

**THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO**

DARREN PATTERSON CHRISTIAN
ACADEMY,

Plaintiff,

v.

LISA ROY, et al.,

Defendants.

Case No. 1:23-cv-1557-DDD-STV

EXPERT REPORT OF STEPHEN B. LEVINE, M.D.

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I. CREDENTIALS

1. I am Clinical Professor of Psychiatry at Case Western Reserve University School of Medicine and maintain an active private clinical practice. I received my M.D. from Case Western Reserve University in 1967 and completed a psychiatric residency at the University Hospitals of Cleveland in 1973. I became an Assistant Professor of Psychiatry at Case Western in 1973, became a Full Professor in 1985, and in 2021 was honored to be inducted into the Department of Psychiatry's "Hall of Fame."

2. Since July 1973, my specialties have included psychological problems and conditions relating to individuals' sexuality and sexual relations, therapies for sexual problems, and the relationship between love, intimate relationships, and wider mental health. In 2005, I received the Masters' and Johnson Lifetime Achievement Award from the Society of Sex Therapy and Research. I am a Distinguished Life Fellow of the American Psychiatric Association.

3. I have served as a manuscript and book reviewer for numerous professional publications. I have been the Senior Editor of the first (2003), second (2010), and third (2016) editions of the *Handbook of Clinical Sexuality for Mental Health Professionals*. I have solo-authored six books for professionals, the most recent of which is *Psychotherapeutic Approaches to Sexual Problems* (2020) which, like the previous books, contains a chapter on sexual identity variations.

4. I have authored or co-authored over 180 journal articles and book chapters, 39 of which deal with the issue of gender dysphoria. I was an invited member of a Cochrane Collaboration subcommittee that sought to publish a review of the scientific literature on the effectiveness of puberty blocking hormones and of cross-sex hormones for gender dysphoria for adolescents. Cochrane Reviews are a well-respected cornerstone of evidence-based practice, comprising a systematic

review that aims to identify, appraise, and synthesize all the empirical evidence that meets pre-specified eligibility criteria in response to a particular research question.

5. My four publications on Gender Dysphoria since March 2022 have attracted significant international attention, having been downloaded over 260,635 times in Europe, Asia, Australia, New Zealand, and the U.S. as of May 25, 2024. The titles are: 1. Reconsideration of Informed Consent for Trans-identified Children, Adolescents, and Young Adults (Levine, Abbruzzese & Mason 2022).; 2. What Are We Doing to These Children? Response to Drescher, Clayton, and Balon Commentaries on Levine et al., 2022 (Levine, Abbruzzese & Mason 2022); 3. The Myth of “Reliable Research” in Pediatric Gender Medicine: A critical evaluation of the Dutch Studies—and research that has followed (Abbruzzese, Levine & Mason 2023); 4. Current Concerns About Gender-Affirming Therapy in Adolescents (Levine & Abbruzzese 2023). A fifth paper, What is the Purpose of the Initial Psychiatric Evaluation of Minors with Gender Dysphoria?, is in press.

6. I first encountered a patient suffering what we would now call gender dysphoria in July 1973. In 1974, I founded the Case Western Reserve University Gender Identity Clinic and have served as Co-Director of that clinic since that time. Across the years, our Clinic treated hundreds of patients who were experiencing a transgender identity. An occasional grade school-aged child or younger were seen during this era. I was the primary psychiatric caregiver for several dozen of our patients and supervisor of the work of other therapists. I supervise psychotherapists from out of town on their treatment of adolescents with gender dysphoria. I was an early member of the Harry Benjamin International Gender Dysphoria Association (later known as WPATH) and served as the chairman of the committee that developed the 5th version of its Standards of Care. In 1993 the CWRU Gender Identity Clinic was renamed, moved to a new location, and became independent of Case Western Reserve University. I continue to serve as Co-Director of our Gender Diversity Clinic,

which has monthly meetings with members of our local staff and others from Canada and North America.

7. In the course of my five decades of practice treating patients who suffered from gender dysphoria, I have at one time or another supported requested social transition, cross-sex hormones, and surgery for particular patients, but only after extensive diagnostic and psychotherapeutic work.

8. In 2006, Judge Mark Wolf of the Eastern District of Massachusetts asked me to serve as an independent, court-appointed expert in a litigation involving the treatment of a transgender inmate within the Massachusetts prison system. In that litigation, the U.S. Court of Appeals for the First Circuit in a 2014 (en banc) opinion cited and relied on my expert testimony. I have been retained by the Massachusetts Department of Corrections as a consultant on the treatment of transgender inmates since 2007. This supervisory, consultative, and direct educational work continues to this day.

9. In 2019, I was qualified as an expert and testified concerning the diagnosis, understanding, developmental paths and outcomes, and therapeutic treatment of transgenderism and gender dysphoria, particularly as it relates to children, in the matter of *In the Interest of J.A.D.Y. and J.U.D.Y.*, No. DF-15-09887-S, 255th Judicial District, Dallas County, TX (the “*Younger* litigation”).

10. In 2019, I provided written expert testimony in the landmark case in the United Kingdom in the case of *Bell v. The Tavistock and Portman NHS Foundation Trust*. I have provided expert testimony in other litigation as listed in my curriculum vitae, which is attached as Exhibit A.

11. I am often requested to speak on the topic of gender dysphoria and have given countless presentations to academic conferences and Departments of Psychiatry around the country. In May 2022, I organized and co-presented a symposium on the management of adolescent-onset transgender identity at American

Psychiatric Association’s Annual Meeting. In June 2023, I spoke in Finland at a conference on psychotherapy for adolescents with a trans identity. In September and October 2023, I spoke at international conferences on the same topic in Denver and New York. A fuller review of my professional experience, publications, and awards is provided in Exhibit A.

12. This report responds to certain opinions contained in the Expert Reports of Doctors Abbie Goldberg and Amy Tishelman, submitted on behalf of the Defendants in this case, which explicitly and implicitly advocate for the active affirmation of a minor’s current transgender identity, which has been called an “affirmative” response. As I will detail in this report, an affirmative response is not the sole appropriate response to child or who may or may not meet all the diagnostic criteria for gender dysphoria. Indeed, an “affirmative” approach has been demonstrated to start a minor on a path that leads in the large majority of cases to the administration of puberty blockers, which in turn almost inevitably leads to the administration of cross-sex hormones—all of which carry known social, psychological, and medical risks for the affected minor that cannot be ignored. I employ an analogy that is important for parents, educators, and government officials to understand—this sequence can be visualized as a “conveyor belt.”

13. The bases for my opinions expressed in this report are my professional experience as a psychiatrist, my knowledge of the pertinent scientific literature, and my review of the various pleadings and documents filed in this case, including the Verified Complaint and the Expert Reports of Doctors Abbie Goldberg and Amy Tishelman.

14. I am being compensated for my time spent in preparation of this report at a rate of \$400.00 per hour and for time spent during and in preparation for trial and/or deposition testimony at a rate of \$500.00 per hour. My compensation is not dependent upon the outcome of this litigation or the substance of my opinions.

II. SUMMARY

15. As a preliminary matter, I note from the Verified Complaint that no minor will be refused enrollment at the universal preschool program at Darren Patterson Christian Academy due to the minor being trans-identified at the time, but that Darren Patterson Christian Academy would treat the minor according to his or her sex for purposes of restroom usage, pronouns, dress codes, and housing during school expeditions and field trips.¹ In other words, Darren Patterson Christian Academy does not implement the “affirmative” response advocated by Doctors Abbie Goldberg and Amy Tishelman.

16. Adopting an “affirmative” response to currently trans-identified minors is controversial because it assumes a minor’s identity is a fixed and stable biological entity that must be treated as though the minor has always been and will always be a trans person. However, the scientific literature has consistently shown that the vast majority of minors who want to be, or insist that they are, members of the opposite sex desist from this identity during childhood or adolescence. The observation of these high rates of natural desistance is not discussed in the reports of Doctors Abbie Goldberg and Amy Tishelman.

17. Moreover, the scientific literature also demonstrates that an “affirmative” response to a trans-identified minor—often called “social transition”—is a powerful psychotherapeutic intervention that almost eliminates the naturally observed desistance rates and predisposes the minor to desire and receive puberty blockers, cross-sex hormones, and surgical interventions. This is why I employ the analogy of a “conveyor belt” to conceptualize the path that leads, in the large majority of cases, from “social transition” to medical interventions. These further interventions all have profound social, psychological, and medical consequences for the minors and their families, which I discuss at length in this report, which cannot be ignored and

¹ Verified Complaint, ¶ 7, 11, 48, 61–63.

must all be considered when deciding to adopt an “affirmative” response. Discussion of the ensuing impact on minors and their families from an “affirmative” response is notably absent from the reports of Doctors Abbie Goldberg and Amy Tishelman.

