guidelines (*i.e.*, genital surgery, hysterectomy, laryngeal surgery, etc.). The results are thus not of particular value to discussion of the Arkansas SAFE Act, which applies only to minors.

35. In addition, the state's experts all failed to mention a recent study in *JAMA Surgery* that addressed a major limitation of the analysis Bränström and Pachankis published in their response to letters to the editor critiquing their original study.[41] Namely, the *JAMA Surgery*

[40] Theisen, J. G., Sundaram, V., Filchak, M. S., Chorich, L. P., Sullivan, M. E., Knight, J., ... & Layman, L. C. (2019). The use of whole exome sequencing in a cohort of transgender individuals to identify rare genetic variants. *Scientific Reports*, *9*(1), 1-11.

[41] The Bränström and Pachankis paper itself found a decrease in mental healthcare utilization following gender-affirming surgery. Following publication, several physicians submitted letters

paper by Almazan & Keuroghlian used a proper control group. Their control group included only those who *desired* gender-affirming surgery as a control group, as comparing those who accessed surgery to those who did not desire surgery in the first place is not a clinically relevant comparison. The *JAMA Surgery* paper found that transgender people who accessed gender-affirming surgery had lower odds of past-month severe psychological distress and past-year suicidal ideation than those who desired but never accessed gender-affirming surgery.[42] Furthermore, they examined "lifetime but no past-year" measures of suicidality to address any potential concerns of reverse causality, with results indicating that gender-affirming surgery *improves* mental health, rather than those with better mental health being more likely to access gender-affirming surgery.

36. The state's experts repeatedly cite a study by Dhejne et al. to imply that gender-affirming surgical interventions worsen mental health.[43] Their extrapolations from this data set are flawed. For example, Dr. Levine states, in reference to Dhejne et al., "The Swedish follow-up study found a suicide rate in the post-sex reassignment surgery population 19.1 times greater than that of the controls after affirmation treatment." However, the control group he references

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to the editor critiquing the study for not including a control group. In response to these letters to the editor, Bränström and Pachankis published a response in which they provided a new analysis, comparing transgender people who received surgery to those who did not receive surgery. This new analysis did not detect lower rates of healthcare utilization among people who underwent surgery. As Bränström and Pachankis explain in their published response to the letters, however, this new analysis is not of particular value, as many transgender people do not desire surgery. Inclusion of transgender people who do not desire surgery in the control group makes this analysis relatively meaningless. A later study with a proper control group (Almazan & Keuroghlian 2021 *JAMA Surgery*) found a link between surgery and improved mental health.

[42] Almazan, A. N., & Keuroghlian, A. S. (2021). Association Between Gender-Affirming Surgeries and Mental Health Outcomes. *JAMA Surgery*.

[43] Dhejne, C., Lichtenstein, P., Boman, M., Johansson, A. L., Långström, N., & Landén, M. (2011). Long-term follow-up of transsexual persons undergoing sex reassignment surgery: cohort study in Sweden. *PLoS One*, *6*(2), e16885.

consists of cisgender people. This is not an appropriate control group. Transgender people face a range of stressors that affect their mental health, most prominently societal rejection based on being transgender. Though gender-affirming surgery improves mental health (as shown, for example, by Almazan & Keuroghlian discussed above), it cannot eliminate societal discrimination, and thus even after surgery, many transgender people still suffer elevated rates of mental health problems compared to cisgender people. This reality of mental health challenges even with gender-affirming care is not a valid argument against the provision of gender-affirming care. Dr. Lappert states, "As a physician and surgeon, I have a duty to carefully assess the available scientific research literature and determine what surgical procedures have been scientifically proven safe and effective for use on patients — and which procedures are still experimental, potentially dangerous, and may well do more harm than good for patients." However, it appears that Dr. Lappert did not read the discussion of the Dhenje paper he cites, which states that, "the results should not be interpreted such as sex reassignment *per se* increases morbidity and mortality. Things might have been even worse without sex reassignment. As an analogy, similar studies have found increased somatic morbidity, suicide rate, and overall mortality for patients treated for bipolar disorder and schizophrenia. This is important information, but it does not follow that mood stabilizing treatment or antipsychotic treatment is the culprit." Furthermore, the study was published in 2011, and it followed individuals who had surgery when the surgical techniques were not as advanced and discrimination in society was far worse.

37. Gender-affirming chest surgery for transgender adolescents is not considered lightly. Parents and adolescents work extensively with their physicians to carefully weigh the potential risks and benefits of surgery. Existing medical guidelines note that this is only

considered for transmasculine patients and only after ample time living as their identified gender. There have been two studies examining the impact of gender-affirming chest surgery on the mental health of transgender adolescents specifically. The first was a case series of 68 transmasculine adolescents and young adults that found a reduction in scores on a novel unvalidated chest dysphoria scale.[44] The second was a series of qualitative interviews with 30 adolescents and young adults that identified themes of improved chest dysphoria and quality of life. [45] Though this intervention is not appropriate for all transgender adolescents, for some with severe chest dysphoria that persists despite other interventions, it can dramatically improve mental health. It would be dangerous to take this option away from families and their physicians.

THE STATE'S EXPERTS MISREPRESENT THE ASSESSMENT AND INFORMED CONSENT PROCESS FOR GENDER-AFFIRMING MEDICAL CARE FOR TRANSGENDER ADOLESCENTS

38. The state's experts repeatedly misrepresent the way physicians approach the matter of informed consent for pediatric patients in the U.S. Aside from a few specific areas of medicine, all medications prescribed to minors require consent from a parent or legal guardian. This is particularly true for gender-affirming medical interventions. It is presumed that adolescents generally are unable to provide consent, and physicians rely on their parents or guardians to provide said informed consent after the physician discusses the relevant risks and benefits of an intervention with the parents. Adolescents, by contrast, provide "assent" when they agree to interventions, which alone is not sufficient for a physician to legally prescribe a

[44] Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest reconstruction and chest dysphoria in transmasculine minors and young adults: comparisons of nonsurgical and postsurgical cohorts. JAMA *Pediatrics*. 2018;172(5):431-436.
[45] Mehringer JE, Harrison JB, Quain KM, Shea JA, Hawkins LA, Dowshen NL. Experience of chest dysphoria and masculinizing chest surgery in transmasculine youth. *Pediatrics*. 2021;147(3)

medication. Arkansas's SAFE Act does not simply say that gender-affirming medical and surgical interventions cannot be offered to adolescents without parental consent; it states that gender-affirming medical and surgical interventions cannot be offered *even with parental consent*. This is an unprecedented infringement upon the rights of physicians and families to work together and provide the treatment that is most likely to improve the health and wellbeing of an adolescent.

39. The state's experts also misrepresent the way in which gender-affirming medical and surgical care are provided to transgender adolescents. Dr. Hruz, for example, states "By demanding the immediate and uninvestigated 'affirmation' of a sex discordant gender identity patient's requests for so-called 'transitioning' – without conducting a detailed, proper, medical assessment of alternative hypothesis – the gender transition industry is attempting to enforce and institutionalize the methodological failure of 'confirmation bias.'" Though it is somewhat unclear to what he is referring with the phrase "gender transition industry," it appears he is referring to physicians and other medical providers who provide gender-affirming medical care. Such medical providers do not "[demand] immediate and uninvestigated" provision of gender-affirming medical or surgical interventions. The WPATH Standards of Care, for instance, highlight that, "before any physical interventions are considered for adolescents, extensive exploration of psychological, family, and social issues should be undertaken." The Standards of Care explain that mental health providers conducting an assessment should, among other guidelines: (1) offer a thorough assessment for gender dysphoria and any coexisting mental health concerns, (2) explore the nature and characteristics of an adolescent's gender identity. A psychodiagnostic and psychiatric assessment — covering the areas of emotional functioning, peer and other social relationships, and intellectual functioning/school achievement — should be

performed. Assessment should include an evaluation of the strengths and weaknesses of family functioning. Emotional and behavioral problems are relatively common, and unresolved issues in a youth's environment may be present, and (3) for adolescents, the assessment phase should also be used to inform youth and their families about the possibilities and limitations of different treatments. This is necessary for informed consent, but also important for assessment. The way that adolescents respond to information about the reality of sex reassignment can be diagnostically informative. Correct information may alter a youth's desire for certain treatment, if the desire was based on unrealistic expectations of its possibilities. The WPATH guidelines also note that for adolescents to be candidates for pubertal suppression, the following criteria must be met: (1) the adolescent has demonstrated a long-lasting and intense pattern of gender nonconformity or gender dysphoria, (2) gender dysphoria must have emerged or worsened after the onset of puberty, (3) any co-existing psychological, medical, or social problems that could interfere with treatment have been addressed, such that the adolescent's situation and functioning are stable enough to start treatment, and (4) the adolescent has given informed consent and, particularly when the adolescent has not reached the age of medical consent [18 in Arkansas], the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process. They further note that mental health professionals working with minors with gender dysphoria must: (1) be trained in childhood and adolescent developmental psychopathology, (2) be competent in diagnosing and treating the ordinary problems of children and adolescents, and (3) meet the competency requirements for mental health providers that the Standards of Care lay out for adults. These competency requirements include: (1) a master's degree or its equivalent in a clinical behavioral science field. This degree, or a more advanced one, should be granted by an institution accredited by the

appropriate national or regional accrediting board. The mental health professional should have documented credentials from a relevant licensing board or equivalent for that country, (2) competence in using the *Diagnostic Statistical Manual of Mental Disorders and/or the International Classification of Diseases* for diagnostic purposes, (3) ability to recognize and diagnose coexisting mental health concerns and to distinguish these from gender dysphoria, (4) documented supervised training and competence in psychotherapy or counseling, (5) being knowledgeable about gender-nonconforming identities and expressions, and the assessment and treatment of gender dysphoria, and (6) continuing education in the assessment and treatment of gender dysphoria. This may include attending relevant professional meetings, workshops, or seminars; obtaining supervision from a mental health professional with relevant experience; or participating in research related to gender nonconformity and gender dysphoria. Dr. Hruz states that "parents are often manipulated and coerced by misinformed political activists or providers who threaten them with dire warnings that the only two options are 'treatment or suicide.'" He provides no evidence to support this extreme assertion. If medical providers were, in fact, threatening or coercing a patient and their family into treatments, this would be grounds for legal liability and loss of one's medical license under typical state medical regulations. Arkansas's SAFE Act would add nothing in this regard, but rather it would take away a treatment option that is vital for many adolescent patients.

THE STATE'S EXPERTS' ASSERTION THAT GENDER-AFFIRMING TREATMENTS FOR TRANSGENDER ADOLESCENTS ARE "EXPERIMENTAL" IS INCORRECT

40. The state's experts repeatedly label gender-affirming medical interventions for adolescents "experimental." In ascribing this term to gender-affirming medical interventions, they primarily rely on the fact that pubertal suppression and gender-affirming hormones do not

have FDA indications for gender dysphoria specifically, but rather for other indications. Prescribing FDA approved medications without specific FDA indications for the condition being treated is common in pediatrics. It is referred to as "off-label" prescribing.[46] The American Academy of Pediatrics has explained that "it is important to note that the term 'off-label' does not imply an improper, illegal, contraindicated, or investigational use."[47] They go on to explain that "off-label use of medications is neither experimentation nor research."

THE STATE'S EXPERTS INCORRECTLY IMPLY THAT "RAPID-ONSET GENDER DYSPHORIA" IS AN ACCEPTED DIAGNOSTIC ENTITY AND THAT "SOCIAL CONTAGION" IS AN ESTABLISHED DRIVER OF GENDER DYSPHORIA

41. The state's experts repeatedly imply that "rapid-onset gender dysphoria" is an accepted phenomenon and that "social contagion" is a driver of gender dysphoria. For instance, Dr. Levine states, "the post-pubertal onset of what is now commonly referred to as rapid onset gender dysphoria or post-pubertal gender dysphoria seems to be heavily influenced by social and internal developmental forces." This is a fringe view not supported by evidence. The term "rapid-onset gender dysphoria" entered the literature through a publication by Dr. Lisa Littman.[48] As the state's experts note, a correction was later published on this article. However, the state's experts did not highlight the content of the correction, which noted, "Rapid-onset gender dysphoria (ROGD) is not a formal mental health diagnosis at this time. This report did not collect data from the adolescents and young adults (AYAs) or clinicians and therefore does not validate the phenomenon."[49] The correction goes on to say "the term should not be used in any

[46] American Academy of Pediatrics Committee on Drugs. (2014). Policy Statement: Off-label use of drugs in children. *Pediatrics*, *133*(3), 563-567.
[47] *Id.*
[48] Littman, L. (2018). Rapid-onset gender dysphoria in adolescents and young adults: A study of parental reports. *PloS one*, *13*(8).
[49] Littman, L. (2019). Correction: Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PloS one*, *14*(3), e0214157.

way to imply that it explains the experiences of all gender dysphoric youth…" The Littman study was an anonymous online survey of the parents of transgender youth, recruited from websites where this notion of "social contagion" leading to transgender identity is popular. The anonymous survey participants were asked what they thought was the etiology of their children's transgender identity. Some of these parents believed that their children became transgender as a result of watching transgender-related content on websites like *YouTube* and having LGBTQ friends. The obvious alternative interpretation is that these youth sought out transgender-related media and LGBTQ friends because they wanted to find other people who understood their experiences and could offer support. If the study had surveyed the children in addition to their parents, it likely would have found that this was the case. Unfortunately, the Littman study is based on an anonymous survey of *parents only*. The survey respondents also noted that, from their perspective, their children became transgender "all of a sudden," hence the term "rapid-onset." Once again, the problem here is that the study did not interview the adolescents themselves, nor their healthcare providers. Transgender people will tell you that it is common for transgender (as with gay, lesbian and bisexual) children and adolescents to conceal their identity from their parents for long periods of time, out of fear of negative repercussions were their parents to find out (rejection, being kicked out of the house, or even physical assault). Children often learn this early, when their parents have strong negative reactions to them exhibiting gender non-confirming behavior. No conclusions can be drawn from the Littman study other than the fact that some anonymous people recruited from the Internet theorize that transgender identity is due to social contagion and that their children's gender dysphoria came on suddenly. This theorizing from people online does not establish a true phenomenon. Furthermore, no study to date has established a psychosocial or "environmental" determinant of gender identity. In

contrast, as described above, transgender identity has been shown to be primarily influenced by innate biological factors.

