UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

DYLAN BRANDT, by and through his mother Joanna Brandt, et al., Plaintiffs, v. LESLIE RUTLEDGE, in her official capacity as Arkansas Attorney General, et al., Defendants.	No. 4:21-CV-00450-JM

BRIEF OF ALABAMA, ALASKA, ARIZONA, GEORGIA, IDAHO, INDIANA, KANSAS, KENTUCKY, LOUISIANA, MISSISSIPPI, MISSOURI, MONTANA, NEBRASKA, SOUTH CAROLINA, SOUTH DAKOTA, TENNESSEE, AND TEXAS AS *AMICI CURIAE* IN SUPPORT OF DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION FOR A PRELIMINARY INJUNCTION

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Amici curiae are the States of Alabama, Alaska, Arizona, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Montana, Nebraska, South Carolina, South Dakota, Tennessee, and Texas. Like Arkansas, amici are concerned about the surge in recent years of children suffering from gender dysphoria and other forms of gender-related psychological distress. And like Arkansas—and like Plaintiffs—amici are concerned because these vulnerable children are suffering greatly and need help.

The question is how to help them. According to Plaintiffs and their amici, the answer is simple and the science settled: provide children puberty blockers, then cross-sex hormones, then surgical interventions such as "chest reconstruction surgery" (a double mastectomy to "masculinize"—their word—a girl's chest). *See* Br. of Am. Acad. of Pediatrics, Doc. 30 at 19 n.44 ("AAP Br.")[1]. Anything less, they threaten, "can result in debilitating anxiety and depression, self-harm, and suicide." *Id.* at 10.

The problem with this course of treatment is the evidence doesn't support it. That may be an odd thing for a group of States to say in response to a group of medical professionals, but it's true. Spend just a little time with the scientific literature in this field and a few things become abundantly clear: the science in this area is largely unsettled; nearly everyone agrees that far more research is needed; and the currently popular approach to care in the United States is not supported by well-researched, evidence-based studies. What is known, however, is that most cases of gender dysphoria in children resolve naturally with time, and it's impossible to know ahead of time whose dysphoria will persist into adulthood and whose won't. Yet the evidence also shows that nearly all children whose gender dysphoria is treated with puberty blockers to "buy time" will proceed to

[1] References to briefs are to the ECF-stamped page number.

take cross-sex hormones and seek other medical interventions with irreversible, lifelong consequences—complications such as infertility, loss of sexual function, increased risk of heart attacks and strokes, bone-density problems, risk of altered brain development, social risks from delayed puberty, and mental health concerns. Sadly, but for the "gender-affirming" "care" they received, AAP Br., Doc. 30 at 10, most of these children would neither suffer from gender dysphoria nor from lifelong medical harm as adults.

And for what? What are the outcomes for children who undergo Plaintiffs' preferred treatment? Or for the rising tide of adolescent girls who seem to have a new form of sudden-onset gender-related distress? Incredibly, no one really knows. The evidence is distressingly thin. In fact, the lack of evidence in this field is why the Centers for Medicare & Medicaid Services rejected a nationwide coverage mandate for adult gender transition surgeries during the Obama Administration. It is also why hospitals in the United Kingdom, Finland, and Sweden have recently altered their protocols to reduce or eliminate the use of hormone and surgical treatments for minors seeking gender transition. What evidence does exist, though, does not show that long-term mental health outcomes are much improved or rates of suicide much reduced by hormonal or surgical intervention. Yet children are promised relief and asked to "consent" to life-altering, irreversible treatment—and to do so when they are in pain, when they cannot weigh long-term risks the way adults do, when they are not even old enough to vote.

So it is no wonder that States have been forced to step in to protect kids from experimental treatments. The medical establishment has abandoned the field to the political zeitgeist, which labels dissenting opinions as "animus" (or worse) and closes its ears to the tragic and growing chorus of detransitioners who feel betrayed by the adults who should have been caring for them.

State legislatures have historically played this role, regulating in the face of medical uncertainty. The amici States offer this brief in support of Arkansas's right to do so here.

ARGUMENT

I. States Have Broad Authority To Regulate In Areas Fraught With Medical And Scientific Uncertainties, Particularly To Protect Children.

State and federal governments have "wide discretion to pass legislation in areas where there is medical and scientific uncertainty." *Gonzales v. Carhart*, 550 U.S. 124, 163 (2007). Thus, States routinely regulate the medical profession, and routinely update their regulations as new trends arise and new evidence becomes available. Not too long ago, for instance, States responded to an epidemic caused largely by pharmaceutical companies and medical professionals. Dismissing as "opiodphobic" any concern that "raising pain treatment to a 'patients' rights' issue could lead to overreliance on opioids," these experts created new pain standards and assured doctors that prescribing more opioids was largely risk free. *See* David W. Baker, *The Joint Commission's Pain Standards: Origins and Evolution* 4 (May 5, 2017) (footnotes omitted), *available at* https://perma.cc/RZ42-YNRC. "[N]o large national studies were [then] conducted to examine whether the standards improved pain assessment or control." *Id.* As we know now, the results were—are—nothing short of tragic.[2] In response, many States enacted laws restricting the prescribing or dispensing of opioids in some manner.[3]

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[2] *See generally* U.S. Health & Human Servs., *What is the U.S. Opioid Epidemic?*, https://www.hhs.gov/opioids/about-the-epidemic/index.html.

[3] *See, e.g.*, Alaska Stat. Ann. § 08.64.363; Ariz. Rev. Stat. Ann. § 32-3248; Colo. Rev. Stat. Ann. § 12-30-109; Conn. Gen. Stat. Ann. § 20-14o; Haw. Rev. Stat. Ann. § 329-38; Ind. Code Ann. § 25-1-9.7-2; La. Stat. Ann. § 40:978; Mass. Gen. Laws Ann. ch. 94C, § 19D; Me. Rev. Stat. tit. 32, § 18308; Mo. Ann. Stat. § 195.080; N.C. Gen. Stat. Ann. § 90-106; N.J. Stat. Ann. § 45:1-46.1; Okla. Stat. Ann. tit. 63, § 2-309I; 35 Pa. Stat. Ann. § 873.3; S.C. Code Ann. § 44-53-360; Utah Code Ann. § 58-37-6; W. Va. Code Ann. § 16-54-4.

