



Testimony on Kentucky House Bill 470

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Honorable Members:

My name is Dr. Jennifer Bauwens. I am representing Family Research Council. I'm also providing this testimony on the basis of my previous roles as a clinician with over 25 years of experience providing trauma therapy to children, as a researcher investigating the psychological effects of traumatic stress, and as an educator training future mental health practitioners.

I am grateful for the opportunity to express support for H.B. 470. I do so not at the chagrin of my profession or former colleagues but out of a deep concern and a desire to see the children of Kentucky protected from misdiagnosis and scientifically unsupported, highly invasive, and potentially irreversible interventions that will impact the rest of their lives.

Historically, children have been treated as a special and vulnerable class in the psychological and research fields. This followed a series of highly unethical and dangerous medical studies that came into public view (*e.g.*, Tuskegee). The need for ethical research standards culminated with the passage of the National Research Act of 1974 and the subsequent Belmont Report of 1979. The Belmont Report gave guidance for ensuring that research practices were nonexploitative. For this reason, children, as well as those with intellectual disabilities and other groups of people who could be targeted with coercive treatment and research protocols, were to be afforded extra precautions. Of course, greater caution was applied to children in light of the fact that they do not have the developmental capacity to understand

life-long decisions. How many of you wish you could change something you did in elementary or high school?

Even if natural observation wasn't enough to confirm the need for extra precautions for children, neurological science tells us why this is the case. A large-scale study of 20,000 brain scans funded by the National Institutes of Health found that the brain continues to develop into a person's mid-twenties.¹ Some of the greatest developmental strides occur within complex neurological structures during adolescence. The limbic system, also known as the seat of our emotions, relates to emotional processing, learning, and memory and is still undergoing major change. Importantly, this structure is known to play a role in many mental disorders. It also takes the longest to reach structural norms. Again, most people do not reach these norms until their twenties. Hence, the reason why the psychological, medical, and research fields have instituted ethical safeguards to move conservatively with regard to interventions, particularly when the evidence is weak or the research methods and agenda are in the early phases (which is the case in transgender research).

Sadly enough, some in my profession have set aside this basic understanding of child neurological, emotional, and cognitive development. Instead, they have embraced what has been referred to as "gender-affirming care," which permanently alters the human psyche and physiology through puberty blockers, cross-sex hormones, and surgical procedures to remove healthy body parts.

Incidentally, compared to other psychological disorders found in the DSM V-TR, gender-affirming care is the most invasive and unnecessary physiological intervention connected to a psychological issue. Gender-affirming care is also in direct opposition to the basic practices of good mental health treatment.

1) As I already mentioned, this experimental practice has been administered to children despite our understanding of a child's developmental capacity to truly give **informed consent** for social and physiological interventions that have life-long consequences.

2) The state of the scientific literature is based on consensus, not evidence. This means that people who have an interest in transgenderism joined a committee on the topic and voted on the use of gender-affirming care rather than promoting it based on the merits of the research findings addressing gender dysphoria, which are quite poor.

In fact, based on the research methods alone, never mind the topic of inquiry (*i.e.*, cross-sectional, self-selected samples, no RCTs, missing significant variables), gender-affirming practices should never have been allowed on anyone, particularly a child.

3) Therefore, it is no surprise that the benefits do not outweigh the risks. If I told you that 85 percent of research participants no longer had anxiety, posttraumatic stress, etc. after going through my treatment program, I'd be the next multimillion-dollar grant recipient of NIH funds, and suddenly you'd see clinics everywhere adopting my new treatment. This success rate is already true for gender dysphoric children.² If we provide basic supportive therapy or simply leave children alone, they will desist. Given this, gender-affirming care is not only unnecessary but potentially interrupts a natural developmental process.

4) Good mental health assessment and research accounts for competing diagnoses (variables in the research context). This one-size fits all approach to gender dysphoria emphasizes the source of psychological distress as related to an issue of acceptance. This is done at the expense of a thorough understanding of other psychological phenomena that may play a significant role with gender dysphoria (*i.e.*, neurodevelopmental and other mental disorders, substance use, self-harm, and trauma-based responses). The problem with this premise is that it explains away other sources of distress, not giving proper weight to other issues known to be prominent in the trans-identifying person may experience.³ Without including these known factors, the clinician and the researcher will almost always have an incomplete picture of the problem.

For example, gender-affirming practice and research do not account for the high rates of early childhood trauma (ACEs) found in the transgender-identifying population.

The UCLA Williams Institute, an LGBTQIA+ advocacy group, found that:

- **45 percent** of transgender-identifying people reported childhood sexual abuse.
- **44 percent** of transgender-identifying people reported childhood physical abuse.
- **75 percent** of transgender-identifying people reported childhood emotional abuse.⁴

As a trauma clinician, I can tell you that when someone has endured a traumatic event, particularly one sexual in nature, it is not uncommon for a person to hate the parts of their body or want to get rid of those aspects of themselves that made them vulnerable.