THE CURRENT SCIENTIFIC CONSENSUS REGARDING THE INCREASE IN REFERRALS TO PEDIATRIC GENDER CLINICS AND THE SHIFT IN SEX RATIO DOES NOT FOCUS ON "SOCIAL CONTAGION"

42. As detailed above, there is no evidence that gender dysphoria or transgender identity are results of "social contagion". It is true that there has been an increase in referrals to gender clinics over the past few decades. This has coincided with increased visibility of transgender youth in the media. Whereas parents in the past may have had limited literacy regarding gender diversity in adolescents, today most Americans, as well as people abroad, have greater understanding of the experiences of transgender youth. This has undoubtedly dramatically increased the number of parents bringing their adolescents to gender clinics for evaluation. Additionally, insurance coverage of gender-affirming medical and surgical interventions has improved drastically, meaning that more families are able to afford care, which results in an increase in referrals for evaluation. Of note, not all adolescents who present for treatment ultimately go on to receive gender-affirming medical or surgical interventions.[50] In fact, in a large study from The Netherlands, the percentage of transgender people who presented for evaluation who actually started any kind of gender-affirming treatment decreased over time.[51] The authors of that study note, "this finding may be explained by the fact that in the past it was harder to find information about [gender dysphoria] and its treatment, and only people with extreme types of [gender dysphoria] managed to visit our gender identity clinic for treatment.

[50] Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., ... & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study (1972–2015): trends in prevalence, treatment, and regrets. *The Journal of Sexual Medicine*, *15*(4), 582-590.
[51] *Id*.

Currently, owing to media attention and the internet, it is easier to access information about our gender identity clinic, making the threshold lower to search for help."

43. Dr. Regnerus additionally states that if decreased stigma were driving the higher rates of adolescents openly identifying as transgender, "we should be witnessing a parallel in documentable rise in gender dysphoria among, say, middle-aged adults." However, transgender middle-aged adults have endured decades of stigma for their transgender identities that, despite improvements in contemporary social attitudes, make them fare less likely to come out as transgender. The "gender minority stress" model explains that these decades of exposure to unaccepting environments leads to expectations of future rejection and internalized transphobia (i.e., internalization of society's negative messages about transgender people leading to self-hate of oneself for being transgender).[52] These factors make it less likely for middle-aged transgender adults to come out, despite an increase in societal acceptance. Transgender young people are for the first time growing up in environments where transgender identity is not as stigmatized, making it much easier for them to come out when compared to transgender adults plagued by anxiety due to decades of living in societies where being transgender was not recognized or accepted.

44. Some clinics have noted that they are seeing more birth-assigned females than males in recent years, often referred to as a change in the "sex ratio." There have been a number of explanations for this, including the fact that in the past, transgender men could push the barriers of gender presentation further than transgender women could, due to gender non-conformity being more accepted among birth-assigned females than among birth-assigned males.

[52] Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the Minority Stress Model. *Professional Psychology: Research and Practice*, *43*(5), 460.

For example, tomboys are often accepted in society, whereas feminine boys are ridiculed. This is a phenomenon that has been noted internationally.[53] This likely led to more transgender males being satisfied with pushing gender expression toward more male without seeking support from a gender clinic; whereas transgender women had no similar option and thus presented to gender clinics at higher rates. Greater acceptance of gender diversity and transgender identity for both sexes would be expected to thus shift the ratio toward birth-assigned females, as some clinics have noted. This impact of societal acceptance impacting sex ratio has been noted in the past. A 2013 study compared the child sex ratio in two countries: Canada and The Netherlands. The sex ratio in Canada, where gender diversity is less socially accepted was 4.5:1 in favor of birth-assigned males. In The Netherlands, where gender diversity is more socially accepted, the ratio skewed much further toward birth-assigned females, 2:1.[54] While the state's experts would lead the court to believe that a sex ratio in favor of birth-assigned females is unprecedented, this is not the case. It is not new to see sex ratios that favor birth-assigned females. This has been seen many times in the past, including in the 1970s and 1980s in then-Czechoslovakia[55] and Poland,[56] where sex ratios were as high as 5.5:1 in favor of birth-assigned females. This was prior to the existence of the Internet or social media.

45. In summary, the current scientific consensus is that the increase in referrals to gender clinics is due to decreased stigma toward transgender people in recent years, along with

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[53] Yu, C., Zuo, X., Blum, R. W., Tolman, D. L., Kågesten, A., Mmari, K., ... & Lou, C. (2017). Marching to a different drummer: A cross-cultural comparison of young adolescents who challenge gender norms. *Journal of Adolescent Health*, *61*(4), S48-S54.
[54] Wood, H., Sasaki, S., Bradley, S. J., Singh, D., Fantus, S., Owen-Anderson, A., ... & Zucker, K. J. (2013). Patterns of referral to a gender identity service for children and adolescents (1976–2011): age, sex ratio, and sexual orientation. *Journal of Sex & Marital Therapy*, *39*(1), 1-6.
[55] Brzek, A., & Sipova, L. (1983) Transsexuelle in Prag. Sexualmedizin, 3, 110-112
[56] Godlewski, J. (1988). Transsexualism and anatomic sex ratio reversal in Poland. *Archives of Sexual Behavior*, *17*(6), 547-548.

an increase in awareness among the general population that gender-affirming medical interventions for transgender adolescents exist, and an increase in insurance coverage for these interventions.

GENDER IDENTITY CONVERSION THERAPY HAS A CLEAR DEFINITION AND IS DANGEROUS AND UNETHICAL

46. Dr. Regnerus asserts that "there is no defined psychotherapeutic method for treating gender dysphoria that can be widely characterized and consistently identified as 'conversion therapy' in order to be banned." This is false. The American Academy of Child & Adolescent Psychiatry offers a clear definition of conversion therapy, "'Conversion therapies' (or 'reparative therapies') are interventions purported to alter same-sex attractions or an individual's gender expression with the specific aim to promote heterosexuality as a preferable outcome. Similarly, for youth whose gender identity is incongruent with their sex anatomy, efforts to change their core gender identity have also been described and more recently subsumed under the conversion therapy rubric."[57] This same policy statement labels conversion therapy for both sexual orientation and gender identity unethical and dangerous. All relevant major medical organizations have issued clear statements that gender identity conversion therapy should not be practiced, including The American Medical Association,[58] The American Academy of

[57] The American Academy of Child & Adolescent Psychiatry. Conversion Therapy. 2018. https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx Accessed July 12, 2022.

[58] American Medical Association. Health care needs of lesbian, gay, bisexual and transgender populations. H-160.991. 2017. https://policysearch.ama-assn.org/policyfinder/detail/H-160.991%20?uri=%2FAMADoc%2FHOD.xml-0-805.xml. Accessed July 12, 2021.

Pediatrics,[59] and The American Academy of Child & Adolescent Psychiatry.[60] In a recent paper from our team published in *JAMA Psychiatry*, we found that, after adjusting for a range of potentially confounding variables, exposure to gender identity conversion efforts was associated with greater odds of attempting suicide.[61] The increased odds of attempting suicide were even greater for transgender people who were exposed to gender identity conversion efforts during childhood. Some have pointed out that this study was not a randomized-controlled trial, but rather a cross-sectional study. In the realm of scientific evidence, this level of evidence is less conclusive than a randomized-controlled trial. However, given that gender identity conversion efforts have been labeled unethical by the major medical organizations cited above, it is not possible to conduct a randomized controlled trial of gender identity conversion efforts. No institutional review board would allow such a study to proceed. Because such a study design is not ethically permissible or feasible, we must rely on the evidence we currently have. All existing evidence suggests that trying to force a transgender person to be cisgender is harmful to those exposed to this intervention. There is no evidence of any benefit from such interventions. As Dr. Levine points out, there is also no evidence of efficacy or effectiveness, "To my knowledge, there is no credible scientific evidence beyond anecdotal reports that psychotherapy can enable a return to male identification for genetically male boys, adolescents, and men, or return to female identification for genetically female girls, adolescents and women."

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[59] Rafferty, J., & Committee on Psychosocial Aspects of Child and Family Health. (2018). Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics*, *142*(4).

[60] The American Academy of Child & Adolescent Psychiatry. Conversion Therapy. 2018. https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx Accessed July 12, 2022.

[61] Turban, J. L., Beckwith, N., Reisner, S. L., & Keuroghlian, A. S. (2020). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry*, *77*(1), 68-76.

47. Dr. Regnerus asserts that our paper in *JAMA Psychiatry* "paint[s] an entire class of cautious therapeutic approaches as intrinsically harmful." However, this is not true. It only classifies attempts to make transgender people cisgender as conversion therapy. This is, precisely, the definition of conversion therapy. If one were to treat anxiety, depression, or trauma-related symptoms, for instance, with the goal of treating these symptoms, rather than with the goal of forcing a person to be cisgender, this would not be conversion therapy. In fact, it would be following the guidelines set forth by The World Professional Association for Transgender Health, which note that other mental health conditions must be reasonably well controlled prior to initiating gender-affirming medical or surgical interventions. Dr. Hruz similarly asserts, "By disparaging as 'conversion therapy' all forms of psychotherapy, coping-and-resilience training, cognitive behavioral therapy for depression/anxiety, the gender transition industry is failing to treat individual patients according to the basic requirements and principles of competent medical assessment, diagnosis, and treatment." This again is untrue, and in fact, many transgender patients are offered psychotherapeutic treatment like cognitive behavioral therapy for conditions such as anxiety and depression by the same mental health providers who ultimately refer them for gender-affirming medical interventions.

DR. HRUZ MISREPRESENTS THE STUDY HE CITES TO CLAIM THAT RACIAL MINORITIZED ADOLESCENTS ARE OVER-REPRESENTED AMONG THOSE RECEIVING GENDER-AFFIRMING CARE

48. Dr. Hruz cites a paper by Rider et al. as showing that racial minoritized adolescents are more likely to access gender-affirming medical care. However, this study did not examine access to gender-affirming medical care, but rather visits to the school nurse's office,

preventative medical check-ups, and dental visits.[62] Studies that have examined access to gender-affirming medical care for transgender adolescents have found that racial minoritzed patients are under-represented among those who access care.[63]

SOME OF THE STATE'S EXPERTS' OPINIONS DEMONSTRATE FUNDAMENTAL GAPS IN THEIR UNDERSTANDING REGARDING THE FIELD OF PSYCHIATRY

49. Dr. Hruz states that "There are no reliable radiological, genetic, physical, hormonal, or biomarker tests that can establish gender identity or reliably predict treatment outcomes." This is true of nearly all psychiatric conditions. If Arkansas were to use this standard to outlaw medications, it would outlaw selective-serotonin reuptake inhibitors like Prozac, Lexapro, and Zoloft for major depressive disorder and generalized anxiety disorder. It would also outlaw all anti-psychotic medications for schizophrenia. This is an unreasonable standard that would leave essentially all patients with mental health conditions without medical care.

50. Dr. Hruz states that, "NIMH [The National Institute of Mental Health] has launched the Research Domain Criteria (RDoC) project to transform diagnosis by incorporating genetics, imaging, cognitive science, and other levels of information to lay the foundation for a new classification system" to imply that the mental health field has moved away from using self-report measures in diagnosis and treatment measures. This is not true. RDoC includes over 100 self-report measures.[64]

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[62] Rider, G. N., McMorris, B. J., Gower, A. L., Coleman, E., & Eisenberg, M. E. (2018). Health and care utilization of transgender and gender nonconforming youth: A population-based study. *Pediatrics*, *141*(3).

[63] Lopez, C. M., Solomon, D., Boulware, S. D., & Christison-Lagay, E. R. (2018). Trends in the use of puberty blockers among transgender children in the United States. *Journal of Pediatric Endocrinology and Metabolism*, *31*(6), 665-670.

[64] The full list of RDoC self-report measures can be found on the National Institute of Mental Health's RDoC website here: https://www.nimh.nih.gov/research/research-funded-by-nimh/rdoc/units/self-reports/. Accessed: July 12, 2021.

51. Dr. Hruz claims that "gender dysphoria or gender identity disorder is a logical subcategory of body dysmorphic disorder." This is not true. Body dysmorphic disorder falls under the category of OCD and related disorders and involves an obsessive preoccupation with a perceived abnormally formed specific body part and frequent checking behaviors of that body part. Gender dysphoria, in contrast, does not focus on a specific body part but rather gender broadly. The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) clearly describes body dysmorphic disorder as a separate diagnosis that must be distinguished from gender dysphoria during the diagnostic process.[65] Gender dysphoria does not, as body dysmorphic disorder does, fall under the category of OCD and Related Disorders in the DSM-5.

52. Dr. Lappert asserts that "since the abandonment of frontal lobotomies in 1967, there has been no other psychological-psychiatric condition for which surgery is performed." This is not true. Vagal nerve stimulators are FDA approved for surgical implantation in patients with treatment-refractory major depressive disorder.[66] An anterior capsulotomy is a neurosurgical procedure for refractory obsessive-compulsive disorder (OCD) that is considered safe, well-tolerated, and efficacious.[67] Deep brain stimulation is an additional surgical procedure that has been shown to be efficacious for treatment-refractory OCD,[68] with emerging evidence

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[65] American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA: American Psychiatric Association, 2013.

[66] O'Reardon, J. P., Cristancho, P., & Peshek, A. D. (2006). Vagus nerve stimulation (VNS) and treatment of depression: to the brainstem and beyond. *Psychiatry (Edgmont)*, *3*(5), 54.

[67] Pepper, J., Zrinzo, L., & Hariz, M. (2019). Anterior capsulotomy for obsessive-compulsive disorder: a review of old and new literature. *Journal of Neurosurgery*, *133*(5), 1595-1604.

[68] Menchón, J. M., Real, E., Alonso, P., Aparicio, M. A., Segalas, C., Plans, G., ... & Gabriëls, L. (2021). A prospective international multi-center study on safety and efficacy of deep brain stimulation for resistant obsessive-compulsive disorder. *Molecular Psychiatry*, *26*(4), 1234-1247.

for treatment-resistant major depressive disorder.[69] All of these surgical procedures for psychiatric conditions are major interventions not to be taken lightly. In each instance, as with the decision to offer gender-affirming top surgery for an adolescent, a physician must carefully weigh the potential risks of the treatment with the potential benefits of the treatment. For some patients, the potential benefits will outweigh the potential risks. It is vital that physicians and families do not have these medical options taken away from them.