They could do so because, as the Supreme Court has explained, "the State has a significant role to play in regulating the medical profession." *Gonzalez*, 550 U.S. at 157; *see Washington v. Glucksberg*, 521 U.S. 702, 731 (1997) (The government "has an interest in protecting the integrity and ethics of the medical profession."); *Lambert v. Yellowley*, 272 U.S. 581, 596 (1926) ("[T]here is no right to practice medicine which is not subordinate to the police power of the states."); *Watson v. Maryland*, 218 U.S. 173, 176 (1910) ("There is perhaps no profession more properly open to such regulation than that which embraces the practitioners of medicine."); *Abigail All. For Better Access to Development Drugs v. von Eschenbach*, 495 F.3d 695, 703-05 (D.C. Cir. 2007) (en banc) (examining history of medical and drug regulation in the United States, which began when "the Colony of Virginia's legislature passed an act in 1736 that addressed the dispensing of more drugs than was 'necessary or useful' because that practice had become 'dangerous and intolerable'" (citations omitted)).

The legislature's role is particularly important if the science is unsettled or varying factions disagree about the best course of treatment. "In fact, it is precisely where such disagreement exists that legislatures have been afforded the widest latitude in drafting such statutes." *Kansas v. Hendricks*, 521 U.S. 346, 360 n.3 (1997). As the en banc D.C. Circuit explained in rejecting a challenge by terminally ill patients to the FDA's policy of limiting access to investigational drugs, "[o]ur Nation's history and traditions have consistently demonstrated that the democratic branches are better suited to decide the proper balance between the uncertain risks and benefits of medical technology, and are entitled to deference in doing so." *Abigail All.*, 495 F.3d at 713. As a result, the court said, the plaintiffs' "arguments about morality, quality of life, and acceptable levels of medical risks are certainly ones that can be aired in the democratic branches," but it is those branches

that ultimately must decide the issue "without injecting the courts into unknown questions of science and medicine." *Id.*; *see also Cameron v. Tomes*, 990 F.2d 14, 20 (1st Cir. 1993) ("Nothing in the Constitution mechanically gives controlling weight to one set of professional judgments."). The Supreme Court has expressed similar sentiments. *See Gonzales*, 550 U.S. at 163 (collecting cases for the proposition that "state and federal legislatures [are given] wide discretion to pass legislation in areas where there is medical and scientific uncertainty"); *id.* at 164 ("Medical uncertainty does not foreclose the exercise of legislative power in the abortion context any more than it does in other contexts."); *Marshall v. United States*, 414 U.S. 417, 427 (1974) ("When Congress undertakes to act in areas fraught with medical and scientific uncertainties, legislative options must be especially broad."); *cf. City of Akron v. Akron Ctr. for Reprod. Health, Inc.*, 462 U.S. 416, 456-56 & n.4 (1983) (O'Connor, J., dissenting) (noting that "[i]rrespective of the difficulty of the task, legislatures, with their superior fact-finding capabilities, are certainly better able to make the necessary [scientific and policy] judgments than are Courts"), *overruled by Planned Parenthood of Se. Pennsylvania v. Casey*, 505 U.S. 833 (1992).

The State's power is likely at its zenith when it comes to protecting children. In the Supreme Court's words, that is due to "the peculiar vulnerability of children." *Bellotti v. Baird*, 443 U.S. 622, 634 (1979); *see also Ginsberg v. New York*, 390 U.S. 629, 640 (1968) ("The State also has an independent interest in the well-being of its youth."). And as especially relevant here, the Court has explained that children's "inability to make critical decisions in an informed, mature manner" makes legislation to protect them particularly appropriate. *Bellotti*, 443 U.S. at 634.

Many of Plaintiffs' amici once echoed this truth, noting in another context that minors are "less capable of mature judgment than adults" and "more vulnerable to negative external influ-

ences." *See, e.g.*, Br. of Am. Psych. Ass'n, Am. Psychiatric Ass'n, and Nat'l Ass'n of Social Workers at 7, 15, *Miller v. Alabama*, 567 U.S. 460 (2012) (No. 10-9646) ("APA Brief"); Br. of Am. Med. Ass'n and Am. Acad. of Child and Adol. Psychiatry at 2-4, 5-7, 36-37, *Miller v. Alabama*, 567 U.S. 460 (2012) (No. 10-9646) ("AMA Brief"). "Sound judgment requires both cognitive and psychosocial skills," these amici explained, APA Br. at 14, but minors tend to lack these skills because "the brain continues to develop throughout adolescence and young adulthood in precisely the areas and systems that are regarded as most involved in impulse control, planning, and self regulation," *id.* at 10 (citations omitted). As a result, adolescents generally "use a risk-reward calculus that places relatively less weight on risk, in relation to reward, than that used by adults." *Id.* at 10 (citation omitted). They also "overvalue short-term benefits and rewards, and are less capable of controlling their impulses[,] making them susceptible to acting in a reflexive rather than a planned voluntary manner." AMA Br. at 2-3. And, of course, "adolescents have less life experience on which to draw, making it less likely that they will fully apprehend the potential negative consequences of their actions," particularly since they "are less capable than adults to envision and plan for the future, a capacity still developing during adolescence." APA Br. at 12 (citations omitted). "In short," these amici concluded, "the average adolescent cannot be expected to act with the same control or foresight as a mature adult." AMA Br. at 2-3,

As explained next, given these unique vulnerabilities of children, their inability to properly weigh long-term risk, and the lack of evidence supporting Plaintiffs' transition procedures, Arkansas was well within its right to prohibit such experimentation on children.

II. The Experimental Gender Transition Procedures Prohibited By Arkansas Are Fraught With Medical And Scientific Uncertainties.

