



# ISSUE ANALYSIS

## Do Not Sterilize Children

### Why Physiological Gender Transition Procedures for Minors Should Be Prohibited

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#### EXECUTIVE SUMMARY:

It has long been known that some children suffer from “gender incongruity” (a disconnect between one’s psychological, self-perceived “gender identity” and one’s biological sex) or “gender dysphoria” (distress about such incongruity). Studies have shown that, when left to themselves, most children with such conditions outgrow them and do not identify as “transgender” adults. However, such conditions and identities are increasingly being embraced and actively affirmed, not only through “social transition” (changing one’s public expression of gender identity), but through radical physiological interventions as well. These include the use of drugs to block normal puberty, cross-sex hormones, and gender reassignment surgery.

Each of these procedures has serious negative side effects – up to and including permanent sterilization. Despite claims to the contrary, these procedures are often not reversible, and they are not evidence-based, because research has not shown that these procedures are effective in accomplishing their purpose, which is to improve the patient’s mental health. They violate the most fundamental principle of medical ethics – “First, do no harm.”

These facts fully justify – in fact, they demand – state and federal legislation to prohibit such procedures from being performed upon minors. The rights of parents who affirm their child’s transgender identity are not of a higher value than the public interest in protecting children from physical harm. Legislators should not be dissuaded from acting on this issue because of economic blackmail.

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#### Introduction: The James Younger Case

In 2019, the case of James Younger, a boy caught up in a tragic custody battle between his parents, highlighted the dangers “gender transition” poses to children. Many Americans were alarmed that James’ mother wanted him to wear girl’s clothes, have a girl’s name, and eventually take puberty-blocking hormones – even though James’ father insisted that he is a perfectly happy 7-year-old boy.<sup>1</sup> Custody of James was eventually awarded to both parents by a Texas judge, after a national outcry.<sup>2</sup>

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## Understanding the Issue

### “Sex” vs. “Gender”

Although activists on the Left depict the transgender issue primarily as one of “discrimination” against a particular group of people because of “who they are,” the reality is quite different. The real dispute is a philosophical one over what it means to be “male” or “female.”<sup>3</sup> For most of human history, it was taken as self-evident that these terms referred to an individual’s biological sex, as defined by their reproductive capacity. Even the American Psychiatric Association (APA), which is supportive of transgender identities, continues to define the word “sex” in biological terms. Here is the definition that appeared in the most recent (2013) edition of the APA’s *Diagnostic and Statistical Manual of Mental Disorders, or DSM-5*:

**Sex** Biological indication of male and female (understood in the context of reproductive capacity), such as sex chromosomes, gonads, sex hormones, and nonambiguous internal and external genitalia.<sup>4</sup>

A dictionary expands upon the concept of “reproductive capacity” in defining the words “female” and “male;” defining “female” as “of, relating to, or being the sex that bears young or produces eggs;” and defining “male” as “of, relating to, or being the sex that produces gametes which fertilize the eggs of a female.”<sup>5</sup>

By these definitions, “sex” is a biological characteristic which is evident at (or, with ultrasound, even before) birth, and one’s identity as “male” or “female” is an objective physical reality that is innate and immutable. Family Research Council (FRC) holds firmly to these definitions and to this view of “sex.”

However, activists on the Left have sought to undermine it – in part linguistically, by substituting the word “gender” for “sex.” Sometimes, “gender” is used as essentially a *synonym* for “sex” – such as when expectant parents have a “gender reveal” party. At other times, however, “gender” is defined in psychological terms (in *contrast* to biological “sex”), based upon a person’s subjective self-perception or self-identification as “male” or “female.” The core principle of what is called “gender ideology” is that this subjective, psychological self-perception is a *more fundamental and more accurate* determinant of who is “male” or “female” (or something else) than a person’s objective, biological sex.<sup>6</sup>

While Family Research Council firmly rejects this gender ideology, such beliefs are nevertheless at the heart of the transgender movement. It is virtually impossible to discuss that movement without using “gender” and its derivative terms in this way, so for the remainder of this paper I will do so (and without quotation marks). The reader should bear in mind that such usage should not be taken as representing the author’s affirmation of that theoretical construct, however.

### What is Gender Incongruence/Gender Dysphoria?

The American College of Pediatricians (a conservative alternative to the larger and more liberal American Academy of Pediatrics) explains these terms this way (emphasis and bullet points added):

- *Gender* is a term that refers to the psychological and cultural characteristics associated with biological sex. It is a psychological concept and sociological term, not a biological one.
- *Gender identity* refers to an individual’s awareness of being male or female and is sometimes referred to as an individual’s “experienced gender.”

- *Gender dysphoria (GD)* in children describes a psychological condition in which they experience marked incongruence between their experienced gender and the gender associated with their biological sex. They often express the belief that they are the opposite sex.<sup>7</sup>

The American Psychiatric Association, in its *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, states that *gender incongruence* should only be classified as the mental disorder known as “gender dysphoria” if “[t]he condition is associated with clinically significant distress or impairment in social, school, or other important areas of functioning.”<sup>8</sup>

The term *transgender* “refers to the broad spectrum of individuals who identify with a gender other than that associated with their birth sex.”<sup>9</sup>

### Gender Transition

Gender transition is the process whereby a person experiencing gender incongruity changes his or her appearance and self-presentation from being consistent with the individual’s biological sex at birth to being more consistent with the individual’s preferred psychological gender identity. The first step in such a transition is usually “social” transition, which involves changing one’s name, clothing, hairstyle, and public self-identification (as male, female, or something else), and requesting that others affirm this new public identity. Social transition may occur before or in the absence of any interventions that require the aid of people with pharmacological or medical training, such as the use of hormones or surgery.

For the most part, this paper does not address the question of “social” transition – although there are significant concerns about it. The focus of this paper is on procedures designed to alter the body’s physiology, such as hormones and surgery. When we use the term “gender transition procedures,” it will be in reference to these more invasive physiological interventions.

### What Percentage of Children with Gender Dysphoria Go on to Identify as Transgender Adults?

According to the *DSM-5*:

Rates of persistence of gender dysphoria from childhood into adolescence or adulthood vary. In natal males, persistence has ranged from 2.2% to 30%. In natal females, persistence has ranged from 12% to 50%.<sup>10</sup>

Those “persistence” rates are the percentages that *continue* to have gender dysphoria. That means that the number who *grow out of* their gender dysphoria, the “desistance” rates, range from 70 percent to 97.8 percent in biological males, and from 50 percent to 88 percent in biological females.

In a separate analysis combining the results from 10 studies, two scholars reported in 2016 that “for the majority of the children (85.2%; 270 out of 317) the gender dysphoric feelings remitted around or after puberty,”<sup>11</sup> meaning that only 14.8 percent continued to experience such feelings.

### No Objective Test for a “True Transgender” Child

As a group of physicians warned in a letter to a medical journal in 2018, “There are no laboratory, imaging, or other objective tests to diagnose a ‘true transgender’ child.” In other words, “There is currently no way to predict who will desist and who will remain dysphoric.”<sup>12</sup>

Given the evidence that the majority of children with gender dysphoria do not identify as transgender adults if left to themselves, and the inability to know which will “persist” and which will “desist,” it is simply irresponsible for those trained to provide medical care to perform physical interventions, some effects of which are irreversible, that almost always put a child on a path toward a transgender identity.