RECENT NON-PEER-REVIEWED REPORTS FROM THE UNITED KINGDOM, SWEDEN, AND FINLAND DO NOT ACCURATELY SUMMARIZE THE SCIENTIFIC EVIDENCE ON GENDER-AFFIRMING MEDICAL CARE FOR ADOLESCENTS WITH GENDER DYSPHORIA

53. Defendants' experts cite reports from the U.K., Sweden and Finland that they claim support their opinions about gender-affirming medical care for adolescents.

54. The state's experts cite two reports from the U.K.'s National Institute for Health and Care Excellence (NICE). These reports were not peer-reviewed but were meant to present a review of the evidence on the efficacy and safety of pubertal suppression and gender-affirming hormones to treat gender dysphoria in adolescents. The first report, which addressed pubertal suppression,[70] critiqued the research on this treatment as having substantial limitations, which is not unusual in medical research, but it's important to note that the analysis omitted important studies. For example, the NICE report cited a lack of comparative studies (i.e., studies with control groups), but omitted discussion of two such studies. It did not include Van der Miesen et

[69] Raymaekers, S., Luyten, L., Bervoets, C., Gabriëls, L., & Nuttin, B. (2017). Deep brain stimulation for treatment-resistant major depressive disorder: a comparison of two targets and long-term follow-up. *Translational Psychiatry*, *7*(10), e1251-e1251.

[70] United Kingdom's National Institute for Health Care Excellence. Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria. Available at: https://arms.nice.org.uk/resources/hub/1070905/attachment. Accessed: July 14, 2021.

al. 2020 *Journal of Adolescent Health*, which was a large comparative study comparing 272 adolescents who presented to a gender clinic but had not yet received pubertal suppression with 178 adolescents who had received pubertal suppression, and found that those who received pubertal suppression had statistically significant lower rates of internalizing psychopathology (anxiety and depression) than those who did not receive pubertal suppression. The NICE report also erroneously excluded a second comparative study, Turban et al. 2020 *Pediatrics,* mistakenly stating that pubertal suppression was not reported separately from other interventions in this study. The study did report on pubertal suppression separately and found that those who accessed pubertal suppression during adolescence had statistically significant lower odds of lifetime suicidal ideation than those who desired but did not access pubertal suppression. The report also states that past studies have not addressed potential confounding variables, overlooking that Turban et al. 2020 *Pediatrics* examined a wide range of potential confounding variables including taking gender-affirming hormones, having been exposed to gender identity change efforts, family support for gender identity, race, sexual orientation, employment status, education level, and several others.

55. The second NICE report addressed the evidence regarding gender-affirming hormones. This report concluded, "results from 5 uncontrolled, observational studies suggest that, in children and adolescents with gender dysphoria, gender-affirming hormones are likely to improve symptoms of gender dysphoria, and may also improve depression, anxiety, quality of life, suicidality, and psychosocial functioning." The studies they reference, which show statistically significant *improvement* in mental health following gender-affirming hormones, have already been described above. The report notes that the literature would benefit from larger studies with control groups but does not state that the existing evidence does not support

continued use of such treatment. Nowhere in either NICE report is there any statement that gender-affirming medical care should be prohibited. In addition to citing these non-peer-reviewed reports, the state's experts have repeatedly implied that the U.K… courts have prohibited the provision of gender-affirming medical care for transgender youth, citing *Bell v Tavistock*. However, this case did no such thing. The case simply ruled that adolescents cannot, on their own, consent to pubertal suppression. This was already the case in the U.S. prior to Arkansas's SAFE Act. Throughout the U.S, pubertal suppression cannot be provided without parents providing consent and adolescents providing assent. The state's experts also failed to mention that a second case in the U.K., *AC v CD and Others*, established that parents can provide consent for their transgender adolescents to receive pubertal suppression. Gender-affirming medical care for transgender adolescents has not been prohibited and continues to be legal in the U.K. with parental consent.

56. The state's experts also cite a report from Finland's Council for Choices in Health Care in Finland, which is "a subordinate of the country's Ministry of Social Affairs and Health that provides recommendations on which healthcare methods should be funded by the public sector."[71] This report is not peer-reviewed and reports on only three studies of gender-affirming medical care for adolescents, ignoring the additional studies I cited above. Specifically, it failed to review the following studies showing that gender-affirming medical interventions improve mental health: deVries et al. *Pediatrics* 2014, Turban et al. *Pediatrics* 2020, Van der Miesen et al. 2020 *Journal of Adolescent Health,* Achille et al. 2020 *International Journal of Pediatric*

[71] See the description on the Ministry of Social Affairs and Health website, available at: https://stm.fi/en/legislation-steering-and-supervision-cooperation#:~:text=The%20Council%20for%20Choices%20in,funded%20by%20the%20public%20sector. Accessed: July 12, 2021.

Endocrinology, Kuper et al. 2020 *Pediatrics*, and Allen et al. 2019 *Clinical Practice in Pediatric Psychology*. It states that the effects of pubertal suppression on the central nervous system is "unknown," despite these medications being used for precocious puberty for decades and a recent peer-reviewed systematic review and meta-analysis finding that "current evidence does not support an adverse impact of gender-affirming hormone therapy on cognitive performance in birth-assigned either male or female transgender individuals" and found "a higher performance in verbal working memory in treated assigned males."[72] The Finnish report suggests that gender-affirmation increases the likelihood of persistence, failing to cite the literature I cite above that indicates that gender affirmation does not increase the degree of one's transgender identity. In summary, this report was poorly researched and omits key studies. I do not recommend relying on its conclusions. But in any event, it does not recommend denying care as Arkansas's SAFE Act does. Rather, it permits such treatments on a case-by-case basis when medically indicated.

57. The state's experts also cite another non-peer-reviewed report from Sweden's Statens Beredning for Medicinsk Och Social Utvardering (SBU), which translates to The Swedish Agency for Health Technology Assessment and Assessment of Social Services. The report only examined studies published prior to September 19, 2019. It thus did not review a number of key studies, described above, that found gender-affirming medical interventions for transgender adolescents improve mental health, including Turban et al. 2020 *Pediatrics*, Van der Miesen et al. 2020 *Journal of Adolescent Health*, Achille et al. 2020 *International Journal of Pediatric Endocrinology*, and Kuper et al. 2020 *Pediatrics*. It also failed to review a key paper

[72] Karalexi, M. A., Georgakis, M. K., Dimitriou, N. G., Vichos, T., Katsimpris, A., Petridou, E. T., & Papadopoulos, F. C. (2020). Gender-affirming hormone treatment and cognitive function in transgender young adults: a systematic review and meta-analysis. *Psychoneuroendocrinology*, *119*, 104721.

that was published prior to 2019 that found improvement in internalizing psychopathology (anxiety and depression), externalizing psychopathology (e.g., disruptive behaviors), and global functioning that I note above, namely de Vries et al. 2011 *Journal of Sexual Medicine*. It appears The Karolinska Institute's Astrid Lindgren Children's Hospital has, based on this report, a misinterpretation of the *Bell v Tavistock* ruling, and a lack of knowledge of the *AC v CD and Others* decision, limited gender-affirming medical interventions at its institutions to patients over age sixteen and limited treatment to clinical trial settings. This decision, made on faulty and incomplete evidence, was clearly ill-advised. It is also worth noting that this is a decision by one hospital, not a government ban all gender-affirming medical care for minors. In summary, the SBU report is outdated and omits key studies. I do not recommend relying on its conclusions.

58. In summary, the state's experts' references these non-peer-reviewed reports from the U.K., Finland and Sweden do not support their assertions that gender-affirming medical interventions are ineffective or unsafe or should be taken away from transgender adolescents and their families in Arkansas. The state's experts have inflated the importance of these reports, and as noted above, all relevant major medical organizations in the United States disagree with their assessments.

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

Jack L. Turban

Executed on: July 16, 2021. JACK L. TURBAN, MD, MHS

EXHIBIT A

Jack Lewis Turban III MD MHS
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EDUCATION & TRAINING

Stanford University School of Medicine Palo Alto, CA 2020-2022
Fellow in Child & Adolescent Psychiatry. Fellow in child and adolescent psychiatry. Research focuses on pediatric gender identity and LGBTQ mental health. Serves as administrative chief fellow 2021-2022.

Massachusetts General Hospital & McLean Hospital Boston, MA 2017 - 2020
Integrated Adult, Child, & Adolescent Psychiatry Resident. Resident physician in the integrated adult, child, and adolescent psychiatry program. Research focused on pediatric gender identity and LGBT mental health.

Yale School of Medicine New Haven, CT 2012-2017
Doctor of Medicine & Master of Health Science with honors. Clinical rotations included inpatient pediatrics, inpatient child psychiatry, inpatient adolescent psychiatry, residential adolescent psychiatry, psychiatric consult liaison service, clinical neuromodulation, neurology clinics, and neurosurgery. Completed award-winning masters' thesis as a Howard Hughes Medical Institute (HHMI) medical research fellow on evolving treatment paradigms for transgender youth. Clerkship Grades: All Honors

Harvard University Cambridge, MA 2007-2011
B.A. Neurobiology magna cum laude with a secondary in the Dramatic Arts. Coursework included clinical neuroscience, systems neurobiology, visual neuroscience, positive psychology, neurobiology of behavior, CNS regenerative techniques, neuroanatomy, vertebrate surgery, and extensive coursework in dramatic theory and practice. International study included Spanish language (Alicante, Spain), stem cell biology (Shanghai, China), and studying how visual art may be used as a window into the mechanisms of neural processing (Trento, Italy). Honors thesis completed at The Massachusetts Eye & Ear Infirmary studying inner-ear development and regeneration. GPA: 3.8/4.0

RESEARCH EXPERIENCE

The Fenway Institute Boston, MA 2017-Present
LGBT Mental Health Research. Currently using data from the National Transgender Discrimination Survey to determine the adult mental health correlates of recalled childhood experiences including exposure to conversion therapy and access to gender-affirming hormonal interventions. PIs: Timothy Wilens, Alex Keuroghlian, & Sari Reisner

McLean Institute for Technology in Psychiatry Belmont, MA. 2017-Present
LGBT Mental Health Research. Conducting cross-sectional studies that examine the associations between geosocial "hook-up apps," internalizing psychopathology, and compulsive sexual behavior. Utilizing the TestMyBrain platform. PI: Laura Germine

Yale Program for Research on Impulsivity & Impulse Control Disorders New Haven, CT 2016-Present
Clinical Research. Conducted a study on US military veterans who had recently returned from deployment, studying rates and comorbidities of those veterans who exhibit compulsive sexual behavior facilitated by social media. Currently studying psychiatric morbidities among veterans who send sexually explicit self-images over social media. PI: Marc Potenza MD/PhD

Yale Child Study Center New Haven, CT 2015-2017
Medical Education Research. Conducted a study to evaluate pediatric attending and medical student knowledge regarding transgender pediatric patient care. Additionally studied participants' personal ethical views regarding pubertal blockade and cross-sex hormone therapy for adolescent patients. PI: Timothy VanDeusen MD

Yale Department of Dermatology New Haven, CT 2015-2016
HHMI Medical Research Fellow. Studied the potential molecular mediators of Langerhans Cell-mediated UVB-induced epidermal carcinogenesis. Techniques included transgenic mouse models of chronic UV exposure, epidermal sheet

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preparations, immunohistochemistry, confocal microscopy, flow cytometry, Bioplex analysis, quantitative PCR and tissue culture. PI: Michael Girardi MD

Yale Department Laboratory Medicine New Haven, CT 2012-2014
Basic Research. Employed mass spectrometry to compare metabolite profiles of recurrent tumor versus radiation-induced necrosis following Gamma Knife Radiosurgery for brain metastases, working to identify novel biomarkers for non-invasive imaging techniques. PI: Tore Eid MD/PhD

Yale Department of Neurosurgery New Haven, CT 2012-2012
Clinical Research. Developed a database of patients who received gamma knife radiosurgery or whole brain radiation for the treatment of brain metastases. This database is designed to evaluate the relative risks of radiation-induced necrosis following these two treatment modalities. PI: Veronica Chiang MD

Eaton-Peabody Laboratory Cambridge, MA 2009-2011
Basic Research. Worked at the Massachusetts Eye and Ear Infirmary laboratory, studying stem cells of the inner ear and working toward cochlear hair cell regeneration. PI: Albert Edge PhD

Novartis Pharmaceuticals Shanghai, China 2009-2009
Intern. Worked as a biological research intern, studying the role of Math-1 in inner-ear development and regeneration.

WORK EXPERIENCE

Freelance Medical Journalism New Haven, CT 2012-Present
Freelance Writer. Writing pieces for the popular press to highlight the experiences of children suffering from societal stigma. Writing has been featured in the *New York Times, The Washington Post, The Los Angeles Times, Scientific American, Psychology Today,* and *Vox* among others.

Clarion Healthcare Consulting, LLC Boston, MA 2011-2012
Associate Consultant. Worked as a strategy and management consultant for top ten pharmaceutical companies and emerging biotech. Areas of focus included neuroscience business development, life cycle management, and innovation in new product commercialization.

Harvard Summer School in Mind/Brain Sciences Trento, Italy 2011-2012
Resident Director. Directed a study abroad program for Harvard undergraduate and Italian graduate students, introducing them to the basic principles of neuroscience and cognitive psychology.

LEADERSHIP

The Upswing Fund 2020-Present
Scientific Advisory Board. Member of the scientific advisory board of a $15M charitable fund to support adolescent minority mental health during the COVID19 pandemic. Funded by Melinda Gates's Panorama Global.

MGH Psychiatry Gender Lab Meetings Boston, MA 2019-Present
Founder. Established monthly lab meetings for those in the MGH psychiatry department to discuss ongoing research regarding transgender mental health.

Yale School of Medicine Cultural Competence Committee New Haven, CT 2012-2017
Chair. Worked with individual course directors to develop course material on cultural competence. Authored case studies on handling pediatric patient sexuality (Professional Responsibility Course), authored a pre-clinical lecture on LGBT healthcare (Ob/Gyn Module), and lectured on transgender pediatric patient care (Pediatrics Clinical Clerkship).