Despite the picture painted by Plaintiffs and their amici, "gender-affirming" "care"—meaning the puberty blockers, cross-sex hormones, and surgical interventions for children that the

Arkansas legislature prohibited—does not stand on a robust mountain of evidence-based research. And despite their accusation that Arkansas relies on "outdated and now discredited theories," *see* AAP Br., Doc. 30 at 11, it is Plaintiffs and their amici who ignore the most recent research and developments. For not only are record numbers of minors now presenting with gender-related distress, but the patient profile has changed radically in recent years as more teenage girls are suffering from sudden-onset dysphoria that is not typical of the genre.[4] Evidence regarding treatment has not kept up—and, at least for affirmation therapy, was never very good to begin with. As a result, while American organizations have been caught in the political winds, many international experts are urging caution. Here, for instance, is how *The Economist* recently situated Arkansas's law within the global conversation:

> Last June, … Finland revised its guidelines to prefer psychological treatment to drugs. In September Britain launched a top-down review of the field. In December the High Court of England and Wales ruled that under-16s were unlikely to be able to consent meaningfully to taking puberty blockers, leading [the Gender Identity Development Service at the Tavistock Clinic in London] to suspend new referrals, though a subsequent ruling held that parents could consent on their children's behalf. On April 6th Arkansas passed laws that make prescribing puberty blockers and cross-sex hormones to children illegal. Also in April the Astrid Lindgren Children's Hospital in Stockholm, a part of the Karolinska Institute, announced that it would stop prescribing puberty blockers and cross-sex hormones to those under 18, except in clinical trials.[5]

Tellingly, Plaintiffs and their amici mention none of this. They do not explain that most experts in the field agree there is a general paucity of evidence and robust studies. They deny outright one of the few things the research is clear about: that most cases of gender dysphoria in children resolve naturally if transition interventions are not applied. They barely acknowledge the

[4] *See generally* L. Littman, *Parent Reports of Adolescents & Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria*, PLos ONE 13(8): e0202330.

[5] *Doubts Are Growing About Therapy for Gender-Dysphoric Children*, THE ECONOMIST, May 13, 2021, *available at* https://www.economist.com/science-and-technology/2021/05/13/doubts-are-growing-about-therapy-for-gender-dysphoric-children.

risks such experimental treatments pose. They ignore the fact that children cannot fully understand the long-term risks associated with the procedures. They threaten that Arkansas's law will result in increased suicides even though the research does not support such a claim. And they assert that the State's protection of its children is "animus" against transgender youth, even though—among other problems with the statement—most of these children will not identify as transgender as adults since their dysphoria will have resolved naturally so long as they can be protected from Plaintiffs' preferred experiments.

In sum, Plaintiffs and their amici paint a very misleading picture this Court should reject.

A. There is a General Paucity of Evidence Regarding Pediatric Gender Transition.

If there is one takeaway from the literature on treating gender-related distress, it's that nearly everyone agrees much more research is needed. This is particularly true when it comes to the experimental transition procedures Arkansas prohibits for minors—puberty blockers, cross-sex hormones, and surgical interventions.

First, a bit of history. Incredibly, there is just one main study that forms the basis for treating gender dysphoric youth with hormones and surgical interventions: the 2014 "Dutch Study."[6] The study began with 70 youths who had suffered from gender dysphoria since childhood (not just since adolescence); who did not have other mental health problems; who were given extensive psychological support throughout the study; and who had strong family support.[7] The participants were given puberty blockers after they began puberty (average age of intervention: 13.6 years), cross-sex hormones later in adolescence (16.7 years), and surgical interventions after they reached

[6] *See* Annelou de Vries et al., *Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment*, 130 PEDIATRICS, No. 4, 696-704 (Oct. 2014).
[7] *See id.* at 697.

18 (20.7 years).[8] Of the 70 children who formed the starting cohort, only 55 completed the study and participated in an assessment a year after surgery.[9] Notably, there was no control group that did not receive hormonal or surgical interventions. The study's authors reported two main conclusions. One, gender dysphoria had resolved for the participants when they were surveyed a year after surgery.[10] Two, a year after surgery the participants reported psychological well-being outcomes "comparable to same-age peers."[11]

As others have pointed out,[12] there are many limitations to this study and many questions it did not answer. How did the participants' *pre*-treatment psychological function compare to their peers? Would the outcomes have been any different if the participants were not, on average, already in the healthy psychological range before they began treatment? How did the 13% of the initial cohort who did not or could not participate in the final survey fare? What were the participants' long-term physical health outcomes? Did the puberty blockers, cross-sex hormones, and surgical procedures cause any physical problems for the participants down the line (other than to the non-reported participant who died from the surgical intervention)? What were the participants' long-term psychological outcomes at 5, 10, or 20 years after surgery? Would the results be similar

[8] *Id.* at 696.
[9] One participant died from a bacterial infection caused by the surgical intervention; four refused to participate; three became ineligible for treatment due to comorbidities; and six had surgery within a year and were ineligible to complete the questionnaire. *Id.* at 697. The outcomes for these patients were thus not included in the study's results. Nor did all of the 55 remaining subjects participate in every aspect of the follow-up assessment; only 32 of them, for instance, provided answers regarding their psychological functioning for all three time periods studied—at intake, while on puberty suppression, and after gender reassignment surgery. *Id.* at 700.
[10] *Id.* at 701.
[11] *Id.* at 702.
[12] *See generally, e.g.*, Society for Evidence Based Gender Medicine, https://segm.org/.

for youths whose gender-related distress began in adolescence rather than childhood?[13] And most importantly, how do gender dysphoric youth fare if they do not receive the experimental gender transition procedures, and how would that control group compare to the study's experimental cohort?

Some research has been done to try to answer some of these questions in the seven-or-so years since the final Dutch study was published. But not as much as one might think. A few recent surveys of the data make this clear.

Centers for Medicare & Medicaid Services Coverage Analysis

In 2016, the Centers for Medicare & Medicaid Services released its national coverage analysis for gender dysphoria and gender reassignment surgery.[14] The analysis looked specifically at whether the data supported surgical interventions to treat gender dysphoria in the Medicare population. The conclusion? "[T]here is not enough high quality evidence to determine whether gender reassignment surgery improves health outcomes for Medicare beneficiaries with gender dysphoria and whether patients most likely to benefit from these types of surgical intervention can be identified prospectively."[15] The analysis explained:

- "Overall, the quality and strength of evidence were low due to mostly observational study designs with no comparison groups, subjective endpoints, potential confounding

[13] The lead author of the Dutch Study recently cautioned practitioners about using findings from the study to treat the more recent wave of (mostly) natal girls who present as adolescents with gender dysphoria—what the author called a "new developmental pathway … involving youth with postpuberty adolescent-onset transgender histories." *See* Annelou L.C. de Vries, *Challenge in Timing Puberty Suppression for Gender-Nonconforming Adolescents*, 146 PEDIATRICS, No. 4 (Oct. 2020), *available at* https://pediatrics.aappublications.org/content/pediatrics/146/4/e2020010611.full.pdf. "According to the original Dutch protocol," she noted, "one of the criteria to start puberty suppression was a presence of gender dysphoria from early childhood," while now "the older presenting youth simply experienced gender history events at older ages." *Id.* (cleaned up and citations omitted).