18. A summary of the key points that I explain in this report that are implicit in determining the response to a trans-identified minor is as follows:

- a. Sex as defined by biology and reproductive function is clear, binary, and cannot be changed. While hormonal and surgical procedures may enable some individuals to “pass” as the opposite gender during some or all of their lives, such procedures carry with them physical, psychological, and social risks, and no procedures can enable an individual to perform the reproductive role of the opposite sex. (Section III.A.)
- b. The diagnosis of “gender dysphoria” encompasses a diverse array of conditions, with widely differing pathways and characteristics depending on age of onset, biological sex, mental health, intelligence, motivations for gender transition, family circumstances, socioeconomic status, country of origin, etc. Data from one population (e.g., adults) cannot be assumed to be applicable to others (e.g., children). The term transgender, which is widely used by individuals with differing identities—nonbinary, gender fluid, queer, pangender, for instance, is not a synonym for the diagnosis of “gender dysphoria.” (Section III.B.)
- c. Among practitioners in the field, there are currently widely varying views concerning both the causes of and appropriate therapeutic response to gender dysphoria in children and adolescents. There are no generally accepted international or national “standards of care,” and existing studies do not provide a basis for a scientific conclusion as to which therapeutic response results in the best long-term outcomes for affected individuals. (Section IV.)

- d. Transgender identities are not biologically based; they are not simply determined prenatally. Rather, gender dysphoria is a psychiatric condition that cannot be identified by any biological test or measurement. (Sections V.A.)
- e. Disorders of sexual development (“DSDs”), referred to as Variations in Sex Traits (“VSTs”) by Dr. Amy Tishelman, are biologically based phenomena. It is a speculative error to conflate and/or scientifically link DSDs with incidents of gender dysphoria. (Sections V.C, V.D.)
- f. The large majority of children who are diagnosed with gender dysphoria “desist”—that is, their gender dysphoria does not persist—by puberty or adulthood. Desistance is also increasingly observed among teens and young adults who have experienced “rapid onset gender dysphoria”—first manifesting gender dysphoria during or shortly after adolescence. Such desistance is usually discussed as detransition or retransition. (Sections VI.A., VI.B.)
- g. “Social transition”—the active affirmation of a transgender identity through name changes at home and in school, hair and dress styles, and pronoun change—in children is a powerful intervention that solidifies the child’s incorrect sense that “sex” can be changed through gender presentation. While social transition is not itself a medical intervention, it strongly predisposes the child and family to desire and receive puberty blockers, cross-sex hormones and surgical interventions, each of which have social, psychological, and medical consequences. Thus, social transition leads to medicalization and far fewer children desisting by puberty. (Sections VII.A, VII.B.)
- h. Administration of puberty blockers is not a benign “pause” of puberty, but rather a powerful medical and psychotherapeutic intervention that

almost invariably leads to persistence in a transgender identity and, ultimately, to the administration of cross-sex hormones. (Section VII.C.)

- i. The knowledge base concerning the “affirmative” treatment of gender dysphoria available today has very low scientific quality with many relevant long-term implications remaining unknown. (Section VIII.A.)
- j. There are no studies that show that affirmation of transgender identity in minors permanently reduce suicide or suicidal or improves long-term outcomes, as compared to other therapeutic approaches. Meanwhile, multiple studies show that adult individuals living transgender lives suffer much higher rates of suicidal ideation, completed suicide, and negative physical and mental health conditions than does the general population. This is true before and after transition, hormones, and surgery. (Section VIII.B., VIII.C.)
- k. In light of what is known and not known about the impact of affirmation on the incidence of suicide, suicidal ideation, and other indicators of mental and physical health, it is scientifically baseless, and therefore unethical, to assert that a child or adolescent who expresses an interest in a transgender identity will kill him- or herself unless parents, educators, and peers affirm that child in a transgender identity. (Section IX.)
- l. Hormonal interventions to treat gender dysphoria are unproven, experimental, and dangerously uncertain in the long run. (Sections X, IV.F). Such treatments place an individual at risk of a wide range of long-term and even life-long harms including physical health risks; sterilization and its personal and interpersonal emotional responses; impaired sexual functional capacity; surgical complications and life-long after-care; alienation of family and romantic relationships; elevated

mental health risks of depression, anxiety, and substance abuse. The most overlooked and undiscussed harm, however, is shortened life expectancy. (Sections V.III, X.)

- m. The prevalence of the diagnosis of gender dysphoria in children and adolescents is higher among those in foster care, those who have been adopted, those with autism, a prior psychiatric diagnosis, and other earlier adversities such as neglect, or physical and sexual abuse. In the last decade, the prevalence of girls who claim to be transgendered has conspicuously increased. (Section III.C.)

III. BACKGROUND ON THE FIELD

A. The biological baseline of the binary sexes.

19. Biological sex is very well defined in all biological sciences including medicine. It is pervasively important in human development throughout the lifecycle.

20. Sex is not “assigned at birth” by humans visualizing the genitals of a newborn; it is not imprecise. Rather, it is clear, binary, and determined at conception. The sex of a human individual at its core structures the individual’s reproductive capabilities—to produce ova and bear children as a mother, or to produce semen and beget children as a father. As physicians know, sex determination occurs at the instant of conception, depending on whether a sperm’s X or Y chromosome fertilizes the egg. A publication of the federal government’s National Institute of Health accurately summarizes the scientific facts:

Sex is a biological classification, encoded in our DNA. Males have XY chromosomes, and females have XX chromosomes. Sex makes us male or female. Every cell in your body has a sex—making up tissues and organs, like your skin, brain, heart, and stomach. Each cell is either male or female depending on whether you are a man or a woman.” (NIH, How Sex and Gender Influence Health and Disease, 2022.)

21. The binary of biological sex is so fundamental and wide-ranging in its effects on human (and mammal) development and physiology that since 2014, the NIH has required all funded research on humans or vertebrate animals to include “sex as a biological variable” and give “adequate consideration of both sexes in experiments.” (NIH 2015.) In 2021, the Endocrine Society issued a position paper elaborating on the application of the NIH requirement. The Endocrine Society correctly stated that “Sex is a biological concept . . . all mammals have 2 distinct sexes;” that “biological sex is . . . a fundamental source of intraspecific variation in anatomy and physiology;” and that “In mammals, numerous sexual traits (gonads, genitalia, etc.) that typically differ in males and females are tightly linked to each other because one characteristic leads to sex differences in other traits.” (Bhargava et al. 2021 at 221, 229.)

22. The Endocrine Society emphasized that “The terms sex and gender should not be used interchangeably,” and noted that even in the case of those “rare” individuals who suffer from some defect such that they “possess a combination of male- and female-typical characteristics, those clusters of traits are sufficient to classify most individuals as either biologically male or female.” They concluded, “Sex is an essential part of vertebrate biology, but gender is a human phenomenon. Sex often influences gender, but gender cannot influence sex.” (Bhargava et al. 2021 at 220–221, 228.) This latter phrase requires repeated emphasis.

23. As these statements and the NIH requirement suggest, biological sex pervasively influences human anatomy, its development and physiology. This includes, of course, the development of the human brain, in which many sexually dimorphic characteristics have now been identified. In particular, the Endocrine Society and countless other researchers have determined that human brains undergo sex-specific developmental stages during puberty. This predictable developmental process is a genetically controlled coordinated endocrine response that begins with

pituitary influences leading to increases in circulating sex hormones. (Bhargava et al. 2021 at 225, 229; Blakemore et al. 2010 at 926–927, 929; NIH 2001.) This internal endocrine process begins well before puberty is manifested on the body and its function.

24. Humans have viewed themselves in terms of binary sexes since the earliest historical records. Recognizing a concept of “gender identity” as something distinct from sex is a rather recent innovation whose earliest manifestations likely began in the late 1940s. Its usage became common in medicine in the 1980s and subsequently in the larger culture. Definitions of gender have been evolving and remain individual-centric and subjective. In a statement on “Gender and Health,” the World Health Organization defines “gender” as “the characteristics of women, men, girls and boys that are socially constructed” and that “var[y] from society to society and can change over time,” and “gender identity” as referring to “a person’s deeply felt, internal and individual experience of gender.” (WHO Gender and Health.) As these definitions indicate, a person’s “felt” “experience of gender” is inextricably bound up with and affected by societal gender roles and stereotypes—or, more precisely, by the affected individual’s perception of societal gender roles and stereotypes and their personal idiosyncratic meanings. Typically, gendered persons also have subtly different, often idiosyncratic, reactions to societal gender roles and stereotypes without preoccupation with changing their anatomy. “Socially constructed” means that perceptions of others interact with internal conscious and unconscious developmental processes to generate a current and changeable sense of identity reflected in current self-concepts of gender identity and romantic/sexual attractions to other classes of individuals (i.e. male, female, or trans-identified persons).

