Dear Chair Roegner, Vice Chair Antani, Ranking Member Hicks-Hudson and Members of the Senate Government Oversight Committee:

I am providing this testimony as a representative of Do No Harm Action in support of Ohio House Bill 68.

I am a physician who is Board Certified in Internal Medicine and Diabetes/Endocrinology and Metabolism. I am a Senior Fellow with Do No Harm..

Since the end of my fellowship in 1986, I have been in the active and continuous practice of Endocrinology to the present day. I am licensed to practice medicine in Ohio, Utah, and Nevada. I joined a medical practice in Utah in 2022. My comments do not reflect the views of my employer, Intermountain Health.

I served as the sole endocrinologist in a group of 110 physicians in northeastern Ohio before establishing an independent practice in 2003. I have provided care for both adults and children.

For about a decade (2003-2013) while providing care in my independent practice, I became the key physician in northeastern Ohio offering hormonal interventions for adults with "gender dysphoria". My name was listed on the principal LGBTQ website as the "go to" physician.

I provided hormonal care for approximately 100 persons as young as 18. During this period, I observed that my patients had minimal psychologic evaluation and treatment for their significant psychic distress. I stopped accepting new patients with "gender dysphoria" when I realized the lack of benefit and the harm these interventions caused.

Summary of this testimony:

In this document I will analyze and summarize the evidence in support of these five key points. 1. "Gender dysphoria" is a construct. In minors, in most cases, it arises from previous trauma, abuse, social isolation, depression, and other psychosocial factors.

2. Hormonal and surgical interventions usually leave psychologic issues unexplored and unresolved. These interventions can cause substantial harm and create permanent patients out of healthy young people.

3. Professionals who advocate for medical intervention fail to admit that the evidence base is poor. The extrapolation of the flimsy existing evidence to a "one size fits all" generalized approach is profoundly unscientific. These interventions are experimental and violate the foundational principles of medical ethics and informed consent.

4. The interventions that HB 68 bans are neither safe nor effective. I will review the harms of puberty blockers and opposite sex hormones, the risk of post-surgical complications, and the experience of desisters and detransitioners.

5. There is no medical consensus in support of the "gender affirmation" model. Medical societies that endorse these interventions are politicized and do not represent the viewpoint of their members. Countries with much more experience than the US have curtailed hormonal and surgical interventions in minors. Unfortunately, a set of perverse financial incentives is likely to play an important role in the massive expansion of these harmful interventions in the U.S.

"Gender dysphoria" is a construct. In most cases in minors, it arises from previous trauma, abuse, social isolation, depression, and other psychosocial factors.

Diagnosis of "gender dysphoria" is based on feelings and behavior.

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is used by clinicians and researchers to diagnose and classify mental disorders. The latest version is called DSM-5-TR. [1] In the DSM, "gender dysphoria" is defined in children as: A marked incongruence between one's experienced/expressed gender and "assigned" gender, lasting at least six months, as manifested by at least six of the following (one of which must be the first criterion):

- A strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one's assigned gender);
- In boys (assigned gender), a strong preference for cross-dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing;

[1] American Psychiatric Associa0on, *Diagnos(c and Sta(s(cal Manual of Mental Disorders. 5th Ed. Text Revision.* , (American Psychiatric Associa0on., 2022).

- A strong preference for cross-gender roles in make-believe play or fantasy play; • A strong preference for the toys, games or activities stereotypically used or engaged in by the other gender;
- A strong preference for playmates of the other gender;
- In boys (assigned gender), a strong rejection of typically masculine toys, games, and activities and a strong avoidance of rough-and-tumble play; or in girls (assigned gender), a strong rejection of typically feminine toys, games, and activities;
- A strong dislike of one's sexual anatomy; or

• A strong desire for the physical sex characteristics that match one's experienced genders. • In adolescents, the DSM-5-TR criteria "clinically significant distress" is a criterion for diagnosis.[2]

More than 70% of children with "gender dysphoria" have had recent trauma, or have a history of abuse, autism spectrum disorder, homosexual orientation, depression, anxiety, or bullying.[3,4,5,6,7,]The DSM fails to consider these diagnoses in its descriptions of "gender dysphoria".

[2] Ibid.

[3] J. Elkadi and others, 'Developmental Pathway Choices of Young People Presen0ng to a Gender Service with Gender Distress: A Prospec0ve Follow-up Study', *Children (Basel),* 10 (2023).

[4] L. Engel and others, 'Assessment of Quality of Life of Transgender and Gender-Diverse Children and Adolescents in Melbourne, Australia, 2017-2020', *JAMA Netw Open,* 6 (2023).

[5] L. LiUman, 'Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transi0on Who Subsequently Detransi0oned: A Survey of 100 Detransi0oners', *Arch Sex Behav,* 50 (2021).

[6] J. W. Wanta and others, 'Mental Health Diagnoses among Transgender Pa0ents in the Clinical Se[ng: An All-Payer Electronic Health Record Study', *Transgend Health,* 4 (2019).

[7] T. A. Becerra-Culqui and others, 'Mental Health of Transgender and Gender Nonconforming Youth Compared with Their Peers', *Pediatrics,* 141 (2018).

Hormonal or surgical interventions do not address deep-seated emotional and psychologic problems, as I will review in more detail below[8,9].

"Gender dysphoria" can be influenced by what society considers stereotypic masculine and feminine behavior. Dr. Stephen Levine is an internationally known psychiatrist with expertise in "gender dysphoria". He writes: "What must a 12-year-old, for example, understand about

masculinity and femininity that enables the conviction that 'I can never be happy in my body'?"[10] Children and adolescents are unable to imagine life as an adult man or woman.

Feeling disconnected from or uncomfortable with one's body is a normal and common experience for adolescents. This discomfort during normal puberty is not a disease state. Importantly, discomfort or distress is especially common in those with anxiety, autism, eating disorders or a history of trauma.[11,12]

The famous psychiatrist Carl Jung stated in 1957: "Just as people can catch measles and scarlet fever from one another, so can they catch the ways of feeling, thinking, and behaving. The more people live together in heaps, the less each individual counts, and the more he or she will be inclined to take

[8] A. L. de Vries and others, 'Young Adult Psychological Outcome ader Puberty Suppression and Gender Reassignment', *Pediatrics,* 134 (2014).

[9] A. L. de Vries and others, 'Puberty Suppression in Adolescents with Gender Iden0ty Disorder: A Prospec0ve Follow up Study', *J Sex Med,* 8 (2011).

[10] S. B. Levine, 'Ethical Concerns About Emerging Treatment Paradigms for Gender Dysphoria', *J Sex Marital Ther,* 44 (2018).

[11] A. N. Nabbijohn and others, 'Gender Variance and the Au0sm Spectrum: An Examina0on of Children Ages 6-12 Years', *J Au(sm Dev Disord,* 49 (2019).

[12] E. L. Lantz and others, 'Conceptualizing Body Dissa0sfac0on in Ea0ng Disorders within a Self-Discrepancy Framework: A Review of Evidence', *Eat Weight Disord,* 23 (2018).

his or her cue from the collective rather than pursue an individual ideal."[13] Eating disorders are also associated with social contagion.[14,15]

Adolescents are strongly influenced by their peers and by their peer group on social media.[16,17] One

study of 1655 young people with a mean age of 15.7 years reported that of those who wanted to change their sex, 55% had friends who also "came out" as transgender at around the same time.[18]. This large study was retracted after activist pressure on the publisher; the conclusions and the methodology remain sound. [19]

The medical and scientific diagnosis of sex in human beings is based on biology. Human beings live their lives as one of two biologic sexes, male and female.[20] Sex is almost always simply observed at birth, not "assigned." Examination of an infant's external genitalia will immediately and accurately reveal whether that infant is male or female. The incidence of intersex or ambiguous genitalia is estimated to occur in less than 1 in 10,000 births.[21] These rare conditions are the only occasions in which the sex of a newborn may be uncertain.

[13] Carl Jung, *The Undiscovered Self*, (Signet Books, 1957).

[14] D. M. Hutchinson and R. M. Rapee, 'Do Friends Share Similar Body Image and Ea0ng Problems? The Role of Social Networks and Peer Influences in Early Adolescence', *Behav Res Ther,* 45 (2007).

[15] T. A. Meyer and J. Gast, 'The Effects of Peer Influence on Disordered Ea0ng Behavior', *J Sch Nurs,* 24 (2008). [16] L. LiUman, 'Parent Reports of Adolescents and Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria', *PLoS One,* 13 (2018).

[17] S. Diaz and J. M. Bailey, 'Rapid Onset Gender Dysphoria: Parent Reports on 1655 Possible Cases', *Arch Sex Behav,* 52 (2023).

[18] Ibid.

[19] 'Springer to Retract a Key Paper in Response to Ac0vist Demands', (hUps://segm.org/retrac0on-of-key-publica0on in-response-to-ac0vist-pressures).

[20] A. Bhargava and others, 'Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scien0fic Statement', *Endocr Rev,* 42 (2021).

[21] 'Intersex Society of America, Incidence of Intersex'.

Males have XY chromosomes and females have XX chromosomes in every cell in their body. Therefore, genetic analysis, performed at birth, can reveal the sex of the rare child born with

ambiguous genitalia.

As defined by biology and reproductive function, sex is clear, binary, and cannot be changed. The Endocrine Society states that sex is a biological concept, that "all mammals have two distinct sexes" and that "in mammals, numerous sexual traits (gonads, genitalia, etc.) that typically differ in males and females are tightly linked to each other."[22]

While hormonal and surgical procedures may enable some individuals to appear to others to be the opposite sex during some parts of their lives, no procedure can enable an individual to perform the reproductive function of the opposite sex. Dr Christiane Nusslein-Volhard the Nobel prize winning biologist has stated, "all mammals have two sexes and man is a mammal." "There are people who want to change their gender, but they can't do it"[23]

Hormonal and surgical interventions usually leave psychologic issues unexplored and unresolved.

"Gender dysphoria" in minors usually resolves if left untreated.

[22] Bhargava and others

[23] Michael Tennant, 'Nobel Prize-Winning German Biologist: Mul0ple Genders Are "Nonsense" and "Unscien0fic"', in *The New American,* (hUps://thenewamerican.com/nobel-prize-winning-german-biologist-mul0ple-genders-are nonsense-and-unscien0fic/?print=pdf: TheNewAmerican.com, 2022).