For the trauma survivor, an ideology that suggests a child can be born in the wrong body, unfortunately, fits hand-in-glove with the mentality of a person who self-harms and wants to dissociate from any aspect of their being or body that highlights vulnerability. Yet, despite this knowledge, clinical settings and research studies promoting transgenderism have not properly accounted for this significant variable and how it relates to gender dysphoria.

5) Empowerment and self-management are aspects of good mental health practices. We often hear that suicide will be the result if someone struggling to embrace their biological sex isn't offered transgender physiological procedures. It is entirely inappropriate and unethical for anyone in my profession to plant the idea that an inevitable outcome will be suicide (even in the absence of expressed suicidal ideation) if the clinician's counsel for gender-affirming care is not followed. This is blatantly manipulative and has no part in promoting psychological or relational health.

Scientifically, based on the research methods, alone, it is impossible to establish a causal relationship between the absence of gender-affirmative procedures and suicide. A recent meta-analysis from the suicide literature, which has been around a lot longer than research addressing gender dysphoria, notes a number of risk factors for a completed suicide, which curiously happen to be the same risk factors that are prominent in the trans-identifying community. This literature frequently reports that although we have identified risks, it is unclear which combination will ultimately lead someone to suicide.⁵

In the practice setting, using the threat of suicide to motivate a client or family member to engage in an intervention would be considered egregious when dealing with any other issue. I worked on a suicide hotline early in my career. We know someone who gambles often can be at risk for suicide, especially after a big loss. As a clinician, it would be bad practice for me to tell someone who gambles that if they don't get more money to gamble, they will probably commit suicide. Yet, this threat is given every day in settings all over where gender dysphoria is the focal point.

Taken together, the onus should be on the transgender theorists and researchers to tell us (with overwhelming results from RCTs, clinical practice reports, and long-term studies that report on five to seven years after the procedures) that this practice significantly benefits children and far outweighs the harms. Instead, this research body leaves many unanswered questions on the mental health front. Contrary to some political opinions, this matter is far from settled. Here are a few of the countless unanswered questions:

1. What factors are responsible for the new cohort of biological females presenting as gender dysphoric rather than the historic numbers who were primarily biological males?
2. Are there comorbidities that affect the outcome?
3. Do biological males and females have different outcomes as a response to gender affirmation and different responses to components of these interventions?
4. Is there an aspect of gender-affirming care that affects a quantifiable rate of those with gender dysphoria?
5. Who will fare best after surgery, cross-sex hormones, or puberty blockers?
6. **No common program evaluation questions have been answered.** For example, what effect does attending treatment alone have on mental health outcomes (without gender-affirming care)?
7. Who are the people who regret each one of these unique interventions (*i.e.*, puberty blockers, hormones, and surgeries)?
8. What effect do transgender physiological procedures have on trauma symptoms, the desire to self-harm, or other mental distresses?
9. Who is most likely to benefit or be harmed by these procedures?

Instead of answers to these questions, we've plowed ahead with practices that break ethical research and practice boundaries. Gender-affirming care creates an illusion that there is only one choice for children and their families to experience relief from their distress, and that is to become someone else.

Please look at www.cochrane.org, the website of the healthcare information organization the Cochrane Collaboration, and type in the name of any mental disorder (*i.e.*, depression). You will see a multitude of treatments that have been researched to help children through depression.⁶ When it comes to gender dysphoria, there's only one path.⁷ That is, to make yourself look like someone else. These kids deserve better. We should be innovating solutions to heal their distress, not coercing them onto a path that tells them they need to remove or change parts of who they are in order to be whole.

Please endorse the health and well-being of Kentucky's children and support H.B. 470.

Jennifer Bauwens is Director of the Center for Family Studies at Family Research Council.

Appendix

The following will address the problematic research used to promote physiological procedures (*i.e.*, puberty blockers, cross-sex hormones, and surgery), often referred to as “gender-affirming care.” These procedures have been promoted as an intervention to treat psychological distress defined by the Diagnostic and Statistical Manual of Mental Disorders Edition 5-TR (DSM 5-TR) as gender dysphoria (GD). This testimony speaks to the current state of the scientific literature and raises significant concerns about the quality of the evidence used to support gender-affirming care, which is the most invasive practice(s) for treating any psychological condition conceptualized in the DSM 5-TR. The studies referenced in this testimony raise concern that no clear and long-term path has been established to demonstrate that gender-affirming practices successfully reduce the psychological distress characteristic of GD. Lastly, this testimony will highlight ideological rather than scientific evidence that has been used to support the use of gender-affirming practices.