25. Thus, the self-perceived gender of a child begins to develop along with the early stages of identity formation generally, influenced in part from how others

label the infant: “I love you, son (daughter).” This designation occurs thousands of times in the first two years of life when a child begins to show awareness of the two possibilities. As acceptance of the designated gender corresponding to the child’s sex is the outcome in >99% of children everywhere, anomalous gender identity formation begs for understanding. Is it biologically shaped? Is it biologically determined? Is it the product of how the child was privately regarded and treated? Is it a product of the quality of early life caregiver attachments? Does it stem from trauma-based rejection of maleness or femaleness, and if so, flowing from what trauma? Does it derive from a tense, chaotic interpersonal parental relationship without physical or sexual abuse? Is it a symptom of another, as of yet, unrevealed, emotional disturbance or neuropsychiatric condition (autism)? The answers to these relevant questions are not scientifically known but are not likely to be the same for every trans-identified child, adolescent, or adult.

26. Under the influence of hormones secreted by the testes or ovaries, numerous additional sex-specific differences between male and female bodies continuously develop postnatally, culminating in the dramatic maturation of the primary and secondary sex characteristics with puberty. These include differences in hormone levels, height, weight, bone mass, shape, musculature, internal organ size, body fat levels and distribution, and hair patterns, as well as physiological differences such as menstruation and ejaculation. These are genetically programmed biological consequences of sex—the manifestations of sex throughout the life cycle. Among the many consequences of sex is the evolution and consolidation of gender identity during childhood, adolescence, and various eras of adulthood.

27. Despite the increasing ability of hormones and various surgical procedures to reconfigure some male bodies to visually pass as female, or vice versa, the biology of the person remains as defined by his (XY) or her (XX) chromosomes, including cellular, anatomic, and physiologic characteristics and the disease

vulnerabilities associated with that chromosomally defined sex. For instance, the XX (genetically female) individual who takes testosterone to stimulate certain male secondary sex characteristics will nevertheless remain unable to produce sperm and father children. Contrary to assertions and hopes that medicine and society can fulfill the aspiration of the trans-identifying individual to become “a complete man” or “a complete woman,” this is not biologically attainable. (Levine 2016 at 238; Levine 2018a at 6.) It is possible for some adolescents and adults to pass unnoticed—that is, to be perceived by most individuals as a member of the gender that they aspire to be—but with limitations, costs, and risks, as I detail later.

B. Definition and diagnosis of gender dysphoria.

28. Specialists have used a variety of terms over time, with somewhat shifting definitions, to identify and speak about a distressing incongruence between an individual’s genetically determined sex and the gender with which they identify or to which they aspire. The American Psychiatric Association first used the term “gender identity disorder” in its Diagnostic and Statistical Manual of Mental Disorders in 1980 (DSM-3) to replace “transsexualism.” The term “gender dysphoria” was introduced in the 2013 version of the DSM (DSM-5). Today’s version of the DSM (DSM-5-TR) defines gender dysphoria with separate sets of criteria for adolescents and adults and for children.

29. There are at least five distinct pathways to gender dysphoria: (i) early childhood onset; (ii) onset near or after puberty with no prior cross gender patterns; (iii) onset after defining oneself as gay for several or more years and participating in a homosexual lifestyle; (iv) adult onset after years of heterosexual transvestism; (v) and onset in later adulthood with few or no prior indications of cross-gender tendencies or identity. (Levine 2021.)

30. Gender dysphoria has very different characteristics depending on age, sex, and era. Young children who are living a transgender identity commonly suffer

materially fewer symptoms of concurrent mental distress than do older patients. (Zucker 2018 at 10.) The developmental and mental health patterns for each of these groups are sufficiently different that data developed in connection with one of these populations cannot be assumed to be applicable to another.

31. The criteria used in DSM-5-TR to identify Gender Dysphoria include signs of discomfort with one's sex and vary somewhat depending on the age of the patient, but in all cases require "clinically significant distress or impairment in . . . important areas of functioning" such as social, school, or occupational settings. The symptoms must persist for at least six months. The diagnostician must consider whether the impairments are developmentally due to the incongruence, per se, and not symptoms of another underlying developmental difficulties. This is a very difficult discernment to make. In medical tradition, the diagnosis of gender dysphoria is a conclusion that is reached after a thorough consideration of other problems that may masquerade as gender dysphoria. This process of discernment is widely known as a differential diagnostic process.

32. Children who conclude that they are transgender are often unaware of a vast array of adaptive possibilities for how to live life as a man or a woman—possibilities that become increasingly apparent over time to both males and females. A boy or a girl who claims or expresses interest in pursuing a transgender identity often does so based on stereotypical notions of femaleness and maleness that reflect constrictive notions of what men and women can be. (Levine 2017 at 7.) A young child's—or even an adolescent's—understanding of this topic is quite limited. When asked why they so identify, they often cannot state a cogent reason why. Nor can they grasp what it may mean for their future to be sterile or sexually dysfunctional. (Levine et al. 2022.) These children and adolescents consider themselves to be relatively unique; they do not realize that discomfort with the body and perceived social role is neither rare nor new to civilization. (Jorgensen 2023.) What is culturally

new is that such discomfort is thought to indicate that they must be an example of a trans person.

C. Impact of gender dysphoria on minority and vulnerable groups.

33. Given that, as I discuss later, a diagnosis of gender dysphoria is now frequently putting even young children on a pathway that leads to irreversible physical changes and sterilization by young adulthood, it should be of serious concern to all practitioners that minority and vulnerable groups are receiving this diagnosis at disproportionately high rates. These include: children of color (Rider et al. 2018), children with mental developmental disabilities (Reisner et al. 2015), children on the autistic spectrum (at a rate more than 7x the general population) (Shumer et al. 2016; van der Miesen et al. 2018), children with ADHD (Becerra-Culqui et al. 2018), children residing in foster care homes, adopted children (at a rate more than 3x the general population) (Shumer et al. 2017), victims of childhood sexual or physical abuse or other “adverse childhood events” (Thoma et al. 2021; Newcomb et al. 2020; Kozłowska et al. 2021), children with a prior history of psychiatric illness (Edwards-Leeper et al. 2017; Kaltiala-Heino et al. 2015; Littman 2018), and more recently adolescent girls (in a large recent study, at a rate more than 2x that of boys). (Rider et al. 2018 at 4.)

D. Three competing conceptual models of gender dysphoria and transgender identity.

34. Discussions about appropriate responses by mental health professionals (“MHPs”) to actual or sub-threshold gender dysphoria are complicated by the fact that various speakers and advocates (or a single speaker at different times) view transgenderism through at least three very different paradigms, often without being aware of, or at least without acknowledging, the distinctions. These paradigmatic lenses are: physical illness, developmental, and civil rights.

35. Gender dysphoria is conceptualized and described by some professionals and laypersons, particularly in court rooms, as though it were a **serious, physical medical illness** that causes suffering, comparable to diseases that are curable before they spread, such as melanoma or sepsis. Within this paradigm, whatever is causing distress associated with gender dysphoria—whether menstruation, facial hair, nose and jaw shape, presence or absence of breasts, or the sex organs of testes, ovaries, penis, or vagina—should be removed to alleviate the illness.

36. The medical paradigm of understanding gender dysphoria is inaccurate. Gender dysphoria is a psychiatric, not a medical, diagnosis. Since its inception in DSM-III in 1980, it has always been specified in the psychiatric DSM manuals and has not been specified in medical diagnostic manuals. Notably, gender dysphoria is the only psychiatric condition with no known biological abnormality to be treated by hormones and surgery. (Levine 2016 at 240.)

37. Gender dysphoria is alternatively **conceptualized in developmental** terms, as an adaptation to a psychological problem that may have been first manifested as a failure to establish a comfortable sense of self in early childhood. This paradigm starts from the premise that all human lives are influenced by past processes and events. The lives of those with a current trans identity are not exceptions to this axiom. (Levine 2016 at 238.) MHPs who think of gender dysphoria through this paradigm may work both to identify and address causes of the basic problem of the deeply uncomfortable self or a sense of self impaired by later adversity or abuse. The purpose is to ameliorate suffering when the underlying problem cannot be solved. MHPs first work with the patient and (ideally) family to learn about the events and processes that may have led to the trans-identifying person repudiating the gender associated with his or her sex. The developmental paradigm is mindful of temperamental, parental bonding, psychological, sexual, and physical trauma influences, and the fact that young children work out their psychological issues

through fantasy and play and adolescents work out their issues by adopting various interests and identity labels.

38. There is evidence among adolescents that peer social influences through “friend groups” (Littman 2018) or through the internet can increase the incidence of gender dysphoria or claims of transgender identity. Responsible MHPs will want to probe these potential influences to better understand what is truly deeply tied to the psychology of the patient, and what may instead be being “tried on” by the youth as part of the adolescent process of self-exploration and self-definition. The dramatic recent increase in adolescents who do not identify as heterosexual is evidence of social influences in today’s cultural environment. Among this larger group, the segment who identify as binary and nonbinary transgender persons have been seeking assistance and overwhelming clinical services in many countries, particularly in the UK. (Cass 2022 at 32–34, 45–47, 56.)