Eleven studies reveal that approximately 90% of children who are diagnosed with "gender dysphoria" will "desist" if left untreated (no medical interventions). [24,25,26,27] In other words,

"gender dysphoria" will resolve on its own by the end of puberty or adulthood. [28]Among teens and young adults who have experienced "rapid onset gender dysphoria" (those with no sign of discomfort with their biologic sex during childhood), desistance is frequent.[29] Minors who develop "gender dysphoria" during or shortly after adolescence are susceptible to psychosocial factors including pressure from peers and social media.[30]

There are few studies of the long-term outcome of the interventions made in gender clinics. One paper from gender clinics in the Netherlands, Germany, and Norway reported the experience of 201 young adults followed for an average of five years after treatment. Fourteen percent of that group had no medical interventions. Yet these untreated persons exhibited a 67% reduction in their "gender dysphoria" score.[31]

[24] S. L. Adelson, Child American Academy of, and Issues Adolescent Psychiatry CommiUee on Quality, 'Prac0ce Parameter on Gay, Lesbian, or Bisexual Sexual Orienta0on, Gender Nonconformity, and Gender Discordance in Children and Adolescents', *J Am Acad Child Adolesc Psychiatry,* 51 (2012).

[25] J. M. Cantor, 'Transgender and Gender Diverse Children and Adolescents: Fact-Checking of Aap Policy', *J Sex Marital Ther,* 46 (2020).

[26] J. Ristori and T. D. Steensma, 'Gender Dysphoria in Childhood', *Int Rev Psychiatry,* 28 (2016). [27] D. Singh, S. J. Bradley, and K. J. Zucker, 'A Follow-up Study of Boys with Gender Iden0ty Disorder', *Front Psychiatry,* 12 (2021).

[28] Ristori and Steensma.

[29] LiUman.

[30] Ibid.

[31] T. C. van de Grid and others, 'Effects of Medical Interven0ons on Gender Dysphoria and Body Image: A Follow-up Study', *Psychosom Med,* 79 (2017).

The Endocrine Society clinical practice guidelines state that "in most children diagnosed with GD/gender incongruence, (the symptoms) did not persist into adolescence."[32] No test can predict whether "gender dysphoria" will persist or not.

It is notable that "gender dysphoria" is the only diagnosis listed in the DSM that for which medication and/or surgery might be used with the goal of altering body appearance.

Psychotherapy is underutilized in treating "gender dysphoria."

In 2021, the Royal Australian and New Zealand College of Psychiatrists issued a position statement with the key message that there is "mixed evidence regarding (medical) treatment options for people with gender concerns, especially children and young people."[33]

The goal of treatment in patients with "gender dysphoria" should be to resolve gender related distress. Therefore, it is essential to understand the factors that might have led to the patient's

[32] W. C. Hembree and others, 'Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Prac0ce Guideline', *Endocr Pract,* 23 (2017).

[33] 'Recognizing and Addressing the Mental Health Needs of People Experiencing Gender Dysphoria/Gender Incongruence', in *Posi(on Statement of the Royal Australian and New Zealand College of Psychiatrists,* (2021).

rejection of their natal sex.[34,35,36,37] Exploratory, non-judgmental psychotherapy can alleviate suffering in patients with "gender dysphoria" and may help them accept their natal sex.[38,39] World Professional Association for Transgender Health (WPATH) guidelines (discussed in more detail 3a below) have gained influence along with the rapid proliferation of gender clinics that emphasize medical interventions. However, the WPATH guidelines are not universally accepted, either internationally or within the United States. Many endocrinologists refuse to treat "gender dysphoria" patients, though few of these physicians speak out about their concerns.

Some clinicians may think that children must simply be "affirmed" in their expression of transgender identity. As a result, psychosocial factors remain unexplored and untreated.[40,41] Clinicians who prioritize the child's self-diagnosis will fail to address psychiatric co-morbidities that may underlie that child's rejection of their sex. A history of bullying, sexual abuse, social isolation, anxiety, emotional or physical trauma all may contribute to the child's distress.

Dr. Erica Anderson is a psychologist and former president of the United States Professional Association of Transgender Health (USPATH), a division of WPATH. Dr. Anderson has expressed

[34] S. B. Levine, 'Reflec0ons on the Clinician's Role with Individuals Who Self-Iden0fy as Transgender', *Arch Sex Behav,* 50 (2021).

[35] L. Griffin and others, 'Sex, Gender and Gender Iden0ty: A Re-Evalua0on of the Evidence', *BJPsych Bull,* 45 (2021). [36] M. Evans, 'Freedom to Think: The Need for Thorough Assessment and Treatment of Gender Dysphoric Children - Corrigendum', *BJPsych Bull,* 45 (2021).

[37] R. Withers, 'Transgender Medicaliza0on and the AUempt to Evade Psychological Distress', *J Anal Psychol,* 65 (2020). [38] R. D'Angelo and others, 'One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria', *Arch Sex Behav,* 50 (2021).

[39] A. Churcher Clarke and A. Spiliadis, ''Taking the Lid Off the Box': The Value of Extended Clinical Assessment for Adolescents Presen0ng with Gender Iden0ty Difficul0es', *Clin Child Psychol Psychiatry,* 24 (2019). [40] Hannah Barnes, *Time to Think : The inside Story of the Collapse of the Tavistock's Gender Service for Children*, (London: Swid, 2023).

[41] Jamie Reed, 'Affidavit of Jamie Reed', (hUps://ago.mo.gov/docs/default-source/press-releases/2-07-2023-reed affidavit---signed.pdf?sfvrsn=6a64d339_2, 2023).

this same concern about rushing into medical interventions after prioritizing the child's self - diagnosis.[42]

Recent studies show that more than 70% of children with "gender dysphoria" have had recent trauma, history of abuse, autism spectrum disorder, depression, anxiety, or bullying.[43,44,45,46,47] I am concerned about "the one size fits all" protocol of puberty blockers, opposite-sex hormones, and soon, surgery, for complex children who have already been terribly traumatized. An "assembly line" of harm has been revealed by whistle-blowers at gender clinics. In these clinics, open exploratory supportive psychotherapy or talk therapy is often dispensed with entirely when young patients present with gender identity issues.[48,49]

A study was commissioned by the United Kingdom (UK) government to evaluate the care provided at their world-famous Gender Identity Development Service (GIDS). That study revealed that an inappropriate focus on "gender" overlooked or "overshadowed" other psychologic issues.[50] In the GIDS clinic, healthcare needs were not addressed once "gender related distress" was diagnosed. [51]

[42] Laura Davis, 'A Trans Pioneer Explains Her Resigna0on from the Us Professional Associa0on for Transgender Health.', (hUps://quilleUe.com/2022/01/06/a-transgender-pioneer-explains-why-she-stepped-down-from-uspath and-wpath/: QuilleUe, 2022).

[43] Elkadi and others

[44] Engel and others

[45] LiUman.

[46] Wanta and others

[47] Becerra-Culqui and others

[48] Barnes.

[49] Reed.

[50] H. Cass, 'Independent Review of Gender Iden0ty Services for Children and Young People: Interim Report. ', (2022). [51] Ibid.

Weak science and disregard for medical ethics characterizes published literature on medical interventions for "gender dysphoria" in minors.

Two influential European studies are misunderstood.

Researchers in the Netherlands hypothesized that an effective intervention for "gender dysphoria" in children would be to stop puberty before secondary sexual characteristics have developed and subsequently administer opposite sex hormones. The results of the so-called "Dutch protocol" were published in 2006.[52] This research was funded by the pharmaceutical company that manufactures triptorelin, used to block pituitary hormones, and in this study triptorelin was used to block the onset of puberty.[53]

To participate in this study, adolescents were required to have a "comprehensive psychologic evaluation with many sessions." The study participants could not have "psychosocial problems interfering with assessment or treatment."[54] Further, participants required a "good comprehension of the impact of medical interventions." Therefore, the study subjects were highly selected at the start.[55,56]

Serious flaws in the scientific design and methodology used in the "Dutch protocol" study, include: 1) the study lacked an untreated comparison group, i.e., it was not a controlled study; and 2) many

[52] H. A. Delemarre-van de Waal, Cohen-KeUenis, P., 'Clinical Management of Gender Iden0ty Disorder in Adolescents: A Protocol on Psychological and Pediatric Aspects', *Eur J Endocrinology,* 155 (2006).

[53] Ibid.

[54] de Vries and others

[55] Ibid.

[56] de Vries and others

participants dropped out of the study. The reasons for drop out were not reported in the final analysis.[57,58,59] Though 111 children began the trial, only 55 were analyzed at its conclusion. The principal author of the Dutch studies, a psychiatrist named Dr. Annelou de Vries, interpreted her study as showing that "the main finding remains the resolution of gender dysphoria."[60] This statement deserves critical analysis. "Dysphoria" was measured using a 12 item Utrecht Gender Dysphoria Scale (UGDS) that was not designed to be used after treatment."[61] In fact, after opposite sex hormone treatment, treated children showed no improvement in gender distress, anxiety, or anger.[62] This finding was downplayed in the final discussion.

At the end of the study 55 children remained, all of whom had received "surgical reassignment." These research subjects showed a marked reduction in "gender dysphoria" using the UGDS scale.[63] This dramatic change in UGDS score is best explained by the researchers' decision to switch the scale from male to female, or the other way around. In other words, females were measured as females before surgery then evaluated as males after surgery, and vice versa. To be clear, changing measurements scales in the middle of a scientific experiment invalidates that experiment.

How would changing the measurement tool alter the study outcome?[64] Abbruzzese's rigorous critique describes this scenario: A severely dysphoric biologic female "is asked to answer two of

the

[57] E. Abbruzzese, S. B. Levine, and J. W. Mason, 'The Myth of "Reliable Research" in Pediatric Gender Medicine: A Cri0cal Evalua0on of the Dutch Studies-and Research That Has Followed', *J Sex Marital Ther,* (2023). [58] S. B. Levine, E. Abbruzzese, and J. W. Mason, 'Reconsidering Informed Consent for Trans-Iden0fied Children, Adolescents, and Young Adults', *J Sex Marital Ther,* 48 (2022).