What Transgender Advocates Themselves Are Saying

Before looking at the studies, it is important to note what the primary transgender advocacy group has said about the current practices for treating gender dysphoria. The World Professional Association for Transgender Health (WPATH), formerly the Harry Benjamin International gender dysphoria Association, is a key promoter of using surgical procedures and off-label drugs to treat the psychological distress associated with GD. WPATH “publishes the leading clinical guidance on gender dysphoria treatment,” guidance that some medical groups claim is a “robust body of scientific evidence” and use to administer puberty blockers, cross-sex hormones, and surgical procedures.⁸ However, as the U.S. Courts of Appeal for the First and Fifth Circuits have recognized, WPATH’s guidelines “reflect not consensus, but merely one side in a sharply contested medical debate.”⁹

A few of WPATH’s own leaders have publicly agreed with the First and Fifth Circuits’ explanation of the group’s practice guidelines:

Dr. Stephen Levine, who helped author an early version of WPATH's guidelines, said "that later versions of WPATH were driven by political considerations rather than medical judgment." Dr. Levine said that the guidelines are not "politically neutral" because WPATH is "an advocacy group for the transgendered"—which means that its positions "sometimes conflict" with "scientific" evidence and that the group does not "tolerate" "[s]kepticism and strong alternate views." Dr. Levine added that the field generally is characterized by a "lack of rigorous research" about "the long-term effects of sex reassignment surgery and other gender dysphoria treatments."¹⁰

Dr. Marci Bowers, who has conducted more than 2,000 gender transition surgeries, known as vaginoplasties, noted that in formulating the guidelines, WPATH "tr[ie]d to keep out anyone who doesn't absolutely buy the party line that everything should be affirming," leaving "no room for dissent." And Bowers lamented that many clinics like Planned Parenthood would start giving adolescents cross-sex hormones after just "one visit."¹¹

Drs. Levine and Bowers are not the only medical and mental health professionals commenting on the credibility of the scientific evidence used to undergird gender-affirming practices.

The State of the Scientific Literature: Consensus Is Not Evidence

In 2012, the American Psychiatric Association (APA) Task Force reported on the treatment of Gender Identity Disorder (now gender dysphoria). The report concluded that the "quality of evidence pertaining to most aspects of treatment in all subgroups was determined to be low; however, areas of broad clinical consensus were identified and were deemed sufficient to support recommendations for treatment in all subgroups."¹² Note the use of the phrase "clinical consensus" rather than the term "evidence-based." Although this statement is from 2012, there has been very little change in the literature since the APA made this statement.

A study conducted in 2021 assessed the relationship between gender-affirming practices and mental-health outcomes. This study referred back to the APA's earlier conclusion that "the quality of evidence for treatment of gender dysphoria is low, and consequently, recommendations regarding gender-

affirming care have been driven by clinical consensus where empirical evidence is lacking. This [their] study offers new data that substantiate the current clinical consensus by expanding the evidence base in support of gender-affirming surgical care.” That is, the researchers who published this comment in 2021 recognized more studies are needed to claim robust empirical support for gender-affirming care that goes beyond clinical consensus.

These concerns certainly apply to WPATH’s guidelines, too, which are not true standards of care. They cannot be true standards of care because the evidence to support these practices does not exist. In short, these guidelines are “suggestions or recommendations,” not “authoritative, unbiased consensus positions designed to produce optimal outcomes.”¹³ Worse, they are suggestions based on an ideological construct, not solid empirical data. This is also the case in the latest iteration of the WPATH guidelines (version 8), which note that the standards are based on the “best available evidence.” Ultimately, these guidelines were constructed and then voted on by those who adhere to transgender ideology and not on the basis of studies with solid research methods and certainly not by any neutral research entities.

Given the use of highly physiologically invasive practices associated with “gender-affirming care,” the nature of these practices should necessitate the highest standard of evidence from studies that employ a wide range of research methods (*e.g.*, sampling, design). These studies should stand up against the most rigorous scrutiny, and any data used to support these practices should be available for secondary analysis. Instead, any efforts to question the methods of these studies are met with attempts to suppress legitimate scientific debate (*e.g.*, Washington State¹⁴). Further, many of the studies used to support these practices are from cross-sectional investigations, are missing key variables that are known to present in the transgender-identifying community (*e.g.*, ACES), and contain poorly defined constructs (*e.g.*, Turban study¹⁵ 2,3). Still, these studies are touted as proof that transgender physiological procedures have a positive and unquestionable effect on mental health. Some have even claimed this effect on mental health is settled, which is quite a remarkable statement that cannot be said about any other psychological issue outlined in the DSM 5-TR. Based on the research methods alone, these studies are limited in their ability to evaluate the impact of major life-altering pharmaceuticals and

surgeries, particularly on minors. Therefore, if the scientific method is adhered to, any claims to calling these procedures a settled science cannot be supported with any measure of professional integrity.