39. In addition, the developmental paradigm recognizes that, with the important exception of genetic sex, essentially all aspects of an individual’s identity evolve—often markedly—across the individual’s lifetime. This includes a person’s understanding of gender. Some advocates assert that a transgender identity is biologically caused, fixed from early life, and eternally present in an unchanging manner—it is often raised as a justification for medical and surgical interventions. As I review later, however, this assertion is not supported by science.²

40. The third paradigm through which gender dysphoria is alternatively conceptualized is from **a sexual minority rights perspective**. Under this paradigm, any response other than medical and societal affirmation and implementation of a patient’s claim to “be” the opposite gender is a violation of the

² Even the advocacy organization The Human Rights Campaign asserts that a person can have “a fluid or unfixed gender identity.”
<https://www.hrc.org/resources/glossary-of-terms>.

individual's civil right to self-expression. Any effort to ask "why" questions about the patient's condition, or to address underlying causes, is viewed as a violation of autonomy and civil rights. In the last few years, this paradigm has been successful in influencing public policy and the education of pediatricians, endocrinologists, and many mental health professionals. Obviously, however, this is not a medical or psychiatric perspective. Unfortunately, it appears to be the most powerful perspective that exists in the public, non-scientific debate.

E. Four competing models of therapy.

41. Few would disagree that the human psyche is complex. Few would disagree that children's and adolescents' developmental pathways typically have surprising twists and turns. The complexity and unpredictability of childhood and adolescent development equally applies to trans-identifying youth. Because of past difficulties of running placebo-controlled clinical trials in this arena, substantial disagreements among professionals exist about the causes of trans identities and their ideal treatments. These current disagreements might have been minimized if trans treated persons were carefully followed up to determine long term outcomes. They have not been. When we add this to the very different current paradigms for understanding transgender phenomena, it is not scientifically surprising that disagreements are sharply drawn. It is with this in mind that I summarize below the leading approaches and offer certain observations and opinions concerning them.

1. The two "watchful waiting" therapy models.

42. In Section VI.A below I review the uniform finding of eleven follow-up studies that the large majority of children who present with gender dysphoria will desist from desiring a transgender identity by adulthood if left untreated by social transition approaches.

43. When a pre-adolescent child presents with gender dysphoria, a "watchful waiting" approach seeks to allow for the fluid nature of gender identity in

children to naturally evolve—that is, take its course from forces within and surrounding the child. After a comprehensive evaluation of the child or adolescent and with the parents, a first model of “watchful waiting” prescribes no treatment except a regular follow up appointment to ascertain how the minor and the family are doing and what else might be useful. Informally, model #1 can be referred to as an “hands off” approach to let development proceed. The therapist, however, establishes their interest in the person and wants to remain in touch regularly.

44. Model #2 of the watchful waiting has no focus on the minor’s gender identity per se. It is based on treating psychological co-morbidities—that is, other mental illnesses as defined by DSM-5-TR (separation anxiety disorder, attention deficit hyperactivity disorder, autism spectrum disorder, obsessive compulsive disorder, etc), or subthreshold for diagnosis but behavioral problems that the child may exhibit (school avoidance, bedwetting, inability to make friends, aggression/defiance). When gender is understood and expected to be one of the subjects of and for the intervention, a third model becomes apparent.

2. The psychotherapy model: Alleviate distress by identifying and addressing causes (model #3).

45. One of the foundational principles of psychotherapy has long been to work with a patient to identify the causes of observed psychological distress and then to address those causes as a means of alleviating the distress. The National Institute of Mental Health has promulgated the idea that 75% of adult psychopathology has its origins in childhood experience.

46. Many experienced practitioners in the field of gender dysphoria, including myself, have believed that it makes sense to employ these long-standing tools of psychotherapy for patients suffering gender dysphoria, asking the questions: What factors in the patient’s life are the determinants of the patient’s repudiation of his or her sex and What is it about the other gender that you desire to incorporate

into your life? (Levine 2017 at 8; Spiliatis 2019; Levine 2021; Levine et al. 2022.) I and others have reported success in alleviating distress in this way for at least some patients, whether the patient's sense of discomfort or incongruence with his or her sex entirely disappeared or not. Relieving accompanying psychological co-morbidities leaves the patient freer to consider the pros and cons of transition as he or she matures. It improves their capacity to understand the gravity of the transition that they seem to want to undertake. It also improves their capacities for prudent autonomy (D'Angelo 2023).

47. Among other things, the psychotherapist who is applying traditional methods of psychotherapy may help—for example—the male patient to appreciate the wide range of masculine emotional and behavioral patterns as he grows older. He may discuss with his patient, for example, that one does not have to become a “woman” to be kind, compassionate, caring, noncompetitive, to love the arts, and to be devoted to others' feelings and needs. (Levine 2017 at 7.) Many biological males identifying as transgender, from childhood to older ages, speak of their perceptions of femaleness as enabling them to discuss their feelings openly, whereas they perceive boys and men to be constrained from emotional expression within the family and larger culture, and to be aggressive. Men, of course, can be emotionally expressive, just as they can wear pink. Converse examples can be given for girls and women. Girls don't have to conform to stereotypic media images that bombard them, nor do they have to have the traits and the problems that they see in the women in their families. These types of ideas regularly arise during psychotherapies.

48. Many gender-nonconforming children and adolescents in recent years derive from minority and vulnerable groups who have reasons to feel isolated and have an uncomfortable sense of self. A trans identity may be a hopeful attempt to redefine the self in a manner that increases their comfort and decreases their anxiety. The clinician who uses traditional methods of psychotherapy may not focus on their

gender identity, but instead work to help them to address the actual sources of their discomfort. They may enable the patient to understand the commonality of discomfort with the body's physiology, the growth process, and the struggle to accept oneself during the pubertal developmental process. Patients need to understand that this discomfort with one's body, per se, and one's attractiveness relative to others, typically lasts for several or more years. Success in this effort may remove or reduce the desire for a redefined identity. This often involves a focus on disruptions in their attachment to parents in vulnerable children, for instance, those in the foster care system.

49. Because “watchful waiting” can include treatment of accompanying psychological co-morbidities, and the psychotherapist who hopes to relieve gender dysphoria may focus on potentially causal sources of psychological distress rather than on the gender dysphoria itself, there is no sharp line between “watchful waiting” and the psychotherapy model in the case of prepubescent children.

50. There is no evidence beyond anecdotal reports that psychotherapy can enable a return to male identification for genetically male boys, adolescents, and men, or return to female identification for genetically female girls, adolescents, and women. On the other hand, anecdotal evidence of such outcomes does exist; I and other clinicians have witnessed reinvestment in the patient's biological sex in some individual patients who are undergoing psychotherapy. The Internet contains many such reports, and I have published a paper on a patient who sought my therapeutic assistance to reclaim his male gender identity after 30 years living as a woman and is in fact living as a man today. (Levine 2018b.) I have seen children desist even before puberty in response to thoughtful parental interactions and a few meetings of the child with a therapist. There are now a series of articles and at least one major book on the psychological treatment of adolescents. (*See, e.g., D'Angelo et al. 2021; Evans & Evans 2021.*)

51. Among detransitioners, a large percentage of this growing population express regret that their affirmative therapists did not recommend psychotherapy before encouraging hormonal treatment. (Littman 2021.) Exposito-Campos pointed out the large number of reports on detransition and the far greater traffic on various nonprofessional websites. (Exposito-Campos 2021.) More recently, detransition and regret have been discussed in a balanced manner acknowledging its complexities. (Jorgensen 2023; *see also* Levine & Abbruzzese 2023.) It needs to be understood that when comparing anecdotal reports of the psychotherapy, the convictions of affirmative care interventionists are also based on anecdotal experiences and what they have been taught by their educators. Among her many cogent observations in this field, Clayton has illuminated the power of the placebo effect in the medicalization of trans youth wherein the patient's expectations, the professionals' beliefs, and social movements combine to create short lived symptom relief yielding the illusion of long-term benefit without supporting data. (Clayton 2023 at 487–90.) And as reviewed in one of the world's most prestigious medical journals, the science in this field is uncertain. (Block 2023 at 2–4. *See also* Section IV.)

3. The affirmation therapy model (model #4).

52. While it is widely agreed that, under any model, the therapist should not directly challenge a claimed transgender identity in a child (“No, you are not actually a boy”, for instance), there are kind, supportive ways to inquire about the child's self-understanding. Some advocates and practitioners go much further and consider that no inquiry should ever occur. They promote and recommend that any expression of transgender identity should be immediately accepted as decisive, and thoroughly affirmed by means of consistent use of clothing, toys, pronouns, etc., associated with transgender identity. They argue that the child should be comprehensively re-socialized in grade school or junior or senior high school in their aspired-to gender. As I understand it, this is asserted as a reason why male students

who assert a female gender identity must be permitted to compete in girls' or women's athletic events, use girl's bathrooms, and be addressed with a feminine name and pronouns. These advocates treat any question about the causes of the child's current transgender identification as inappropriate. Advocates assume that observed psychological co-morbidities in the children or their families are unrelated or will get better with transition and need not be addressed by the MHP who is providing supportive guidance concerning the child's gender identity.