[14] *See* Tamara Syrek Jensen, et al., *Decision Memo for Gender Dysphoria and Gender Reassignment Surgery* (CAG-00446N) (Aug. 30, 2016), *available at* https://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=282.

[15] *Id.*

(a situation where the association between the intervention and outcome is influenced by another factor such as a co-intervention), small sample sizes, lack of validated assessment tools, and considerable lost to follow-up."[16]

- "Of the 33 studies reviewed, published results were conflicting – some were positive; others were negative. Collectively, the evidence is inconclusive for the Medicare population. The majority of studies were non-longitudinal, exploratory type studies (i.e., in a preliminary state of investigation or hypothesis generating), or did not include concurrent controls or testing prior to and after surgery. Several reported positive results but the potential issues noted above reduced strength and confidence."[17]

- "Clinical evidentiary questions regarding the care of patients with gender dysphoria remain. Many of the publications focused on aspects of surgical technique as opposed to long-term patient outcomes. The specific type(s) of gender/sex reassignment surgery (e.g., genital, non-genital) that could improve health outcomes in adults remain(s) uncertain because most studies included patients who had undertaken one or more of a spectrum of surgical procedures or did not define the specific types of surgical procedures under study."[18]

To be sure, the CMS analysis looked only at surgical interventions, not hormonal, and determined only whether those interventions were appropriate for the Medicare population, not children. But the lessons are obvious: Plaintiffs ask this Court to require Arkansas to allow experimental transitional surgeries *on children* when the CMS found the evidence did not support performing the surgeries on adults.

United Kingdom's National Institute for Health and Care Excellence Evidence Reviews

In 2020, Britain's National Institute for Health and Care Excellence (NICE) conducted evidence reviews of two treatment options prohibited by Arkansas: puberty blockers and cross-sex hormones for children and adolescents.[19] Neither inspired much confidence in the procedures. As

[16] *Id.*
[17] *Id.*
[18] *Id.*
[19] *See Evidence review: Gender-affirming hormones for children and adolescents with gender dysphoria*, Nat'l Inst. for Health & Care Excellence (released Mar. 11, 2021), *available at* https://arms.nice.org.uk/resources/hub/1070871/attachment ("NICE Cross-Sex Hormone Evidence Review"; *Evidence review: Gondotrophin releasing hormone analogues for children and adolescents with gender dysphoria*, Nat'l Inst. for Health & Care Excellence (released Mar. 11,

for the cross-sex hormones, the study cautioned: "Any potential benefits of gender-affirming hormones must be weighed against the largely unknown long-term safety profile of these treatments in children and adolescents with gender dysphoria."[20]

Other significant findings include:

- "Ten observational studies were included in the evidence review.… No studies directly compared gender-affirming hormones to a control group (either placebo or active comparator). Follow-up was relatively short across all studies, with an average duration of treatment with gender-affirming hormones between around 1 year and 5.8 years."[21]

- "The key limitation to identifying the effectiveness and safety of gender-affirming hormones for children and adolescents with gender dysphoria is the lack of reliable comparative studies."[22]

- "All the studies included in the evidence review are uncontrolled observational studies, which are subject to bias and confounding and were of very low certainty using modified GRADE."[23]

- "Most studies included in this review did not report comorbidities (physical or mental health) and no study reported concomitant treatments in detail. Because of this it is not clear whether any changes seen were due to gender-affirming hormones or other treatments the participants may have received."[24]

- "It is difficult to draw firm conclusions for many of the effectiveness and safety outcomes reported in the included studies because many different scoring tools and methods were used to assess the same outcome, often with conflicting results. In addition to this, most outcomes reported across the included studies do not have an accepted minimal clinically important difference (MCID), making it difficult the determine whether any statistically significant changes seen are clinically meaningful."[25]

2021), *available at* https://arms.nice.org.uk/resources/hub/1070905/attachment ("NICE Puberty Blocker Evidence Review").

[20] NICE Cross-Sex Hormone Evidence Review, *supra*, at 14.

[21] *Id.* at 4.

[22] *Id.* at 13.

[23] *Id.*

[24] *Id.*

[25] *Id.* at 13-14.

Such is the state of the research for the "gender affirming" hormone treatments Plaintiffs ask this Court to allow.

The picture is not much different when it comes to puberty blockers.[26] As the NICE report explained, puberty blockers—gonadotrophin releasing hormone (GnRH) analogues—are used to "suppress puberty by delaying the development of secondary sexual characteristics," with the intention "to alleviate the distress associated with the development of secondary sex characteristics, thereby providing a time for on-going discussion and exploration of gender identity before deciding whether to take less reversible steps."[27] The use of puberty blockers to treat gender dysphoria is off-label in the U.K., as it is in America.[28] (As *The Economist* recently explained, this means that, "[b]ecause they are not licensed for gender medicine, drug firms have done no trials."[29]) Again, the NICE review found that "[a] key limitation to identifying the effectiveness and safety of GnRH analogues for children and adolescents with gender dysphoria is the lack of reliable comparative studies."[30] To wit:

> - "The studies included in this evidence review are all small, uncontrolled observational studies, which are subject to bias and confounding, and all the results are of very low certainty using modified GRADE. They all reported physical and mental health comorbidities and concomitant treatments very poorly. All the studies are from a limited number of, mainly European, care facilities. They are described as either tertiary referral or expert services but the low number of services providing such care and publishing evidence may bias the results towards the outcomes in these services only and limit extrapolation."[31]

[26] *See* NICE Puberty Blocker Evidence Review, *supra*.
[27] *Id.* at 3.
[28] *Id.*
[29] *Little Is Known About the Effects of Puberty Blockers*, THE ECONOMIST (Feb. 18, 2021), *available at* https://www.economist.com/science-and-technology/2021/02/18/little-is-known-about-the-effects-of-puberty-blockers.
[30] NICE Puberty Blocker Evidence Review, *supra*, at 12.
[31] *Id*. at 13.