Reports on Puberty Blockers

These drugs have been portrayed as well-known and that their “effects are reversible.”¹⁶ Yet the effects cannot be accurately depicted as reversible because a child blocked from development can never get those years back. There is also evidence that these drugs could have long-term negative effects. At a minimum, as the U.K. High Court explained, “there is real uncertainty over the short and long-term consequences of the treatment with very limited evidence as to its efficacy, or indeed quite what it is seeking to achieve.”¹⁷

Likewise, Britain’s recent National Institute for Health and Care Excellence (NICE) review concluded that no “reliable comparative studies” exist about “the effectiveness and safety of [puberty blockers] for children and adolescents.”¹⁸ In 2022, the Cass Review was conducted at the commissioning of the U.K.’s National Health Service (NHS). After a review of the data and engagement with a wide range of stakeholders, the interim report expressed concern over the use of puberty blockers and hormones for children and adolescents.¹⁹

Advocacy groups like the American Academy of Pediatrics (AAP) also say that puberty blockers may have “long-term risks, particularly in terms of bone metabolism and fertility” that cannot currently be assessed by the “limited” research available.²⁰

In terms of mental health, puberty blockers in adolescents can lead to depression and other emotional disturbances. Some evidence shows “that after a year on [puberty blockers,] children reported greater self-harm, and that girls experienced more behavioral and emotional problems and expressed greater dissatisfaction with their body.”²¹

Lupron, the most widely prescribed puberty blocker for females in America, may block hormones that contribute to neurological development, “suppressing peak IQ” levels.²² As endocrinologist Dr.

William Malone has explained, puberty cannot necessarily be “restart[ed]” later: once “the system ‘goes to sleep,’” “it may not wake up.”²³ Finally, the use of puberty blockers may worsen gender dysphoria by “solidif[ying] the feeling of cross-gender identification.”²⁴

For these reasons, including the known physiological harms that come through these medical interventions (see attached paper), the U.K High Court found that “the consequences of the treatment are highly complex and potentially lifelong and life changing in the most fundamental way imaginable.”²⁵ “The treatment goes to the heart of an individual’s identity, and is thus, quite possibly, unique as a medical treatment.”²⁶ Additionally, Britain’s NICE review concluded the “limited evidence for the effectiveness and safety of gender-affirming hormones in children and adolescents with gender dysphoria” consists entirely of studies that are “uncontrolled,” “observational,” or have “outcomes of very low certainty.”²⁷

The Scientific Evidence Used to Support Transgender Medical Procedures Is Weak

Despite the learning from other countries, medical interest groups in the United States continue to claim that “research has linked gender-affirming care to a significantly lowered risk of depression, anxiety, and other negative mental health outcomes.”²⁸ For support, medical groups have cited “a study of 50 transgender youth undergoing puberty suppression treatment [that] found that the treatment was associated with decreased depression and improved quality of life over time.”²⁹

That study—contrary to the medical group’s claims of “robust” evidence—acknowledged that “there are few data concerning the impact of endocrine intervention on psychological function in transgender youth.”³⁰ And the study’s results are weak at best. Of 116 participants who entered the study, less than 50 percent completed it. Forty-seven participants were given drugs, and three participants were not. Many participants were older than age 18—as old as 25.³¹ A non-randomized control group (*i.e.*, participants given no drugs) of three participants is deficient, and the study makes no attempt to compare outcomes between the groups. Because the study makes little effort to control for other relevant variables, the study could not show any causal relationship between gender transition

treatments and outcomes. Finally, according to the study itself, “most predictors did not reach statistical significance.”³² No entity concerned with evidence-based medicine would rely so heavily on this study.

Medical groups in support of transgender procedures have also referenced “[a] systemic analysis of 25 years of peer-reviewed articles found a robust consensus that gender-affirming treatments, including treatments such as hormone therapy, improve the overall wellbeing of transgender individuals.”³³ This analysis only confirms the lack of any “robust” evidence here. The analysis says nothing about this issue—gender transition drugs and surgeries for children—and it concedes that even as to adults, available evidence is “limited” and seldom involves “prospective studies or randomized control trials.”³⁴

Likewise, groups advocating gender-affirming practices cite “multiple studies have revealed long-term positive outcomes for transgender people who have undergone puberty suppression.”³⁵ But the study by Anna Van der Miesen et al. explicitly rejected these groups’ proposition, stating that it does “not provide evidence about the direct benefits of puberty suppression over time and long-term mental health outcomes.”³⁶ According to the study, “Conclusions about long-term benefits of puberty suppression should thus be made with extreme caution needing prospective long-term follow-up studies with a repeated measure design with individuals being followed over time.”³⁷ Yet, scientific groups acting in good faith would not say that a study “reveal[s] long-term positive outcomes”³⁸ when it expressly repudiates that reading.³⁹