## **Invasive Physiological Procedures**

### **What Physiological Procedures Are Performed on Children/Minors with Gender Dysphoria?**

Since at least the 1950’s, invasive physiological procedures have been offered to adults wishing to change the appearance of their bodies as part of a gender transition. These include the use of cross-sex hormones (testosterone for females identifying as male, and estrogen for males identifying as female) and gender reassignment surgery. However, only in the last 20 years or so have such interventions begun being offered to minors for this purpose.

One set of scholars described these treatments, first devised in the Netherlands and referred to as “the Dutch protocol,” in a 2010 journal article:

Since the mid-1990s, one model of therapeutic care, developed by Dutch clinicians and researchers, has been to initiate the biomedical aspects of sex-reassignment in early- to mid-adolescence rather than to wait for the legal age of adulthood (18 years in many countries) or even later. After careful psychologic evaluation, adolescents deemed appropriate for such treatment are prescribed hormonal medication to delay or suppress somatic puberty (prior to the age of 16 years). If the gender dysphoria persists, then cross-sex hormonal therapy is offered at the age of 16 and, if the adolescent so desires, surgical sex change procedures are then offered at a lower bound age of 18.<sup>13</sup>

### **Puberty Blockers**

“Puberty blockers” is a colloquial term for a class of hormones that can prevent a pre-adolescent child from undergoing the physical changes associated with puberty. Originally developed and approved to treat a medical condition known as “precocious puberty,” they are now being used as part of a gender transition in some children.

#### ***“Central Precocious Puberty”***

Some children begin to develop the physical signs of puberty at unusually early ages. If, for example, a girl’s breasts begin to develop at the age of 6, or a boy begins to grow pubic hair at the age of 7, these may be considered signs of a medical disorder known as “central precocious puberty.” Websites on the disorder describes the physiological process:

The brain starts the process [of puberty] with the production of a hormone called gonadotropin-releasing hormone (GnRH).

When this hormone reaches the pituitary gland – a small bean-shaped gland at the base of your brain – it leads to the production of more hormones in the ovaries for females (estrogen) and the testicles for males (testosterone).

...

Most commonly, especially in girls, precocious puberty is due to the brain sending signals earlier than it should.<sup>14</sup>

This condition can adversely affect children both physically<sup>15</sup> and emotionally.<sup>16</sup>

In the 1980's, scientists realized that children experiencing precocious puberty could be treated with a class of drugs that effectively neutralize the puberty-stimulating effect of the GnRH. These are known as GnRH analogues or GnRH agonists (GnRHa), but are referred to more colloquially as puberty-blocking hormones, puberty-blocking drugs, or simply "puberty blockers." These drugs can essentially pause the physical changes associated with puberty until the child reaches an age where his or her peers are typically experiencing them. Then the treatment is withdrawn, and normal pubertal development resumes within about a year.<sup>17</sup>

### ***Use of Puberty Blockers for Gender Transition***

Some health care providers, however, are turning the usual (and FDA-approved) use of puberty blockers on its head. Instead of using these drugs to stop *premature* puberty, and then withdrawing them at the normal age for puberty to allow normal development to resume, they are using them to *prevent* children who have gender dysphoria from going through puberty at the *normal* age. In other words, instead of *preventing* an abnormal condition in order to *facilitate* normal development, doctors in gender clinics are *creating* an abnormal condition in order to *prevent* normal development.

One journal article explains the rationale for this approach:

. . . [T]he suspension provides adolescents with GD 'time and rest before making definite decisions on gender reassignment without the distress of developing secondary sex characteristics'.<sup>18</sup>

However, puberty blockers "have potentially serious physical side effects."<sup>19</sup> An article in the journal *Nature* said that "some scientists worry that putting off puberty in older children may disrupt bone and brain development, reducing bone density and leading to cognitive problems."<sup>20</sup> A 2018 article in *Pediatrics* (the official journal of the American Academy of Pediatrics) noted other concerns:

- GnRHAs significantly increased both body fat percentage and BMI [body mass index] while decreasing lean body mass . . .
- [P]otential adverse effects such as arterial hypertension . . . [were] reported in a recent case series in association with GnRHAs.<sup>21</sup>

This is not to mention the more obvious fact that puberty blockers "inhibit fertility by preventing the development of gonadal tissue and mature gametes for the duration of treatment."<sup>22</sup>

### ***No Evidence Puberty Blockers Improve Mental Health***

As with all gender transition procedures, the goal is not to improve the patient's physical health, but to improve his or her mental health, and especially to ease gender dysphoria (the distress associated with "gender incongruence") itself. However, it is not even clear that the use of puberty blockers achieves this goal, which would be absolutely necessary to justify such a radical and unnatural physical intervention.

One early (2010) study of puberty suppression for gender transition reported, “Gender dysphoria did not resolve as a result of puberty suppression.”<sup>23</sup> A more recent (2018) study reported that “our psychometric data suggest that . . . the impact [of puberty blockers] on reducing psychological difficulties is limited.”<sup>24</sup>

### *Are Puberty Blockers “Fully Reversible?”*

Critics of the use of puberty blockers for gender transition have warned, “Children and adolescents generally lack the emotional and cognitive maturity needed to consent to a treatment that will have lifelong consequences.”<sup>25</sup> Supporters of puberty suppression acknowledge that children and young adolescents are immature, but deny that its consequences are necessarily lifelong by claiming, “Puberty suppression is fully reversible and can be discontinued should the adolescent decide not to pursue GR” [gender reassignment].<sup>26</sup>

The claim of reversibility, however, is based on the use of these drugs in treating central precocious puberty – not gender dysphoria. In a letter to a British medical journal in 2019, three experts noted, “It is surely presumptuous to extrapolate observations from an intervention that suppresses pathologically premature puberty to one that suppresses normal puberty.”<sup>27</sup> A group of German scholars noted in 2008 that the claim of reversibility “is true, however, only with respect to its physical effects, not with respect to the irreversible damage it does to the process of psychosexual development.”<sup>28</sup> The three British experts (Richards, et al.) said that use of puberty blockers “leaves a young person in developmental limbo without the benefit of pubertal hormones or secondary sexual characteristics, which would tend to consolidate gender identity.”<sup>29</sup>

There is no record in the academic literature documenting what happens to a child who goes on puberty blockers at the age of 11, say, and then discontinues them at 16 or 18. In a key early study of “the first 70 eligible candidates who received puberty suppression between 2000 and 2008” at a pioneering gender identity clinic in Amsterdam, “No adolescent withdrew from puberty suppression, and all started cross-sex hormone treatment, the first step of actual gender reassignment.”<sup>30</sup>

The dramatic contrast between the 85 percent *desistance* rate in pre-pubertal children with gender dysphoria<sup>31</sup> and the reported 100 percent *persistence* rate in those placed on puberty blockers at the onset of puberty<sup>32</sup> strongly suggests that, like “gender social transition of prepubertal children,” puberty blockers “will increase dramatically the rate of gender dysphoria persistence.”<sup>33</sup> Richards, et al. note, “Our concern is that the use of puberty blockers may prevent some young people with GD from finally becoming comfortable with the birth sex.”<sup>34</sup>

This is being done despite the lack of any long-term longitudinal studies evaluating the risks and benefits of using these drugs for the treatment of gender dysphoria and gender transition.<sup>35</sup>

### Cross-Sex Hormones

A second step in the invasive physiological gender transition of minors (for those who first took puberty blockers), or a first step for those who have already entered their natural (biological) puberty, is the administration of cross-sex hormones. For example, the male hormone testosterone is given to biological females who wish to present themselves as male, in order to give them more masculine physical characteristics (such as facial and body hair and deepening of the voice). Meanwhile the female hormone estrogen is given to biological males who wish to present themselves as female, in order to give them more feminine characteristics (such as enlarged breasts).<sup>36</sup>

In those who have previously taken puberty blockers, cross-sex hormones may be used as a tool to, in effect, initiate an artificial puberty corresponding to the desired gender identity. In this situation, there may be pressure to start cross-sex hormones at even younger ages, so that the child does not remain in an artificial pre-pubescent state while his or her peers are continuing to develop more adult sexual characteristics. Endocrinologist Michael Laidlaw has sharply criticized this approach, however, saying, "There is no such thing as 'trans puberty.' What happens is that [an] abnormal, pathologic state . . . is induced . . ."<sup>37</sup>

### *Risks of Cross-Sex Hormones*

The use of cross-sex hormones is associated with a likely or potential increased risk of several serious physical health conditions. Even the pro-transgender World Professional Association for Transgender Health acknowledges this in their "Standards of Care."