- "Many of the studies did not report statistical significance or confidence intervals. Changes in outcome scores for clinical effectiveness and bone density were assessed with regards to statistical significance. However, there is relatively little interpretation of whether the changes in outcomes are clinically meaningful."[32]

- "In the observational, retrospective studies providing evidence on bone density, participants acted as their own controls and change in bone density was determined between starting GnRH analogues and follow up. Observational studies such as these can only show an association with GnRH analogues and bone density; they cannot show that GnRH analogues caused any differences in bone density seen. Because there was no comparator group and participants acted as their own controls, it is not known whether the findings are associated with GnRH analogues or due to changes over time."[33]

In sum: "The results of the studies that reported impact on the critical outcomes of gender dysphoria and mental health (depression, anger and anxiety), and the important outcomes of body image and psychosocial impact (global and psychosocial functioning), in children and adolescents with gender dysphoria are of very low certainty using modified GRADE … [and] suggest little change with GnRH analogues from baseline to follow-up."[34]

Though not expressly included as a finding of the NICE reviews, one observation by Britain's High Court of Justice is worth mentioning here. *See Bell v. Tavistock & Portman Nat'l Health Serv. Foundation Trust*, 2020 EWHC (Admin) 3274. In concluding last year that children under 16 likely cannot give informed consent to take puberty blockers or cross-sex hormones, that court observed: "[T]he use of puberty blockers is not itself a neutral process by which time stands still for the child on PBs, whether physically or psychologically. PBs prevent the child going through puberty in the normal biological process. As a minimum it seems to us that this means that the child is not undergoing the physical and consequential psychological changes which would contribute to the understanding of a person's identity." *Id.* ¶ 137.

[32] *Id.*
[33] *Id.*
[34] *Id.*

Sweden's Literature Review and Policy Change at the Karolinska Institute

In December 2019, the Swedish Agency for Health Technology Assessment and Assessment of Social Services published a "scoping review of the literature on gender dysphoria in children and adolescents."[35] Once again, the results do not support Plaintiffs' narrative. From the report's summary: "There are few studies on gender affirming surgery in general in children and adolescents and only single studies on gender affirming genital surgery. Studies on long-term effects of gender affirming treatment in children and adolescents are few.… Almost all identified studies are observational, some with controls and some with evaluation before and after gender affirming treatment. No relevant randomised controlled trials in children and adolescents were found."[36]

This review, coupled with the *Tavistock* decision in the U.K., caused the Astrid Lindgren Children's Hospital at Karolinska University Hospital in Sweden to change course and prohibit the use of puberty blockers and cross-sex hormones in minors except in clinical trial settings.[37] The Hospital's guideline document explained that the studies conducted on puberty blockers and cross-sex hormones to treat gender dysphoria in children have been "small, uncontrolled observational studies providing low quality evidence that the treatments have the desired effect."[38] Accordingly, the study found, "we have very little knowledge about their safety in the long term," and the "treatments are potentially fraught with extensive and irreversible adverse consequences

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[35] *See* Swedish Agency for Health Tech. Assessment and Assessment of Soc'l Servs., *Gender Dysphoria in Children and Adolescents: An Inventory of the Literature* (Dec. 20, 2019), *available at* https://www.sbu.se/en/publications/sbu-bereder/gender-dysphoria-in-children-and-adolescents-an-inventory-of-the-literature/.

[36] *Id.*

[37] *See Guideline Regarding Hormonal Treatment of Minors with Gender Dysphoria at Tema Barn – Astrid Lindgren Children's Hospital (ALB), available at* https://segm.org/sites/default/files/Karolinska%20Guideline%20K2021-4144%20April%202021%20%28English%2C%20unofficial%20translation%29.pdf.

[38] *Id.*

such as cardiovascular disease, osteoporosis, infertility, increased cancer risk, and thrombosis."[39] "This makes it challenging to assess the risk/benefit for the individual patient, and even more challenging for the minors or their guardians to be in a position of an informed stance regarding these treatments."[40]

Finland's Council for Choices in Healthcare in Finland Policy Change

In June 2020, Finland's Council for Choices in Healthcare in Finland also suggested changes to its treatment protocols.[41] Though allowing for some reversible hormonal interventions under certain conditions, the Council lamented the lack of evidence in the area and urged caution in light of the severe risks associated with medical intervention:

- "As far as minors are concerned, there are no medical treatment[s] that can be considered evidence-based."[42]
- "Potential risks of GnRH therapy include disruption in bone mineralization and the as yet unknown effects on the central nervous system. In trans girls, early pubertal suppression inhibits penile growth, requiring the use of alternative sources of tissue grafts for a potential future vaginoplasty. *The effect of pubertal suppression and cross-sex hormones on fertility is not yet known*."[43]
- "In cases of children and adolescents, ethical issues are concerned with the natural process of adolescent identity development, and the possibility that medical interventions may interfere with this process. It has been suggested that hormone therapy (e.g., pubertal suppression) alters the course of gender identity development; i.e., it may consolidate a gender identity that would have otherwise changed in some of the treated adolescents. *The reliability of the existing studies with no control groups is highly uncertain, and because of this uncertainty, no decisions should be made that can permanently alter a still-maturing minor's mental and physical development*."[44]

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[39] *Id.*
[40] *Id.*
[41] *See* Palveluvalikoima, *Recommendation of the Council for Choices in Health Care in Finland (PALKO / COHERE Finland), available (in English) at https://segm.org/sites/default/files/Finnish_Guidelines_2020_Minors_Unofficial%20Translation.pdf*.
[42] *Id.*
[43] *Id.* (emphasis added).
[44] *Id.* (emphasis added).

- "Professionals, for their part, consider it important to ensure that irreversible interventions, which may also have significant adverse effects, both physical and mental, are only performed on individuals who are able to understand the permanence of the changes and the potential for harm, and who are unlikely to regret such interventions. *It is not known how the hormonal suppression of puberty affects young people's judgement and decision-making.*"[45]

- "A lack of recognition of comorbid psychiatric disorders common among gender-dysphoric adolescents can also be detrimental. *Since reduction of psychiatric symptoms cannot be achieved with hormonal and surgical interventions, it is not a valid justification for gender reassignment.*"[46]

The Council thus concluded: "Information about the potential harms of hormone therapies is accumulating slowly and is not systematically reported. It is critical to obtain information on the benefits and risks of these treatments in rigorous research settings."[47]

* * *

The reality these evidence reviews describe is starkly different from the picture Plaintiffs and their amici paint. "[N]ecessary, effective[,] and safe." Pls' PI Br., Doc. 12 at 9. "[R]obust body of empirical evidence." AAP Br., Doc. 30 at 10. "[S]upported by medical evidence that has been subject to rigorous study." DOJ Statement, Doc. 19 at 21. None of these statements are true. Yet this is what children and their parents are told. They are assured relief with little downside. Given that children rely on such false promises, the truth is terrifying: In the words of Finland's Council for Choices in Healthcare, "[i]n light of available evidence, gender reassignment of minors is an experimental practice."[48] Arkansas had every reason to prohibit such experimentation on vulnerable minors.