Regarding the claim of “long-term positive outcomes,” medical groups cite a 2014 study by de Vries et al.⁴⁰ The study looked at a mere 55 people, drawn with self-selection problems from an initial group of nearly 200.⁴¹ The study acknowledged that the self-selected group was “different from the transgender youth in community samples.”⁴² (“[A] selection bias could exist.”) No control group existed. And the study found that gender dysphoria and “body image difficulties persisted through puberty suppression”; in fact, these problems were worse after puberty suppression drugs were used than before.⁴³ This study also found only a “small amount of scientific evidence of the medical safety and efficacy and the psychological efficacy” of treatments that have been featured as “robust” evidence.⁴⁴

As for the commonly cited high risk for suicide, particularly among minors who identify as transgender, groups have repeatedly cited a study by Turban et al. that used responses from an online survey drawn from trans-affirming websites as “data.” The problem with this study is that it “excluded those who underwent medical intervention and then subsequently stopped identifying as transgender” and, of course, “those who actually committed suicide.”⁴⁵ “73% of respondents who reported having taken puberty blockers” “said they started on them after the age of 18 years”—which is even not when puberty blockers are prescribed.⁴⁶ The study itself concedes that it “does not allow for determination of causation.”⁴⁷

Admission of Harm Is Rising

On the other hand, a growing body of evidence shows gender transition drugs and surgeries harm children (see the attached paper). Specifically, these interventions are risky and unnecessary as there is also evidence that up to 94 percent of children experiencing gender dysphoria no longer suffer from it by adulthood. This finding has been supported by WPATH’s guidelines, which report that 73 to 94 percent of children referred for GD have conditions that do not “continue into adulthood.”⁴⁸ And the medical group’s own study says that “predicting individual persistence at a young age will always remain difficult.”⁴⁹ Other studies confirm that most children desist.⁵⁰

However, if a child is introduced to puberty blockers to prevent normal development, once they are used, they almost always lead to the use of cross-sex hormones that permanently alter the child’s body. For this reason, many countries—including the United Kingdom, Sweden, and Finland—are moving away from these experimental interventions. Specifically, a number of countries have conducted their own reviews of physiological gender-affirming care and have all warned against these procedures:

- **Britain’s National Health Service’s** systematic review found a lack of evidence to support the use of puberty blockers and cross-sex hormones.⁵¹
- **France’s National Academy of Medicine** warned about the deleterious long-term side effects of puberty blockers and cross-sex hormones in children and adolescents. They further noted that

there is no solid predictive measure to ascertain the persistent or transient nature of gender dysphoria.⁵²

- **The Finnish Health Authority's** systematic review determined that GD should first be treated as a psychological condition rather than introducing physiological procedures or drugs.⁵³
- **The Royal Australian and New Zealand College of Psychiatrists** released a statement noting a need for better evidence and assessments for treating GD in children and adolescents. They also determined that the current evidence for gender-affirming care is weak.⁵⁴
- **The Swedish National Board of Health and Welfare** in 2022 found that the risks of these physiological hormones and procedures were greater than the benefits. This followed the Children's Hospital at the Karolinska Institute's decision to halt physiological affirming care based on their findings that the use of puberty blockers and hormones carried irreversible and negative consequences.⁵⁵

A New Cohort, but an Old and Untested Method

The protocols for gender affirmation procedures were designed 15 years ago and have no application to the patient population now presenting with gender dysphoria—overwhelmingly, adolescent females.

Since 2008, the share of biological female college students identifying as transgender has increased 100-fold.⁵⁶ Twice as many girls as boys struggle with gender dysphoria, when the opposite was true just a few years ago.⁵⁷ At the same time, “the number of gender clinics in the U.S. has grown from one in 2007 to hundreds today.”⁵⁸ Medical professionals have called this rise in female GD a “clinical phenomenon” with “uncertain diagnostic significance making up a substantial proportion.”⁵⁹ Many attribute this change to the rise of “rapid onset gender dysphoria.”⁶⁰ (The professor who coined the phrase was promptly relieved of her position.⁶¹)

The lead author of the Dutch study recently cautioned practitioners about using the Dutch Protocol to treat the more recent wave of girls who present as adolescents with gender dysphoria, calling this a “new developmental pathway ... involving youth with postpuberty adolescent-onset transgender histories.”⁶² “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.”⁶³