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Dean's Advisory Committee on LGBTQ Affairs (Yale School of Medicine) New Haven, CT 2016-2017
Member. Served on the advisory committee to the Dean of Yale School of Medicine, advising on issues related to LGBTQ affairs.

Yale HIV Dermatology Roundtable New Haven, CT 2014-2017
Founder. Eighty percent of patients suffering from HIV face a dermatologic manifestation of their disease. Struck by these patients' experience of stigma, I organized a bi-monthly interdisciplinary roundtable to improve research, education, and clinical care in HIV dermatology. Interventions have included primary care provider training on the treatment of genital warts and improved referral systems for cutaneous malignancies.

Yale Gay & Lesbian Medical Association New Haven, CT 2013-2017
President. Led a group of medical students focused on supporting careers in medicine for LGBT individuals. Organized mixers with LGBT organizations from other graduate schools and with LGBT faculty. Coordinated trips to GLMA national conferences. Worked with the medical school administration to create an LGBT faculty advisor position.

VOLUNTEER WORK & ADVOCACY

American Academy of Child & Adolescent Psychiatry "Break the Cycle" 2017-2017
Event Coordinator. Worked with Dr. Andres Martin to coordinate a fundraising indoor cycling event for the AACAP *Break The Cycle* fundraising campaign to fight children's mental illness.

Yale Hunger & Homelessness Auction New Haven, CT 2012-2014
Logistics Co-Chair. Organized a group of ten students to coordinate entertainment, donations, and event logistics for the Yale annual charity auction. All proceeds for the auction go to support local charities.

Yale School of Medicine Admissions Committee New Haven, CT 2015-2017
Interviewer. Served as a full voting member of the admissions committee. Responsibilities include student interviewing, recruitment, and organizing LGBT-focused activities for admitted students.

Harvard College Admissions New Haven, CT 2012-Present
Interviewer. Interviewing students from the Boston area for admission to Harvard College.

SELECTED PEER REVIEWED PUBLICATIONS

Turban J.L., King, D., Li, J.L., Keuroghian, A.S. (2021) Timing of Social Transition for Transgender and Gender Diverse Youth, K-12 Harassment, and Adult Mental Health Outcomes. *Journal of Adolescent Health*. [ePub ahead of print]

Turban J.L., Kraschel K.L., Cohen, G.C. (2021) Legislation to Criminalize Gender-affirming Medical Care for Transgender Youth. *JAMA*. [ePub ahead of print]

Liu M., **Turban J.L.**, Mayer K.H. (2021) The US Supreme Court and Sexual and Gender Minority Health. *American Journal of Public Health*. [ePub ahead of print]

Turban J.L., Loo, S. S., Almazan, A. N., Keuroghlian, A.S. (2021) Factors Leading to "Detransition" Among Transgender and Gender Diverse People in the United States: A Mixed-Methods Analysis. *LGBT Health*. [ePub ahead of print]

Suto, D.J., Macapagal, K., **Turban, J.L.** (2021) Geosocial Networking Application Use Among Sexual Minority Adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*. 60(4), 429-431.

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Turban, J. L., Passell E, Scheer L, Germine L. (2020) Use of Geosocial Networking Applications Is Associated With Compulsive Sexual Behavior Disorder in an Online Sample. *The Journal of Sexual Medicine*. 17(8), 1574-1578.

Turban, J. L., Keuroghlian, A. S., & Mayer, K. H. (2020) Sexual Health in the SARS-CoV-2 Era. *Annals of Internal Medicine*. 173(5), 387-389.

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TEXTBOOKS AND TEXTBOOK CHAPTERS

Forcier, M., Van Schalkwyk, G., **Turban, J. L.** (Editors). Pediatric Gender Identity: Gender-affirming Care for Transgender & Gender Diverse Youth. Springer Nature, 2020.

Challa M., Scott C., **Turban J.L.** Epidemiology of Pediatric Gender Identity. In Forcier, M., Van Schalkwyk, G., **Turban, J. L.** (Editors). Pediatric Gender Identity: Gender-affirming Care for Transgender & Gender Diverse Youth. Springer Nature, 2020.

Turban J.L., Shadianloo S. Transgender & Gender Non-conforming Youth. In Rey, J.M. (Editor): IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva. International Association of Child and Adolescent Psychiatry and Allied Professionals, 2018.

Turban, J. L., DeVries, A.L.C., Zucker, K. Gender Incongruence & Gender Dysphoria. In Martin A., Bloch M.H., Volkmar F.R. (Editors): Lewis's Child and Adolescent Psychiatry: A Comprehensive Textbook, Fifth Edition. Philadelphia: Wolters Kluwer 2018.

PRESENTATIONS & ABSTRACTS

Turban JL. The Emergence of Gender-affirming Care for Transgender & Gender Diverse Youth, United Nations NGO Committee on Mental Health, Oral Presentation, Online, 2021.

Turban JL. Opinion Writing 101: An Introduction. American Psychiatric Association Professional Development Series, Online, 2021.

Turban JL. McLean Psychiatry Grand Rounds: Evolving Treatment Paradigms for Transgender Youth. Grand Rounds McLean Psychiatry, Online, 2021.

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Turban JL. Keynote – Transgender & Gender Diverse Youth: Research Updates. Stony Brook Transgender Health Conference, Online, 2021.

Turban JL. Einstein Psychiatry Grand Rounds: Evolving Treatment Paradigms for Transgender Youth. Grand Rounds, Einstein Psychiatry, Online, 2021.

Turban JL. Gender Identity Conversion Efforts: Quantitative Perspectives. Annual Meeting of The American Psychiaric Association, Oral Presentation, Online, 2021.

Turban JL. COVID19 and Pediatric Mental Health. Grand Rounds, Stanford University School of Medicine Pediatrics, Online, 2021.

Turban JL. Opinion Writing on Sensitive Topics. Harvard Media & Medicine Course, Live Lecture, Online, 2021.

Turbal JL. Evolving Treatment Paradigms for Transgender Youth. Grand Rounds, Beth Israel Deaconess Medical Center Psychiatry (Harvard Medical School), Online, 2020.

Turban JL. For Worse: Negative Aspects of Social Media for LGBT Youth. Oral Presentation, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Oral Presentation, Online, 2020.

Turban JL. Hookup App Use among Gay and Bisexual Males: Sexual Risk and Associated Psychopathology. Oral Presentation, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Online, 2020.

Turban JL. Communicating with the Public: From The New York Times to The Big Screen. Oral Presentation, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Online, 2020.

Turban JL, King D, Reisner S, Keuroghlian A. Gender-Affirming Hormone Therapy for Transgender Adolescents Is Associated With Lower Odds of Suicidal Ideation in Adulthood. Poster, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Online, 2020.

Turban JL. Gender affirming care for transgender and gender diverse youth: what we know and what we don't. University of Texas Pride Health Institute, Oral Presentation, Online, 2020.

Turban JL. Q&A on Transgender Youth Mental Health. PEOPLE in Healthcare at University of Toledo, Oral Presentation, Online, 2020.

Turban JL, Pagato S, Gold J, Broglie J, Naidoo U, Alvarado A. Innovation of Student Mental Health during COVID19. Panel to the People, Oral Presentation, Online, 2020.

Turban JL, Belkin B, Vito J, Campos K, Scasta D, Ahuja A, Harris S. Discussion on Abomination: Homosexuality and the Ex-Gay Movement. Panelist, The Association of LGBTQ+ Psychiatrists Virtual Session, Oral Presentation, Online, 2020.

Turban JL. Is Grindr affecting gay men's mental health? Oral Presentation, UCLA & AETC Coping with Hope, Online, Oral Presentation, 2020.

Turban JL, Hall TM, Goldenberg D, Hellman R. Gay Sexuality and Dating. Moderator, The Association of LGBTQ+ Psychiatrists Virtual Session, Oral Presentation, Online, 2020.

Turban JL, McFarland C, Walters O, Rosenblatt S. An Overview of Best Outpatient Practice in the Care of Transgender

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Individual. Oral Presentation, Annual Meeting of the American Psychiatric Association, Philadelphia, 2020. [Accepted, but cancelled due to COVID19]

Turban JL, Lakshmin P, Gold J, Khandai C. #PsychiatryMatters: Combating Mental Health Misinformation Through Social Media and Popular Press. Oral Presentation, Annual Meeting of the American Psychiatric Association, Philadelphia, 2020. [Accepted, but cancelled due to COVID19]

Turban JL. The Pen and the Psychiatrist: Outreach and Education Through the Written Word. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, 2019.

Turban JL. For Better and For Worse: Gender and Sexuality Online, Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, 2019.

Turban JL. Gender Diverse Young Adults: Narratives and Clinical Considerations, Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, 2019.

Turban JL. Transgender Youth: Controversies and Research Updates, Oral Presentation, Annual Meeting of the American Psychiatric Association, San Francisco, 2019.

Turban JL, Beckwith N, Reisner S, Keuroghlian A. Exposure to Conversion Therapy for Gender Identity Is Associated with Poor Adult Mental Health Outcomes among Transgender People in the U.S. Poster Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Seattle, 2018.

Shirk SD, **Turban JL**, Potenza M, Hoff R, Kraus S. Sexting among military veterans: Prevalence and correlates with psychopathology, suicidal ideation, impulsivity, hypersexuality, and sexually transmitted infections. Oral Presentation, International Conference on Behavioral Addictions, Cologne, Germany, 2018.

Turban JL. Gender Identity and Autism Spectrum Disorder. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Washington D.C., 2017.

Turban JL. Tackling Gender Dysphoria in Youth with Autism Spectrum Disorder from the Bible Belt to New York City. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent psychiatry, Washington D.C., 2017.

Turban JL. Affirmative Protocols for Transgender Youth. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Washington D.C., 2017.

Turban, JL. Evolving Management of Transgender Youth. Oral Presentation, Klingenstein Third Generation Foundation Conference, St Louis, 2017.

Turban, JL, Potenza M, Hoff R, Martino S, Kraus S. Clinical characteristics associated with digital hookups, psychopathology, and clinical hypersexuality among US military veterans. Oral Presentation, International Conference on Behavioral Addictions, Haifa, Israel, 2017.

Lewis J, Monaco P, **Turban JL**, Girardi M. UV-induced mutant p53 ketatinocyte clonal expansion dependence on IL-22 and RORγT. Poster, Society of Investigative Dermatology, Portland, 2017.

Turban JL, Winer J, Encandela J, Boulware S, VanDeusen T. Medical Student Knowledge of and Attitudes toward Transgender Pediatric Patient Care. Abstract, Gay & Lesbian Medical Association, St Louis, 2016.

Turban JL, Lu A, Damisah E, Eid T, Chiang V. Metabolomics to Differentiate Radiation Necrosis from Recurrent

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Tumor following Gamma Knife Stereotactic Radiosurgery for Brain Metastases. Oral Presentation, 14th Annual Leksell Gamma Knife Conference, New York City, 2014

Turban JL, Lewis J, Girardi M. UVB-induced HMGB1 and extracellular ATP increase Langerhans cell production of IL-23 implicated in ILC3 activation. Poster, Society of Investigative Dermatology, Scottsdale, 2016

Turban JL, Lewis J, Girardi M. Characterization of cytokine pathways associated with Langerhans cell facilitation of UVB-induced epidermal carcinogenesis. Poster, American Society of Clinical Investigation, Chicago, 2016.

Lewis J, **Turban JL**, Girardi M, Michael Girardi. Langerhans cells and UV-radiation drive local IL22+ ILC3 in association with enhanced cutaneous carcinogenesis. Poster, Society of Investigative Dermatology, Scottsdale, 2016.

Sewanan L, Zheng D, Wang P, Guo X, Di Bartolo I, Marukian N, **Turban JL**, Rojas-Velazques D, Reisman A. Reflective Writing Workshops Led By Near Peers During Third-Year Clerkships: A Safe Space for Solidarity, Conversation, and Finding Meaning in Medicine. Poster & Workshop, Society of General Internal Medicine, New Haven and Hollywood, 2016.

EDUCATIONAL PRESENTATIONS

Psychotherapeitic Considerations for Transgender Youth. Stanford PsyD Child Psychotherapy Course, 2021.
Transgender Youth: Treatment Paradigms and Research Updates. Children's Health Council DBT Program Lecture Series, 2021.
Gender-affirming Care for Patients with Primary Psychotic Disorders. McLean Psychotic Disorders Division Seminar Series, 2019.
Gender-affirming Care for Transgender Elders. McLean Geriatric Psychiatry Seminar Series, 2019.
Writing about Gender & Sexuality (Guest Lecture), Course: Sexual Outcasts & Uncommon Desires, Emerson College, 2019
Gender-affirming Care for Transgender and Gender Diverse Patients on Inpatient Psychiatric Units, MGH Inpatient Psychiatry Seminar Series, 2019.
Transgender & Gender Non-conforming Youth, MGH/McLean Adult Residency program, 2018.
Writing about Gender Identity for the Lay Audience (Guest Lecture), Course: Kids These Days, Emerson Journalism Program, 2017
International Approaches to the Treatment of Gender Incongruence, VU Medical Center, Amsterdam, 2017
Time to Talk About It: Physician Depression and Suicide, Yale Clerkship Didactics, 2017
Medical Management of Adolescent Gender Dysphoria. Yale Pediatrics Clerkship, 2015-2016
Medical Management of Children and Adolescents with Gender Dysphoria, Yale Pediatrics Residency Didactics, 2016
Reflective Writing Workshop Leader. Yale Surgery Clerkship, 2015-2016
Langerhans Cell Facilitation of Photocarcinogenesis. Yale Department of Dermatology Research Forum, 2016
Panel: Treating Transgender & Gender Non-conforming Patients in the Emergency Setting. Yale Emergency Medicine Clerkship, 2016
Panel: Challenges to the Learning Climate: Difficult Patients, Harassment, and Mistreatment. Yale Pre-Clinical Orientation, 2016
Panel: Personal Behavior and Professionalism, Introduction to the Profession, 2016

AWARDS & HONORS

Sorensen Foundation Fellowship (2021-2023)
Stanford Child & Adolescent Psychiatry Chief Fellow (2021-2022)
Wasserman Award for Advocacy in Children's Mental Health (2021)
Top Manuscript of The Year - *Pediatrics* (2020)
American Academy of Child & Adolescent Psychiatry Pilot Research Award, $15,000 (2019-2020)