[45] *Id.* (emphasis added).
[46] *Id.* (emphasis added).
[47] *Id.*
[48] *Id.*

B. The Evidence That Does Exist Shows That Most Cases of Gender Dysphoria Resolve Naturally by Adulthood.

"Gender dysphoria during childhood does not inevitably continue into adulthood." Given the insistence of Plaintiffs' amici that Arkansas's reliance on this truth "rests on incorrect facts and outdated and discredited theories" "premised on the demonstrably false assumption that an individual's gender dysphoria will naturally cease in the absence of affirming care," AAP Br., Doc. 30 at 9, 22, one might think this statement comes from an anti-transgender group or is at least controversial in the literature. In fact, neither is true. The statement comes from the World Professional Association for Transgender Health's "Standards of Care" v.7[49]—one of two medical protocols Plaintiffs rely on. *See* Pls' PI Br., Doc. 12 at 12-13. The other protocol comes from the Endocrine Society, *id.*, which reports similar findings: "Prospective follow-up studies show that childhood GD/gender incongruence does not invariably persist into adolescence and adulthood (so-called 'desisters')."[50]

In recognizing that "[g]ender dysphoria during childhood does not inevitably continue into adulthood," WPATH reported that "in follow-up studies of prepubertal children (mainly boys) who were referred to clinics for assessment of gender dysphoria, the dysphoria persisted into adulthood for only 6–23% of children."[51] "Newer studies, also including girls, showed a 12–27% persistence rate of gender dysphoria into adulthood."[52] The Endocrine Society's findings were similar: "In most children diagnosed with GD/gender incongruence, it did not persist into adolescence.

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[49] World Professional Ass'n for Transgender Health, *Standards of Care for the Health of Transsexual, Transgender, and Gender-Conforming People* 11 (7th Version) (2012) (citations omitted), *available at* https://www.wpath.org/publications/soc ("WPATH Standards of Care").
[50] Wylie C. Hembree et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guidelines*, 102 J. Clinical Endocrinology & Metabolism 3869, 3876 (Nov. 2017) ("Endocrine Society Guidelines").
[51] WPATH Standards of Care, *supra*, at 11.
[52] *Id.* (citations omitted).

The percentages differed among studies, probably dependent on which version of the DSM clinicians used, the patient's age, the recruitment criteria, and perhaps cultural factors. However, the large majority (about 85%) of prepubertal children with a childhood diagnosis did not remain GD/gender incongruent in adolescence."[53]

Plaintiffs' amici nevertheless assert that "there are no studies to support the view that people whose gender nonconformity persists into adolescence will revert to their sex assigned at birth whether they receive treatment or not." AAP Br., Doc. 30 at 14-15. As proof, they cite to an article about suggested practice parameters for mental health professionals treating LGBTQ youth; the article mentions in passing that "when gender variance with the desire to be the other sex is present in adolescence, this desire usually does persist in adulthood."[54] That article, in turn, relied on a 2001 publication comparing 20 adolescents who received sex reassignment treatment with 21 adolescents who had initially sought treatment but either withdrew their request or were denied the intervention.[55] Fourteen of the 21 adolescents in the non-treated group were seen for a follow-up visit. By that time, 11 of them no longer wished to transition, while 2 "slightly regretted the decision not to start treatment, but in both, the wish for [sexual reassignment surgery] was not clearly differentiated from unrealistic expectations that [the surgery] would resolve important nongender problems."[56] This is hardly robust support for amici's assertion.

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[53] Endocrine Society Guidelines, *supra*, at 3879 (citations omitted).

[54] Stewart L. Andelson, *Practice Parameter on Gay, Lesbian, or Bisexual Sexual Orientation, Gender Non-Conformity, and Gender Discordance in Children and Adolescents*, 51 J. AM. ACAD. OF CHILD & ADOLESCENT PSYCHIATRY 957 (2012), *available at* https://doi.org/10.1016/j.jaac.2012.07.004.

[55] Yolanda L.S. Smith et al., *Adolescents With Gender Identity Disorder Who Were Accepted or Rejected for Sex Reassignment Surgery: A Prospective Follow-Up*, 40 J. AM. ACAD. OF CHILD & ADOLESCENT PSYCHIATRY 472 (2001), *available at* https://doi.org/10.1097/00004583-200104000-00017.

[56] *Id.* at 477.

WPATH made a similar, if far more hedged, claim in its Standards of Care publication. "In contrast" to childhood gender dysphoria, WPATH posited, "the persistence of gender dysphoria into adulthood appears to be much higher for adolescents."[57] The study it cited was the Dutch Study discussed above—in which (as WPATH recounted) the adolescents "who were diagnosed with gender dysphoria *and given puberty-suppressing hormones*[] all continued with actual sex reassignment, beginning with feminizing/masculinizing hormone therapy."[58]

There are at least two problems with WPATH's conclusion that the Dutch Study shows that adolescents with gender dysphoria will always suffer from dysphoria unless they medically transition. The first is one WPATH recognized in the sentence directly following its hypothesis: "No formal prospective studies exist."[59] (This might be how amici can claim there are "no studies" to support a contrary view—because according to WPATH there are no robust studies at all.) The second problem is that whether a child who is given puberty blockers and cross-sex hormones proceeds to surgical transition tells us nothing about what would happen to a child who is not given puberty blockers and cross-sex hormones (much less whether he would continue to identify opposite his natal gender well into adulthood). Instead, as the *Tavistock* court recognized, all it shows is that puberty blockers and cross-sex hormones are "two stages of one clinical pathway and once on that pathway it is extremely rare for a child to get off it." *Tavistock*, 2020 EWHC (Admin) 3274, ¶ 136.[60]

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[57] WPATH Standards of Care, *supra*, at 11.
[58] *Id.* (emphasis added) (citing de Vries et al., *supra*).
[59] *Id.*
[60] These findings raise the question about precisely what Plaintiffs and amici mean by their oft-repeated phrase "gender-affirming care." When the clear majority of children who experience gender discordance desist from this discordance by adulthood, is a child's gender really being "affirmed" by treatments that make long-lasting discordance more likely?