Biological males using feminizing hormones (estrogen) are at increased risk for:

- Blood clots
- High triglycerides
- Cardiovascular disease
- High blood pressure
- Diabetes.

Biological females using masculinizing hormones (testosterone) are at increased risk for:

- High red blood cells
- High cholesterol
- Cardiovascular disease
- High blood pressure
- Diabetes
- Destabilization of certain psychiatric disorders.<sup>38</sup>

Other side effects have also been reported in recent journal articles. One in *Pediatrics* stated, "Testosterone significantly increased both body fat and BMI" [body mass index].<sup>39</sup> Another cautioned that "reduction of [natural] sex hormone production in mid-adolescence to late adolescence may well have effects on reducing energy and psychological well-being," and "Alterations in mood, including the development of irritability and anxiety, are risks of this treatment."<sup>40</sup>

### Gender Reassignment Surgery

Gender reassignment surgery (GRS)<sup>i</sup> is the least likely of the invasive physiological gender transition procedures to be performed on minors – but unfortunately, the practice is not unheard of.

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<sup>i</sup> Terminology for the surgery that some transgender people undergo to alter their anatomy has changed rapidly through the years. What used to be called "sex change surgery" became "sex reassignment surgery," then "gender reassignment surgery," and more recently "gender affirmation" or "confirmation" surgery. I prefer not to use the term "sex" or "sex change," because sex is an innate biological condition which cannot be changed. On the other hand, "affirmation" or "confirmation" are used to imply that the transgender identity is the patient's "real" or innate identity, which is being belatedly "affirmed" or "confirmed" by the doctor. This is an ideological construct which I do not share. Therefore, I have continued to use "gender reassignment surgery," or "GRS," to indicate that what is changing in a "gender transition" is not a person's (biological) sex, but his or her (social and psychological)

There are two types of gender reassignment surgery, colloquially referred to as “top” surgery (either removing or fabricating breasts) and “bottom” surgery (either removing or fabricating genitalia).

### *“Top” (Chest) Surgery*

Biological females who have undergone normal puberty but identify as male may experience “chest dysphoria” – distress about having breasts. In a 2018 study, nearly half of the females who had their breasts surgically removed (33 of 68) were under the age of 18, nearly a quarter (16) were under 16, and two were only 13 years old.<sup>41</sup>

### *“Bottom” (Genital) Surgery*

Genital or “bottom” surgery is the least likely procedure to be performed on minors, but even that has sometimes happened. In 2014, a Beverly Hills plastic surgeon (ironically named Gary Alter) actually boasted in a press release about performing male-to-female gender reassignment surgery on a 16-year-old. However, “the creation of a vagina and clitoris” was complicated by the fact that, thanks to the hormones, the patient “never . . . developed normal penis and scrotum size.”<sup>42</sup> This problem was verified in a more recent journal article, which said, “Concern now exists that the early blockade of puberty may result in insufficient genital skin being available for this procedure.”<sup>43</sup>

Perhaps the best-known transgender teenager is Jazz Jennings, star of a reality TV series, who underwent genital surgery to turn his penis into an artificial vagina at the age of 17. Jennings was candid about the challenges involved, acknowledging that after taking puberty blockers followed by cross-sex hormones,

I say it’s going to be like a patchwork vagina, Franken-vagina . . . There was just an unfortunate event and setback where things did come apart, and there was a complication. I had to come back in for another procedure . . .<sup>44</sup>

Neither the 2014 case touted by press release nor the celebrity case of Jazz Jennings is extraordinary anymore. A 2017 study (titled “Age is Just a Number”) found that a majority of the surgeons surveyed who perform vaginoplasty (11 of 20) acknowledged they have done the procedure on minors.<sup>45</sup>

Even apart from the problems created by a lack of genital tissue in patients who have taken puberty blockers, genital gender reassignment surgery is “associated with important complication rates”<sup>46</sup> and “a great number of adverse events.”<sup>47</sup> “Transsexuals have an increased risk for the development of micturition [urination] disorders after sex reassignment surgery,”<sup>48</sup> according to a 2017 article, including urinary problems such as “incontinence, overactive bladder, urinary tract infections and decreased urinary stream.”<sup>49</sup>

## **Sterilizing Children**

One side effect of physiological gender transition procedures is, in a way, obvious, yet in another way easily overlooked. Since such procedures involve deliberately disrupting sex-related functions involved in reproduction, infertility – the inability to conceive and/or bear biological children – is an obvious side effect of those procedures in many cases.

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“gender” or “gender identity,” which is indeed being consciously and deliberately “reassigned” by a surgeon, rather than “affirmed” or “confirmed.”



## Effect of Cross-Sex Hormones on Fertility

Young people who have already undergone natural puberty before beginning a gender transition will generally be rendered infertile, at least temporarily, by the administration of cross-sex hormones, which inhibit ovulation in biological females and the production of sperm in biological males. To preserve fertility, individuals may gather sperm or eggs before beginning hormone treatments, and these can be frozen and then used later in artificial reproductive procedures. (Gathering eggs is a much more difficult, invasive, and expensive procedure than gathering sperm.<sup>50</sup>)

Alternatively, transgender individuals on hormone therapy can stop taking hormones when they decide to have children, and after a period of time, their fertility may return – although experts warn that “thresholds for amount and duration of exogenous [cross-sex] hormone exposure causing permanent negative effects on fertility have not been established.”<sup>51</sup> However, a transgender person adopting this route must be willing to forgo for a period of time the feminizing or masculinizing effects that were sought from hormones in the first place.

## Effect of Puberty Blockers Followed by Cross-Sex Hormones on Fertility

A young person who has taken puberty blockers, however, will have prevented the development of the reproductive system to the point where viable sperm or eggs are produced in the first place. Therefore, *a course of puberty blockers followed by cross-sex hormones is highly likely to result in permanent sterility*, and to make the preservation of fertility impossible.

As noted above, claims that either puberty blockers or cross-sex hormones alone are “fully reversible” are questionable. The application of both amounts to what some have called “chemical castration.”<sup>52</sup> But the impact of genital gender reassignment surgery is indisputable – even the Endocrine Society, in their pro-transgender Guidelines, concedes, “Surgery that affects fertility is irreversible.”<sup>53</sup>

## Sterilization of Children is Unethical

Infertility should be viewed as a serious medical problem. As one survey of the topic summarized:

Research demonstrates a negative psychosocial impact of infertility among otherwise healthy adults, and distress among adolescents facing the prospect of future infertility due to various medical conditions and treatments that impair reproductive health.<sup>54</sup>

Any procedure causing infertility in *minors* should be viewed as a serious ethical problem as well, as noted by Kelsey Hayes in the *Online Journal of Health Ethics*:

Sterilization of humans without medically acceptable and sound justification, is ethically and morally wrong. When an individual is sterilized, even as a secondary outcome of therapy, lacking full, free, and informed consent, it is a violation of international law.<sup>55</sup>

## **Experimenting on Children – the Myth of “Evidence-Based” Care**

One of the arguments raised by opponents is that these procedures should not be restricted because they represent a standard of care that is “evidence-based.”<sup>56</sup> “Evidence-based” is something of a buzzword in medicine, indicating that medical practices should not just be based on opinion (even “expert” opinion), but on sound scientific research.