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American Psychiatric Association Child & Adolescent Psychiatry Fellowship (2019-2021)
Ted Stern Scholarship and Travel Award (2019)
Editor's Pick for Best Clinical Perspectives Manuscript – *Journal of The American Academy of Child & Adolescent Psychatry* (2018)
SciShortform Project: Best Shortform Science Writing, Columns & Op-Eds (2018)
Ted Stern Scholarship and Travel Award (2018)
Medaris Grant (2018)
Editor's Pick for Best Clinical Perspectives Manuscript – *Journal of The American Academy of Child & Adolescent Psychatry* (2017)
United States Preventative Health Services Award for Excellence in Public Health (2017)
NBC Pride 30 Innovator (2017)
Ferris Thesis Prize, Yale School of Medicine (2017)
Parker Prize, Yale School of Medicine (2017)
Howard Hughes Medical Institute Medical Research Fellowship (2015-2016)
American Academy of Child and Adolescent Psychiatry Life Members Mentorship Grant (2016)
Student Scholarship, Gender Conference East (2016)
Farr Award for Excellence in Research (2016)
Yale Office of International Medical Education Grant, Buenos Aires, Argentina (2016)
Yale Office of International Medical Education Grant, VU Medical Center, The Netherlands (2016)
Yale Summer Research Grant (2012)
AIG International Scholar, Harvard College (2007-2011)
Harvard International Study Grant, Alicante, Spain (2008)
David Rockefeller International Study Grant, Shanghai, China (2009)

PROFESSIONAL MEMBERSHIPS

American Medical Association, Member
American Psychiatric Association, Member
American Psychiatry Association, Council on Communications
American Psychaitric Association, Child & Adolescent Psychiatry Fellow
American Academy of Child & Adolescent Psychiatry, Member
American Academy of Child & Adolescent Psychiatry, Media Committee
American Academy of Child & Adolescent Psychiatry, Chair of Subcomittee on Interfacing with the Media
Psychiatric Times, Editorial Board
JAMA, Peer Reviewer
JAMA Pediatrics, Peer Reviewer
Pediatrics, Peer Reviewer
Journal of the American Academy of Child & Adolescent Psychiatry, Peer Reviewer
Journal of Child Psychology and Psychiatry, Peer Reviewer
Journal of Adolescent Health, Peer Reviewer
Academic Psychiatry, Peer Reviewer
Journal of Autism and Developmental Disorders, Peer Reviewer
American Journal of Public Health, Peer Reviewer
Journal of Clinical Medicine, Peer Reviewer
Brain Sciences, Peer Reviewer

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF ARKANSAS

DYLAN BRANDT, et al.,		
	Plaintiffs,	Case No.: 4:21-CV-00450-JM-01
	v.	
LESLIE RUTLEDGE, et al.,		
	Defendants.	

SUPPLEMENTAL DECLARATION OF DEANNA ADKINS, MD IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

I, Deanna Adkins, MD, declare as follows:

1. I have personal knowledge of the matters stated in this declaration.

2. As set forth in greater detail in my previously submitted declaration dated June 11, 2021, my background and credentials include the following: I served as the Fellowship Program Director of Pediatric Endocrinology at Duke University School of Medicine for fourteen years and am currently the Director of the Duke Center for Child and Adolescent Gender Care; I have treated approximately 500 transgender and intersex young people in my career. My CV is attached as Exhibit A.

3. I reviewed the declarations of Dr. Stephen Levine, Dr. Paul Hruz, Prof. Mark Regnerus and Dr. Paul Lappert. Here, I respond to some of the central points in those declarations. I do not specifically address each study or article cited, but instead explain the overall problems with some of the conclusions that Defendants' experts draw and provide data

showing why such conclusions are in error. I reserve the right to supplement my opinions if necessary as the case proceeds.

GENDER IDENTITY

4. As I mentioned in my previously submitted Declaration, a person's gender identity is "fixed" and not subject to external forces that may attempt to change one's gender identity. (Adkins Decl. ¶ 21). In his declaration, Dr. Levine contests this assertion by claiming it is refuted by the facts that (1) there is an increase in the numbers of transgender people; and (2) some people identify as "gender fluid". (Levine Decl. ¶ 24A). The increase in the number of people known to be transgender in no way suggests that people's gender identity can be changed. We are able to see and treat more transgender people now because of increased societal acceptance and improved medical treatments over the past decade. And that some people experience their gender as fluid does not mean that they can change their gender identity. Gender identity—whether cisgender, transgender or something that doesn't fall into a binary male or female category-- cannot be changed voluntarily or by external factors and is therefore fixed. That some people have changing understandings of their gender identity or express it differently at different times in no way changes that.

5. It is also not the case that there are high numbers of transgender people who "desist" in their transgender identity. As I explained in my previous declaration, the claim that most transgender people ultimately come to identify with their "biological sex" is not accurate. (Adkins Decl. ¶ 47). But for any pre-pubertal children who may explore transgender identity and later realize that they are not transgender, that does not mean their gender identity is not "fixed" but rather that their understanding of it evolved.

TREATMENT PROTOCOLS FOR TRANSGENDER YOUTH

6. I am currently a provider to over 250 transgender youth and have during my tenure at the Duke Clinic treated over 400 transgender patients. Each patient is treated individually by a multi-disciplinary team.

7. Though Defendant' experts claim that the treatment protocols for transgender youth and adolescents recommended by the World Professional Association for Transgender Health ("WPATH"), the Endocrine Society, and the American Academy of Pediatrics (AAP) are not in the best interests of such patients, that is contrary to an overwhelming body of contemporary research that says the opposite, as well as to the experience of clinical practice, including mine.

8. WPATH is the leading association of medical and mental health professionals in the treatment of transgender individuals. The AAP is an association representing more than 67,000 pediatricians. The Endocrine Society is an organization representing more than 18,000 endocrinologists. WPATH and the Endocrine Society have published widely accepted standards of care for treating gender dysphoria, which are based on considerable scientific and medical research, and which have been endorsed by the AAP.

9. Dr. Levine critiques WPATH because it is "a voluntary membership organization" and "attendance at its biennial meetings has been open to trans individuals who are not licensed professionals." (Levine ¶ 47.) This critique is misplaced, as an organization can be both an advocacy and a scientific organization, as is WPATH. This is not a new phenomenon in medicine. The American Diabetes Association, for example, is a professional association that both advocates for patients with diabetes and is a scientific organization. Rigorous papers are presented at the WPATH meetings and well-funded scientific research is reported on.

10. Dr. Levine's critique also ignores the November 2017 Endocrine Society Guidelines on the treatment of gender-incongruent persons. This more recent treatment protocol mirrors the WPATH Standards of Care and recommends pubertal suppression and gender-affirming hormone therapy for adolescents and young adults who meet the clinical standards.[1] The guidelines were developed through rigorous scientific processes which "followed the approach recommended by the Grading of Recommendations, Assessment, Development, and Evaluation group, an international group with expertise in the development and implementation of evidence-based guidelines."[2] The guidelines affirm that patients with gender dysphoria often must be treated with "a safe and effective hormone regimen that will (1) suppress endogenous sex hormone secretion determined by the person's genetic/gonadal sex and (2) maintain sex hormone levels within the normal range for the person's affirmed gender."[3]

11. Dr. Levine critiques WPATH and its members, claiming "most current members of WPATH have little ongoing experience with the mentally ill" and recognizing and treating psychiatric comorbidities (Levine Decl. ¶ 53.) In my clinic, as is recommended by the Endocrine Guidelines, every patient is treated by a multi-disciplinary team that includes a social worker, psychological, psychiatrist and an endocrinologist. The mental health providers are all well-trained faculty and clinicians at Duke with years of experience diagnosing and treating mental health conditions. For patients who have other mental health diagnoses, they are treated by a team of mental health providers, as required under the WPATH Standards of Care and the Endocrine Society Guidelines, before medical treatment for gender dysphoria is initiated. Clinic protocol requires written confirmation from the patient's mental health team that any other

[1] Wylie et al. (2017).
[2] *Id.*
[3] *Id.*

underlying mental health conditions are well-managed and the patient is able to begin treatment. Additionally, before any medical treatment is initiated for Clinic patients, we go through an extensive informed consent process. We go through each potential side effect and risk of treatment verbally, we then go through the information in writing and have the patient sign line-by-line, and then we go through verbally a second time. We also have a visual presentation for use with patients who have limitations on their ability to absorb the information otherwise to ensure that all of the information is communicated effectively to the patient before any treatment is initiated.

12. It is not the case that we simply encourage any patient to initiate gender-affirming care as some of Defendants' experts suggest. Each patient is met first by mental health providers who explore the patients medical and mental health history and identity. No patient is rushed into medical treatment and no treatment is initiated without the aforementioned evaluations and informed consent process.

13. Dr. Levine claims that "the use of puberty blockers for transgender children, [is] a recent phenomenon." (Levine Decl. ¶ 83.) However, puberty blockers began to be used in transgender patients in 2004, which is not considered recent in medicine. We also have over thirty years of data on the impact of puberty blockers on children who undergo precocious puberty[4] that we can apply to the transgender population. There is no evidence of short or long-term negative effects on patients who receive puberty blockers from the more than thirty years of data that we have. And for transgender youth (as compared to those treated for precocious

[4] Children with precocious puberty develop signs of puberty before the typically expected time. In some this can happen as early at 12 months of age and puberty blockers are used to pause puberty until the appropriate time.

puberty), the treatment is used for a much shorter period of time, in order to pause puberty before either initiating puberty with cross-sex hormones or resuming endogenous puberty.

14. Though Dr. Levine warns about delaying puberty, pubertal suppression in transgender youth does not delay puberty beyond the typical range. (Levine Decl. ¶ 59A.) Pubertal development has a very wide variation among individuals. Puberty in individuals assigned male at birth typically begins anywhere from age nine to age fourteen, and sometimes does not complete until a person's early twenties. For those individuals assigned female at birth, puberty typically ranges from age eight to age seventeen.[5] Protocols used for transgender youth would tend to put them in the latter third of typical puberty but nothing outside of the typical range.[6] As such there is no reason to assume, and no data to support, Dr. Levine's assumption, that slightly delaying puberty will have negative short- or long-term consequences.

15. In his declaration, Dr. Hruz claims that patients treated with puberty delaying medication will experience a range of health consequences. (Hruz ¶ 63). For example, he claims that patients treated with puberty suppressants will have be at an elevated risk of lower bone-mineral density. Though during the course of treatment patients may have lower bone-mineral density, the density is regained within two years of initiating puberty.[7] This is true of patients

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[5] Wyshak, Grace, PhD and Frisch, Rose E., Evidence for a Secular Trend in Age of Menarche, April 29, 1982, N Engl J Med 1982; 306:1033-1035.

[6] Wylie et al. (2017); Euling SY, Herman-Giddens ME, Lee PA, et al. Examination of U.S. puberty-timing data from 1940 to 1994 for secular trends: panel Findings. *Pediatrics*. 2008;1221: S172–S191

[7] Klink, D., Caris, M., Heijboer, A., et al., Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria, J. of Clin. Endocrinology & Metabolism, 2015; 100(2) E270–E275, https://doi.org/10.1210/jc.2014-2439; van der Loos, MA, Hellinga, I., Vlot, MC, et al. Development of Hip Bone Geometry During Gender-Affirming Hormone Therapy in Transgender Adolescents Resembles That of the Experienced Gender When Pubertal Suspension Is Started in Early Puberty. *J. of Bone & Mineral Res*. 2021 35(6), 931-941, https://doi.org/10.1002/jbmr.4262.

treated with puberty suppressants for precocious puberty as well. Additionally, he says that patients on puberty suppressing treatment will have slower rates of growth in height. For transgender girls, there is some reduced height growth but the reduced height is both consistent with the gender-affirmation aspect of the care (that is, a transgender girl's treatment will aim to align her physiological characteristics including height consistent with what is typical for girls generally) and still within the expected overall range for the patient's height based their mid-parental average. For transgender boys, pubertal suppression would lead to *increased* height growth, which is likewise consistent with the gender-affirmation aspect of the care and also still within the expected overall range for what their adult height would be.

16. Dr. Hruz also repeats many of the alleged risks of hormone therapy in the law's legislative findings including "high blood pressure, weight gain, abnormal glucose tolerance, breast cancer, liver disease, thrombosis and cardiovascular disease." (Hruz Decl. ¶ 63). As I explained previously (Adkins Decl. ¶ 46), we rarely ever see these side effects in patients with well-managed treatment through trained clinical providers. Of these, the most common would be "cardiovascular disease" in transgender women but this is likewise usually only present when a patient is denied care and self-administers the treatment without appropriate clinical supervision.[8]

17. Dr. Levine warns of risks of infertility related to gender-affirming hormone therapy, but many transgender individuals conceive children after undergoing hormone therapy.[9]

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[8] Weinand, JD. And Safer, JD. Hormone therapy in transgender adults is safe with provider supervision; A review of hormone therapy sequelae for transgender individuals. *J Clin Transl Endocrinol*. 2015 Jun; 2(2): 55–60; 10.1016/j.jcte.2015.02.003.

[9] Light AD, Obedin-Maliver J, Sevelius JM, Kerns JL. Transgender men who experienced pregnancy after female-to-male gender transitioning. *Obstet Gynecol*. 2014;124(6):1120-1127; Maxwell S, Noyes N, Keefe D, Berkeley AS, Goldman KN. Pregnancy Outcomes After Fertility

More generally, many medical interventions that are necessary to preserve a person's health and well-being can impact an individual's fertility, but we proceed with the treatment after informed consent.

18. Many transgender patients do not lose genital sensation or the ability to orgasm after undergoing surgery. And in any event, given the extreme dysphoria that many transgender individuals experience with respect to their genitals, it is not true, as Dr. Levine suggests, that data concerning loss of genital sensation and orgasm in non-transgender individuals can be applied to transgender individuals. (Levine Decl. ¶ 83.) Distress of genital change and sensation loss for someone who has a positive association with their genital characteristics does not translate to the experience of someone who might experience disgust and extreme distress at the sight of their genitals. It is simply not reasonable to compare cisgender experiences to transgender experience in the context of genital sensation.