[59] M. Biggs, 'The Dutch Protocol for Juvenile Transsexuals: Origins and Evidence', *J Sex Marital Ther,* (2022). [60] A. L. C. de Vries, 'Ensuring Care for Transgender Adolescents Who Need It: Response to 'Reconsidering Informed Consent for Trans-Iden0fied Children, Adolescents and Young Adults'', *J Sex Marital Ther,* 49 (2023). [61] Ibid.

[62] de Vries and others

[63] de Vries and others

[64] Abbruzzese, Levine, and Mason.

UGDS questions: 'Every time someone treats me like a girl I feel hurt' and 'Every time someone treats me like a boy I feel hurt.' It is likely that this female patient would *strongly agree* with the first statement and *strongly disagree* with the second. The first answer would lead to the score of '5' on the UGDS "gender dysphoria" scale, indicating the highest possible level of dysphoria. The second answer—which is effectively the same answer—would result in the score of '1' indicating the lowest possible gender dysphoria. In other words, unlike the first question, which belongs to the 'female' battery of questions, the second question belongs to the 'male' battery of questions and effectively assumes the subject to be male—hence, the lack of distress of being associated with 'maleness' receives the minimum 'gender dysphoria' score.[65]

Others have challenged the validity of the "Dutch protocol" results, because switching the UGDS score invalidates any interpretation.[66,67]

A little known, and poorly acknowledged tragedy occurred during the Dutch study.[68] After surgery to create a vagina like structure, a boy died from necrotizing fasciitis ("flesh eating disease"). The Gender Identity Development Service (GIDS) in the United Kingdom began treatment of minors with "gender dysphoria" in 1989 and is slated to close in March of 2024[69]. It is the largest and

oldest center in the world treating children with "gender dysphoria". Psychologist Dr. Polly Carmichael became the director of the center in 2009. In 2011, GIDS embarked on a clinical trial in children aged 12-15 to investigate the benefits of pubertal suppression. Before 2011, GIDS offered puberty

[65] Ibid.

[66] J. K. McGuire and others, 'Utrecht Gender Dysphoria Scale - Gender Spectrum (Ugds-Gs): Construct Validity among Transgender, Nonbinary, and Lgbq Samples', *Int J Transgend Health,* 21 (2020).

[67] Biggs.

[68] de Vries and others

[69] 'Closure of Tavistock Gender Iden0ty Clinic Delayed', (hUps://www.bbc.com/news/uk-65564032, 2023).

blockers to slightly older children, admittedly without adequate evidence. The GIDS research team, sought to confirm the claims of the Dutch group. The British study included only 44 children. As in the Dutch study, there was no untreated control or comparison group. The children were observed over the course of 3 years of treatment with puberty blockers. The study results, published in 2021, showed no change whatsoever in psychiatric distress with puberty suppression.[70] Dr. Carmichael and her colleagues concluded that more studies were needed to "fully quantify the harms and benefits of pubertal suppression."[71]

In the United States, the experimental "Dutch Protocol" has been misapplied and fails. Dr. Norman Spack, a pediatric endocrinologist at Boston Children's Hospital began to recommend using the Dutch Protocol for children with "gender dysphoria" in 2009. In collaboration with researchers from the Dutch group, Dr. Spack wrote the first set of practice guidelines for the Endocrine Society in 2009.[72]

Those Endocrine Society guidelines have been updated, most recently in 2017, and conclude with the following disclaimer: "The guidelines are not intended to dictate the treatment of a particular

patient. Treatment decisions must be made based on the independent judgement of healthcare providers and each patient's individual circumstances."[73]

[70] P. Carmichael and others, 'Short-Term Outcomes of Pubertal Suppression in a Selected Cohort of 12 to 15 Year Old Young People with Persistent Gender Dysphoria in the Uk', *PLoS One,* 16 (2021).

[71] Ibid.

[72] W. C. Hembree and others, 'Endocrine Treatment of Transsexual Persons: An Endocrine Society Clinical Prac0ce Guideline', *J Clin Endocrinol Metab,* 94 (2009).

[73] Hembree and others

The Endocrine Society guidelines have been widely implemented, despite the Endocrine Society disclaimer. For example, a publication appeared in the high-impact New England Journal of Medicine (NEJM) early in 2023.[74] This observational study described the treatment of transgender youth with opposite sex hormones at four U.S. clinics over a two-year period. The subjects' ages ranged from 12-20 with a mean age of 16. The exact medical treatment protocols varied but included the use of puberty blockers.[75]

Like the Dutch and British studies, this U.S. research did not include control or comparison groups, and it provided no description of psychologic assessment or treatment. The authors found no change in depression, anxiety, or life satisfaction in biologic males after they had received the medicalized interventions.[76,77]

The quality of medical guidelines can be judged using GRADE criteria. Medical evidence varies in quality. Not all evidence that guides current standard medical treatment is of the same quality. To assess the safety, efficacy, and quality of a treatment recommendation, it is important to understand the meaning of the term "evidence-based."

GRADE (Grading of Recommendations, Assessment, Development, and Evaluations) is a standard

accepted method for judging the quality of medical research.[78] There are four levels of evidence in

[74] D. Chen and others, 'Psychosocial Func0oning in Transgender Youth ader 2 Years of Hormones', *N Engl J Med,* 388 (2023).

[75] Ibid.

[76] Ibid.

[77] S. C. J. Jorgensen, 'Psychosocial Func0oning in Transgender Youth ader Hormones', *N Engl J Med,* 389 (2023). [78] 'Bmj Best Prac0ce: What Is Grade ?'.

GRADE. When the GRADE score is "low," the true effect is likely to be markedly different from the estimated effect.

In 2022 the Endocrine Society summarized the evidence for hormonal interventions in "gender diverse adolescents" as sparse and of low quality.[79] Last year, they restated that systematic reviews of the evidence and the use of GRADE are key factors in establishing the "trustworthiness" of their clinical practice guidelines.[80]

The ECRI Guidelines Trust[81] is a portal to trustworthy guidelines from an independent nonprofit patient safety organization called ECRI[82]. ECRI evaluated Endocrine Society guidelines published since 2015. The 2017 guidelines on "gender dysphoric/gender incongruent" persons[83] was not "eligible for formal ECRI Transparency and Rigor Using Standards of Trustworthiness (TRUST) scoring."[84]. Those guidelines were not "based on verifiable systematic evidence review with explicit descriptions of search strategy, study selection, and evidence summaries".[85]

The key authoritative Endocrinology textbook, published in 2023, includes a chapter on Transgender Healthcare,[86] written by Dr. Madeline Deutsch, WPATH member and current president of USPATH.

[79] M. A. O'Connell and others, 'Approach to the Pa0ent: Pharmacological Management of Trans and Gender-Diverse Adolescents', *J Clin Endocrinol Metab,* 107 (2022).

[80] C. R. McCartney and others, 'Enhancing the Trustworthiness of the Endocrine Society's Clinical Prac0ce Guidelines', *J Clin Endocrinol Metab,* 107 (2022).

[81] 'Ecri Guidelines Trust', (hUps://www.ecri.org/solu0ons/ecri-guidelines-trust).

[82] ECRI, 'Ecri Ins0tute Opens Access to Clinical Prac0ce Guidelines', (hUps://www.ecri.org/press/ecri-ins0tute-opens access-to-clinical-prac0ce-guidelines, 2018).

[83] Hembree and others

[84] McCartney and others

[85] Ibid.

[86] Madeline Deutsch, 'Transgender Healthcare ', in *Degroot's Endocrinology* ed. by R. Paul Robertson (Elsevier, 2023), pp. 1752-57.

Dr. Deutsch writes: "long-term prospective outcome studies of the effects of GAHT (gender affirming hormone therapy) of any type are lacking. What data that do exist are mostly retrospective and have numerous limitations."[87]

Cochrane Reviews are highly respected rigorous analyses of published data. A Cochrane Review looked at hormonal interventions in females with "gender dysphoria". The authors found "insufficient evidence to determine the efficacy or safety of hormonal treatment approaches in transgender women in transition."[88]

There is simply no high-quality evidence that hormonal or surgical interventions in youth with "gender dysphoria" reduce psychic distress. A systematic review published in 2023 in the journal Transgender Health[89] decried the "lack of high-quality studies" and emphasized that all studies to date are observational. The authors found no randomized controlled trials.

The most recent Endocrine Society guidelines were published in 2017. The authors of those

guidelines judged their evidence to be of low or very low quality.[90] Higher quality evidence of the efficacy of a treatment would require, among other elements, a minimum of two groups that were very well matched and were followed prospectively over time. One group would be randomly

[87] Ibid.

[88] C. Haupt and others, 'An0androgen or Estradiol Treatment or Both During Hormone Therapy in Transi0oning Transgender Women', *Cochrane Database Syst Rev,* 11 (2020).

[89] T. R. van Leerdam, J. D. Zajac, and A. S. Cheung, 'The Effect of Gender-Affirming Hormones on Gender Dysphoria, Quality of Life, and Psychological Func0oning in Transgender Individuals: A Systema0c Review', *Transgend Health,* 8 (2023).

[90] Hembree and others

assigned to the treatment to be tested; the other group would be followed as the comparator or control group. Such a study would be said to be a "controlled" study.

Only when researchers are willing to admit uncertainty can we learn what is best for our patients. Here is an example from my own experience as a Clinical Investigator. In the early 2000's, I participated as a Principal Investigator in a large National Institute of Health (NIH) sponsored trial called ACCORD (Action to Control Cardiovascular Risk in Diabetes).[91] Before that study, many doctors were sure that the systolic blood pressure should be below 120 in persons with Type 2 Diabetes. And many doctors thought the closer the blood sugar was kept to normal the better. The ACCORD study[92] showed that both of these convictions were incorrect in persons with Type 2 diabetes. The results of the ACCORD study changed the treatment approach for many adults with Type 2 Diabetes.

Experimental procedures require rigorous adherence to principles of medical ethics and informed consent .

Informed consent is an essential element of patient care. There is much more to informed consent than simply getting a signature on a form.

Informed consent is foundational to the ethical conduct of clinical research. Strict international principles prohibit minors from providing consent because children cannot fully comprehend risk

[91] F. Ismail-Beigi and others, 'Effect of Intensive Treatment of Hyperglycaemia on Microvascular Outcomes in Type 2 Diabetes: An Analysis of the Accord Randomised Trial', *Lancet,* 376 (2010).