Another of the original Dutch protocol researchers agrees. Thomas Steensma, a researcher at the Center of Expertise on gender dysphoria, explained that it is unknown “whether studies we have done in the past can still be applied to this time. Many more children are registering, and [are] also a different type.”⁶⁴ Youth “with post puberty adolescent-onset transgender histories” were not studied in the earlier evaluations.⁶⁵ Steensma criticized American physicians for “blindly adopting [the Dutch] research” without accounting for the change in the population of GD patients.⁶⁶

Particularly given this new population, it is reasonable and responsible to put a hold on experimental treatments on unstudied patient groups. As one leading gender transition doctor—a WPATH board member—cautioned, “we’re going to have more young adults who will regret having gone through this process” thanks to doctors “[r]ushing people through the medicalization” and failing “to evaluate the mental health of someone historically in current time, and to prepare them for making such a life-changing decision.”⁶⁷

Regret: An Understudied Reality

There are also growing reports from those referred to as detransitioners. Many who are coerced into experimental medical interventions later regret that irreversible decision. One recent study, although limited in design, found that 60 percent of those who detransitioned “bec[ame] more comfortable identifying as their natal sex,” and most “felt that they did not receive an adequate evaluation from a doctor” “before starting transition.”⁶⁸

In this study, participants recognized that there were other root causes for gender dysphoria that were not addressed, and the transitioning process prevented them from addressing the true source of distress:

- **58 percent** said the GD was caused by trauma or a mental health condition,

- **51 percent** reported the process of transitioning delayed or prevented them from dealing with or being treated for trauma or a mental health condition, and
- **41 percent** said what they thought were feelings of being transgender were the result of a mental health condition.

In sum, there is a lack of scientific evidence to support the claim that gender-affirming practices account for any sustained reduction in gender dysphoria. There is evidence that puberty blockers, cross-sex hormones, and surgical procedures can cause permanent physiological damage and cause psychological harm. There is also a growing awareness of those who are unhappy with their gender-affirming care and have decided to detransition. Further investigation is needed to understand this population's experiences and those who did not fare well following these medically based practices.

Given the aforementioned reasons, please support Kentucky H.B. 470.

¹ Ajay Nadig et al., "Morphological integration of the human brain across adolescence and adulthood," *Proceedings of the National Academy of Sciences of the United States of America* 118, no. 14 (2021): e2023860118, <https://www.pnas.org/content/118/14/e2023860118>.

² Jiska Ristori and Thomas D Steensma, "Gender dysphoria in childhood," *International Review of Psychiatry* 28, no. 1 (2016): 13–20, <https://doi.org/10.3109/09540261.2015.1115754>; Devita Singh et al., "A Follow-Up Study of Boys With Gender Identity Disorder," *Front Psychiatry* 12 (2021): 632784, <https://doi.org/10.3389/fpsy.2021.632784>.

³ Chris Rowe et al., "Prevalence and correlates of substance use among trans female youth ages 16–24 years in the San Francisco Bay Area," *Drug and Alcohol Dependence* 147 (2015): 160–66, <https://doi.org/10.1016/j.drugalcdep.2014.11.023>.

⁴ Ilan H. Meyer et al., "LGBTQ People in the US: Select Findings from the Generations and TransPop Studies," UCLA School of Law – Williams Institute, June 2021, <https://williamsinstitute.law.ucla.edu/wp-content/uploads/Generations-TransPop-Toplines-Jun-2021.pdf>.

⁵ Christine B. Cha et al., "Annual Research Review: Suicide among youth - epidemiology, (potential) etiology, and treatment," *Journal of Child Psychology and Psychiatry* 59, no. 4 (2018): 460–82, <https://doi.org/10.1111/jcpp.12831>.

⁶ "Site search: Depression," The Cochrane Collaboration, accessed January 23, 2023, <https://www.cochrane.org/search/site/depression>.

⁷ "Site search: Gender dysphoria," The Cochrane Collaboration, accessed January 23, 2023, <https://www.cochrane.org/search/site/gender%20dysphoria>.

⁸ Amicus Brief, *Brandt v. Rutledge*, No. 21-2875, at 21 (8th Cir. 2021), <https://downloads.frc.org/EF/EF21K36.pdf>.

⁹ *Gibson v. Collier*, 920 F.3d 212, 221 (5th Cir. 2019); see also *Kosilek v. Spencer*, 774 F.3d 63, 78–79 (1st Cir. 2014) (discussing debate within the medical community).

¹⁰ Amicus Brief, *Brandt v. Rutledge*, at 22.

¹¹ *Id.*, at 23.

¹² William Byne et al., “Report of the American Psychiatric Association Task Force on Treatment of Gender Identity Disorder,” *Archives of Sexual Behavior* 41, no. 4 (2012): 759–96, <https://pubmed.ncbi.nlm.nih.gov/22736225/>.