53. Some advocates, indeed, assert that unquestioning affirmation of any claim of transgender identity in children is essential, and that the child will otherwise face a high risk of suicide or severe psychological damage. This claim is simply not supported by the clinical data we have available to us. Indeed, available long-term data contradicts this claim. I address physical and mental health outcomes in Section VIII below, and suicide in Section IX below.

54. The commonly referenced scientific basis for affirmative care of both early life onset and adolescent onset gender dysphoria are two reports from de Vries et al. (2011, 2014) that seemingly demonstrated the resolution of gender dysphoria after a sequence of puberty blocking hormones, cross-sex hormones, and breast removal or vaginoplasty. However, recently three articles describing the distinct limitations of the "Dutch Protocol" have been widely circulating throughout the world. (Levine et al. 2022; Biggs 2022; Abbruzzese et al. 2023.) It is now apparent that the basis for such affirmative care is not scientifically solid. Rapid diffusion of the innovative Dutch Protocol occurred without the scientifically required confirmatory, more rigorous studies. The one attempt to repeat their protocol in the UK failed to demonstrate psychological benefits claimed by the Dutch studies. (Carmichael et al. 2021.)

55. I do not know what proportion of practitioners are using which model. However, in my opinion, in the case of young children, prompt and thorough

affirmation of a transgender identity disregards the principles of child development and family dynamics and is not supported by science. Instead of science, this approach is currently being reinforced by an echo-chamber of approval from other like-minded child-oriented professionals who do not sufficiently consider the known negative medical and psychiatric outcomes of trans-identifying adults. Rather than recommend social transition in grade school, the MHP must focus attention on the child's underlying internal and familial issues. Ongoing relationships between the MHP and the parents, and the MHP and the child, are vital to help the parents, child, other family members, and the MHP to understand over time the issues that need to be dealt with by each of them. As I discuss further in Section IV.F below, it should be noted that the distinct trend in western Europe is to make psychotherapy, not affirmation, the first approach to gender dysphoria in children and adolescents.

56. Likewise, since the child's sense of gender develops in interaction with his parents and their own gender roles and relationships, the responsible MHP will almost certainly need to delve into family and marital dynamics. This, however, requires time and effort and for many parents, a challenge to find a therapist to do such work with them. It also assumes that when a MHP is first involved with a transgender-identified minor, a comprehensive psychiatric evaluation ensues. Even organizations that strongly prioritize gender transition consider such an evaluation to be a minimal threshold requirement. (Hembree et al. 2017 at 3872, 3876.) Unfortunately, many children are evaluated only in terms of their gender identity, and their parents are ill-informed about the risks and benefits of affirmative care. (Levine et al. 2022; Bisno et al. 2023.)

IV. THERE IS NO CONSENSUS OR AGREED “STANDARD OF CARE” CONCERNING THERAPEUTIC APPROACHES TO CHILD OR ADOLESCENT GENDER DYSPHORIA.

57. There is far too little firm clinical evidence in this field to permit any evidence-based standard of care. Given the lack of scientific evidence, it is neither surprising nor improper that—as I detailed in Section III—there is a diversity of views among practitioners as to the best therapeutic response for the child, adolescent, or young adult who suffers from gender dysphoria. (Block 2023. *See also* Section IV.F below.)

58. Reviewing the state of opinion and practice in 2021, the Royal Australian and New Zealand College of Psychiatrists observed that “There are polarised views and mixed evidence regarding treatment options for people presenting with gender identity concerns, especially children and young people.” (RANZCP 2021.) Similarly, a few years earlier prominent Dutch researchers noted: “[T]here is currently no general consensus about the best approach to dealing with the (uncertain) future development of children with GD, and making decisions that may influence the function and/or development of the child—such as social transition.” (Ristori & Steensma 2016 at 18.)³ In this Section, I comment on some of the more important areas of disagreement within the field.

A. Experts and organizations disagree as to whether “distress” is a necessary element for diagnoses that justify treatment for gender identity issues.

59. As outlined in Section III.B above, “clinically significant distress” is one of the criteria used in DSM-5-TR to identify gender dysphoria. This indicates a heightened level of distress that rises beyond a threshold level of social awkwardness or discomfort with the changing body. It is known that many trans-identified youth with incongruence between their sexed bodies and their gender identity choose not to

³ *See also* Zucker 2020 which questions the merit of social transition as a first-line treatment.

take hormones; their incongruence is quite tolerable as they further clarify their three elements of sexual identity—gender identity, orientation, and intention (what the person wants to do with a partner’s body during sex and what that person wants to do to their own body to be aroused). This population raises the questions of what distress is being measured when DSM-5-TR criteria are met and what else might be done about it. However, there is no “clinically significant distress” requirement in World Health Organization’s International Classification of Diseases (ICD-11) criteria for gender incongruence, which rather indicates “a marked and persistent incongruence between an individual’s experienced gender and the assigned sex.” (World Health Organization 2019.)

60. Therefore, even between these two committee-based authorities, there is a significant disagreement as to what constitutes a gender condition justifying life-changing interventions. To my knowledge, some American gender clinics and practitioners are essentially operating under the ICD-11 criteria rather than the DSM-5-TR criteria, prescribing social transition for children, hormonal interventions for slightly older children, and different hormones for adolescents who assert a desire for a transgender identity whether or not they are exhibiting “clinically significant distress.” Others adhere to the DSM-5-TR diagnostic standard.

61. Affirmative care is said by advocates to be life enhancing and often to be lifesaving on the theory it will reduce suicide. Based on the DSM-5-TR criterion, distress is required for the diagnosis and its subsequent hormonal and surgical treatments. Gender incongruence is often referred to as a unique form of suffering. Yet, ICD-11 the criteria for the diagnosis of Gender Incongruence do not require distress, just the wish to have the characteristics of the other sex and to change their own sex demarcating features. This is ironic: dramatic interventions are claimed to be medically necessary to avoid incomparable suffering and suicide, yet now no distress is required for a medical intervention; just a desire for the intervention is all

that's necessary to establish "medical necessity." This is not legitimate from a medical point of view.

62. I will add that even from within one "school of thought," it is not responsible to make a single, categorical statement about the proper treatment of children or adolescents presenting with gender dysphoria or other gender-related issues. There is no single pathway to the development of a trans identity and no reasonably uniform short- or long-term outcome from medically treating it. As individuals grow physically, mature psychologically, and experience or fail to experience satisfying romantic relationships, their life course depends on their differing psychological, social, familial, and life experiences. There should be no trust in assertions that trans-identified youth must be treated in a particular manner to avoid harm for three reasons. First, there is no systematic data on the nature of, and the rate of harms or benefits of either affirmative treatment, no treatment, or psychological only treatment. Second, as in other youthful psychiatric and other challenges, outcomes vary. Third, many psychological, social, and experiential forces outside of medical professions' knowledge shape outcomes. Medical and surgical interventions do not necessarily take account of, nor resolve, the broader issues facing the youth in question. Advocates of rapid affirmation and medical interventions take no account of trans identifications that occur and disappear without ever being seen by a clinician. Awareness of this emerged from retrospective accounts of homosexual identified adults. There is no psychiatric condition—depression, anxiety, schizophrenia—where one size fits all.

B. Opinions and practices vary widely about the utilization of social transition for children and adolescents.

63. The World Professional Association for Transgender Health (WPATH) has published a guidance document under the title "Standards of Care." Below, I will provide some explanation of WPATH and its "Standards of Care," which are not the

product of a strictly scientific organization, and they are by no means accepted by all or even most practitioners as setting out best practices.

64. Here, however, I will note that WPATH does not take a position concerning whether or when social transition may be appropriate for pre-pubertal children. Instead, the WPATH “Standards of Care version 7” states that the question of social transition for children is a “controversial issue” and calls for mental health professionals to support families in what it describes as “difficult decisions” concerning social transition. Its version 8, however, avoids the word “controversial” even though it discusses the dangers of harms versus the possibility of benefits of early transition. (Coleman et al. 2022 at S577–78.)

65. Dr. Erica Anderson is a prominent practitioner in this area who identifies as a transgender woman, who was the first transgender president of USPATH, and who is a former board member of WPATH. Dr. Anderson recently resigned from those organizations and has condemned automatic approval of transition upon the request of a child or adolescent, noting that “adolescents . . . are notoriously susceptible to peer influence,” that transition “doesn’t cure depression, doesn’t cure anxiety disorders, doesn’t cure autism-spectrum disorder, doesn’t cure ADHD,” and instead that “a comprehensive biopsychosocial evaluation” should precede allowing a child to transition. (Davis 2022.) And as I have explained previously, my own view based on 50 years of experience in this area favors strong caution before approving life-altering interventions such as social transition, puberty blockers, or cross-sex hormones.