[92] Ibid.

versus benefit. Although minors can *assent* to a treatment or intervention, they are not legally able to give *informed consent* until they turn 18.[93,94]

Medical decision-making competence is inadequate in adolescents. In one study from the Netherlands, clinicians and parents concluded that failure to understand the consequences of puberty suppression "is inherent to the adolescent's age and/or development stage."[95] Adolescence is a time of "suboptimal choice behavior", increased risk taking and vulnerability. [96] The American Academy of Pediatrics states that adolescent decision-making "relies more on their mature limbic system (socioemotional) than on the impulse-controlling, less-developed prefrontal cognitive system."[97] In other words, adolescents have immature brains. Even Dr. Daniel Metzger, an endocrinologist associated with WPATH, admits that "most of the kids (we treat) are nowhere in any kind of brain space" and "I know I am talking to a blank wall" when informing them of the possibility of infertility. [98]

Anthony Latham, Chair of the Scottish Council on Bioethics, wrote "risk taking that would seem dangerous to an adult is part of the adolescent make-up."[99] He pointed out that "children cannot

[93] 'Assent Versus Informed Consent'.

[94] 'Fda Informed Consent'.

[95] Ljjj Vrouenraets and others, 'Medical Decision-Making Competence Regarding Puberty Suppression: Percep0ons of Transgender Adolescents, Their Parents and Clinicians', *Eur Child Adolesc Psychiatry,* (2022). [96] B. J. Casey, R. M. Jones, and T. A. Hare, 'The Adolescent Brain', *Ann N Y Acad Sci,* 1124 (2008). [97] CommiUee On Bioethics, 'Informed Consent in Decision-Making in Pediatric Prac0ce', *Pediatrics,* 138 (2016). [98] Dr Daniel Metzger, 'Wpath Gender Affirming Doctor Expresses Concern for Mental Capacity and Informed Consent of Minors for Transi0on Surgeries… "Reproduc0ve Regret"… " I Don't Think Any of That Surprises Us" ', (hUps://www.projectveritas.com/news/wpath-gender-affirming-doctor-expresses-concern-for-mental-capacity-and/, 2022).

[99] A. Latham, 'Puberty Blockers for Children: Can They Consent?', *New Bioeth,* 28 (2022).

consent, and therefore should not be asked to consent to being treated with puberty blockers for "gender dysphoria"."[100]

Professor Carl Heneghan, director of the Centre of Evidence Based Medicine at Oxford University stated that the "quality of evidence in this area is terrible."[101] And "in the absence of evidence, I just do not understand how they can inform children, adolescents, and parents and families in a way that helps them make an informed decision."[102]

The United States is a signatory to the United Nations Convention on the Rights of the Child. The *Declaration of the Rights of the Child* states that "the child, by reason of his physical and mental immaturity, needs special safeguards and care."[103] These safeguards are uniquely important when it comes to an experimental intervention. The Declaration of Helsinki[104] allows individual parents to consent to an experimental treatment for their child. Usually, this choice is made in an extraordinary circumstance, to save that child's life, and with the child's assent. Opposite sex

hormonal interventions to change physical appearance should not be an exception to these requirements.

Psychiatrist Dr. Stephen Levine and his colleagues have discussed the inadequacies in the informed consent process for minors with "gender dysphoria".[105] Clinicians are required to provide balanced and thorough information on all the potential risks and benefits and unknowns of the treatment as

[100] Ibid.

[101] Dr. Faye Kirkland, 'Transgender Teen Care "Needs Urgent Regula0on"', (hUps://www.bbc.com/news/health 47456938, 2019).

[102] Ibid.

[103] 'United Na0ons Declara0on of the Rights of Children', (1989).

[104] 'Code of Ethics of the World Medical Associa0on. Declara0on of Helsinki ', (1964).

[105] Levine, Abbruzzese, and Mason.

well as alternative treatments available. Clinicians must assess the competence and understanding of the patient and caregiver.

Often the informed consent process is "perfunctory"[106] with "poor evaluation" [107] of children and "incorrect and incomplete information."[108] Evidence of this inadequate consenting process has been revealed by those who have desisted or detransitioned and by whistleblowers at gender clinics.[109,110,111]

Clinical equipoise is "uncertainty about the relative effects of the treatments" offered to a patient.[112] Clinical equipoise is an "ethical standard" in clinical research.

It is clearly unethical to cause harm to an increasing number of vulnerable children with medical interventions that do not have a sound evidence base. Clinicians must not rely on weak evidence and flimsy data. Below, I describe historical examples of harm by doctors when they fail to

recognize the limits of their knowledge.

"Gender affirming" guidelines evade the scrutiny of science and ethics.

[106] Ibid.

[107] Ibid.

[108] Ibid.

[109] Barnes.

[110] LiUman.

[111] Reed.

[112] B. Dewar and others, 'What Do We Talk About When We Talk About "Equipoise"? Stakeholder Interviews Assessing the Use of Equipoise in Clinical Research Ethics', *Trials,* 24 (2023).

WPATH[113,114] did not use GRADE criteria in creating recommendations. WPATH used the Delphi process which is based upon "collective opinion"[115]. The majority of WPATH's guidelines are based on opinions, and not supported by science.

The Guidelines International Network and the Institute of Medicine have established criteria for "trustworthy guidelines".[116,117] These criteria include transparency of the development process, management of conflicts of interest and multiple factors in the development process (high quality systematic reviews, judgmental processes and more).[118] WPATH guidelines do not meet most of these criteria.

WPATH guidelines do not require dysphoria or distress for a child to "access gender-affirming

treatments".[119] WPATH guidelines have no lower age limit for hormonal or surgical interventions on children. [120]

[113] E. Coleman, 'Correc0on, Standards of Care for the Health of Transgender and Gender Diverse People, Version 8', *Interna(onal J of Transgender Health,* 23 (2022).

[114] E. Coleman and others, 'Standards of Care for the Health of Transgender and Gender Diverse People, Version 8', *Int J Transgend Health,* 23 (2022).

[115] P. Nasa, R. Jain, and D. Juneja, 'Delphi Methodology in Healthcare Research: How to Decide Its Appropriateness', *World J Methodol,* 11 (2021).

[116] 'Clinical Prac0ce Guidelines We Can Trust from the Ins0tute of Medicine', (hUps://www.ncbi.nlm.nih.gov/books/NBK209538/).

[117] 'Guidelines Interna0onal Network', p. Guidelines Interna0onal Network.

[118] Clinical Prac0ce Guidelines We Can Trust from the Ins0tute of Medicine.

[119] Coleman; Coleman and others

[120] Coleman; Coleman and others

WPATH provides guidance for those males who feel they are "nonbinary," i.e., neither male nor female.[121] Those males may wish to have their testes removed to become a eunuch.[122] Here too, WPATH offers no lower age limit for these orchiectomies.

WPATH's "goals have shifted from reducing suffering to achieving personal 'embodiment goals.'" "Although achieving body modification goals can be very satisfying to patients, clinicians should not confuse it with improved functioning in relational, sexual, educational, substance dependence, and vocational aspects of life—the domains of mental health. Nor can it be claimed to be 'lifesaving.'"[123]

WPATH states: “gender diversity in prepubescent children may, for some, be fluid; there are no reliable means of predicting an individual child’s gender evolution and the gender-related needs for a particular child may vary over the course of their childhood.”[124]

The American Psychiatric Association states that “families should be informed about potential outcomes including the possibility that the child’s experience/perception of the gendered self may change as they mature.”[125]

[121] Coleman and others

[122] Ibid.

[123] S. B. Levine and Abbruzzese E., 'Current Concerns About Gender-Affirming Therapy in Adolescents', *Current Sexual Health Reports,* 15 (2023).

[124] Coleman and others

[125] W. Byne and others, 'Report of the American Psychiatric Associa0on Task Force on Treatment of Gender Iden0ty Disorder', *Arch Sex Behav,* 41 (2012).

Fluidity was also described in a recent analysis of adolescents at a “gender services” program.[126] Of 68 adolescents, mean age 15 years, 29% changed their requests for opposite sex hormones over time.[127]

Psychiatrist Dr. Stephen Levine was a member of WPATH for twenty-five years. He served as chairman of the International Standards of Care Committee that issued the fifth version of the “Standards of Care”. He wrote: “WPATH claims to speak for the medical profession; however, it does not welcome skepticism and therefore, deviates from the philosophical core of medical science.”[128] Dr. Levine resigned from WPATH when WPATH completely dropped the requirement

for a letter of support from a psychotherapist before opposite sex hormones were to be prescribed.[129]

In the case of the Endocrine Society Guidelines, there was no discussion or member referendum. Those guidelines were announced without soliciting the input from members with alternative views.[130]

Similarly, the position of the American Academy of Pediatrics (AAP) on "gender dysphoria" was written by 36 members without input from the remainder of its 66,000 members. Furthermore, efforts to reassess the guidelines, in light of scientific evidence have been repeatedly rebuffed.[131,132]

[126] A. Cohen and others, 'Shids in Gender-Related Medical Requests by Transgender and Gender-Diverse Adolescents', *J Adolesc Health,* 72 (2023).

[127] Ibid.

[128] Miriam Grossman, *Lost in Trans Na(on* (Skyhorse Publishing, 2023).

[129] Ibid.

[130] S Ayad and S. O'Malley, 'Gender. A Wider Lens', in *Hormonal interven(ons from fringe to mainstream: a conversa(on with Dr. WIlliam Malone,* (2021).

[131] Bernard Lane, 'Gagging the Debate', in *Gender Clinic News,* (2022), pp. hUps://www.genderclinicnews.com/p/gagging-the-debate.

[132] Julia Mason and Leor Sapir, 'The American Academy of Pediatrics' Dubious Transgender Science', *Wall Street Journal,* (2022).

After international pressure from the medical community, AAP has stated publicly that their organization will now conduct a systematic review of the evidence, and potentially amend its policies.[133]

Recently, the AAP rejected an application from The Society for Evidence Based Gender Medicine to present alternative opinions at an exhibitor table during its annual conference.[134] Dr Stephen

Levine has written: “Nowhere in Medicine has free speech been as limited as it has been in the trans arena. Skeptics are being institutionally suppressed. Critical letters to the editor in journals that published affirmative data are refused publication, symposia submitted for presentation at national meetings are rejected, scheduled lectures are canceled, and pressure has been exerted to get respected academics fired.”[135]

Dr Christopher Gillberg, a world-renowned Child and Adolescent Psychiatrist from Sweden called medical interventions in children with “gender dysphoria” “possibly one of the greatest scandals in medical history.”[136]

Some medical groups that do not endorse puberty blockers, opposite sex hormones or surgery for children with “gender dysphoria” include the American College of Pediatricians, the Society for

[133] 'Aap Reaffirms Gender-Affirming Care Policy, Authorizes Systema0c Review of the Evidence to Guide Update', (hUps://publica0ons.aap.org/aapnews/news/25340/AAP-reaffirms-gender-affirming-care policy?autologincheck=redirected, 2023).