19. Ultimately, it appears from Dr. Levine's and Dr. Hruz's declarations that their central point is that it is not healthy to be transgender and that government policies and medical practice should consider efforts to make people not transgender (*i.e.*, encourage people to live in accordance with their assigned sex at birth rather than their gender identity). This approach to treating transgender people is known to be not only ineffective, but extremely harmful and is considered unethical by every major medical association.[10]

Preservation in Transgender Men. *Obstet Gynecol*. 2017;129(6):1031-1034; Neblett MF 2nd, Hipp HS. Fertility Considerations in Transgender Persons. *Endocrinol Metab Clin North Am*. 2019;48(2):391-402.

[10] American Academy of Child & Adolescent Psychiatry. Conversion Therapy. 2018. https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx; American Medical Association. Health care needs of lesbian, gay, bisexual and transgender populations. H-160.991. 2017. https://policysearch.ama-assn.org/policyfinder/detail/H-160.991%20?uri=%2FAMADoc%2FHOD.xml-0-805.xml; Rafferty, J., & Committee on

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

Executed on: July 15, 2021

Deanna Adkins, MD

Psychosocial Aspects of Child and Family Health. (2018). Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics*, 142(4).

EXHIBIT A

DUKE UNIVERSITY MEDICAL CENTER

CURRICULUM VITAE

for
Permanent Record
and the
Appointments and Promotions Committee

Date Prepared: April 27, 2020

Name:	Deanna W. Adkins, MD
Primary Academic Appointment:	Assistant Professor Track IV
Primary Academic Department :	Pediatrics
Secondary Appointment	None
Present Academic Rank and Title	Associate Professor of Pediatrics
Date and Rank of First Duke Faculty Appointment:	July 1, 2004 Clinical Associate
Medical Licensure:	North Carolina
License #:	200100207
Date :	March 15, 2001
Specialty Certification(s) and Dates:	10/16/2001-2018 General Pediatrics 8/18/2003 and current-Pediatric Endocrinology
Date of Birth:	June 29, 1970
Place :	Albany, GA USA
Citizen of:	USA
Visa Status :	N/A

Education	Institution	Date (Year)	Degree
High School	Tift County High School	1988	Graduated with High Honors
College	Georgia Institute of Technology	1993	BS Applied Biology/Genetics High Honors
Graduate or Professional School	Medical College of Georgia	1997	MD

Professional Training and Academic Career

Institution	Position/Title	Dates
University of North Carolina Hospitals, Chapel Hill, North Carolina	Pediatrics Resident	1997-2000
University of North Carolina Hospitals, Chapel Hill, North Carolina	Pediatric Endocrine Fellow	2000-2004
Duke University Medical Center, Durham, North Carolina	Clinical Associate/Medical Instructor	2004-2008
Duke University Medical Center, Durham, North Carolina	Assistant Professor	2008-2020
Duke University Medical Center, Durham, North Carolina	Fellowship Program Director Pediatric Endocrinology	2008-2010
Duke University Medical Center, Durham, North Carolina	Associate Fellowship Program Director Pediatric Endocrinology	2010-2014
Duke University Medical Center, Durham, North Carolina	Fellowship Program Director Pediatric Endocrinology	2014-12/2019
Duke University Medical Center, Durham, North Carolina	Director Duke Child and Adolescent Gender Care	3/2015-present
Duke University Medical Center, Durham, North Carolina	Medical Director-Duke Children's Specialty of Raleigh	3/2017-present
Duke University Medical Center, Durham, North Carolina	Associate Professor Pediatric	1/2020-present

Publications

Refereed Journals

1. Zeger M, **Adkins D**, Fordham LA, White KE, Schoenau E, Rauch F, Loechner KJ. " Hypophosphatemic rickets in opsismodysplasia," J Pediatr Endocrinol Metab. 2007 Jan;20(1):79-86. PMID: 17315533

2. Worley G, Crissman BG, Cadogan E, Milleson C, **Adkins DW**, Kishnani PS "Down Syndrome Disintegrative Disorder: New-Onset Autistic Regression, Dementia, and Insomnia in Older Children and Adolescents With Down Syndrome".. J Child Neurol. 2015 Aug;30(9):1147-52. doi: 10.1177/0883073814554654. Epub 2014 Nov 3.PMID:25367918

3. Tejwani R, Jiang R, Wolf S, **Adkins DW**, Young BJ, Alkazemi M, Wiener JS, Pomann GM, Purves JT, Routh JC**,"** Contemporary Demographic, Treatment, and Geographic Distribution Patterns for Disorders of Sex Development".Clin Pediatr (Phila). 2017 Jul 1:9922817722013. doi: 10.1177/0009922817722013. PMID:28758411

4. Lapinski J1, Covas T2, Perkins JM3, Russell K4, **Adkins D** 5, Coffigny MC6, Hull S7. "Best Practices in Transgender Health: A Clinician's GuidePrim Care". 2018 Dec;45(4):687-703. doi: 10.1016/j.pop.2018.07.007. Epub 2018 Oct 5. PMID: 30401350 DOI: 10.1016/j.pop.2018.07.007

5. Paula Trief, Nicole Foster, Naomi Chaytor, Marisa Hilliard, Julie Kittelsrud, Sarah Jaser, Shideh Majidi, Sarah Corathers, Suzan Bzdick, **Adkins DW**, Ruth Weinstock; "Longitudinal Changes in Depression Symptoms and Glycemia in Adults with Type 1 Diabetes", Diabetes Care; 2019 Jul;42(7):1194-1201. doi: 10.2337/dc18-2441. Epub 2019 May; PMID: 31221694

6. M. Hassan Alkazemi, MD, MS, Leigh Nicholl, MS, Ashley W. Johnston, MD, Steven Wolf, MS, Gina-Maria Pomann, PhD, Diane Meglin, MSW**, Deanna Adkins, MD**, Jonathan C. Routh, MD, MPH; "Community Perspectives on Difference of Sex Development (DSD) Diagnoses: a Crowdsourced Survey", Journal of Pediatric Urology accepted April 2, 2020

Study Group publications

1. Turner DA, Curran ML, Myers A, Hsu DC, Kesselheim JC, Carraccio CL and the Steering Committee of the Subspecialty Pediatrics Investigator Network (SPIN). Validity of Level of Supervision Scales for Assessing Pediatric Fellows on the Common Pediatric Subspecialty Entrustable Professional Activities. *Acad Med*. 2017 Jul 11. doi: 10.1097/ACM.0000000000001820. PMID:28700462
2. Mink R, Carraccio C, High P, Dammann C, McGann K, Kesselheim J, Herman B. Creating the Subspecialty Pediatrics Investigator Network (SPIN). Creating the Subspecialty Pediatrics Investigator Network Richard Mink, MD, MACM1, Alan Schwartz, PhD2, Carol Carraccio, MD, MA3, Pamela High, MD4, Christiane Dammann, MD5, Kathleen A. McGann, MD6, Jennifer Kesselheim, MD, EdM7, J Peds 2018 Jan;192:3-4.e2. PMID: 29246355 DOI: 10.1016/j.jpeds.2017.09.079
3. Erratum 2018. PMID: 29246355 DOI: 10.1016/j.jpeds.2017.09.079
4. Mink RB[1], Myers AL, Turner DA, Carraccio CL. Competencies, Milestones, and a Level of Supervision Scale for Entrustable Professional Activities for Scholarship. Acad Med. 2018 Jul 10. doi: 10.1097/ACM.0000000000002353. [Epub ahead of print] PMID: 29995669 DOI:10.1097/ACM.0000000000002353 Mink RB, Schwartz A, Herman BE,

Editorials

a. Editorial Charlotte News and Observer-"**NC pediatric specialists say HB2 'flawed' and 'harmful,' call for repeal**"; April 18, 2016; authors: Deanna Adkins, Ali Calikoglu, Nina Jain, Michael Freemark, Nancie MacIver, Robert Benjamin, Beth Sandberg, etc.
b. Editorial Raleigh News and Observer-"**Beverly Gray: Repeal HB2"** May 2016: authors Beverly Gray, Deanna Adkins, Judy Sidenstein, Jonathan Routh, Haywood Brown, Clayton Afonso, William Meyer, Kristen Russell, Caroline Duke, Nancy Zucker, Kevin Weinfurt, Jennifer St. Claire, Angela Annas, Katherine Keitcher

Chapters in Books

1. Endocrinology Chapter writer and editor in **Fetal and Neonatal Physiology for the Advanced Practice Nurse**; Editors: Amy Jnah DNP, NNP-BC, Andrea Nicole Trembath MD, MPH, FAAP. December 21, 2018 ISBN-10 0826157319

Selected Abstracts:

1. Redding-Lallinger RC, **Adkins DW,** Gray N: The use of diaries in the study of priapism in sickle cell disease. Poster Abstract in Blood November 2003
2. **Adkins, D.W.** and Calikoglu, A.S.: Delayed puberty due to isolated FSH deficiency in a male. Pediatric Research Suppl. 51: Abstract #690. page 118A, 2004
3. Zeger, M.P.D**., Adkins, D.W.,** White, K., Loechner, K.L.: Opsismodysplasia and Hypophosphatemic Rickets. Pediatric Research Suppl.-from PAS 2005
4. Kellee M. Miller[1], David M. Maahs[2]**, Deanna W. Adkins[3]**, Sureka Bollepalli[4], Larry A. Fox[5], Joanne M. Hathway[6], Andrea K. Steck[2], Roy W. Beck[1] and Maria J. Redondo[7] for the T1D Exchange Clinic Network; Twins Concordant for Type 1 Diabetes in the T1D Exchange -poster at ADA scientific sessions 6/2014
5. Laura Page, MD; Benjamin Mouser, MD; Kelly Mason, MD; Richard L. Auten, MD; **Deanna Adkins, MD** CHOLESTEROL SUPPLEMENTATION IN SMITH-LEMLI-OPITZ: A Case of Treatment During Neonatal Critical Illness; - poster 06/2014
6. Lydia Snyder**, MD, Deanna Adkins, MD,** Ali Calikoglu, MD; Celiac Disease and Type 1 Diabetes: Evening of Scholarship UNC Chapel Hill 3/2015 poster
7. **Deanna W. Adkins, MD,** Kristen Russell, LCSW, Dane Whicker, PhD, Nancy Zucker, Ph. D**:** Departments of Pediatrics and Psychiatry, Duke University Medical Center*;* Evaluation of Eating Disturbance and Body Image Disturbance in the Trans Youth Population; WPATH International Scientific Meeting June 2016; Amsterdam, The Netherlands
8. Rohit Tejwani**, Deanna Adkins,** Brian J. Young, Muhammad H. Alkazemi,Steven Wolf[3], John S. Wiener, J. Todd Purves, and Jonathan C. Routh; Contemporary Demographic and Treatment Patterns for Newborns Diagnosed with Disorders of Sex Development; Poster presentation at AUA meeting 2016
9. S.A. Johnson, **D.W. Adkins,** Case Report: The Co-diagnosis of Hypopituitarism with Klinefelter in a patient with short stature; Pediatric Academic Society Meeting 2018
10. Lapinski J, Dooley R, Russell K, Whicker D, Gray, B**, Adkins DW; Title:** Developing a Pediatric Gender Care Clinic at a Major Medical Setting in the South; Workshop Philadelphia Trans Wellness Conference 2018
11. Jessica Lapinski, DO, Deanna Adkins, MD, Tiffany Covas, MD, MPH, Kristen Russell, MSW, LCSW; An Interdisciplinary Approach to Full Spectrum Transgender Care; WPATH Conference Buenos Aires, Argentina, November 3, 2018
12. Leigh Spivey, MS, Nancy Zucker, PhD, Erik Severiede, B.S., Kristen Russell, LCSW, Deanna Adkins, MD; USPATH Washington, DC Sept. 2019. Platform presentation;

"Psychological Distress Among Clinically Referred Transgender Adolescents: A latent Profile Analysis"

Non-Refereed Publications

i. Print
   i. Editorial Charlotte News and Observer-"**NC pediatric specialists say HB2 'flawed' and 'harmful,' call for repeal**"; April 18, 2016
   ii. Editorial News and Observer-HB2 May 2016 -"**Beverly Gray: Repeal HB2"** May 2016

ii. Digital
   i. Supporting and Caring for Transgender Children-HRC guide 2017
   ii. Initial endocrine workup and referral guidelines for primary care Providers-Pediatric Endocrine Society Education Committee Website Publication
   iii. Only Human Podcast August 2, 2016; https://www.wnycstudios.org/podcasts/onlyhuman/episodes/id-rather-have-living-son-dead-daughter

iii. Media and Community Interviews
   i. Greensboro News and Record Community Forum October 2017-*Transgender Panel Moderator*
   ii. Playmakers Repertory Company-Chapel Hill: *Draw the Circle* Transgender Community Panel 2017
   iii. Duke Alumni Magazine
   iv. Duke Stories
   v. DukeMed Alumni Magazine
   vi. NPR Podcast Only Human piece on caring for transgender youth and follow up piece 1 year later
   vii. ABC11, WRAL, WNCN News Coverage
   viii. News and Observer: Charlotte and Raleigh
   ix. Duke Chronicle and Daily Tarheel Article
   x. Huffington Post Article

Published Scientific Reviews for Mass Distribution

c. Lapinski J1, Covas T2, Perkins JM3, Russell K4, **Adkins D** 5, Coffigny MC6, Hull S7. Best Practices in Transgender Health: A Clinician's GuidePrim Care. 2018 Dec;45(4):687-703. doi: 10.1016/j.pop.2018.07.007. Epub 2018 Oct 5. PMID: 30401350 DOI: 10.1016/j.pop.2018.07.007

Position and Background Papers

Non-authored Publications

Other

Consultant Appointments:
North Carolina Newborn Screening Committee,
Human Rights Campaign Transgender Youth Advisory Board

Scholarly Societies: None

Professional Awards and Special Recognitions

ESPE Fellows Summer School, 2001
NIH Loan Repayment Program Recipient
Lawson Wilkins AstraZeneca Research Fellow,
2003-2004
HEI 2017 Leaders in LGBTQ Healthcare
Equality
Inside Out Durham Appreciation Award
Duke Health System Diversity and Inclusion
Award January 2018

Editorial Experience

Editorial Boards
Ad Hoc scientific review journals:
Hormone Research, Lancet, NC Medical journal, Journal of Pediatrics, Pediatrics, Transgender Health, International Journal of Pediatric Endocrinology

Organizations and Participation

American Academy of Pediatrics
Council on Information Technology
Member
Reviewer COCIT AAP Annual Meeting
presentations
Member Section on Endocrinology