C. The WPATH “Standards of Care” is not an impartial or evidence-based document.

66. Because WPATH is frequently cited by advocates of social, hormonal, and surgical transition, I provide some context concerning that private organization and its “Standards of Care.” WPATH insists its guidance is evidence-based. But its

reviews of the evidence strikingly omit evidence to the contrary. This renders it unbalanced or biased and not in keeping with the traditions of respected clinical science.

67. I was a member of the Harry Benjamin International Gender Dysphoria Association from 1974 until 2001. From 1997 through 1998, I served as the Chairman of the eight-person International Standards of Care Committee that issued the fifth version of the Standards of Care. I resigned my membership in 2002 due to my regretful conclusion that the organization and its recommendations had become dominated by politics and ideology, rather than by scientific process, as it was years earlier. In approximately 2007, the Harry Benjamin International Gender Dysphoria Association changed its name to the World Professional Association for Transgender Health (WPATH).

68. WPATH is a voluntary membership organization. Since at least 2002, attendance at its biennial meetings has been open to trans-identifying individuals who are not licensed professionals. While this ensures taking patients' needs into consideration, it limits the ability for honest and scientific debate, for scientifically based policy, and means that WPATH can no longer be considered a purely professional organization. Its associate members are not health care professionals. The professional members have various medical specialties, various mental health degrees, and varying experience and approaches to caring for these patients. They share, however, the position that an affirmative care paradigm is the only effective treatment approach.

69. WPATH takes a decided view on issues as to which there is a wide range of opinion among professionals. WPATH explicitly views itself as not merely a scientific organization, but also as an advocacy organization. (Levine 2016 at 240.) WPATH is supportive to those who want sex reassignment surgery ("SRS"). Skepticism as to the benefits of SRS to patients, and strong alternate views, are not

well tolerated in discussions within the organization or their educational outreach programs. Such views have been known to be shouted down and effectively silenced by the large numbers of nonprofessional adults who attend the organization's biennial meetings. Two groups of individuals that I regularly work with have attended recent and separate WPATH continuing education sessions. There, questions about alternative approaches were quickly dismissed with "There are none. This is how it is done." Such a response does not accurately reflect what is known, what is unknown, and the diversity of clinical approaches in this complex field.

70. The reviews of WPATH's 7th version of standards of care published in 2021 by Dahlen et al. and Sapir in 2022 have clarified the low quality, low reliability, and bias inherent in its recommendations. (Dahlen et al. 2021 at 1, 7–8.) Its 8th version, which is three times the length of the 7th, has not gained additional confidence in its scientific merit. The Standards of Care ("SOC") document does not balance the benefits and risks of its recommendations and is not politically neutral. WPATH aspires to be both a scientific organization and an advocacy group for the transgendered. It articulates policy. These aspirations sometimes conflict. The limitations of the Standards of Care, however, are not at their root political. They are caused by the lack of rigorous research in the field, which allows room for passionate convictions on how to care for the transgendered. And, of course, once individuals have socially, medically, and surgically transitioned, WPATH members and the trans-identifying people themselves at the meetings are committed to supporting others in their transitions. Not only have some trans participants been distrustful or hostile to those who question the wisdom of these interventions, their presence makes it difficult for professionals to raise their concerns. Vocal trans rights advocates have a worrisome track record of attacking those who have alternative views. (*See, e.g., Dreger 2015; McNamara et al. 2022 at 1919.*)

71. In recent years, WPATH has fully adopted some mix of the medical and civil rights paradigms. It has downgraded the role of counseling or psychotherapy as a requirement for these life-changing processes. WPATH no longer considers preoperative psychotherapy to be a requirement. It is important to WPATH that the person has gender dysphoria; but the pathway to the development of this state is not. (Levine 2016 at 240.) The trans-identifying person is assumed to have thoughtfully considered his or her options before seeking hormones. That assumption cannot be justified in persons as young as age 11 when hormones are likely to be contemplated.

72. Most psychiatrists and psychologists who treat patients suffering distress from gender dysphoria sufficiently severe to seek inpatient psychiatric care are not members of WPATH. Many psychiatrists, psychologists, and pediatricians who treat some patients suffering gender dysphoria on an outpatient basis are not members of WPATH. WPATH represents a self-selected subset of the profession along with its many non-professional members; it does not capture the clinical experiences of others. WPATH claims to speak for the medical profession; however, it does not welcome skepticism and therefore, deviates from the philosophical core of medical science. There are pediatricians, psychiatrists, endocrinologists, and surgeons who object strongly, on professional grounds, to transitioning children and providing affirmation in a transgender identity as the first treatment option. WPATH does not speak for all of the medical profession.

73. In 2010 the WPATH Board of Directors issued a statement advocating that incongruence between sex and felt gender identity should cease to be identified in the DSM as a pathology.⁴ This position was debated but not adopted by the (much

⁴ WPATH *De-Psychopathologisation Statement* (May 26, 2010), available at <https://wpath.org/policies> (last accessed July 14, 2023).

larger) American Psychiatric Association, which maintained the definitions and diagnoses of gender dysphoria as a pathology in the DSM-5 manual issued in 2013.

74. In my experience some current members of WPATH have little ongoing experience with the mentally ill, and many trans care facilities are staffed by MHPs who are not deeply experienced with recognizing and treating frequently associated psychiatric co-morbidities. Further, being a mental health professional, per se, does not guarantee experience and skill in recognizing and effectively intervening in serious or subtle patterns. Because the 7th version of the WPATH SOC deleted the requirement for psychotherapy, trans care facilities that consider these standards sufficient are permitting patients to be counseled to transition by means of social presentation, hormones, and surgery by individuals with master's rather than medical degrees. The 8th version of the SOC continues this tradition. When this document recommends a comprehensive psychiatric evaluation, it fails to elaborate its duration, the topics to be covered, and necessary treatment results of the commonly found previous and co-current psychiatric conditions. It emphasizes the evaluation; it does not emphasize what to do with the identified problems, other than to state that they must be under reasonable control. WPATH prioritizes the treatment of gender incongruence over the frequently encountered states of depression, anxiety, social and school avoidance, etc.

D. Opinions and practices differ widely with respect to the proper role of psychological counseling before, as part of, or after a diagnosis of gender dysphoria

75. In version 7 of its Standards of Care, released in 2012, WPATH downgraded the role of counseling or psychotherapy, and the organization no longer sees psychotherapy without transition and hormonal interventions as a potential path to eliminate gender dysphoria by enabling a patient to return to or achieve comfort with the gender identity aligned with his or her biology. And in 2017, the Endocrine Society removed the obligation for a mental health professional to conduct

a psychosocial evaluation prior to hormonal intervention in its guidelines. Around the world, many prominent voices and practitioners disagree. For example, renowned gender therapists Dr. Laura Edwards-Leeper and Dr. Erica Anderson (who, as mentioned above, has long lived as a transgender woman) have spoken out arguing that children and adolescents are being subjected to puberty blockers and hormonal intervention far too quickly, when careful and extended psychotherapy and investigation for potential causes of feelings of dysphoria (such as prior sexual abuse) should be the first port of call and might resolve the dysphoria. (Edwards-Leeper & Anderson 2021; Davis 2022.)

76. In a published position statement on gender dysphoria, the Royal Australian and New Zealand College of Psychiatrists emphasized the critical nature of mental health treatment for gender dysphoric minors, stressing “the importance of the psychiatrist’s role to undertake thorough assessment and evidence-based treatment ideally as part of a multidisciplinary team, especially highlighting co-existing issues which may need addressing and treating.” The Royal College also emphasized the importance of assessing the “psychological state and context in which Gender Dysphoria has arisen,” before any treatment decisions are made. (RANZCP 2021.)

77. Dr. Paul Hruz of the University of Washington St. Louis Medical School has noted, “The WPATH has rejected psychological counseling as a viable means to address sex–gender discordance with the claim that this approach has been proven to be unsuccessful and is harmful. (Coleman et al. 2012.) Yet the evidence cited to support this assertion, mostly from case reports published over forty years ago, includes data showing patients who benefited from this approach (Cohen-Kettenis and Kuiper 1984; Hruz, 2020.)

78. In several recent publications, my colleagues and I have demonstrated that both the Endocrine Society’s and WPATH’s citations for the scientific basis of

affirmative care of adolescents reference the same two Dutch studies. We have demonstrated in considerable detail the limitations of these studies, their lack of applicability to today’s transgendered youth, and the dangers of following therapeutic fashion rather than evidence-based medicine. (Levine et al. 2022; Abbruzzese et al. 2023.)