[134] 'The Aap Silences the Debate on How to Best Care for Gender-Diverse Kids. American Academy of Pediatrics Annual 2021 Conference Blocks Segm’s Par0cipa0on', (hUps://www.segm.org/AAP_silences_debate_on_gender_diverse_youth_treatments, 2021). [135] Stephen Levine, 'Should Transgender Youth Be Guided by Beliefs or Science ?', (hUps://www.psychotherapy.net/ar0cle/transgender-youth-care-science-or-beliefs, 2023). [136] Van Maren Jonathon, 'World-Renowned Child Psychiatrist Calls Trans Treatments “Possibly One of the Greatest Scandals in Medical History”', in *The Bridgehead,* (hUps://thebridgehead.ca/2019/09/25/world-renowned-child psychiatrist-calls-trans-treatments-possibly-one-of-the-greatest-scandals-in-medical-history/, 2019).

Evidence Based Gender Medicine, the Association of American Physicians and Surgeons, the Catholic Medical Association, the Christian Medical and Dental Associations, and the Jewish Orthodox Women’s Medical Association.

The history of medicine offers lessons in humility.

Just because an intervention is popular does not prove it to be safe or beneficial. The neurosurgeon who pioneered the once popular brain surgery pre-frontal lobotomy for mental disorders was awarded the Nobel Prize.[137] In our day, we react to the idea of lobotomy with horror. This brutal intervention has been scientifically discredited.

High quality data is essential to judging whether a treatment causes long-term harm. Until the 1990's it was very popular to prescribe post-menopausal women the female hormones estrogen and progesterone. Doctors believed, without solid evidence, that such treatments would reduce the risk of heart attacks and help women stay healthy. Only after a large high quality, randomized, controlled trial was it revealed that such hormonal treatments increase the risk of stroke, blood clots, and breast cancer.[138]

The medical and surgical interventions in minors with "gender dysphoria" are not effective and cause harm.

Hormonal and surgical treatments for "gender dysphoria" do not reduce suicide risk.

[137] L. M. Terrier, M. Leveque, and A. Amelot, 'Brain Lobotomy: A Historical and Moral Dilemma with No Alterna0ve?', *World Neurosurg,* 132 (2019).

[138] J. E. Rossouw and others, 'Risks and Benefits of Estrogen Plus Proges0n in Healthy Postmenopausal Women: Principal Results from the Women's Health Ini0a0ve Randomized Controlled Trial', *JAMA,* 288 (2002).

"Would you rather have a dead daughter or a living transgender son?" - words of gender specialist to parents of Chloe Cole.[139]

Suicidal thoughts should not be confused with the act of suicide or suicide attempts. The rate of

suicide in youth with distress attributed to gender appears similar to the suicide rate in youth with other mental health disorders including depression, post-traumatic stress disorder, anxiety, and autism spectrum disorder.[140] In a recent study in the U.K., the annual suicide rate of transgender youth in a gender-clinic setting was 13 per 100,000.[141] In the United States, the number of suicides in young people aged 15-19 is 11.8/100,000 population.[142]

The Dutch study provided no data on suicide. However, existing data suggest that hormonal and surgical interventions in persons with "gender dysphoria" may increase the risk of suicide, as I describe next.

A long-term study of transgender persons in Sweden[143] found a 19-fold overall higher suicide rate, 40-fold higher in females, and a 3-fold higher overall mortality during an average of 11 years of follow up compared to population-based controls. Most significantly, these suicides occurred in patients who had completed interventions with opposite sex hormones and surgery.

[139] Chloe Cole, 'Chloe Cole Tes0fies before Congress', (hUps://donoharmmedicine.org/2023/07/27/do-no-harm senior-fellow-chloe-cole-tes0fies-before-congress/, 2023).

[140] N. M. de Graaf and others, 'Suicidality in Clinic-Referred Transgender Adolescents', *Eur Child Adolesc Psychiatry,* 31 (2022).

[141] M. Biggs, 'Suicide by Clinic-Referred Transgender Adolescents in the United Kingdom', *Arch Sex Behav,* 51 (2022).

[142] 'Suicide and Homicide Death Rates among Youth and Young Adults Aged 10-24: United States, 2001-2021 from the Centers for Disease Control,
U.S. Department of Health and Human Services', (hUps://www.cdc.gov/nchs/data/databriefs/db471.pdf, 2023).

[143] C. Dhejne and others, 'Long-Term Follow-up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden', *PLoS One,* 6 (2011).

In another study of more than 8,000 transgender persons, two-thirds of those who died by suicide had remained on their opposite-sex hormones at the "gender clinic".[144]

One of few long-term outcome studies, performed at a "gender clinic" in the Netherlands, found that the suicide rate was six times higher in male to female persons than in an age-matched normal population, over the course of 18 years of follow-up.[145]

In the NEJM study previously mentioned, there was a 45-fold higher than expected suicide rate in the adolescents receiving opposite sex hormone therapy during their care at gender clinics (compared to the Center for Disease Control age-matched population).[146,147]

A Danish gender clinic reported its experience with suicide in treated patients followed for up of 6 years.[148] Despite ready access (since 2017) to opposite sex hormones and "surgical reassignment", transgender persons had a 7-fold higher rate of suicide attempts, a 3½ fold higher rate of death by suicide and were twice as likely to die from non-suicide related causes.[149]

In summary, persons with "gender dysphoria" continue to have significant psychiatric issues despite hormonal and surgical interventions.

[144] C. M. Wiepjes and others, 'Trends in Suicide Death Risk in Transgender People: Results from the Amsterdam Cohort of Gender Dysphoria Study (1972-2017)', *Acta Psychiatr Scand,* 141 (2020).

[145] H. Asscheman and others, 'A Long-Term Follow-up Study of Mortality in Transsexuals Receiving Treatment with Cross-Sex Hormones', *Eur J Endocrinol,* 164 (2011).

[146] Chen and others

[147] Suicide and Homicide Death Rates among Youth and Young Adults Aged 10-24: United States, 2001-2021 from the Centers for Disease Control,
U.S. Department of Health and Human Services.

[148] A. Erlangsen and others, 'Transgender Iden0ty and Suicide AUempts and Mortality in Denmark', *JAMA,* 329 (2023). [149] Ibid.

Psychotherapy has known efficacy in reducing the risk of suicide.[150] In my opinion, psychotherapy

remains an essential treatment for "gender dysphoria," and the best prevention against suicide.

Gender is not to be confused with sexual orientation. It is therefore simplistic and misleading to "amalgamate aversion therapy for adult homosexuals, c.1970, with cautious exploratory psychotherapy with gender non-conforming children today."[151]

Puberty blockers are not a "pause button." Puberty is a necessary stage in human development.

Dr Joshua Safer, an endocrinologist who has repeatedly minimized the risk of medical interventions for "gender dysphoria" , writes of the "need for appropriate humility regarding what we know versus what we only predict." He writes: "Even the most logical conclusions extrapolated from our understanding of physiology must remain suspect until demonstrated in actual clinical environments."[152] Elsewhere this author writes that there are "numerous gaps in knowledge"[153] in transgender medicine. I agree with these statements, and I will now describe what we, in fact, do know.

Background: The ovaries make the principal female hormone called estrogen. The testes make the principal male hormone called testosterone. Ovaries are the site of production of gametes called ova

[150] P. Mendez-Bustos and others, 'Effec0veness of Psychotherapy on Suicidal Risk: A Systema0c Review of Observa0onal Studies', *Front Psychol,* 10 (2019).

[151] D. Pilgrim, 'Bri0sh Mental Healthcare Responses to Adult Homosexuality and Gender Non-Conforming Children at the Turn of the Twenty-First Century', *Hist Psychiatry,* (2023).

[152] J. D. Safer, 'Using Evidence to Fill Gaps in the Care of Transgender People', *Endocr Pract,* 26 (2020). [153] J. D. Safer, 'Are the Pharmacokine0cs of Sublingual Estradiol Superior or Inferior to Those of Oral Estradiol?', *Endocr Pract,* 28 (2022).

(singular is ovum). When an ovum is fertilized with a sperm, an embryo can form and lead to the

birth of a newborn baby. At the moment of fertilization, the sex of the future baby is determined by the sex (X and Y) chromosomes.

The testes and ovaries are both regulated by a small gland in the brain called the pituitary. The pituitary is considered a master gland because it regulates other hormone producing glands, not just the ovaries and testes. The pituitary makes many hormones, two of which are Luteinizing hormone (LH) and Follicle stimulating hormone (FSH). LH and FSH are called gonadotropins; they regulate the ovaries and testes.

The pituitary gland is, in turn, controlled by an area located above it called the hypothalamus. The hypothalamus produces many vital substances. One of these is gonadotropin releasing hormone, abbreviated GnRH. GnRH stimulates the release of LH and FSH.

The chemical structure of GnRH has been modified by pharmaceutical companies into chemicals called GnRH analogs. GnRH analogs are often called puberty blockers. GnRH analogs are administered, usually as an injection (every 1-6 months). There is also an implanted version (under the skin) of GnRH analogs. GnRH analogs block or stop the GnRH signals that come from the hypothalamus. Blockade of those signals means there is no secretion of LH and FSH and, consequently, the testes and ovaries are turned off.

GnRH analogs are called puberty blockers. GnRH analogs are not FDA approved for use in children with "gender dysphoria". They are approved for use in children who have the relatively rare disorder

called central precocious puberty. Central precocious puberty is a condition in which puberty occurs at an abnormally early age, generally below the age of 8 in girls and 9 in boys. GnRH analogs are approved for treatment of endometriosis in women. GnRH analogs will stop the

signals from the brain that cause ovulation and menstruation. They will markedly lower estrogen and reduce bone density.[154]

GnRH analogs have also been used in the treatment of prostate cancer because they markedly lower the male hormone, testosterone. Testosterone increases the growth of diagnosed prostate cancer.[155] The cancer is suppressed by reducing testosterone.