NC Pediatric Society
The Endocrine Society
Member Education Committee
Writer Web Publication for Pediatrician
WPATH-International Transgender Society

External Support

Approximate Duration	PI	% Effort	Purpose	Amount Duration
Past	JAEB Center-Deanna Adkins	0.5%	Type 1 diabetes research	$ 5yr

Approximate Duration	PI	% Effort	Purpose	Amount Duration
Past	Josiah Trent Foundation Grant-Deanna Adkins	0.5%	Transgender and eating disorder research	$5000 3 yr
Pending: Submitted	NIH-Kate Whetten	0.1%	Analysis of TransgenderHealth in Adolescents in Rural Africa, India, and Thailand	Consultant
submitted	NIH Deanna Adkins	2%	Development of New Gender Dysphoria Measures in Youth	Co PI

Mentoring Activities

Faculty	
Fellows, Doctoral, Post docs	**Nancie MacIver-fellow**
	Dorothee Newbern-fellow
	Krystal Irizarry-fellow
	Kelly Mason-fellow
	Laura Page-fellow
	Elizabeth Sandberg fellow UNC
	Dane Whicker-psychology post doc
Residents	**Yung-Ping Chin-mentor**
	Kristen Moryan-mentor
	Jessica Lapinski-mentor
	Kathryn Blew-research mentor
	Matthew Pizzuto, Breana Scott-Coach
Medical students	
Undergraduates	**Erik Severeide-Duke University** **Lindsay Carey-Dickinson College** **Jeremy Gottleib-Duke University** **Jay Zussman-Duke University**

High School Students	**Aeryn Colton-Intern Apex High School**
Graduate Student MBS program	**Nicholas Hastings**

Educational Activities:

Didactic classes

Undergraduate

1. Duke School of Nursing Course on Sexual and Gender Health guest lecturer: fall 2017, spring 2018, fall 2018, spring 2019, fall 2019, spring 2020
2. Duke School of Nursing Lecture on Transgender Care-recorded for reuse
3. Duke Physician Assistant Program guest lecturer; fall 2017, spring 2018
4. Duke Global Health Course guest lecturer fall 2016
5. Duke Neuroscience course on Gender and Sex guest lecturer fall 2016
6. Duke Ethics Interest group guest lecturer fall 2018
7. Duke Med Pediatrics Interest Group lecture fall 2018
8. Duke EMS group lecture fall 2018

UME:

1. Cultural Determinants of Health and Health Disparities Course: Facilitator and developed one class; 2017-18 and 2018-19 and 2019-2020; Steering Committee member for course development
2. UNC School of Medicine Lecturer for LGBTQ Health series 2016-recorded for reuse

Graduate School Courses:

1. Master of Biomedical Science Program-guest lecturer on Transgender Medicine fall 2016
2. School of Nursing Graduate Intensive Course Lecturer on Sexual and Gender Health; fall 2017, spring 2018, fall 2018, spring 2019
3. Fuqua School of Business Med Pride Panel and presentation fall 2017
4. Master of Biomedical Science Program Mentor 2019-2020

DUHS Employee Education

1. Annual Duke Human Resources Lunch and Learn on Gender Diversity 2016, 2017, 2018
2. Over 40 lectures across the institution on gender including CHC front desk/nursing staff, hospital wide social work/case management, radiology, PDC clinic front desk/nursing staff
3. Steering Committee for Sexual and Gender Identity Epic Module development and Educational module development
4. DCRI Pride invited speaker

GME:

1. Adult Endocrinology Fellows every year on growth and/or gender
2. Pediatric Residency Noon conferences on Growth and Gender-yearly
3. Reproductive Endocrinology Noon Conferences every 2 to 3 years
4. Psychiatry Noon Conferences periodically
5. Family Practice Noon Conference periodically
6. Pediatric Endocrine Fellow lectures twice a year or more
7. Pediatrics grand rounds: Vitamin D, Type 2 diabetes, Pubertal Development, Gender Diverse Youth

Development of Courses Educational programs

1. Pituitary Day October 2019-full day multispecialty seminar for caregivers of patients with hypopituitarism-Organized and developed the curriculum
2. Development of Gender Diversity Education for Health System education
3. Steering Committee for Cultural Determinants and Health Disparities Course
4. Helping to Adapt Resident Coaching Program to Pediatric Fellowships
5. Developed half day course for Duke Student Health on Care of the Gender Diverse Student with multiple disciplines included
6. Course Director: American Diabetes Association Camp Carolina Trails rotation for fellows and residents: 2009, 2011 – 2019
7. Medical Education for Camp Morris 2019

Development of Assessment Tools and Methods

1. Currently under development with Population Health Sciences-method to assess gender dysphoria; received Brief High Intensity Production (BHIP) grant for this collaboration; NIH grant Submitted March 2020; I am writing the portion of grant giving background on the population and the need for better measures.
2. Collaborating with the Duke Chaplain group to develop a spiritual assessment tool for gender diverse children and their families. completed

Educational leadership roles

1. Fellowship Program Director Pediatric Endocrinology 2008-2019
2. Course Director: American Diabetes Association Camp Carolina Trails rotation for fellows and residents: 2009, 2011 to present

Educational Research

1. -Working with national group on SPIN to analyze new EPA's and Milestones Efficacy in Fellow Education
2. -Working with Boston Children's on a Journal Club Curriculum for Pediatric Endocrinology fellows with pre and post assessments
3. -Working with coaching program for residents modified and applied in pediatric fellows

Invited Lectures and Presentations

1. Trent Center for Ethics Lecture May 2017: Transgender Medicine: a Wealth of Ethical Issues
2. Visiting Professorship: ECU Brody School of Medicine Invited Professor October 2017
3. College of Diplomates-pediatric dentistry society-Webinar on transgender care 4/1/2020

International Meetings

1. WPATH Amsterdam 2016
2. WPATH Buenos Aires 2018

National Scientific Meetings (invited)

1. Transgender SIG Developing a Patient Registry
2. Patient Advocacy for Transgender Youth Philadelphia 2018

Instructional Courses, Workshops, Symposiums (National)

1. Time to Thrive Arkansas Children's Hospital April 2018
2. National Transgender Health Summit UCSF Jan 2018: Providers as Advocates Workshop
3. Magic Foundation-Chicago, IL Annual Speaker on Precocious Puberty at National Conference 2016, 2017, 2019
4. The Seminar-Fort Lauderdale, FL Invited Speaker on Care of Transgender Youth 2017

Posters (National and International meetings)

1. WPATH 2018 Meeting Buenos Aires: Building a Multidisciplinary Gender Care Team at an Academic Center; Lapinski, J, Adkins DW
2. Lapinski J, Dooley R, Russell K, Whicker D, Gray, B, Adkins DW; Title: Developing a Pediatric Gender Care Clinic at a Major Medical Setting in the South; Workshop Philadelphia Trans Wellness Conference 2018
3. S.A. Johnson, D.W. Adkins, Case Report: The Co-diagnosis of Hypopituitarism with Klinefelter in a patient with short stature; Pediatric Academic Society Meeting 2018
4. Rohit Tejwani, Deanna Adkins, Brian J. Young, Muhammad H. Alkazemi,Steven Wolf3, John S. Wiener, J. Todd Purves, and Jonathan C. Routh; Contemporary Demographic and Treatment Patterns for Newborns Diagnosed with Disorders of Sex Development; Poster presentation at AUA meeting 2016
5. Deanna W. Adkins, MD, Kristen Russell, LCSW, Dane Whicker, PhD, Nancy Zucker, Ph. D: Departments of Pediatrics and Psychiatry, Duke University Medical Center; Evaluation of Eating Disturbance and Body Image Disturbance in the Trans Youth Population; WPATH International Scientific Meeting June 2016; Amsterdam, The Netherlands

Regional Presentations and Posters

a. North Carolina Pediatric Society: Pubertal Development Presentation– Pinehurst, NC 2017

b. North Carolina Psychiatric Association: Caring for Transgender Children Presentation and Workshop on key concepts in care of transgender child-Asheville, NC 2017
c. ECU Campus Health Presentation Caring for Transgender Patients 2018
d. Radiology Technology Symposium Presentation on Caring for Transgender Patients 2018
e. Duke CME in Wake County-Update on Type 2 Diabetes Treatments Feb 2019
f. Hilton Head Pediatric CME Course-Update on Type 2 Diabetes, Short Stature, and Caring for Transgender Patients June 2019 as well at 2020 discussion lipid disorders and type 2 diabetes

Local Presentations

1. Grand Rounds: 2016 to present-Duke Pediatrics twice, Moses Cones Pediatrics, ECU Ob/Gyn, Duke Ob/Gyn, Duke Psychiatry, Duke Urology, Duke Adult Endocrinology
2. Prior to 2016-Rex Grand rounds: Salt and Water balance, New treatments in Pediatric Diabetes, Adrenal Insufficiency, Duke peds grand rounds Bone Health, Type 2 Diabetes Mellitus
3. Duke Women's Weekend 2018 hosted by Duke Alumni Association
4. NCCAN Social Work Training 2016
5. NAPNAP lecture 2016
6. Profiles in Sexuality Research Presentation at Duke Center for Sexual and Gender Diversity 2017
7. Duke LGBTQ Alumni Weekend Presentation 2017
8. UNC Chapel Hill Campus Health Presentation 2018
9. Duke Student Health Presentation 2017 and 2018

Clinical Activity

1. Duke Consultative Services of Raleigh-2.5 days per week in endocrinology and diabetes
2. Duke Child and Adolescent Gender Care Clinic 1 day per week at the CHC
3. Inpatient Consult Service Pediatric Endocrinology 1 week per month

Clinical Projects:

1. Epic module key stakeholder and steering committee on Sexual Orientation and Gender Identity Module 2018
2. Incorporation of Glooko system to Duke adult and pediatric diabetes clinics to download diabetes data from insulin pumps and continuous glucose sensors for analysis
3. Helped develop the pediatric endocrinology dashboard for Epic/Maestro
4. Helped develop a community advisory board for LGBTQ care at Duke and continue to help run this group which meets quarterly
5. Collaborating with the Duke Chaplain group to develop a spiritual assessment tool for gender diverse children and their families.

Participation in academic and administrative activities of the University and Medical Center

Administrative and Leadership Positions

1. Medical Director Duke Children's and WakeMed Consultative Services of Raleigh
2. Director Duke Child and Adolescent Gender Care Clinic
3. Pediatric Endocrinology Fellowship Program Director 2008-2019

Committees

1. Graduate Medical Education Committee-2008-2019
2. School of Medicine Sexual and Gender Diversity Council
3. Pediatrics Clinical Practice Committee
4. Pediatric Diversity and Inclusion Committee
5. Pediatrics Advocacy Committee

Community

1. Test proctor local schools
2. Guest lecture GSA multiple years
3. Diabetes Camp
4. 100 Women who give a hoot
5. Collaborated to bring "Becoming Johanna" to Duke along with multiple screenings with the director and the lead actor
6. Teddy Bear Hospital volunteer

Signature of Chair Date

Personal Information

Faculty Member's Preferred Familiar Name:	Deanna
Home Address	1801 Charlion Downs Ln
	Apex, NC 27502
Telephone Number:	919-363-5706
Email Address:	Deanna.adkins@duke.edu

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF ARKANSAS

DYLAN BRANDT, et al.,		
	Plaintiffs,	Case No.: 4:21-CV-00450-JM-01
	v.	
LESLIE RUTLEDGE, et al.,		
	Defendants.	

SUPPLEMENTAL DECLARATION OF ARMAND H. MATHENY ANTOMMARIA, MD, PhD, FAAP, HEC-C IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

I, ARMAND H. MATHENY ANTOMMARIA, MD, PhD, FAAP, HEC-C, declare as follows:

1. I have personal knowledge of the matters stated in this declaration.

2. As set forth in greater detail in my previously submitted declaration dated June 11, 2021, my background and credentials include the following: I am the Director of the Ethics Center, the Lee Ault Carter Chair of Pediatric Ethics, and an Attending Physician in the Division of Hospital Medicine at Cincinnati Children's Hospital Medical Center. I am also a Professor in the Departments of Pediatrics and Surgery at the University of Cincinnati College of Medicine. My CV is attached as Exhibit A.

3. I reviewed the Defendants' Combined Brief in Opposition to Plaintiffs' Motion for Preliminary Injunction and Reply in Support of Defendants' Motion to Dismiss ("Opposition Brief"), and the declarations of Drs. Stephen Levine, Paul Hruz, Mark Regnerus, and Paul Lappert. Here, I respond to some of the central points in the brief and declarations. I do not

specifically address each and every point made and study or article cited, but instead explain the problems with the major conclusions the Defendants and their experts draw and provide data showing why such conclusions are in error. I reserve the right to supplement my opinions if necessary as the case proceeds.

4. While the Defendants assert that the Plaintiffs' filings leave a false impression, Defendants' brief and their expert witnesses' declarations consistently mischaracterize the current treatment paradigm for adolescents with gender dysphoria as experimental, mislead the court by suggesting that parts of the treatment paradigm not being approved by the US Food & Drug Administration (FDA) is intrinsically problematic, and suggesting that the treatment paradigm is politically biased and not evidence-based. They, by way of just one example, state, "When used as a gender transition procedure to indefinitely halt the normal progression of puberty in a child, puberty blockers are *not* FDA approved. That is, the use of such drugs as gender-transition procedure on children is experimental and unsupported by data." Opposition Brief, at 9. These claims are misleading and false. They also erroneously claim that the current treatment paradigm is inconsistent with the standards of informed consent.

The prohibited treatments are not experimental

5. The Defendants use the term "experimental" in the colloquial sense rather than in the technical sense of the subject of research. These two uses should not be conflated. The Belmont report states, "The fact that a procedure is 'experimental,' in the sense of new, untested or different, does not automatically place it in the category of research (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. *The Belmont Report:*

Ethical Principles and Guidelines for the Protection of Human Subjects of Research. [Bethesda, MD]: The Commission; 1978)."