79. A recent survey of board-certified endocrinologists in the United States who prescribe hormonal interventions for the purpose of gender affirmation demonstrates that opinion within the profession is split. (Bisno et al. 2023.) The survey noted that “42.9% of the respondents reported that their practice required documentation of a psychosocial evaluation from a mental health professional before initiating [hormones].” Hence, despite the position of WPATH and the Endocrine Society, US-based endocrinologists “are divided about requiring a baseline psychosocial evaluation before prescribing [hormones]” for the purpose of gender affirmation. (Bisno et al. 2023 at 465.)

E. Opinions and practices vary widely with respect to the administration of puberty blockers and cross-sex hormones.

80. There is likewise no broadly accepted standard of care with respect to use of puberty blockers. WPATH Standards of Care version 7 explicitly recognized the lack of any consensus on this important point, stating: “Among adolescents who are referred to gender identity clinics, the number considered eligible for early medical treatment—starting with GnRH analogues to suppress puberty in the first Tanner stages—differs among countries and centers. Not all clinics offer puberty suppression . . . The percentages of treated adolescents are likely influenced by the organization of health care, insurance aspects, cultural differences, opinions of health professionals, and diagnostic procedures offered in different settings.” (Coleman et al. 2012 at 13.) Notably, the recent version 8 of the WPATH “Standards of Care” does not include this language. (Coleman et al. 2022.)

81. The use of puberty blockers as a therapeutic intervention for gender dysphoria is often justified by reference to the seminal work of a respected Dutch research team that developed a protocol that administered puberty blockers to children no younger than age 14. However, it is well known that many clinics in North America now administer puberty blockers to children at much younger ages than the “Dutch Protocol” allows. (Zucker 2019.) The Dutch protocol only treated children with these characteristics: a stable cross gender identity from early childhood; dysphoria that worsened with the onset of puberty; were otherwise psychologically healthy; had healthy families; the patient and family agreed to individual and family counseling throughout the protocol. But the experience and results of the Dutch model is being used as a justification for giving puberty blockers to children who differ considerably from these criteria. Its authors have noted this fact. (de Vries 2020.)

82. However, Zucker notes that “it is well known” that clinicians are administering cross-sex hormones, and approving surgery, at ages lower than the minimum age thresholds set by that “Dutch Protocol.” (Zucker 2019 at 5.)

83. Internationally, there has been a recent marked trend against use of puberty blockers, as a result of extensive evidence reviews by national medical bodies, which I discuss later. (*See* Section IV.F below.)

84. In this country, some voices in the field are now publicly arguing that no comprehensive mental health assessment at all should be required before putting teens on puberty blockers or cross-sex hormones (Ghorayshi 2022), while Dr. Anderson and Dr. Edwards-Leeper argue that U.S. practitioners are already moving too quickly to hormonal interventions. (Edwards-Leeper & Anderson 2021; Davis 2022.) It is evident that opinions and practices are all over the map.

85. In 2018, the subcommittee on sexual minority youth of the American Academy of Pediatricians issued a policy statement supporting administration of puberty blockers to children diagnosed with gender dysphoria. No other American

medical association has endorsed the use of puberty blockers. Pediatricians are neither endocrinologists nor psychiatrists. Dr. James Cantor published a peer-reviewed paper detailing that the Academy’s statement was not evidence-based and misdescribed the few scientific sources it did reference. (Cantor 2019.) It has been well noted in the field that the AAP has declined invitations to publish any rebuttal to Dr. Cantor’s analysis. But this is all part of ongoing debate, simply highlighting the absence of any generally agreed standard of care. In 2022, the same committee of the AAP modified its recommendation supporting alternative treatments but still held out that affirmative care is still a viable option. Evidence after all is required for policy decisions and the 2018 evidence base is now widely appreciated as insubstantial. In August 2023, the AAP acknowledged the need for a systematic evidence review and commissioned one, while retaining the slight modification noted above. Dr. Gordon Guyatt of McMaster University, and author of the GRADE system, explained that the decision to promulgate and then retain a policy prior to the completion of a systematic review is “very clearly putting the cart before the horse.” (Ghorayshi 2023.)

86. The 2017 Endocrine Society Guidelines themselves expressly state that they are not “standards of care.” The document states: “The guidelines cannot guarantee any specific outcome, *nor do they establish a standard of care*. The guidelines are not intended to dictate the treatment of a particular patient.” (Hembree et al. 2017 at 3895 (emphasis added).) Nor do the Guidelines claim to be the result of a rigorous scientific process. Rather, they expressly advise that their recommendations concerning use of puberty blockers are based only on “low quality” evidence.

87. The 2017 Guidelines assert that patients with gender dysphoria “require a safe and effective hormone regimen” Notably, however, the Guidelines do not make any firm statement that use of puberty blockers for this purpose is safe,

and the Guidelines go no further than “suggest[ing]” use of puberty blockers—language the Guidelines warn represents only a “weak recommendation.” (Hembree 2017 at 3871, 3872.) Several authors have pointed out that not only were the Endocrine Society suggestions regarding use of puberty blockers reached on the basis of “low quality” evidence, but any suggestion of ‘safety’ or ‘efficacy’ would be starkly contradicted by several in-depth evidence reviews. (Laidlaw et al. 2019; Malone et al. 2021.) The most recent systematic independent reviews of hormonal treatment of adolescents reaffirmed the poor quality of evidence making their use questionable (Ludvigsson et al. 2023; Taylor et al. 2024a.) I detail these contradictory findings in more detail in Sections IV.F and VIII below.

88. Notably, in developing a guideline on “the health of trans and gender diverse people,” the World Health Organization recently announced that it would address treatments of adults only and would not cover children or adolescents (WHO 2023.) Explaining this decision in an accompanying ‘FAQ’ document, the World Health Organization noted concerns over the existing evidence base for this population, stating that “on review, the evidence base for children and adolescents is limited and variable regarding the longer-term outcomes of gender affirming care for children and adolescents.” (WHO 2024.)

89. While there is too little meaningful clinical data and no consensus concerning best practices or a “standard of care” in this area, there are long-standing ethical principles that do or should bind all medical and mental health professionals as they work with, counsel, and prescribe for these individuals. (Levine et al. 2022.)

90. One of the oldest and most fundamental principles guiding medical and psychological care—part of the Hippocratic Oath—is that the physician must “do no harm.” This states an ethical responsibility that cannot be delegated to the patient. Physicians themselves must weigh the risks of treatment against the harm of not

treating. If the risks of treatment outweigh the benefits, principles of medical ethics prohibit the treatment even if the patient desires it.

F. European health authorities recognize that medical transition is unproven, experimental and dangerously uncertain.

91. On April 17, 2023, a systemic review of the hormonal treatment for children with gender dysphoria was published by an eight-person team of scientists with appointments in various departments: epidemiology, pediatrics, gastroenterology, health technology, clinical science, women's and children's health, psychiatry and neurochemistry, and neuroscience and physiology. (Ludvigssen et al. 2023.) The diverse backgrounds of reviewers free the committee from the bias of those who deliver the care. It is recognized as an ideal composition of professionals for this purpose. It is known that this report was one of the bases for Sweden's new national health policy, which makes psychotherapy (instead of hormonal treatment) the initial treatment approach for transgender-identified children and adolescents. Sweden now allows hormonal treatment to be offered to minors under the age of 16 only in research protocols. The article contains five tables, the last of which describes how future research should be conducted and reported. This table indirectly demonstrates the profound methodological problems with the current studies and gives guidance to the Karolinska Institute in Stockholm, at which future adolescents may be enrolled in research protocols.

92. This project assessed psychosocial effects, bone health, body composition and metabolisms, and therapy persistence in children less than age 18 years of age who were treated with puberty blockers. The study initially identified 9,934 English language articles on the topic, but as is usual for such processes, selected 24 studies from 2014 onward for intense scrutiny. The GRADE system, which provides four levels of evidence (very low, low, moderate, high), was used to analyze the 24 studies.

Puberty blockers (PB) were typically administered to patients between 11- and 15-years-old, but the actual age range spanned from 9 to 18.6 years.

93. Six studies focused on psychosocial and mental health parameters and found the benefits to be uncertain. Global function was evaluated for 113 patients, but the certainty of the evidence “[could not] be assessed.” When suicidal ideation was evaluated for 28 patients, there was no change noted and the certainty of evidence “[could not] be assessed.” Similar conclusions about the certainty of the evidence were made when assessing gender dysphoria, depression, anxiety, cognition, and quality of life. Each of the six studies was downgraded because of selection bias, lack of precision in measurement, absence of long-term follow-up, and inability to separate effects of the hormone from psychotherapeutic effects. One study of 20 patients on cognitive effects found no differences between the treated and untreated patients but had no pre- and post-treatment measurements. This missing method could have shown the variable effects from patient to patient—positive, negative, or no change. Mean data obscures this important information. (Ludvigssen et al. 2023.)