¹³ William J. Malone et al., “Letter to the Editor, Proper Care of Transgender and Gender-diverse Persons in the Setting of Proposed Discrimination: A Policy Perspective,” *The Journal of Clinical Endocrinology & Metabolism* 106, no. 8 (2021): e3287–88, <https://academic.oup.com/jcem/article/106/8/e3287/6190133>.

¹⁴ Jason Rantz, “Despite ‘concerning’ transgender study, UW kept quiet because of positive coverage,” 770 KTTH, last updated August 24, 2022, <https://mynorthwest.com/3602854/rantz-despite-concerning-trans-study-uw-kept-quiet-because-of-positive-coverage/>.

¹⁵ Leor Sapir, “A New Low: Advocates of pediatric gender transition publish a fatally flawed study purporting to debunk the social-transition hypothesis,” *City Journal*, August 5, 2022, <https://www.city-journal.org/major-flaws-in-new-study-on-pediatric-gender-transition>; Michelle M. Johns et al., “Transgender Identity and Experiences of Violence Victimization, Substance Use, Suicide Risk, and Sexual Risk Behaviors Among High School Students — 19 States and Large Urban School Districts, 2017,” *MMWR* 68 no. 3, 67–71. <https://www.cdc.gov/mmwr/volumes/68/wr/mm6803a3.htm>.

¹⁶ Amicus Brief, *Brandt v. Rutledge*, at 11.

¹⁷ Tavistock ¶ 134; see *id.* ¶ 73 (noting “no overall improvement in mood or psychological wellbeing”); see Amicus Brief, *Brandt v. Rutledge*.

¹⁸ “Evidence review: gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria,” National Institute for Health and Care Excellence, March 11, 2021, 40, https://cass.independent-review.uk/wp-content/uploads/2022/09/20220726_Evidence-review_GnRH-analogues_For-upload_Final.pdf.

¹⁹ “Independent review of gender identity services for children and young people: Interim report,” The Cass Review, February 2022, <https://cass.independent-review.uk/wp-content/uploads/2022/03/Cass-Review-Interim-Report-Final-Web-Accessible.pdf>.

²⁰ Jason Rafferty, et al., “Ensuring Comprehensive Care and Support for Transgender and Gender-Diverse Children and Adolescents,” *Pediatrics* 142, no. 4 (2018): e2018-2162, <https://pubmed.ncbi.nlm.nih.gov/30224363/>.

²¹ Michael Briggs, “Tavistock’s Experimentation with Puberty Blockers: Scrutinizing the Evidence,” *Transgender Trend*, March 5, 2019, accessed January 27, 2022, <https://www.transgendertrend.com/tavistock-experiment-puberty-blockers/>.

²² Amicus Brief, *Brandt v. Rutledge*.

²³ *Id.*

²⁴ Tavistock ¶ 76; see Amicus Brief, *Brandt v. Rutledge*.

²⁵ Tavistock ¶ 134; see Amicus Brief, *Brandt v. Rutledge*.

²⁶ *Id.*

²⁷ “Evidence review: gender-affirming hormones for children and adolescents with gender dysphoria,” National Institute for Health and Care Excellence, March 11, 2021, 50, https://cass.independent-review.uk/wp-content/uploads/2022/09/20220726_Evidence-review_Gender-affirming-hormones_For-upload_Final.pdf.

²⁸ Amicus Brief, *Brandt v. Rutledge*, at 12.

²⁹ Amicus Brief, *Brandt v. Rutledge*, at 12, 13.

³⁰ Christal Achille et al., “Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: preliminary results,” *International Journal of Pediatric Endocrinology*, 8 (2020), <https://ijpeonline.biomedcentral.com/articles/10.1186/s13633-020-00078-2>.

³¹ *Ibid.*, Tbl. 1; see also Tbl. 2 (apparently noting that 24 participants were only given cross-sex hormones).

³² *Ibid.*

³³ Amicus Brief, *Brandt v. Rutledge*, at 18.

³⁴ “What does the scholarly research say about the effect of gender transition on transgender well-being?,” Cornell University, accessed January 27, 2022, <https://whatwewknow.inequality.cornell.edu/topics/lgbt-equality/what-does-the-scholarly-research-say-about-the-well-being-of-transgender-people/>.

³⁵ Amicus Brief, *Brandt v. Rutledge*, at 18-19.

³⁶ Anna I. R. van der Miesen et al., “Psychological Functioning in Transgender Adolescents Before and After Gender-Affirmative Care Compared With Cisgender General Population Peers,” *Journal of Adolescent Health* 66, no. 6 (2020): 669, 703, <https://www.sciencedirect.com/science/article/abs/pii/S1054139X20300276>.

³⁷ *Ibid.*

³⁸ Amicus Brief, *Brandt v. Rutledge*, at 19.