What we are left with, then, is precisely what the Arkansas legislature found: "For the small percentage of children who are gender nonconforming or experience distress at identifying with their biological sex, studies consistently demonstrate that the majority come to identify with their biological sex in adolescence or adulthood." *See* SAFE Act, § 2(4). Of course, the fact that this statement is true also means that the assertion by Plaintiffs' amici that it is a "demonstrably false assumption that an individual's gender dysphoria will naturally cease in the absence of affirming medical care," AAP Br., Doc. 30 at 22, is, well, demonstrably false.

C. Plaintiffs' Preferred Experimental Procedures Come With Serious, Lifelong Risks That Children Cannot Fully Understand.

As detailed above, the benefits, if any, of puberty blockers, cross-sex hormones, and surgical interventions to treat gender-related distress are not well understood or studied. But the risks associated with the interventions are serious and often irreversible. As the Swedish literature review found, "these treatments are potentially fraught with extensive and irreversible adverse consequences such as cardiovascular disease, osteoporosis, infertility, increased cancer risk, and thrombosis."[61] And even for puberty blockers—which Plaintiffs' amici treat as the least-dangerous intervention, calling them "reversible" with "well known efficacy and side-effect profiles," AAP Br., Doc. 30 at 18—the Endocrine Society's Guidelines warn that pubertal suppression "may include adverse effects on bone mineralization …, compromised fertility if the person subsequently is treated with sex hormones, and unknown effects on brain development."[62] Then the Guidelines note: "Few data are available on the effect of GnRH analogs on BMD in adolescents with GD/gender incongruence."[63]

[61] *See* Swedish Agency for Health Tech. Assessment, *supra*.
[62] Endocrine Society Guidelines, *supra*, at 3882.
[63] *Id.*

As Finland's Council for Choices in Healthcare has explained, "[i]n a situation where a minor's identification with the opposite sex causes longterm and severe dysphoria, it is important to make sure that he/she understands the realistic potential of gender reassignment treatments to alter secondary sex characteristics, the reality of a lifelong commitment to medical therapy, the permanence of the effects, and the possible physical and mental adverse effects of the treatments. *Although patients may experience regret, after reassignment treatments, there is no going back to the non-reassigned body and its normal functions.*"[64]

There is very little reason to think that a child in early adolescence can properly weigh these lifetime risks, particularly when the popular narrative and many doctors (*see generally* AAP Br., Doc. 30) so distort what the evidence shows regarding the possible benefits of puberty blockers, cross-sex hormones, and surgical interventions. As the Endocrine Society Guidelines recognize, there are not even "formally evaluated decision aids available to assist in the discussion and decision regarding the future fertility of adolescents or adults beginning gender-affirming treatment."[65] How is an 11-year-old girl feeling uncomfortable in her body to weigh the probabilities that her gender-based distress will resolve without hormonal or surgical intervention? (As the Endocrine Society's Guidelines state, "[w]ith current knowledge," not even medical professionals "can predict the psychosexual outcome for any specific child."[66]) How is she to know whether she will want to have children in twenty years? Whether she will want to breastfeed them? Whether she will come to regret her deepened voice and irreversible mastectomy? What it would have been like to develop and go through puberty with her peers? Whether it would all be worth it? These are tough questions for anyone. They are unfair questions to ask of a child who cannot yet "gauge

[64] *See* Palveluvalikoima, *supra* (emphasis added).
[65] Endocrine Society Guidelines, *supra*, at 3879.
[66] *Id.* at 3876.

risks and benefits in an adult manner" or "envision the future consequences of one's actions." APA Br. at 14; *see also id.* at 20 ("Research has shown that personality traits change significantly during the developmental transition from adolescence to adulthood, and the process of identity-formation typically remains incomplete until at least the early twenties." (footnotes omitted)).

It is little wonder, then, that at least some children who are asked to answer these questions feel betrayed by the adults to whom they turned for help. Because the evidence in this entire field is so poor, no one really knows how many patients come to regret their transition, but the number is not insignificant. And the stories of those who seek to detransition are heartbreaking. Here is a typical one, from one of the claimants in the *Tavistock* case:

> It is only until recently that I have started to think about having children and if that is ever a possibility, I have to live with the fact that I will not be able to breastfeed my children. I still do not believe that I have fully processed the surgical procedure that I had to remove my breasts and how major it really was. I made a brash decision as a teenager, (as a lot of teenagers do) trying to find confidence and happiness, except now the rest of my life will be negatively affected. I cannot reverse any of the physical, mental or legal changes that I went through. Transition was a very temporary, superficial fix for a very complex identity issue.

Tavistock, 2020 EWHC (Admin) 3274, ¶ 83.

One of the few studies to look at the needs of detransitioners was published earlier this year.[67] The author surveyed 237 participants who had detransitioned back to their natal gender.[68] Seventy percent of the participants reported that they detransitioned because they "realized that [their] gender dysphoria was related to other issues"; half of them reported that "[t]ransition did not help with [their] dysphoria"; and over a third reported that their "[d]yspohria resolved itself

[67] *See* Elie Vandenbussche, *Detransition-Related Needs and Support: A Cross-Sectional Online Survey*, JOURNAL OF HOMOSEXUALITY (Apr. 30, 2021), *available at* https://doi.org/10.1080/00918369.2021.1919479.

[68] The survey included participants who had transitioned both socially and medically (65%) and those who had transitioned only socially (31%). *Id.* at 4. Most of the participants were females in their twenties.

over time."[69] Notably, only 13% reported that a lack of support from social surroundings contributed to their detransition.[70] "Close to half of the sample (49%) reported a need for receiving accurate information on stopping or changing hormone therapy, and almost a quarter (24%) reported the need for receiving help for complications related to surgeries or hormone therapy."[71] Most participants reported needing help with "learning to cope with feelings of regret."[72]

Plaintiffs and their amici prefer to ignore these stories and needs, promising instead that hormonal and surgical interventions for gender dysphoric youth are medically necessary and safe. Feelings of regret, they seem to contend, are rare. But the reality is that no one really knows what percentage of children who transition come to regret their transition, though (again) we do know that most cases of gender dysphoria in children would have resolved naturally but for medical intervention. With the stakes so high, the harms so great, and the known benefits so paltry, the Arkansas legislature did not have to embrace an experimental path in lieu of the one that has served the medical profession so well for so long: First, do no harm.