There are no controlled trials that prove the safety of GnRH analogs in children with normal puberty.[156] There are many unknowns with puberty blockers even in those conditions for which treatment is FDA approved. Some have called GnRH analogs use in these children with normal puberty a "momentous step in the dark."[157]

Puberty blockers may cause hot flashes, weight gain, fatigue, and mood alterations.[158,159] Seizures have also been reported. A disorder affecting the hip, slipped capital femoral epiphysis, has been

[154] 'Lupron for Endometriosis, Prescribing Informa0on'.

[155] 'Lupron for Prostate Cancer, Prescribing Informa0on', (hUps://www.rxabbvie.com/pdf/lupronuro_pi.pdf). [156] C. Richards, J. Maxwell, and N. McCune, 'Use of Puberty Blockers for Gender Dysphoria: A Momentous Step in the Dark', *Arch Dis Child,* 104 (2019).

[157] Ibid.

[158] Hembree and others

[159] 'Lupron Prescribing Informa0on '.

reported in children on puberty blockers.[160] Reductions in bone density are seen with the use of puberty blockers; those reductions increase the risk of bone fractures.[161,162,163]

Pseudotumor cerebri (also known as idiopathic intracranial hypertension) has been associated with puberty blockers. This condition causes severe headache and loss of vision.[164,165]

Early administration of puberty blockers reduces penile growth. The surgery for creation of a vagina like structure (or pseudo-vagina) in male to female transgender individuals is called vaginoplasty. This surgery uses penile tissue. The pre-pubertal penis does not provide sufficient tissue to create a vagina-like structure, leading to more complex surgeries with more post-surgical complications.[166]

Dr. Marci Bowers, a surgeon and vaginoplasty specialist, described another important adverse effect of puberty blockers in transgender people. These persons will not be able to achieve an orgasm as adults.[167]

[160] K. Bangalore Krishna and others, 'Use of Gonadotropin-Releasing Hormone Analogs in Children: Update by an Interna0onal Consor0um', *Horm Res Paediatr,* 91 (2019).

[161] M. Biggs, 'Revisi0ng the Effect of Gnrh Analogue Treatment on Bone Mineral Density in Young Adolescents with Gender Dysphoria', *J Pediatr Endocrinol Metab,* 34 (2021).

[162] D. Klink and others, 'Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents with Gender Dysphoria', *J Clin Endocrinol Metab,* 100 (2015).

[163] Lupron Prescribing Informa0on

[164] U. Gul and others, 'Pseudotumour Cerebri Presenta0on in a Child under the Gonadotropin-Releasing Hormone Agonist Treatment', *J Clin Res Pediatr Endocrinol,* 8 (2016).

[165] A. A. Omar, G. Nyaga, and L. N. W. Mungai, 'Pseudotumor Cerebri in Pa0ent on Leuprolide Acetate for Central Precocious Puberty', *Int J Pediatr Endocrinol,* 2020 (2020).

[166] T. C. van de Grid and others, 'Timing of Puberty Suppression and Surgical Op0ons for Transgender Youth', *Pediatrics,* 146 (2020).

[167] Transleithanian@genderthehun, in *"Gender affirming" surgeon admits children who undergo transi(on before*

puberty never a[ain sexual sa(sfac(on (2022).

Children who fail to progress through puberty are infertile. This is a biologic fact. The same physiology means that early initiation of puberty blockers will stop maturation of the testes and the ovaries. If the testes or ovaries fail to mature, sperm and ova cannot be produced. Infertility will likely occur, especially if followed by opposite sex hormones.[168,169,170]

Gender clinics now are advised to routinely counsel children about the loss of fertility and steps they might take to preserve it.[171] An informed consent form for a research study at Children's Hospital of Los Angeles included this language, 7 years ago: "If your child starts puberty blockers in the earliest stages of puberty, and then goes on to gender affirming hormones, they will not develop sperm or eggs. This means that they will not be able to have biological children. This is an important aspect of blocking puberty and progressing to hormones that you should understand prior to moving forward with puberty suppression."[172]

Authors this year wrote that "Research protocols for ovarian and testicular tissue cryopreservation have been developed at some centers and these methods can be also applied to children."[173] These "research" approaches are costly and have uncertain efficacy.

[168] S. Baram and others, 'Fer0lity Preserva0on for Transgender Adolescents and Young Adults: A Systema0c Review', *Hum Reprod Update,* 25 (2019).

[169] K. Rodriguez-Wallberg and others, 'Reproduc0ve Health in Transgender and Gender Diverse Individuals: A Narra0ve Review to Guide Clinical Care and Interna0onal Guidelines', *Int J Transgend Health,* 24 (2023).

[170] Hembree and others

[171] E. Bayar and others, 'Fer0lity Preserva0on and Realignment in Transgender Women', *Hum Fer(l (Camb),* (2023).

[172] Johanna Olsen Kennedy, 'Puberty Blockers for Minor in Early Adolescence. Parent or Guardian Consent',

(hUps://defendinged.org/wp-content/uploads/2023/05/consent_forms-JOK.pdf, 2016).

[173] Rodriguez-Wallberg and others

Children given puberty blockers for "gender dysphoria" find themselves unable to get off the conveyor belt of "gender transition." After puberty blockers, more than 95% go on to opposite sex hormones.[174]

The Swedish government commissioned a study on hormonal therapy in children with "gender dysphoria". The authors concluded in their systematic review[175] that "the long-term effects of hormone therapy on psychosocial and somatic health are unknown, except that GnRH analog treatment seems to delay bone maturation and a normal gain in bone mineral density." They concluded that "GnRH analog treatment in children with "gender dysphoria" should be considered experimental."[176]

In 2021, the UK's National Institute for Health and Care Excellence (NICE) published an extensive review, over 130 pages, examining puberty blockers for "gender dysphoria" in children.[177] They found "a lack of reliable comparative studies." They concluded that "the studies that reported impact on the critical outcomes of "gender dysphoria" and mental health (depression, anger and anxiety), and the important outcomes of body image and psychosocial impact (global and psychosocial functioning) in children and adolescents with "gender dysphoria" are of very low certainty using modified GRADE."

[174] Carmichael and others

[175] J. F. Ludvigsson and others, 'A Systema0c Review of Hormone Treatment for Children with Gender Dysphoria and Recommenda0ons for Research', *Acta Paediatr,* (2023).

[176] Ibid.

[177] 'New Systema0c Review of Puberty Blockers and Cross Sex Hormones Published by the Na0onal Ins0tute for

Health and Care Excellence (Nice)', (2021).

The UK authors wrote that these studies "suggest little change with GnRH analogues from baseline to follow-up." They did note a loss of the expected increase in bone density that is normally seen in children not taking puberty blockers.

Blocking of puberty in a child with normal puberty is a powerful intervention that has psychologic and physical impacts. Brain maturation during puberty is crucial.[178,179] There are no studies of the effect of blocking normal puberty on judgment, cognition, and emotional development.[180] However, one careful study is noteworthy. An 11-year-old male treated with a GnRH analog for "gender dysphoria" showed an abnormal failure to increase brain white matter. In addition, he had a reduction in IQ and memory over the course of 22 months of puberty blockers.[181]

The Endocrine Society pointed out the need for more data on the effects on the brain and wrote that "animal data suggest there may be an effect of GnRH analogs on cognitive function."[182] A recent review published in the Endocrine Society's clinical journal reiterated the concern for potential adverse effects of GnRH analogs on cognition[183].

Dr. Hilary Cass, a former president of the Royal College of Pediatrics and Child Health, in her interim report[184] (see below) expressed concern that blockade of puberty may impair "maturation

[178] S. J. Blakemore, S. BurneU, and R. E. Dahl, 'The Role of Puberty in the Developing Adolescent Brain', *Hum Brain Mapp,* 31 (2010).

[179] M. Arain and others, 'Matura0on of the Adolescent Brain', *Neuropsychiatr Dis Treat,* 9 (2013). [180] K. Kozlowska and others, 'AUachment PaUerns in Children and Adolescents with Gender Dysphoria', *Front Psychol,* 11 (2020).

[181] M. A. Schneider and others, 'Brain Matura0on, Cogni0on and Voice PaUern in a Gender Dysphoria Case under Pubertal Suppression', *Front Hum Neurosci,* 11 (2017).

[182] Hembree and others

[183] V. Prevot, M. Tena-Sempere, and N. PiUeloud, 'New Horizons: Gonadotropin-Releasing Hormone and Cogni0on', *J Clin Endocrinol Metab,* 108 (2023).

[184] Cass.

and development of frontal lobe functions which control decision making, emotional regulation, judgement and planning ability."

Furthermore, Dr. Cass stated: "The most difficult question is whether puberty blockers do indeed provide valuable time for children and young people to consider their options, or whether they effectively 'lock in' children and young people to a treatment pathway which culminates in progression to feminising/masculinising hormones by impeding the usual process of sexual orientation and gender identity development."[185] Dr. Cass concluded that more research is needed.

Advocates for "gender affirming care" hope that GnRH analogs will reduce the patient's dysphoria. Yet the risks of this treatment approach are high, and effects on bone and brain development may be irreversible.

In summary, GnRH analogs are not a "pause button." They are a powerful intervention and are neither safe nor effective.

Hormones have powerful effects.

Most of the data on the effects of opposite sex hormones come from follow up studies of adults. There are very little data on minors. Pediatricians and pediatric endocrinologists are unlikely to see the long-term harms of opposite sex hormones begun in childhood, because they rarely provide care for persons after the age of 18.

[185] Ibid.

The dose of the principal male hormone, testosterone, that is recommended by the Endocrine Society for gender dysphoric females would produce levels 20-40 times higher than the normal blood level of testosterone in females.[186]

Estradiol is the main female hormone. Males normally have levels below 30 pg/ml.[187] For "gender dysphoria" in biologic males, the Endocrine Society recommends an estradiol level of 100-200 pg/ml, about 5 times higher than a normal male. [188]

For natal females treated with testosterone

Short term effects of testosterone given to natal females include acne,[189] baldness, facial hair, clitoral enlargement, and pelvic pain.[190] The voice may deepen.