6. Regardless of which meaning Defendants intend, neither the colloquial nor the technical use of the term "experimental" applies to the current treatment paradigm. It is not new or untested; the Endocrine Society's recommendation regarding pubertal suppression, for example, is supported, in part, by a clinical trial published 10 years ago. See Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3869-3903 and de Vries AL, Steensma TD, Doreleijers TA, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study. *J Sex Med*. 2011;8(8):2276-2283. The current treatment paradigm is also not experimental in the technical sense. See National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research*. [Bethesda, MD]: The Commission; 1978. The interventions are designed to promote the well-being of individual patients. They are not administered to contribute to generalized knowledge or as part of a formal research protocol.

<u>The use of drugs for uses other than indications for which they were approved by the FDA does not mean the use is experimental, untested, or unsafe</u>

7. For the FDA to approve a drug, the company must show that it is safe and effective for its intended use. (Safe does not mean that the drug is without side effects, but rather that the benefits outweigh the potential risks.) Once a drug is approved, healthcare providers may prescribe the drug for other uses that they believe are medically appropriate. They may, for example, prescribe it for another disease or medical condition. This is called off-label use. See

U.S. Food & Drug Administration. Understanding unapproved use of approved drugs "off label" February 5, 2018. Available at https://www.fda.gov/patients/learn-about-expanded-access-and-other-treatment-options/understanding-unapproved-use-approved-drugs-label. Accessed July 12, 2021.

8. Off-label use does not mean that the use is experimental, untested, or unsafe. The American Academy of Pediatrics Committee on Drugs states, "It is important to note that the term 'off-label' does not imply an improper, illegal, contraindicated, or investigational use" and "[t]he administration of an approved drug for a use that is not approved by the FDA is not considered research and does not warrant special consent or review if it is deemed to be in the individual patient's best interest (Frattarelli DA, Gailinkin JL, Green TP et al. Off-label use of drugs in children. *Pediatrics* 2014;133:565)." The off-label use may be well-supported by evidence. For example, the off-label use of tricyclic antidepressants (amitriptyline and nortriptyline) and calcium channel alpha(2)-delta ligands (gabapentin and pregabalin) are supported by randomized controlled trials. See Dworkin RH, O'Connor AB, Audette J, et al. Recommendations for the pharmacological management of neuropathic pain: An overview and literature update. *Mayo Clin Proc*. 2010;85(3 Suppl):S3-14. Companies nevertheless may choose not to seek FDA approval for additional indications for a drug because it is not cost effective. Companies are, however, generally prohibited from advertising off-label uses. See Wittich CM, Burkle CM, Lanier WL. Ten common questions (and their answers) about off-label drug use. *Mayo Clin Proc.* 2012;87(10):982-990.

9. Off-label use of drugs is common in many areas of medicine, including pediatrics. For example, morphine, an opioid that is indicated for the management of pain that is not adequately treated by non-narcotic pain medication, although widely used, is not FDA approved

for individuals under 18 years of age. See Morphine Sulfate injection label. November 2011. Available at https://www.accessdata.fda.gov/drugsatfda_docs/label/2011/202515s000lbl.pdf Accessed July 12, 2021. A recent study of children's hospitals found that in 28.1% of encounters, at least one off-label drug was prescribed. The study only included 76 preselected medications. It also only included one type of off-label use: use in patients younger than the lower limit of the FDA-approved age range. If the investigators had included more medications and other types of off-label use, e.g., use of these drugs for unapproved indications or unapproved dosages, the actual percentage of off-label use would be even higher. See Yackey K, Stukus K, Cohen D, Kline D, Zhao S, Stanley R. Off-label medication prescribing patterns in pediatrics: An update. *Hosp Pediatr*. 2019;9(3):186-193. The rate of off-label use may be significantly higher in certain age groups, categories of drugs, and clinical settings. For example, a recent study of patients in pediatric cardiac wards and intensive care units found that 75% of treatments were off-label. See Back J, Wahlander H, Hanseus K, Bergman G, Naumburg E. Evidence of support used for drug treatments in pediatric cardiology. *Health Sci Rep*. 2021;4(2):e288.

The Endocrine Society Guideline on the banned care is based on accepted scientific methodology

10. The Defendants' brief asserts that while clinical practice guidelines have increasingly become a familiar part of clinical practice, "[u]nlike standards of care, which should be authoritative, unbiased consensus positions designed to produce optimal outcomes, practice guidelines are suggestions or recommendations to improve care that, depending on their sponsor, may be biased." Opposition Brief, at 12. It goes on to say that "because guidelines represent a political, consensus-seeking process (i.e., voting)—a process with no known error rate—as

opposed to an evidence-seeking scientific research process, they have never been accepted by the scientific community as establishing what practices are or are not experimental. (See Hruz Decl. at pp. 46-48; Levine Decl. ¶ 52.) (12-13)." *Id.*

11. As an initial matter, the Defendants' brief and the expert declarations upon which it relies confuse standard of care and clinical practice guidelines. While healthcare providers may use the term "standard of care" in a colloquial manner, it is a technical legal term that refers to "what a minimally competent physician in the same field would do in the same situation, with the same resources (Moffett P, Moore G. The standard of care: Legal history and definitions: The bad and good news. *West J Emerg Med.* 2011;12(1):111.)" It is a decision regarding the care of a particular patient in a particular context. Clinical practice guidelines in contrast are intended to assist clinicians and patients in medical decision-making and improve the quality of care. See Murad MH. Clinical practice guidelines: A primer on development and dissemination. *Mayo Clin Proc.* 2017;92(3):423-433. Guidelines are not intended to dictate the treatment of a particular patient. See Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2017;102(11):3869-3903.

12. More importantly, Defendants and their experts incorrectly suggest that the Endocrine Society's clinical practice guidelines are developed by a political process as opposed to a scientific method. In developing clinical practice guidelines, the Endocrine Society follows the Grades of Recommendation Assessment, Development and Evaluation (GRADE) methodology. GRADE provides systematic and explicit methods of grading the quality of evidence and the strength of recommendations.[1] See Atkins D, Best D, Briss PA, et al. Grading

[1] Woolf et al.'s analysis of the potential benefits, limitations, and harms of clinical guidelines, Defendants Exhibit 18, was published in 1999 before GRADE.

quality of evidence and strength of recommendations. *BMJ*. 2004;328(7454):1490. Research has shown that the methodology is reliable—different individuals using the method reach similar conclusions about the quality of evidence. See Mustafa RA, Santesso N, Brozek J, et al. The GRADE approach is reproducible in assessing the quality of evidence of quantitative evidence syntheses. *J Clin Epidemiol*. 2013;66(7):736-742. It has been adopted by more than 100 organizations and is considered the gold standard. See Murad MH. Clinical practice guidelines: A primer on development and dissemination. *Mayo Clin Proc*. 2017;92(3):423-433. The Endocrine Society funds the development of its guidelines; the guideline task forces receive no commercial funding. The Society has rules for disclosing and managing potential conflicts of interest. Endocrine Society. Methodology. 2021. Available at https://www.endocrine.org/clinical-practice-guidelines/methodology. Accessed July 12, 2021. This is not, therefore, "a political, consensus-seeking process (i.e., voting)."

The banned treatments are supported by medical evidence

13. The Defendants continue to falsely assert that there is no evidence supporting the current treatment paradigm. They, for example, state, "But contrary to Plaintiffs' claim, there is no evidence whatsoever that such procedures are beneficial." Opposition Brief, at 2. The Endocrine Society Guideline identifies and evaluates the relevant evidence, including longitudinal clinical trials. See Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3869-3903. While the evidence has limitations—as is often the case in medicine, and particularly in pediatrics—it is erroneous to state that there is no evidence.

14. To the extent that the Defendants' expert witnesses address individual studies, their criticisms are largely irrelevant. Dr. Levine and Professor Regnerus, for example, are critical of Bränström R, Pachankis JE. Reduction in mental health treatment utilization among transgender individuals after gender-affirming surgeries: A total population study. *Am J Psychiatry*. 2020;177(8):727-734. While not conceding any of these criticisms, they are beside the point as the Endocrine Society Guideline does not cite this article and the Guideline's recommendations are not dependent upon it. Dr. Levine and Professor Regnerus do not specifically analyze the studies on which the Society's recommendations are based.

15. The Defendants suggest that mental health treatment for gender dysphoria is sufficient, at least until individuals turn 18 years old. This recommendation fails to acknowledge the substantial dysphoria that may remain, even with mental health treatment, and which motivates individuals to seek other medical treatment. *See, e.g.* Levine Decl., ¶ 81 (characterizing the pain of gender dysphoria as "relatively minor"). It also does not acknowledge the development of secondary sexual characteristics inconsistent with the individual's gender identity that may make treatment in adulthood more difficult. The Defendants' experts also fail to support their recommended alternative treatment regime with the same level of evidence to which they hold others. They, for example, provide no randomized controlled trials comparing "watchful waiting" and psychotherapy with what they refer to as "affirmation."

The banned treatments follow accepted principles of informed consent

16. The Defendants suggest, based on solely anecdotal evidence, that treatment is being performed without adequate informed consent. Dr. Levine, for example, intimates that

health care providers "[w]ithhold[]accurate information from patients or parents about alternative approaches and risks and benefits of transition, or misrepresent[]the current state of research in this field." Levine Decl, ¶ 8(l). The Endocrine Society Guideline in fact emphasizes the importance of informed consent and is clear about alternatives, potential risks, and the available evidence.

17. The Guideline emphasizes the importance of informed consent. The criteria for sex hormone treatment for adolescents, for example, include the following:

> 1. A qualified MHP [mental health provider] has confirmed:
> …
> • the adolescent has sufficient mental capacity (which most adolescents have by age 16 years) to estimate the consequences of this (partly) irreversible treatment, weigh the benefits and risks, and give informed consent to this (partly) irreversible treatment.
> 2. And the adolescent:
> • has been informed of the (irreversible) effects and side effects of treatment (including potential loss of fertility and options to preserve fertility),
> • has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on the applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in support the adolescent through the treatment process (Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. J Clin Endocrinol Metab. 2017;102(11):3878).

18. It acknowledges alternatives. It, for example, states, "In some forms of GD/gender incongruence, psychological intervention may be useful and sufficient (Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3880.)"

19. The Guideline discusses the risks of treatment including the potential effects on fertility. It, for example, states, "Treating early pubertal youth with GnRH analogs will temporarily impair spermatogenesis and oocyte maturation. Given that an increasing number of

transgender youth want to preserve fertility potential, delaying or temporarily discontinuing GnRH analogs to promote gamete maturation is an option (Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3879)."

20. Finally the Guideline acknowledges the current state of research in the field. It, for example, states, "We suggest that adolescents who meet diagnostic criteria for GD/gender incongruence, fulfill criteria for treatment, and are requesting treatment should initially undergo treatment to suppress pubertal development. (2 | ++OO) (Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3871)." "We suggest" is a weak, compared to a strong, recommendation and "++OO" designates low, compared to very low, moderate, and high quality evidence. As explained in my opening declaration (par. 20), these descriptions of the evidence are relative, and "low quality" evidence may be sufficient to make a recommendation.

21. The Defendants do not provide empirical evidence of widespread inadequacy of informed consent. Even if inadequate informed consent were frequent, there are mechanisms other than banning the procedures to address this hypothetical problem. Patients and parents could, for example, sue providers for inadequate informed consent and state medical boards could discipline providers for not obtaining adequate informed consent.

22. The Defendants and their expert witnesses also emphasize minors' inability to provide informed consent and to appreciate the long-term consequences of medical decisions. But that is not unique to gender-affirming medical care, and such care, like most other medical care, is only provided to minors with parental consent.

23. The Endocrine Society Guideline acknowledges the role of parents in the informed consent process. It, for example, states, "Because young adolescents may not feel qualified to make decision about fertility and many not fully understand the potential effects of hormonal interventions, consent and protocol education should include parents, the referring MHP(s), and other members of the adolescent support group (Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3879)." The Guideline also acknowledges the role of parents, other caretakers, or guardian in providing informed consent for adolescents who have not reached the age of legal medical consent.

24. Dr. Levine asks rhetorically, "Do parents have a right to determine their child's future sterility, for instance?" Levine Decl., ¶ 8(l). Yes, patients and parents may make medical decisions that cause infertility. This is not unique to the banned treatments. Parents of children with some types of differences of sex development or intersex conditions may choose to have their children's gonads removed due to the risk of malignancy. See Abaci A, Catli G, Berberoglu M. Gonadal malignancy risk and prophylactic gonadectomy in disorders of sexual development. *J Pediatr Endocrinol Metab*. 2015;28(9-10):1019-1027. Parents of children with some types of malignancies may also choose treatments which may damage their children's gonads and result in infertility. See Delessard M, Saulnier J, Rives A, Dumont L, Rondamino C, Rives N. Exposure to chemotherapy during childhood or adulthood and consequences on spermatogenesis and male fertility. *Int J Mol Sci*. 2020;21(4) and Blumenfeld Z. Chemotherapy and fertility. *Best Pract Res Clin Obstet Gynaecol*. 2012;26(3):379-390. Professor Regnerus' reference to judicial review does not apply to these types of treatments; it applies to involuntary sterilization, e.g., performing a hysterectomy on an adolescent with an intellectual disability in

order to prevent pregnancy. See Diekema DS. Involuntary sterilization of persons with mental retardation: An ethical analysis. *Ment Retard Dev Disabil Res Rev*. 2003;9(1):21-26.

25. Dr. Levine's comparison of the treatment of adolescents with gender dysphoria to the Tuskegee study and the Nazi and Imperial Japanese wartime experimental research is offensive. These activities were clearly research rather than practice; they sought to generate knowledge rather than to improve the subjects' health. The Tuskegee study was a study of untreated syphilis in Black men from whom effective treatment was withheld. Nazi research included studies of death by freezing on concentration camp prisoners and Japanese research included studies of gas gangrene on prisoners of war. Such experiments were unethical for multiple reasons including the lack of free and adequately informed consent, the disproportionate risks, and the inequitable selection of participants. See Freedman B. Research, unethical. In: Reich WT, Editor in Chief. *Encyclopedia of Bioethics* Vol 4. Rev Ed. New York: Macmillan Library Reference USA;1995:2258-2261.

26. The Defendants and their experts consistently falsely and erroneously characterize the current treatment paradigm for the care of adolescents with gender dysphoria to justify state prohibition of that care. Decisions to provide and receive gender-affirming care are nonetheless evidence-based and consistent with medical ethics and should remain in the purview of patients, their parents and guardians, and their health care providers.

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

Executed on July 15, 2021

ARMAND H. MATHENY ANTOMMARIA, MD, PhD