## The Quality of the Evidence is Low

But just how good is the “evidence” cited in support of gender transition procedures – especially for minors?

One of the most recent and influential sets of guidelines for procedures to be offered to transgender people was published in 2017 by the Endocrine Society.<sup>57</sup> This document explicitly sought to adopt an “evidence-based” approach.<sup>58</sup>

The key question is – what is the *quality* of the evidence in support of the Endocrine Society’s guidelines? They set forth three types of guidelines:

- an “Ungraded Good Practice Statement” – essentially supported by *no* evidence (beginning “We advise . . .”);
- a “weak recommendation” (beginning “We suggest . . .”); and
- a “strong recommendation” (beginning “We recommend . . .”).

Only with the *strong* recommendations does the task force express “confidence that persons who receive care according to [them] . . . will derive, on average, more benefit than harm.”

Then for each of the “recommendations” (weak or strong) they give a rating of the “quality of the evidence” in support of that recommendation, on a four-point scale: very low, low, moderate, or high.

There are 24 guidelines that are generally relevant to the procedures at issue in Vulnerable Child Protection Acts – puberty blockers, hormones for adolescents, and surgery.

Of these 24 guidelines:

- 5 are ungraded good practice statements (*no* evidence);
- 2 are weak recommendations with *very* low evidence; and
- 9 are weak recommendations with low evidence.

That means only 8 of the 24 “guidelines” are even “strong” recommendations – one third of the total. Of those:

- 2 are supported by *very low* evidence;
- 5 are supported by *low* evidence;
- *only 1* is supported by even “moderate” evidence;
- *None* are supported by “high quality” evidence.

In summary, the claim that these treatments are “evidence-based” is misleading, because the quality of the evidence in this field (even for the Endocrine Society’s “strong” recommendations) is low.

Without higher-quality evidence of both their efficacy and their safety, gender transition procedures must be considered *experimental* procedures at best.<sup>59</sup>

## No FDA Approval

The U.S. Food and Drug Administration (FDA) is the federal agency charged with certifying that medications are safe and effective for their intended use. Given the sweeping claims that puberty blockers and cross-sex hormones represent a well-established “standard of care,” and the claims (misleading, as we have seen) that these treatments are “evidence-based,” it may surprise some readers to learn that puberty blockers and cross-sex hormones have *never* been approved by the FDA for the purpose of gender transition.

Off-label use of drugs is not illegal—in fact, it is fairly common.<sup>60</sup> However, the “off-label” use of a drug means that it has not been scientifically proven to be safe and effective for that particular condition.<sup>61</sup>

Indeed, if you look closely, advocates of gender transition procedures do not even try to deny this. A 2018 article in the journal *Transgender Health* reiterated that “there are no medications or other treatments that are FDA-approved for the purpose of gender affirmation.”<sup>62</sup> And the American Medical Association’s Council on Science and Public Health reported that “steroidal hormones,” “GnRH analogs” (puberty blockers) and “antiandrogens” are all used “off-label” for “gender re-affirming therapy” —because their use “lacks scientific evidence.”<sup>63</sup>

Carl Heneghan, Professor of Evidence-Based Medicine at the University of Oxford and Editor in Chief of the *British Medical Journal*’s Evidence Based Medicine, concluded in 2019 that

treatments for under 18 gender dysphoric children and adolescents remain largely experimental. There are a large number of unanswered questions that include the age at start, reversibility; adverse events, long term effects on mental health, quality of life, bone mineral density, osteoporosis in later life and cognition. We wonder whether off label use is appropriate and justified for drugs such as spironolactone [an anti-androgen drug used with estrogen<sup>64</sup>] which can cause substantial harms and even death. We are also ignorant of the long-term safety profiles of the different GAH [Gender Affirming Hormone] regimens. The current evidence base does not support informed decision making and safe practice in children.<sup>65</sup>

## Do Gender Transition Procedures Prevent Suicide?

Transgender activists often argue that minors must be allowed to undergo gender transition procedures, because they will be at higher risk of suicide if they do not undergo them. Author Sahar Sadjadi described this narrative in an article in the *Journal of Medical Humanities*:

[A] core argument for puberty suppression is frequently repeated by numerous clinicians and advocates of the treatment: preventing the body from developing unwanted secondary sex characteristics saves children from violence, suicide, self-harm, and mental illness at the onset of puberty . . . and from violence and discrimination (and in some accounts, unemployment, drug use, prostitution, suicide) which besets . . . transgender adulthood.<sup>66</sup>

There is some evidence that people who identify as transgender, including youth, are more likely to engage in suicidal behaviors than those who do not identify as transgender. One example is the 2015 U.S. Transgender Survey published by the National Center for Transgender Equality. It reported that among the transgender population,

- Forty percent (40%) have attempted suicide *in their lifetime*, nearly nine times the rate in the U.S. population (4.6%).
- Seven percent (7%) attempted suicide *in the past year* – nearly twelve times the rate in the U.S. population (0.6%).<sup>67</sup>

Some, however, argue that this discrepancy is exaggerated. Experts on suicide in general note, “Untreated mental illness (including depression, bipolar disorder, schizophrenia, and others) is the cause for the vast majority of suicides,” noting, “Over 90 percent of people who die by suicide have a mental illness at the time of their death.”<sup>68</sup> Yet transgender activists resist any focus on “untreated mental illness,” because they reject both the idea that gender incongruity *is* a mental illness and the idea that mental illness could be the *cause* of gender incongruity. They would prefer to use the risk of transgender suicides to demand changes in societal attitudes, rather than provide treatment of underlying mental illness.

Data like that from the U.S. National Transgender Survey are based on a “convenience sample,” meaning people who volunteer online to participate. This method does not necessarily produce a representative sample of the population under study. Hacsí Horvath, an epidemiologist who “detransitioned” (that is, reclaimed his biological identity after having identified as transgender) points to a survey that used more scientific methods, the California Health Interview Survey. This survey of adolescents did not explicitly ask respondents whether they identified as transgender, but it did identify a population who were “highly gender non-conforming,” which may be taken as a proxy for transgender status. Within this population, only 3 percent of girls and 2 percent of boys reported having attempted suicide.<sup>69</sup>

### Analyzing Key Suicide Studies

Often, statistics are cited as though they provide evidence that gender transition procedures are the *solution* to the problem of transgender suicide. However, even if the elevated rates are legitimate, they do not necessarily prove this point, since the data often do not indicate *when* the suicidal thoughts or actions occurred – before or after gender transition.