Infertility is frequent in those females treated with testosterone even if not given puberty blockers.[191,192,193,194] Testosterone causes obstruction of the fallopian tubes which transport the ovum.[195]

[186] Hembree and others

[187] C. Ohlsson and others, 'Comparisons of Immunoassay and Mass Spectrometry Measurements of Serum Estradiol Levels and Their Influence on Clinical Associa0on Studies in Men', *J Clin Endocrinol Metab,* 98 (2013). [188] Hembree and others

[189] L. Chu and others, 'Incidence and Factors Associated with Acne in Transgender Adolescents on Testosterone: A Retrospec0ve Cohort Study', *Endocr Pract,* 29 (2023).

[190] S. Zwickl and others, 'Pelvic Pain in Transgender People Using Testosterone Therapy', *LGBT Health,* 10 (2023). [191] Baram and others

[192] Rodriguez-Wallberg and others

[193] K. Dulohery and others, 'How Do Elevated Levels of Testosterone Affect the Func0on of the Human Fallopian Tube and Fer0lity?-New Insights', *Mol Reprod Dev,* 87 (2020).

[194] Hembree and others

[195] Dulohery and others

In fact, effective treatment for the infertility in natal females on opposite sex hormones is so uncertain that mouse studies are being done to try to understand how to mitigate the harm.[196]

Increases in the red blood cells with consequent thickening of the blood, called erythrocytosis, is a known risk of testosterone therapy especially when testosterone is given by injection.[197] Increases in blood pressure and reduced elasticity of the arteries has been reported with testosterone treatment in adolescent females.[198]Testosterone use in females has also caused pseudotumor cerebri.[199]

After testosterone use in females, if breast cancer occurs, its onset is 20 years earlier than the onset seen in females not administered testosterone.[200,201] Breast cancer has been seen even in those females who have had mastectomies—euphemistically called "top surgery"—because the procedure still leaves some residual breast tissue.[202,203]

[196] A. R. Schwartz and others, 'Impaired Ivf Outcomes Following Testosterone Treatment Improve with Washout in a Mouse Model of Gender-Affirming Hormone Treatment', *Am J Obstet Gynecol,* (2023).

[197] M. K. Laidlaw and others, 'LeUer to the Editor from Laidlaw Et Al: "Erythrocytosis in a Large Cohort of Transgender Men Using Testosterone: A Long-Term Follow-up Study on Prevalence, Determinants, and Exposure Years"', *J Clin Endocrinol Metab,* 106 (2021).

[198] F. S. Cunha and others, 'Arterial S0ffness in Transgender Men Receiving Long-Term Testosterone Therapy', *J Endocr Soc,* 7 (2023).

[199] N. E. Gutkind and others, 'Idiopathic Intracranial Hypertension in Female-to-Male Transgender Pa0ents

on Exogenous Testosterone Therapy', *Ophthalmic Plast Reconstr Surg,* (2023).

[200] M. Berliere and others, 'Effects of Hormones on Breast Development and Breast Cancer Risk in Transgender Women', *Cancers (Basel),* 15 (2022).

[201] G. Corso and others, 'Risk and Incidence of Breast Cancer in Transgender Individuals: A Systema0c Review and Meta-Analysis', *Eur J Cancer Prev,* 32 (2023).

[202] C. S. Cor0na and A. L. Kong, 'Chest Mass in a Transgender Man ader Top Surgery', *Lancet Oncol,* 24 (2023). [203] C. J. M. de Blok and others, 'Breast Cancer Risk in Transgender People Receiving Hormone Treatment: Na0onwide Cohort Study in the Netherlands', *BMJ,* 365 (2019).

Testosterone use in females causes abnormalities in the pap smear making it more difficult to diagnose cervical cancer.[204] Testosterone use increases the risk of myocardial infarctions (heart attacks) by three and half times that of women not given testosterone.[205,206,207]

Testosterone increases the risk of strokes almost two-fold compared to women not given testosterone. [208,209,210]Strokes are usually caused by blockage of blood flow to the brain.

<u>For natal males treated with estrogen</u>

Biologic males treated with estrogen have a 22-fold increase in the rate of breast cancer.[211] Biologic males treated with estrogen may have an increased risk of prostate cancer.[212] Prostate cancer can be easily overlooked in these men who, though they may appear as women, still have a prostate gland. Estrogen treatment in biologic males may increase the risk of other cancers.[213]

[204] J. C. Wang and others, 'Factors Associated with Unsa0sfactory Pap Tests among Sexually Ac0ve Trans Masculine Adults', *LGBT Health,* (2023).

[205] T. Alzahrani and others, 'Cardiovascular Disease Risk Factors and Myocardial Infarc0on in the

Transgender Popula0on', *Circ Cardiovasc Qual Outcomes,* 12 (2019).

[206] D. Getahun and others, 'Cross-Sex Hormones and Acute Cardiovascular Events in Transgender Persons: A Cohort Study', *Ann Intern Med,* 169 (2018).

[207] N. M. Nota and others, 'Occurrence of Acute Cardiovascular Events in Transgender Individuals Receiving Hormone Therapy', *Circula(on,* 139 (2019).

[208] Alzahrani and others

[209] Getahun and others

[210] Nota and others

[211] R. R. Gurrala and others, 'The Impact of Exogenous Testosterone on Breast Cancer Risk in Transmasculine Individuals', *Ann Plast Surg,* 90 (2023).

[212] K. Chandran and others, 'A Transgender Pa0ent with Prostate Cancer: Lessons Learnt', *Eur Urol,* 83 (2023). [213] J. O. Santellan-Hernandez and others, 'Mul0focal Glioblastoma and Hormone Replacement Therapy in a Transgender Female', *Surg Neurol Int,* 14 (2023).

Biologic males treated with estrogen have a 36-fold higher risk of strokes. Venous thromboembolism (clots in veins that can pass to the lung and can cause death) is increased more than six times that of males who are not given estrogen.[214,215,216]

Biologic males treated with estrogen may have an increased risk of retinal vein occlusion (blockage in blood flow from the eye).[217] Prescribing estrogen to biologic males may alter their immune systems and increase the risk of autoimmune disorders.[218]

Post-surgical complications for biologic females who undergo bilateral mastectomy The most common surgery performed on minors with "gender dysphoria" is bilateral mastectomy.[219] Bilateral mastectomy has been euphemistically called "top surgery" and "chest contouring." Physicians who perform these surgeries use this phrase. It is notable that physicians do not speak of "top surgery" or "chest contouring" when women have their breasts removed because of cancer. This phrase has been applied only in reference to girls who have their healthy breasts removed.

The majority of boys have some normal breast tissue development during puberty. In almost all boys this pubertal gynecomastia resolves with no treatment. Less than 5% of boys have persistent

pubertal gynecomastia[220]. Surgery is rarely done to remove this tissue.

[214] Alzahrani and others

[215] Getahun and others

[216] Nota and others

[217] V. Andzembe and others, 'Branch Re0nal Vein Occlusion Secondary to Hormone Replacement Therapy in a Transgender Woman', *J Fr Ophtalmol,* 46 (2023).

[218] A. A. White and others, 'Poten0al Immunological Effects of Gender-Affirming Hormone Therapy in Transgender People - an Unexplored Area of Research', *Ther Adv Endocrinol Metab,* 13 (2022).

[219] J. C. Uffman and others, 'Characteris0cs of Transgender and Gender-Diverse Youth Presen0ng for Surgery in the United States', *Anesth Analg,* (2023).

[220] Bradley Anawalt, 'Gynecomas0a', in *Degroot's Endocrinology 8th Edi(on* (Elsevier, 2023), pp. pp. 1811- 24.

A recent paper reports on a series of 81 girls who underwent bilateral mastectomy.[221] Follow-up was for three months only and was not available for 13% of the group. The youngest child was 13 years old.

Between 15-38% of children who undergo mastectomy require additional surgeries.[222,223,224] Up to a third have post-operative complications.[225] These complications include excessive scarring, pain and swelling from blood or fluid buildup, wound dehiscence (opening up where the surgical incisions were sewn together), and nipple necrosis (death of the nipple tissue).

Most studies did not assess patient satisfaction, had short term follow up, and had no formal, unbiased method of determining regret. The literature on this subject clearly illustrates the inadequate assessment of children undergoing mastectomy.

Desisters and detransitioners expose the lack of efficacy and the harm.

Gender clinics have failed to follow-up on children to determine the outcome of medical interventions. In general, pediatricians and pediatric endocrinologists stop caring for children once those children turn 18 years of age. Therefore, these physicians cannot recognize long-term complications that they may have caused.

[221] M. Ascha and others, 'Top Surgery and Chest Dysphoria among Transmasculine and Nonbinary Adolescents and Young Adults', *JAMA Pediatr,* 176 (2022).

[222] S. Kuhn and others, 'Mastectomy in Female-to-Male Transgender Pa0ents: A Single-Center 24-Year Retrospec0ve Analysis', *Arch Plast Surg,* 46 (2019).

[223] W. J. Riyin and others, 'Gender-Affirming Mastectomy: Comparison of Periareolar and Double Incision PaUerns', *Plast Reconstr Surg Glob Open,* 10 (2022).

[224] A. Tang and others, 'Gender-Affirming Mastectomy Trends and Surgical Outcomes in Adolescents', *Ann Plast Surg,* 88 (2022).

[225] R. Rysin, R. Skorochod, and Y. Wolf, 'Implica0ons of Testosterone Therapy on Wound Healing and Opera0ve Outcomes of Gender-Affirming Chest Masculiniza0on Surgery', *J Plast Reconstr Aesthet Surg,* 81 (2023).

There is increasing evidence of regret[226]. There are over 49,000 members of the reddit.com detransition site.[227] Detransition tends to occur at least four years after interventions.[228,229,230,231] Therefore, short-term follow-up after medical interventions is insufficient.[232,233,234,235] When individuals decide to detransition, they find a far less supportive medical and social environment.[236,237] 76% of those who detransition do not inform their physicians about their decision.[238]

The largest recent series, 952 adolescents, were evaluated for treatment discontinuation over 4 years. Their average age was 19. Among those who had started hormonal intervention before age eighteen, 26% discontinued treatment. Among all the natal females in this follow up study, 36% discontinued treatment.[239]

In my practice, I treated about 100 individuals with “gender dysphoria”. My youngest patient was

18. I stopped accepting new patients for “gender dysphoria” in 2013. Those patients who

[226] S. C. J. Jorgensen, 'Transi0on Regret and Detransi0on: Meanings and Uncertain0es', *Arch Sex Behav,* (2023).