³⁹ *Ibid.* It is also worth noting that the study controls for few variables and relies on self-reported data rather than “a diagnosis of any mental health condition made by clinical assessment.”

⁴⁰ Amicus Brief, *Brandt v. Rutledge*, at 19.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*, at 19-20.

⁴⁴ Annelou L.C. de Vries et al., “Young adult psychological outcome after puberty suppression and gender reassignment,” *Pediatrics* 134, no. 4 (2014), <https://pubmed.ncbi.nlm.nih.gov/25201798/>.

⁴⁵ Michael Biggs, “Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria,” *Archives of Sexual Behavior* 49 (2020): 2227-29, <https://link.springer.com/article/10.1007/s10508-020-01743-6>.

⁴⁶ *Ibid.*

⁴⁷ Jack L. Turban et al., “Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation,” *Pediatrics* 145, no. 2 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7073269/>.

⁴⁸ “Standards of Care for the Health of Transexual, Transgender, and Gender-Nonconforming People,” World Professional Association for Transgender Health, 7, https://www.wpath.org/media/cms/Documents/SOC%20v7/SOC%20V7_English_2012.pdf?t=1613669341.

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- ⁵⁰ E.g., Madeleine S.C. Wallien and Peggy T. Cohen-Kettenis, “Psychosexual outcome of gender-dysphoric children,” *Journal of the American Academy of Child and Adolescent Psychiatry* 47, no. 12 (2008): 1413–23, <https://pubmed.ncbi.nlm.nih.gov/18981931/>; “A follow-up study of boys with gender identity disorder,” Devita Singh Ph.D. Dissertation, University of Toronto, 2012, <http://images.nymag.com/images/2/daily/2016/01/SINGH-DISSERTATION.pdf>.
- ⁵¹ “Evidence review: Gender-affirming hormones for children and adolescents with gender dysphoria,” National Institute for Health and Care Excellence; “Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria,” National Institute for Health and Care Excellence.
- ⁵² French National Academy of Medicine, “Medicine and gender transidentity in children and adolescents,” press release, February 25, 2022, <https://www.academie-medecine.fr/la-medecine-face-a-la-transidentite-de-genre-chez-les-enfants-et-les-adolescents/?lang=en>.
- ⁵³ COHERE Finland, “Medical treatment methods for dysphoria associated with variations in gender identity in minors – recommendation,” summary of recommendation, June 16, 2020, [https://palveluvalikoima.fi/documents/1237350/22895008/Summary_minors_en+\(1\).pdf/fa2054c5-8c35-8492-59d6-b3de1c00de49/Summary_minors_en+\(1\).pdf?bcs-agent-scanner=e41c0523-961c-1447-8ec3-c04775b7be1b](https://palveluvalikoima.fi/documents/1237350/22895008/Summary_minors_en+(1).pdf/fa2054c5-8c35-8492-59d6-b3de1c00de49/Summary_minors_en+(1).pdf?bcs-agent-scanner=e41c0523-961c-1447-8ec3-c04775b7be1b).
- ⁵⁴ The Royal Australian and New Zealand College of Psychiatrists, “Recognising and addressing the mental health needs of people experiencing Gender Dysphoria/Gender Incongruence,” petition statement 103, August 2021, <https://www.ranzcp.org/news-policy/policy-and-advocacy/position-statements/gender-dysphoria>.
- ⁵⁵ The Swedish National Board of Health and Welfare, “Updated recommendations for hormone therapy for gender dysphoria in young people,” press release, February 22, 2022, <https://www.socialstyrelsen.se/om-socialstyrelsen/pressrum/press/uppdaterade-rekommendationer-for-hormonbehandling-vid-konsdysfori-hos-unga/>.
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- ⁵⁷ Amicus Brief, *Brandt v. Rutledge*, at 12.
- ⁵⁸ Id.
- ⁵⁹ Id.
- ⁶⁰ Abigail Shrier, “When Your Daughter Defies Biology,” *The Wall Street Journal*, January 6, 2019, <https://on.wsj.com/3nIHUKD>.
- ⁶¹ Abigail Shrier, “Top Trans Doctors Blow the Whistle on ‘Sloppy’ Care,” *Common Sense*, October 4, 2021, <https://bariweiss.substack.com/p/top-trans-doctors-blow-the-whistle>.
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⁶³ Ibid.

⁶⁴ Grace Williams, “Dutch puberty-blocker pioneer: Stop ‘blindly adopting our research,’” 4thWaveNow, March 16, 2021, <https://bit.ly/3nj6onT>.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Amicus Brief, *Brandt v. Rutledge*.

⁶⁸ Lisa Littman, “Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners,” *Archives of Sexual Behavior* 50 (2021): 3353–69, <https://link.springer.com/article/10.1007/s10508-021-02163-w>.