For example, a 2020 article in the journal *Pediatrics* examined the link between taking puberty-blocking hormones and nine different mental health outcomes.<sup>70</sup> Only one finding received most of the media attention, because it was the only one that reached the technical benchmark of “statistical significance.” This was a finding that those who received puberty blockers had lower “lifetime suicidal ideation” (that is, thoughts about suicide) than those who wanted them but did not receive them. But it was impossible to conclude that the administration of puberty blockers *caused* a reduction in suicidal thoughts. And another finding was more dramatic (though not “statistically significant”) – in the study, those who received puberty blockers were *twice as likely to have had a suicide attempt resulting in inpatient care (i.e., hospitalization) in the last 12 months* as those who did not (45.5 percent vs. 22.8 percent).<sup>71</sup>

Perhaps the most dramatic evidence undermining the theory that gender transition reduces suicide comes from a Swedish study published in 2011. The authors were able to examine the medical records of *every* person in Sweden who underwent gender reassignment surgery over a 30-year period. The study found a number of physical and mental health problems were elevated among this population. Most shocking of all, however, was the rate of completed suicides – which was over *19 times higher* than in the general Swedish population.<sup>72</sup>

A comprehensive review of the literature on the subject by the U.S. Centers for Medicare & Medicaid Services declared about the Swedish study that “we cannot exclude therapeutic interventions as a cause of the observed excess morbidity and mortality.”<sup>73</sup> In other words, not only does gender reassignment surgery (and other “therapeutic interventions” such as hormone therapy) not demonstrably benefit those who identify as transgender (including by reducing their risk of suicide) — *it may actively harm them*, and increase that risk instead.

## Legislative Response

Because of concerns like those described in this paper, bills to prohibit gender transition procedures for minors have been introduced by pro-family legislators. In 2020, South Dakota’s House of Representative passed the *Vulnerable Child Protection Act* (HB 1057) by a vote of 46-23, but the bill was later killed in committee in the Senate.<sup>74</sup> The Alabama Senate passed that state’s *Vulnerable Child Compassion and Protection Act* (SB 219) by a vote of 22-3, but final action was never completed because of the coronavirus pandemic.<sup>75</sup> At the federal level, Rep. Doug LaMalfa (R-Calif.) introduced a pair of bills — one to prohibit such procedures for minors (HB 8012) and one to prohibit federal funding of such procedures (HB 8013).<sup>76</sup> Family Research Council has also drafted model legislation, the SAFE Act (Save Adolescents From Experimentation), which includes a ban on the procedures for minors, a ban on public funding of such procedures, and regulations of insurance coverage for them.<sup>77</sup>

Although transgender activists who support invasive physiological gender transition procedures for minors will obviously oppose such legislation, there are two issues that have been raised in an effort to persuade even conservatives that they should be wary of these bills. These are described below.

### Parental Rights

Some critics have raised the question whether restricting gender transition procedures for minors would not violate another principle usually endorsed by the pro-family movement — that of “parental rights” to control the upbringing and care of their children.

It is true that these bills would prohibit these procedures, even if the child’s parents consent to them. However, *the law has never recognized “parental rights” as a justification for actions which endanger a child’s physical health and safety.*

The most obvious example is laws which prohibit child abuse. If a parent or any other person performs physical acts upon a child which inflict such harm that the child requires medical care, we normally consider that a crime. Indeed, many concerned observers, including the American College of Pediatricians,<sup>78</sup> have declared that gender transition for minors is a form of “child abuse.”

There are less dramatic areas, however, in which we also impose health and safety protections for children which may override “parental rights.” Parents may not choose to transport their young children in an automobile without using a car seat or seat belts. We do not permit parents to supply their young children with alcohol, cigarettes, or illicit drugs.

The proposed bills are actually quite modest in scope. They do not interfere at all with the parents’ rights to control the *moral* or *social* upbringing of their children. Parents of a child with gender dysphoria would remain completely free to change the child’s name, wardrobe, hairstyle, and other forms of “gender expression,” if they believe that is in the child’s best interest — even though others may

vigorously disagree. They remain free to request that schools and other institutions recognize the child in his or her preferred “gender identity,” rather than biological sex.<sup>79</sup>

These laws limit only *physical* interventions which disrupt or interfere with normal physical development, and/or which radically alter the child’s natural anatomy.<sup>80</sup> As noted above, such uses of drugs have *not* been approved by the Food and Drug Administration, and such surgeries have *not* been proven by high-quality scientific evidence to be safe and effective even for their intended purpose (to relieve gender dysphoria), let alone to justify such radical interference with nature.

Restricting such dangerous procedures is fully within the legitimate power of each state to regulate the practice of medicine.

### Claims of Economic Harm

LGBT activists have increasingly been using economic blackmail, rather than persuasion on the merits, to get state and local legislators to bow to their will on public policy issues. This tactic was used in South Dakota to resist H.B. 1057, which would have protected vulnerable children from the severe physical damage caused by certain “gender transition” procedures.<sup>81</sup> California’s liberal administration banned official state travel to Iowa after that state passed modest legislation in 2019 prohibiting Medicaid coverage of gender transition procedures.<sup>82</sup>

A classic example of the use of this tactic, however, was the attacks upon North Carolina after passage of HB 2, the so-called “bathroom privacy bill,” in March of 2016. This bill merely required that in state-owned buildings, sex-separated restrooms and changing facilities (such as school locker rooms and showers) should be used by people whose biological sex corresponds to the designation on the restroom or facility.<sup>83</sup>

LGBT activists responded with dire warnings of economic calamity for the state, and they succeeded in coercing some large sports entities such as the NBA<sup>84</sup> and the NCAA<sup>85</sup> to withdraw or refrain from placing some specific events at North Carolina venues. In addition, some corporations such as PayPal and Deutsche Bank announced (or claimed) that they were calling off planned expansions in the state.<sup>86</sup>

Such pressure led North Carolina to repeal the original version of HB 2 a year after it was enacted, in March 2017, replacing it with a “compromise” (albeit one that was still opposed by LGBT groups).<sup>87</sup>

However, *even during the year that the original HB 2 was in effect*, the economic impact on North Carolina was minimal. A study reported in April 2017 found, “The loss of business, concerts and sporting events represented just 6/100ths of 1 percent of the state’s nearly \$500 billion annual economy.” John Connaughton, professor of financial economics at the University of North Carolina-Charlotte, said the figure was so negligible as to amount to a “rounding error.”<sup>88</sup>

In fact, in February 2017 – when the original HB 2 had been in effect for almost a year – the biggest economic issue facing state officials was what to do with a \$552 million budget *surplus*.<sup>89</sup>

When one business group gave Texas similar warnings of economic doom if they adopted legislation opposed by LGBT activists, even *Politifact* did an analysis and found the claims “Mostly False.”<sup>90</sup>

## Conclusion

Family Research Council has grave concerns about even a social gender transition for minors. Kenneth Zucker, perhaps the world's leading expert on gender identity in children, has said:

I would argue that parents who support, implement, or encourage a gender social transition (and clinicians who recommend one) are implementing a psychosocial treatment that will increase the odds of long-term persistence.<sup>91</sup>

However, proposed legislation like that described above is actually modest in scope, in that it would place no restrictions upon the ability of minors who are supported by their parents to undertake a social transition, or to request that others recognize and affirm such a transition. (Of course, the response of other institutions, such as schools, to such a request must take into account not only the wishes of the transgender-identified child, but the well-being of other students as well.)

However, the implementation of invasive physiological gender transition procedures – puberty blockers, cross-sex hormones, and/or gender reassignment surgery – upon minors raises additional grave concerns. The interference with natural biological functions, the serious potential side effects, and the often irreversible nature of the physical changes that are made mean that a high bar would have to be reached to justify them.

The fact that there is no convincing evidence that these procedures improve mental health in the long run means that bar has not been met. And minors are certainly not capable of the kind of long-term evaluation of risks and benefits that would allow them to give “informed consent” for such procedures.

Invasive physiological gender transition procedures for minors should be prohibited by law.