D. Evidence Does Not Suggest That Suicides Decrease Following Experimental Transition Procedures.

Plaintiffs and their amici warn that if the Court rules against them, patients in Arkansas will be denied care, "materially heighten[ing] the risk of adverse outcomes, including suicide." AAP Br., Doc. 30 at 9. This case, they threaten, is thus "a matter of life and death." *Id.*; *see* Pls. PI Br., Doc. 12 at 19-20.

The evidence does not support such threats. It is a tragic truth that children suffering from gender dysphoria and other gender-related distress are also more likely to suffer from depression

[69] *Id.* at 6.
[70] *Id.*
[71] *Id.* at 12.
[72] *Id.*

and anxiety and to attempt suicide. But while the impulse to "do something" to help is both understandable and admirable, there is little evidence to suggest that what Plaintiffs want to do will actually help. Instead, it will likely inflict more injury.

The same is true when it comes to mental health. The most comprehensive review available was published last year in the *American Journal of Psychiatry* by Richard Bränström and John E. Pachankis.[73] It initially reported long-term improvement in mental health that the authors attributed to gender-transition procedures. But after the report was published, over a dozen scientists wrote to the *Journal* to identify serious methodological problems with the study. Among other things, they pointed out that the data actually revealed that "the risk of being hospitalized for a suicide attempt was 2.4 times higher if [patients] *had* undergone gender-corrective surgery than if they had not."[74] This observation, though clinically concerning, turned out not to be statistically significant. But another one was: As the authors of the original review noted in a correction they issued, "individuals diagnosed with gender incongruence who had received gender-affirming surgery were *more likely* to be treated for anxiety disorders compared with individuals diagnosed with gender incongruence who had not received gender-affirming surgery."[75] In the end, the *American Journal of Psychiatry* published a correction explaining that the study "demonstrated no advantage

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[73] Richard Bränström and John E. Pachankis, *Reduction in Mental Health Treatment Utilization Among Transgender Individuals After Gender-affirming Surgeries: A Total Population Study*, 177 AM. J. OF PSYCHIATRY 727 (2020).

[74] Anes Wold, *Gender-Corrective Surgery Promoting Mental Health in Persons With Gender Dysphoria Not Supported by Data Presented in Article*, 177 AM. J. PSYCHIATRY 768, 768 (Aug. 2020); *see also* Richard Bränström and John E. Pachankis, *Toward Rigorous Methodologies for Strengthening Causal Inference in the Association Between Gender-Affirming Care and Transgender Individuals' Mental Health: Response to Letters*, 177 AM. J. PSYCH., No. 8, 772 (Aug. 2020), table 1 (emphasis added).

[75] Bränström & Pachankis, *Toward Rigorous Methodologies*, *supra*, at 768 (emphasis added).

of surgery in relation to subsequent mood or anxiety disorder-related health care visits or prescriptions or hospitalizations following suicide attempts."[76]

Plaintiffs and their amici ignore this study and subsequent correction. Instead, they rely on another one: a review by a team led by Jack Turban that looked at responses from an online survey drawn from trans-affirming websites. *See* AAP's Br., Doc. 30 at 11. By asking participants whether they had ever desired puberty blockers as part of their gender-related care, and comparing those responses with other data concerning lifetime suicidal ideation, the study purported to find an "inverse association between treatment with pubertal suppression during adolescence and lifetime suicidal ideation among transgender adults who ever wanted this treatment."[77] As with the Bränström/Pachankis study, scientists quickly pointed out the flaws in the findings.[78] First, the survey was nonrepresentative, in that it was composed only of respondents recruited online and "excluded those who underwent medical intervention and then subsequently stopped identifying as transgender," and, of course, "those who actually committed suicide."[79] Second, the study "barely acknowledged the fact that adolescents with severe psychological problems would have been less eligible for drug treatment, which counts the association between treatment and suicidal ideation."[80] Third, "73% of respondents who reported having taken puberty blockers … said they started on them *after* the age of 18 years"—which is not when puberty blockers are prescribed.[81]

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[76] *Correction to Bränström & Pachankis*, 177 AM. J. PSYCH, No. 8, 734 (2020).
[77] Jack L. Turban et al., *Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation*, 145 PEDIATRICS 20191725 (Feb. 2020), *available at* https://pediatrics.aappublications.org/content/145/2/e20191725.
[78] *See, e.g.*, Michael Biggs, *Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria*, 49 ARCHIVES OF SEXUAL BEHAVIOR 2227-29 (2020), *available at* https://link.springer.com/article/10.1007/s10508-020-01743-6.
[79] *Id.*
[80] *Id.*
[81] *Id.*

Fourth, "[t]he subsample was confined to respondents who were aged under 18 in 1998," which was before puberty blockers were widely used in the United States to treat gender dysphoria; this "[f]aulty periodization means that [the] subsample included older respondents who, in fact, had no opportunity to obtain these drugs and so cannot be used for comparison."[82] In short, given these flaws, there is very little that can be derived from the Turban study; at best, all that can be said is that it is unclear what the relationship between puberty blockers and future suicidal ideation is.

The fact that psychological outcomes do not seem to be much improved, or suicides much reduced, following gender transition treatment should cause those who care for children to pause and see whether there are more effective ways to help. That is what doctors in the U.K., Finland, and Sweden, for instance, are doing. But Plaintiffs and their amici seem not to care what the data say, wholly ignoring the recent studies poking holes in their preferred narrative, and insisting instead on falsely proclaiming "consensus" among "the medical community." AAP Br., Doc. 30 at 10. The Arkansas legislature need not be and should not be so blindered: The well-being of Arkansas's children hangs in the balance.

* * *

At the end of the day, it was the responsibility of the Arkansas legislature to determine the best way to protect children suffering from gender dysphoria and other forms of gender-related psychological distress. The medical uncertainty in the field does not relieve that responsibility, but only heightens it. *See Gonzales*, 550 U.S. at 163 ("[S]tate and federal legislatures [are given] wide discretion to pass legislation in areas where there is medical and scientific uncertainty."). And based on the evidence, the legislature determined that the use of puberty blockers, cross-sex hor-

[82] *Id.*

mones, and surgical interventions are still experimental in nature and that the risks of such procedures outweigh their benefits. That determination does not discriminate against children suffering from gender dysphoria, but seeks to protect them. This Court should defer to the legislature's constitutional determination.

CONCLUSION

The Court should deny Plaintiffs' motion for a preliminary injunction.

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