[227] 'R Detrans/Detransi0on Subreddit', (hUps://www.reddit.com/r/detrans/).

[228] E. Vandenbussche, 'Detransi0on-Related Needs and Support: A Cross-Sec0onal Online Survey', *J Homosex,* 69 (2022).

[229] LiUman.

[230] C. M. Roberts and others, 'Con0nua0on of Gender-Affirming Hormones among Transgender Adolescents and Adults', *J Clin Endocrinol Metab,* 107 (2022).

[231] R. Hall, L. Mitchell, and J. Sachdeva, 'Access to Care and Frequency of Detransi0on among a Cohort Discharged by a Uk Na0onal Adult Gender Iden0ty Clinic: Retrospec0ve Case-Note Review', *BJPsych Open,* 7 (2021). [232] Vandenbussche.

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[234] Roberts and others

[235] Hall, Mitchell, and Sachdeva.

[236] Jorgensen.

[237] Daniela Valdes and Kinnon Mackinnnon, 'Take Detransi0oners Seriously', in *The Atlan(c,* (hUps://www.theatlan0c.com/ideas/archive/2023/01/detransi0on-transgender-nonbinary-gender-affirmin g care/672745/, 2023).

[238] LiUman.

[239] Roberts and others

discontinued their care with me did not inform me of their decision to do so. They simply did not return for office visits.

As young people mature, they develop more self-acceptance. 23% of the detransitioners in the recent study reported difficulty in accepting themselves as lesbian, gay, or bisexual.[240] They expressed that it might be easier to become “trans” than to acknowledge the choice of a gay lifestyle. This group suffered from a form of “internalized homophobia.”[241] I speculate that psychotherapy would help these individuals acknowledge their difficulty, without medical complications or harm.

The majority of those who detransitioned believed that their evaluation before starting "transition" was inadequate. Many concluded that their "gender dysphoria" was related to other psychological issues.[242,243] A full 48% of people who detransitioned reported a history of trauma within the year preceding the diagnosis of "gender dysphoria".[244] A recent letter[245] written to U.S. Attorney General Garland by six detransitioners describes the experience of transition and detransition with powerful clarity.

A fragment of that letter reads: "Many of us were young teenagers when we decided, on the direction of medical experts, to pursue irreversible hormone treatments and surgeries to bring our bodies into closer alignment with what we thought was our true 'gender identity.' Many of us had extensive

[240] LiUman.

[241] Ibid.

[242] Vandenbussche.

[243] LiUman.

[244] Ibid.

[245] Chloe Cole and others, 'Detransi0oners Respond: A LeUer to AUorney General Garland. The Medical Safeguarding of Children Should Not Be a Poli0cal Issue', (hUps://www.realityslaststand.com/p/detransi0oners-respond-a-leUer, 2022).

histories of mental illness. Many of us had experienced significant childhood trauma. But all of this was ignored because we uttered the word 'gender.' This utterance placed us on a narrow medical pathway that led us to sacrifice our healthy bodies and future fertility in obeisance to the claim that our suffering was a result of having a 'gender identity' that did not 'match' our biological sex."[246]

There is no medical consensus to support the "gender affirmation" model. Medical Societies that endorse "gender affirmation" are politicized and do not represent the viewpoint of

their members.

I have reviewed this problem above in my critique of the low evidence WPATH guidelines. The endorsement of professional societies must be viewed with skepticism until there is open scientific debate.

Countries with longer experience than the U.S. have curtailed hormonal and surgical interventions in minors.

European centers have offered hormonal and surgical treatments for "gender dysphoria", for decades before the current explosion of interest in the U.S.

In the UK, the GIDS had been in operation since 1989 and is slated to close in March 2024[247]. It treated over 10,000 youth with "gender dysphoria". Dr. Hilary Cass was asked to perform an independent review of GIDS. In February 2022, she issued an interim report.[248] She noted many problems in the care of children treated by the center and pointed out that the "appropriate

[246] Ibid.

[247] Closure of Tavistock Gender Iden0ty Clinic Delayed.

[248] Cass.

management of young people with "gender dysphoria" is inconclusive both nationally and internationally." Dr. Cass stated that "given the gaps in the evidence base regarding hormone treatment" the child must have a thorough assessment of the full range of factors affecting their physical, mental, development and psychosocial wellbeing." She stated that there should not be an "unquestioning affirmative" approach to children expressing the desire to live as the opposite sex.[249]

In the UK, there are now strict criteria for continuing (or discontinuing) opposite sex hormones for those children who have already been taking them.[250] Among the 6 required criteria are: they must not have started those hormones before the age of 16. The primary intervention for persons under

18 years of age is psychosocial intervention and psychologic support[251]

In February 2022, Sweden issued new guidelines[252] recommending psychologic care as its first line of treatment for children with "gender dysphoria." Its new guidelines state that the risks of hormonal interventions outweigh benefits and that hormonal interventions in minors should only be used as part of a research protocol.

The French National Academy of Medicine has recommended extending as much as possible the psychological support phase. They advised "the greatest reserve" in the use of hormonal treatments.[253]

[249] Ibid.

[250] 'Na0onal Health Service England: Interim Specialist Service for Children and Young People with Gender Incongruence ', (hUps://www.england.nhs.uk/wp-content/uploads/2023/06/Interim-service-specifica0on-for Specialist-Gender-Incongruence-Services-for-Children-and-Young-People.pdf, 2023).

[251] Ibid.

[252] 'Sweden Na0onal Board of Health and Welfare: Updated Recommenda0ons for Hormone Therapy in Sex Dysphoria in Young People', (hUps://www.socialstyrelsen.se/om-socialstyrelsen/pressrum/press/uppdaterade rekommenda0oner-for-hormonbehandling-vid-konsdysfori-hos-unga/, 2022).

[253] 'Academie Na0onale De Medecine: Medicine and Gender Trans Iden0ty in Children and Adolescents', (2022).

In Norway, the Norwegian Healthcare Investigation Board concluded that there was "insufficient evidence for the use of puberty blockers and opposite sex hormones in young people."[254] Finland issued new guidelines in 2020.[255] In Finland, psychosocial support is the first line treatment including therapy for comorbid psychiatric disorders. The Finnish health care board stated that "hormonal interventions may be considered "with a great deal of caution" and "no irreversible treatment should be initiated." World renown Finnish psychiatrist Dr. Kaltiala was an early

proponent of medical interventions on minors with gender dysphoria. She is now an outspoken critic of such interventions[256].

Denmark will be revising their "gender dysphoria" guidelines this year, according to the Danish Health Authority website.[257] In 2018, Denmark prohibited surgery to remove the ovaries or testes in minors with "gender dysphoria".[258] In contrast, WPATH guidelines have no lower age-limit for any intervention including surgery to remove ovaries or testes.

[254] J. Block, 'Norway's Guidance on Paediatric Gender Treatment Is Unsafe, Says Review', *BMJ,* 380 (2023). [255] 'Recommenda0ons by the Board for Selec0on of Choices for Health Care in Finland: Medical Treatment Methods for Dysphoria Related to Gender Variance in Minors', (hUps://segm.org/sites/default/files/Finnish_Guidelines_2020_Minors_Unofficial%20Transla0on.pdf, 2020). [256] R. Kal0ala, ''Gender Affirming Care Is Dangerous. I Know Because I Helped Pioneer It.'', (hUps://www.thefp.com/p/gender-affirming-care-dangerous-finland-doctor, 2023).
[257] 'Danish Health Authority: Guidance on Medical Assistance in Connec0on with Gender Iden0ty Issues (Google Transla0on from the Danish)', (hUps://www.sst.dk/da/viden/Seksualitet-og koen/Koensiden0tet/Koensiden0tetsforhold/Vejledning-om-sundhedsfaglig-hjaelp, 2023). [258] 'Danish Health Authority: Guide on Healthcare Related to Gender Iden0ty', (hUps://www.sst.dk/-/media/English/Publica0ons/2018/Guide-on-healthcare-related-to-gender-iden0ty.ashx, 2018).

Psychiatrists in Australia criticized the "enthusiastic prescription of hormones and surgery for a condition of questionable construct validity and with such a high rate of natural desistance."[259]

Financial incentives likely explain the massive expansion of medical interventions in U.S. children, despite the European experience.

In the United States there are over 400 clinics and medical offices offering medical interventions for minors with "gender dysphoria".[260] This total does not include Planned Parenthood sites where opposite sex hormones are easily obtained.

In 2021, as compared to 2017, there was a tripling in the number of minors who feel they are a different sex.[261] In the 3 years ending in 2021, there were at least 776 mastectomies in girls ages 13-17 in the U.S. This total does not include those surgeries paid for out of pocket.[262]

A 2016 report[263] estimated the size of the U.S. market for mastectomies in adults with "gender dysphoria" to be at least $11 billion. Revenues from interventions on minors are a substantial incentive.[264]At present U.S. practitioners appear to ignore our European colleagues' wisdom.

[259] J. C. d'Abrera and others, 'Informed Consent and Childhood Gender Dysphoria: Emerging Complexi0es in Diagnosis and Treatment', *Australas Psychiatry,* 28 (2020).

[260] 'The Gender Mapping Project', (hUps://www.gendermapper.org/, 2023).

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[262] Ibid.

[263] Aaron Berhanu and Richard BartleU, 'Understanding the Market for Gender Confirma0on Surgery in the Adult Transgender Community in the United States:Evolu0on of Treatment, Market Poten0al and Unique Pa0ent Characteris0cs', (hUps://dash.harvard.edu/handle/1/40620231: Harvard University, 2016). [264] 'Dr. Shayne Taylor Lectures at Vanderbilt on Revenue Genera0on at Vanderbilt from Gender Interven0ons', in *Dr. Shayne Taylor lectures at Vanderbilt on revenue genera(on at Vanderbilt from gender interven(ons,* (2022).

Conclusion:

In summary, some children may feel, despite reality, that they are a different sex. Any associated psychic distress is not improved by medical interventions to alter body appearance. These

interventions do not constitute “care” and are not sensible. Furthermore, these medical interventions can cause irreversible harm and lead to lifelong regret. Many members of the medical community agree with this view and stress, as do I, that as physicians, we must first do no harm.

Thank you.

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Daniel Weiss MD

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