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<sup>1</sup> Madeleine Kearns, “The Tragedy of the ‘Trans’ Child,” *National Review*, November 21, 2019, accessed October 16, 2020, <https://www.nationalreview.com/magazine/2019/12/09/the-tragedy-of-the-trans-child/>.

<sup>2</sup> Sarah Taylor, “Victory: New judge affirms that mom of 7-year-old ‘trans’ child James Younger will not be able to give son puberty-blocking hormones without his father's consent,” *The Blaze*, January 31, 2020, accessed October 16, 2020, <https://www.theblaze.com/news/victory-judge-rules-that-texas-mom-cannot-transition-7-year-old-james-younger>.

<sup>3</sup> An outstanding explanation of this philosophical debate can be found in: Nancy R. Pearcey, *Love Thy Body: Answering Hard Questions about Life and Sexuality* (Grand Rapids, Mich.: Baker Books, 2018). Chapter 6 (pp. 193-227) addresses the transgender issue.

<sup>4</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* (Arlington, VA: American Psychiatric Association, 2013), p. 829.

<sup>5</sup> *Merriam-Webster's Collegiate Dictionary, Eleventh Edition* (Springfield, Mass.: Merriam-Webster, Inc., 2005), s.v. “female” and “male.”

<sup>6</sup> “[W]hen a person senses a dissonance between body and mind, the mind wins. The body is dismissed as irrelevant.” Pearcey (2018), p. 195.

<sup>7</sup> American College of Pediatricians, *Gender Dysphoria in Children*, November 2018, accessed October 16, 2020, <https://www.acped.org/the-college-speaks/position-statements/gender-dysphoria-in-children>.

<sup>8</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition: DSM-5* (Washington, D.C.: American Psychiatric Publishing, 2013), 452.



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- <sup>9</sup> Gary Butler, Nastasja De Graaf, Bernadette Wren, Polly Carmichael, "Assessment and support of children and adolescents with gender dysphoria," *Archives of Disease in Childhood* 103, No. 7 (July 2018), 632.
- <sup>10</sup> *Ibid.*, 455.
- <sup>11</sup> Jiska Ristori and Thomas D. Steensma, "Gender dysphoria in childhood," *International Review of Psychiatry* 28:1, published online January 12, 2016, 15.
- <sup>12</sup> Michael K. Laidlaw, et al., "Letter to the Editor: 'Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society\* Clinical Practice Guideline,'" *Journal of Clinical Endocrinology & Metabolism*, published online November 23, 2018.
- <sup>13</sup> Kenneth J. Zucker, Susan J. Bradley, Allison Owen-Anderson, Devita Singh, Ray Blanchard, Jerald Bain, "Puberty-Blocking Hormonal Therapy for Adolescents with Gender Identity Disorder: A Descriptive Clinical Study," *Journal of Gay & Lesbian Mental Health*, 15:1 (2011), 59.
- <sup>14</sup> Tal Grunwald, MD, reviewer, "Precocious Puberty," *KidsHealth from Nemours*, September 2019, accessed October 16, 2020, <https://kidshealth.org/en/parents/precocious.html>.
- <sup>15</sup> Elizabeth Boskey, PhD, "Stop Precocious Puberty With Puberty Blockers," Medically reviewed by Susan Olender, MD, *Verywell Health*, January 11, 2020, accessed October 16, 2020, <https://www.verywellhealth.com/stopping-precocious-puberty-with-puberty-blockers-4135230?print>.
- <sup>16</sup> Grunwald, "Precocious Puberty," *KidsHealth from Nemours*.
- <sup>17</sup> Paul W. Hruz, Lawrence S. Mayer, and Paul R. McHugh, "Growing Pains: Problems with Puberty Suppression in Treating Gender Dysphoria," *The New Atlantis*, Spring 2017, 11, accessed October 16, 2020, <https://www.thenewatlantis.com/publications/growing-pains>.
- <sup>18</sup> Guido Giovanardi, "Buying time or arresting development? The dilemma of administering hormone blockers in trans children and adolescents," *Porto Biomedical Journal* 2(5), published online July 5, 2017, 154.
- <sup>19</sup> Dominic Wilkinson and Julian Savulescu, "Puberty-blocking drugs: the difficulties of conducting ethical research," *The Conversation*, July 25, 2019, accessed October 16, 2020, <https://theconversation.com/puberty-blocking-drugs-the-difficulties-of-conducting-ethical-research-120906>.
- <sup>20</sup> Sara Reardon, "Largest ever study of transgender teenagers set to kick off: Scientists will track psychological and medical outcomes of controversial treatments to help transgender adolescents transition," *Nature*, March 29, 2016, 560, <https://www.nature.com/news/largest-ever-study-of-transgender-teenagers-set-to-kick-off-1.19637>.
- <sup>21</sup> Denise Chew, et al., "Hormonal Treatment in Young People with Gender Dysphoria: A Systematic Review," *Pediatrics* 141(4), published online March 7, 2018, 15-16.
- <sup>22</sup> Kelsey Hayes, "Ethical Implications of Treatment for Gender Dysphoria in Youth," *Online Journal of Health Ethics* 14(2), 9, <https://aquila.usm.edu/ojhe/vol14/iss2/3/>.
- <sup>23</sup> Annelou L.C. de Vries, et al., "Puberty Suppression in Adolescents With Gender Identity Disorder: A Prospective Follow-Up Study," *Journal of Sexual Medicine* 8(8), August 2011, 2282.
- <sup>24</sup> Gary Butler, et al., "Assessment and support of children and adolescents with gender dysphoria," *Archives of Disease in Childhood* 103(7), 635.
- <sup>25</sup> Alexander Korte, et al., "Gender Identity Disorders in Childhood and Adolescence," *Deutsches Ärzteblatt International* 105(48), 2008, 839.
- <sup>26</sup> de Vries, et al., 2277.
- <sup>27</sup> Christopher Richards, Julie Maxwell, Noel McCune, "Use of puberty blockers for gender dysphoria: a momentous step in the dark," *Archives of Disease in Childhood* 104, published online January 17, 2019, 611.
- <sup>28</sup> Korte, et al., 839.
- <sup>29</sup> Richards, et al., 611.
- <sup>30</sup> de Vries, et al., 2276.
- <sup>31</sup> Ristori and Steensma, 15.
- <sup>32</sup> de Vries, et al., 2276.
- <sup>33</sup> Kenneth J. Zucker, "Debate: Different strokes for different folks," *Child and Adolescent Mental Health* 25(1), published online May 31, 2019, 36.
- <sup>34</sup> Richards, et al., 611.
- <sup>35</sup> See World Professional Association for Transgender Health, *Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People* (WPATH, 2012), p. 20 (explaining that bone development and height may be negatively affected by the use of GnRH analogues in children); Sarah Reardon, *Transgender Youth Study*



- Kicks Off*, 531 *Nature* 560, March 2016 (“But some scientists worry that putting off puberty in older children may disrupt bone and brain development, reducing bone density and leading to cognitive problems”); Richards C, Maxwell J, McCune N. Use of puberty blockers for gender dysphoria: a momentous step in the dark. *Archives of Disease in Childhood* 2019;104:611-612; Zucker, K. J. (2019), Debate: Different strokes for different folks. *Child Adolesc Ment Health*. doi:[10.1111/camh.12330](https://doi.org/10.1111/camh.12330).
- <sup>36</sup> Madeline B. Deutsch, editor, *Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People*, 2nd Edition (San Francisco: Center of Excellence for Transgender Health, Department of Family & Community Medicine, University of California, San Francisco), June 17, 2016, <https://transcare.ucsf.edu/sites/transcare.ucsf.edu/files/Transgender-PGACG-6-17-16.pdf>.
- <sup>37</sup> Michael Laidlaw, MD, “The Gender Identity Phantom,” Pediatric and Adolescent Gender Dysphoria Working Group Blog, October 24, 2018, accessed October 16, 2020, <http://gdworkinggroup.org/2018/10/24/the-gender-identity-phantom/>.
- <sup>38</sup> Eli Coleman, et al., “Table 2: Risks Associated with Hormone Therapy,” *Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People*, 7<sup>th</sup> Version (World Professional Association for Transgender Health, 2012), 40, [https://www.wpath.org/media/cms/Documents/SOC%20v7/Standards%20of%20Care\\_V7%20Full%20Book\\_English.pdf](https://www.wpath.org/media/cms/Documents/SOC%20v7/Standards%20of%20Care_V7%20Full%20Book_English.pdf).
- <sup>39</sup> Denise Chew, et al., “Hormonal Treatment in Young People With Gender Dysphoria: A Systematic Review,” *Pediatrics* 141(4), April 2018, <https://pediatrics.aappublications.org/content/pediatrics/141/4/e20173742.full.pdf>.
- <sup>40</sup> Butler, et al., 634-635.
- <sup>41</sup> Johanna Olson-Kennedy, et al., “Chest Reconstruction and Chest Dysphoria in Transmasculine Minors and Young Adults: Comparisons of Nonsurgical and Postsurgical Cohorts,” *JAMA Pediatrics* 172(5), published online March 5, 2018, 434, <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2674039>.
- <sup>42</sup> “Beverly Hills Plastic Surgeon, Gary Alter, MD, Performs Gender Reassignment Surgery on Youngest Transsexual Patient in the United States,” *PRWeb*, September 5, 2014, accessed October 16, 2020, <http://www.prweb.com/releases/2014/09/prweb12141694.htm>.
- <sup>43</sup> Butler, et al., 635.
- <sup>44</sup> Katie Muldowney, et al., “Transgender teen and ‘I Am Jazz’ star Jazz Jennings on sharing the final steps of her transition journey: her gender confirmation surgery,” ABC News, October 15, 2018, accessed October 16, 2020, <https://abcnews.go.com/Health/transgender-teen-jazz-star-jazz-jennings-sharing-final/story?id=58513271>
- <sup>45</sup> Christine Milrod, PhD and Dan H. Karasic, MD, “Age Is Just a Number: WPATH-Affiliated Surgeons’ Experiences and Attitudes Toward Vaginoplasty in Transgender Females Under 18 Years of Age in the United States,” *Journal of Sexual Medicine* Volume 14, Issue 4 (April 2017), Table 1, 626, <https://www.transgendercounseling.com/temp/wp-content/uploads/2018/09/Milrod-Karasic-2017-FINAL.pdf>.
- <sup>46</sup> R. Rossi Neto, F. Hintz, S. Krege, H. Rübber, F. vom Dorp, “Gender reassignment surgery - a 13 year review of surgical outcomes,” *International Brazilian Journal of Urology* Vol. 38 (1), January - February, 2012, 106, <https://www.scielo.br/pdf/ibju/v38n1/a14v38n1.pdf>.
- <sup>47</sup> Rossi Neto, et al., 97.
- <sup>48</sup> Nina Combaz and Annette Kuhn, “Long-Term Urogynecological Complications after Sex Reassignment Surgery in Transsexual Patients: a Retrospective Study of 44 Patients and Diagnostic Algorithm Proposal,” *American Journal of Urology Research* Volume 2 Issue 2, September 15, 2017, 39, <https://www.scireslit.com/Urology/AJUR-ID21.pdf>.
- <sup>49</sup> *Ibid.*, 42.
- <sup>50</sup> Diane Chen, et al., “Fertility Preservation for Transgender Adolescents,” *Journal of Adolescent Health* 61 (2017), 121, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5604229/pdf/nihms904183.pdf>.
- <sup>51</sup> *Ibid.*, 120-121.
- <sup>52</sup> American College of Pediatricians, “Chemical Castration – Not the Best for Children,” press release, October 27, 2011, <https://www.acped.org/chemical-castration-not-the-best-for-children>.
- <sup>53</sup> W. Hembree, P. Cohen-Kettenis, et al., “Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline,” *Journal of Clinical Endocrinology & Metabolism* 102(11), November 2017, 3893, <https://academic.oup.com/jcem/article/102/11/3869/4157558>.
- <sup>54</sup> Leena Nahata, et al., “Low Fertility Preservation Utilization Among Transgender Youth,” *Journal of Adolescent Health* 61(1), July 1, 2017, 40, [https://www.jahonline.org/article/S1054-139X\(16\)30958-2/fulltext](https://www.jahonline.org/article/S1054-139X(16)30958-2/fulltext).

- 
- <sup>55</sup> Kelsey Hayes, "Ethical Implications of Treatment for Gender Dysphoria in Youth," *Online Journal of Health Ethics* 14(2), 2018, 8, <https://aquila.usm.edu/ojhe/vol14/iss2/3/>.
- <sup>56</sup> "Evidence-based medicine," Wikipedia, accessed October 16, 2020, [https://en.wikipedia.org/wiki/Evidence-based\\_medicine](https://en.wikipedia.org/wiki/Evidence-based_medicine).
- <sup>57</sup> Hembree, et al., 3869-3903.
- <sup>58</sup> *Ibid.*, 3872.
- <sup>59</sup> For a more detailed analysis of the Endocrine Society guidelines, see: Peter Sprigg, "The Evidence Suggests Gender Transition Procedures for Minors are Experimental," FRC Blog, February 13, 2020, accessed October 16, 2020, <https://www.frcblog.com/2020/02/evidence-suggests-gender-transition-procedures-minors-are-experimental/>.
- <sup>60</sup> Kelli Miller, "Off-Label Drug Use: What You Need to Know," WebMD, accessed May 8, 2020, <https://www.webmd.com/a-to-z-guides/features/off-label-drug-use-what-you-need-to-know#1>.
- <sup>61</sup> See also: Peter Sprigg, "Off-Label Use of Drugs Are Fine for Gender Transitions, but Not for Coronavirus, Say Liberals," FRC Blog, March 31, 2020, accessed October 16, 2020, <https://www.frcblog.com/2020/03/-label-use-drugs-are-fine-gender-transitions-not-coronavirus-say-liberals/>.
- <sup>62</sup> Sophia Geffen, et al., "Advocacy for Gender Affirming Care: Learning from the Injectable Estrogen Shortage," *Transgender Health* Vol 3(1), 2018, 43, <https://www.liebertpub.com/doi/pdfplus/10.1089/trgh.2017.0025>.
- <sup>63</sup> Council on Science and Public Health, American Medical Association, "Hormone Therapies: Off-Label Uses and Unapproved Formulations," 2016, Table 1, p. 21, <https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/2016-interim-csaph-report-4.pdf>.
- <sup>64</sup> Madeline B. Deutsch, MD, MPH, "Overview of feminizing hormone therapy," UCSF Transgender Care, June 17, 2016, accessed October 16, 2020, <https://transcare.ucsf.edu/guidelines/feminizing-hormone-therapy>.
- <sup>65</sup> Carl Heneghan and Tom Jefferson, "Gender-affirming hormone in children and adolescents," *BMJ EBM Spotlight* Blog, February 25, 2019, accessed October 16, 2020, <https://blogs.bmj.com/bmjebmspotlight/2019/02/25/gender-affirming-hormone-in-children-and-adolescents-evidence-review/>.
- <sup>66</sup> Sahar Sadjadi, "The Endocrinologist's Office – Puberty Suppression: Saving Children from a Natural Disaster?" *Journal of Medical Humanities* 34, March 14, 2013, <https://considerations.neocities.org/Sadjadi-2013.pdf>.
- <sup>67</sup> Sandy E. James, et al., *The Report of the 2015 U.S. Transgender Survey* (Washington, DC: National Center for Transgender Equality, December 2016), <https://www.transequality.org/sites/default/files/docs/USTS-Full-Report-FINAL.PDF>.
- <sup>68</sup> Kevin Caruso, "Suicide Causes," Suicide.org, accessed October 16, 2020, <http://www.suicide.org/suicide-causes.html>.
- <sup>69</sup> Bianca D.M. Wilson, et al., "Characteristics and Mental Health of Gender Nonconforming Adolescents in California," *Health Policy Fact Sheet*, UCLA Center for Health Policy Research and The Williams Institute, December 2017, <https://williamsinstitute.law.ucla.edu/publications/gnc-youth-ca/>.
- <sup>70</sup> Jack L. Turban, et al., "Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation," *Pediatrics* 145(2):e20191725, February 2020.
- <sup>71</sup> For further analysis, see: Peter Sprigg, "Do Puberty-Blocking Drugs Make Transgender Kids Less Likely to Commit Suicide, or More?" FRC Blog, February 13, 2020, accessed October 16, 2020, <https://www.frcblog.com/2020/02/do-puberty-blocking-drugs-make-transgender-kids-emessem-likely-commit-suicideor-emmaorem/>.
- <sup>72</sup> Cecilia Dhejne, et al., "Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden," *PLoS ONE* 6 (2011), accessed October 16, 2020, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0016885>.
- <sup>73</sup> "Decision Memo for Gender Dysphoria and Gender Reassignment Surgery (CAG-00446N)," 62.
- <sup>74</sup> Penny Starr, "GOP Senators in SD Curb Lawsuits over Childhood 'Sex Change' Damages," *Breitbart*, February 12, 2020, accessed October 16, 2020, <https://www.breitbart.com/politics/2020/02/12/gop-senators-in-south-dakota-vote-to-protect-transgender-activists-from-victim-lawsuits/>.
- <sup>75</sup> Christopher Vondracek, "Alabama bill would ban transgender surgery for teens," *The Washington Times*, March 8, 2020, accessed October 16, 2020, <https://www.washingtontimes.com/news/2020/mar/8/alabama-republicans-seek-transgender-surgery-ban-t/>.



- 
- <sup>76</sup> Congressman Doug LaMalfa, "LaMalfa Introduces Legislation to Protect Children and Taxpayers from Paying the Price for Gender Reassignment Surgeries," press release, August 11, 2020, <https://lamalfa.house.gov/media-center/press-releases/lamalfa-introduces-legislation-to-protect-children-and-taxpayers-from>.
- <sup>77</sup> Available to legislators and pro-family groups by request to FRC.
- <sup>78</sup> Michelle A. Cretella, Quentin Van Meter, Paul McHugh, "Gender Ideology Harms Children," American College of Pediatricians, September 2017, 2.
- <sup>79</sup> A school's response to such a request, of course, must consider the legitimate interest of other students, such as physical privacy in showers, locker rooms, and restrooms.
- <sup>80</sup> Thus, these laws are different from – and more defensible than – laws recently adopted in some states which prohibit therapeutic sexual orientation or gender identity change efforts, even when such efforts are carried out using "talk therapy" alone. See: Peter Sprigg, "Protect Client and Therapist Freedom of Choice Regarding Sexual Orientation Change Efforts," Family Research Council, March 2014, <https://downloads.frc.org/EF/EF14C40.pdf>.
- <sup>81</sup> Lisa Kaczke, "Gov. Kristi Noem has 'a few concerns' about transgender bill," *Sioux Falls Argus Leader*, January 24, 2020, accessed October 16, 2020, <https://www.argusleader.com/story/news/politics/2020/01/24/south-dakota-legislature-gov-kristi-noem-has-a-few-concerns-transgender-bill/4562853002/>.
- <sup>82</sup> Gregg Re, "California adds Iowa to 'travel ban' over refusal to fund gender transitions," *Fox News*, September 17, 2019, accessed October 16, 2020, [https://www.foxnews.com/politics/california-adds-iowa-to-its-travel-ban-over-refusal-to-fund-gender-transitions?fbclid=IwAR1nBgR2\\_7AzGi5A9vTHfeDkclvGgidE\\_b34V3q9rF7-0RZwNbkDeJrrhJE](https://www.foxnews.com/politics/california-adds-iowa-to-its-travel-ban-over-refusal-to-fund-gender-transitions?fbclid=IwAR1nBgR2_7AzGi5A9vTHfeDkclvGgidE_b34V3q9rF7-0RZwNbkDeJrrhJE).
- <sup>83</sup> North Carolina Session Law 2016-3, House Bill 2, <https://www.ncleg.net/Sessions/2015E2/Bills/House/PDF/H2v4.pdf>.
- <sup>84</sup> Jill Martin, "NBA moves 2017 All-Star Game to New Orleans," CNN, August 19, 2016, accessed October 16, 2020, <http://edition.cnn.com/2016/08/19/sport/nba-all-star-game-moved-to-new-orleans/index.html>.
- <sup>85</sup> NCAA, "NCAA to relocate championships from North Carolina for 2016-17," press release, September 12, 2016, <http://www.ncaa.org/about/resources/media-center/news/ncaa-relocate-championships-north-carolina-2016-17>.
- <sup>86</sup> Emery P. Dalesio and Jonathan Drew, "AP Exclusive: Price tag of North Carolina's LGBT law: \$3.76B," Associated Press, March 27, 2017, accessed October 16, 2020, <https://apnews.com/fa4528580f3e4a01bb68bcb272f1f0f8/ap-exclusive-bathroom-bill-cost-north-carolina-376b>.
- <sup>87</sup> Bruce Henderson and Tim Funk, "The day after HB2's repeal, transgender people wake up to still-ambiguous law," *Charlotte Observer*, March 31, 2017, accessed October 16, 2020, <http://www.charlotteobserver.com/news/local/article141945379.html>.
- <sup>88</sup> Bradford Richardson and Valerie Richardson, "Transgender bathroom bill's hit to North Carolina economy amounts to scant 'rounding error,'" *The Washington Times*, April 3, 2017, accessed October 16, 2020, <http://www.washingtontimes.com/news/2017/apr/3/transgender-bathroom-bills-hit-to-north-carolina-e/>.
- <sup>89</sup> Colin Campbell, "NC has a budget surplus. Should it fund tax cuts or 'better schools and a stronger middle class'?" *The News & Observer*, February 9, 2017, accessed October 16, 2020, <https://www.newsobserver.com/news/politics-government/state-politics/article131766649.html>.
- <sup>90</sup> W. Gardner Selby, "Business group says bathroom law could lose Texas \$8.5 billion in GDP, up to 185,000 jobs," *PolitiFact*, February 3, 2017, accessed October 16, 2020, <https://www.politifact.com/factchecks/2017/feb/03/texas-association-business/business-group-says-bathroom-law-could-lose-texas/>.
- <sup>91</sup> Kenneth J. Zucker, "The myth of persistence: Response to 'A critical commentary on follow-up studies and 'desistance' theories about transgender and gender nonconforming children' by Temple Newhook et al. (2018)," *International Journal of Transgenderism* Vol. 19, Issue 2, May 29, 2018, <https://www.tandfonline.com/doi/full/10.1080/15532739.2018.1468293>.