94. The evidence on bone density, based on six longitudinal studies, only one of which was prospective, was graded “low certainty.” Three studies found that before the start of PBs, bone density was lower than age mates. Bone mineralization increased less than age mate controls while on PBs, but the absolute density remained unchanged after two to three years. Even after five-plus years of cross sex hormones, the lumbar spine scores were significantly lower than before PBs were started, while other volume and femoral neck scores had normalized. A separate study of female to males on testosterone for 1–2 years failed to regain scores registered at the start of PBs.

95. Puberty blockers arrest the puberty growth spurt and lead to increased fat mass and decreased lean body mass.

96. Obesity at age 22 was more prevalent in the transgender populations.

97. From the abstract review of almost 10,000 studies, no randomized controlled studies were identified. In general, the 24 identified studies lacked control groups and intra-individual analyses, had high attrition rates (lost to follow-up or missing data), and failed to assess long term outcomes. No data were presented that dealt with those who stopped PBs. The authors noted that their conclusions were consistent with the UK systemic review. The Swedish review concluded that the effects on psychosocial and somatic health are “unknown.” (Ludvigssen et al. 2023.)

98. Like Sweden, Finland has also reversed course, issuing new guidelines that allow puberty blockers only on a case-by-case basis after an extensive psychiatric assessment. (COHERE 2020.) Finland’s reversal came after its own systematic review, which concluded that the methodological quality of studies underlying gender-affirming medical interventions was “weak.” (Pasternack et al. 2019; Kaltiala et al. 2020.) Finnish public health authorities concluded “In light of available evidence, gender reassignment of minors is an experimental practice.” (COHERE 2020.) Norway health authorities have also concluded that medical transition procedures in minors is experimental. (UKOM 2023.)

99. In the United Kingdom, a landmark legal challenge against the English National Health Service in 2020 by detransitioner Keira Bell led to the suspension of the use of puberty blockers and new procedures to ensure better psychological care, as well as an independent review of the use of puberty blockers and cross-sex hormones in children by the National Health Service, chaired by Dr. Hilary Cass—a former President of the Royal College of Pediatrics and Child Health.⁵ The Cass Review commissioned a thorough evidence review into puberty suppression and cross-sex hormones by the National Institute for Health and Care Excellence. (NICE

⁵ The decision requiring court approval for administration of hormones to any person younger than age 16 was later reversed on procedural grounds by the Court of Appeal.

2020a; NICE 2020b.) After the NICE evidence review, Dr. Cass issued an interim report in 2022 that noted the poor quality of data available internationally, expressed concern over the presence of serious but understudied risks, and emphasized the need to focus on the patients' psychological state rather than treating the gender incongruence first. (Cass 2022.)

100. In June 2023, the English National Health Service (“NHS”) responded to the Cass Review interim report by issuing an Interim Service Specification confirming that it will not prescribe puberty blockers outside of formal research. (NHS England 2023a at 12–13.) The Interim Service Specification further states that the primary intervention for children and adolescents with gender dysphoria is psychological support. (NHS England 2023b at § 5.) The UK Council for Psychotherapy—a national registering body for psychotherapists in the UK—issued a statement after the Cass Review interim report in November 2023 stating, “it is imperative that all underlying aspects to someone’s dysphoria are given the attention and exploration they deserve through professional psychotherapies, in order that the overall risks can be appropriately assessed prior to considering medical intervention.” (UKCP 2023.)

101. In April 2024, Dr. Cass issued a final report reiterating many of the concerns described in the interim report around the evidence base supporting both social and medical transition and the presence of known and understudied risks. (Cass 2024.) The report specifically referenced WPATH, and noted that while WPATH had been highly influential in directing international practice, its guidelines had been found to “lack developmental rigour.” (Cass 2024 at 28.) The report also directly criticized WPATH for overstating the strength of evidence in recommendations made in Version 8 of its “Standards of Care.” (Cass 2024 at 132.)

102. A series of systematic reviews that accompanied the final Cass report, undertaken by a team of researchers at the University of York, further highlighted

the lack of high-quality evidence in the area. Specifically on *puberty blockers*, the team noted: “There are no high-quality studies using an appropriate study design that assess outcomes of puberty suppression in adolescents experiencing gender dysphoria/incongruence. No conclusions can be drawn about the effect on gender-related outcomes, psychological and psychosocial health, cognitive development or fertility. Bone health and height may be compromised during treatment.” (Taylor et al. 2024a. at 13.) On, *cross-sex hormones*, the team found: “No conclusions can be drawn about the effect on gender-related outcomes, body satisfaction, psychosocial health, cognitive development or fertility,” while noting that: “Uncertainty remains about the outcomes for height/growth, cardiometabolic and bone health.” (Taylor et al. 2024b at 13.) These reviews are consistent with all the published preceding systematic review papers on this topic.

103. The NHS in England responded to the final Cass report by confirming that puberty blockers would no longer be “routinely available” in clinical practice (NHS 2024), and the Scottish NHS responded by stating that patients “will no longer be prescribing gender affirming hormone treatment until they are 18 years old” (NHS Sandyford 2024).

104. Given these and similar findings from other systemic reviews free from commercial bias, such as those from McMaster University (Brignardello-Petersen & Wiercioch 2022) and Cochrane (Haupt et al. 2020), it is my opinion that the terms “experimental,” “unproven,” and “dangerously uncertain” are justified when considering the absence of long-term follow up data and the deficiencies within the current literature. Systemic data reviews are scientifically more reliable than individual reports with definable methodologic limitations. Without quoting extensively from the reviews done by Sweden, Finland, UK, and McMaster University, suffice it to say that their conclusions agree that the risks of puberty suppression and cross-sex hormones outweigh the possible benefits. They also point

to the great unexplained increase in incidence of gender dysphoria, the increased incidence of detransition and regret, and the lack of evidence of efficacy. (Swedish National Board of Health and Welfare 2022 at 3–4.)

105. In light of the findings in this Section, it is of interest why these European countries undertook scientific reviews. European countries, knowing about the experiment the Dutch gender clinic was conducting, quickly and uncritically adopted their methods. When the Dutch published their two outcome studies (de Vries et al. 2011; de Vries et al. 2014), the pace of hormonal and surgical interventions increased. However, many European clinicians were not seeing the positive outcomes the Dutch had described, clinics were overwhelmed by the numbers of new requests for services and promises to provide follow up studies were not kept. Health authorities in the UK and Scandinavian countries became alarmed and commissioned objective appraisals.

106. Given the considerable risk of harms, which include premature death (Jackson et al. 2023; Erlangsen et al. 2023), and the other problems discussed in this declaration, minors cannot provide well-informed consent for gender-affirming medical interventions. With their life experiences being limited and brain development being years from completion, parents are legally required to provide consent and the minor only assents. But parents cannot be expected to understand the limitations of the science pointed out by these European systemic reviews, particularly when American affirmative care clinicians and institutions that support gender-affirming care fail to understand the limitations of science in this politicized arena.

107. When the frequently encountered psychiatric co-morbidities of trans-identifying youth are taken into consideration—autism, depression, social avoidance, anxiety states, eating disorders, suicidality, and self-harming patterns—it becomes clear that a young person lacks the capacity to think through the momentousness of

the decision to receive gender-affirming medical interventions. We might expect U.S. physicians, who know the nature of scientific uncertainty, to be concerned with this haunting question of decision-making capacity, as have the Europeans. (Vrouenraets et al. 2020.)

108. In a recent article in *The Free Press*, Dr. Riittakerttu Kaltiala—chief psychiatrist in the department of adolescent psychiatry at Finland’s Tampere University Hospital who served as the head of Finland’s national pediatric gender program—has urged the American medical community to revisit the evidence. (Kaltiala 2023.) While Finland followed the “Dutch protocol” for several years, as head of the national gender program, Dr. Kaltiala noticed many of the trends that have caused many practitioners in the Western world cause for concern, including the skyrocketing case numbers, the marked change in epidemiology, the widespread presence of psychiatric co-morbidities, and eventually, the emergence of detransitioners. She observed that “[t]he young people we were treating were not thriving. Instead, their lives were deteriorating.”

109. Dr. Kaltiala says that further to the evidence reviews commissioned in Finland and elsewhere, “the foundation on which the Dutch protocol was based is crumbling,” and she feels an “increasing obligation to patients, to medicine, and to the truth, to speak outside of Finland against the widespread transitioning of gender distressed minors.” Dr. Kaltiala also expressed concern about the reluctance of U.S.-based medical groups to engage with these international insights, warning that “Doctors who refuse to consider evidence presented by critics are putting patient safety at risk.” (Kaltiala 2023.)

V. TRANSGENDER IDENTITY IS NOT BIOLOGICALLY BASED.

110. There is no medical consensus that transgender identity has any biological basis. Furthermore, there is considerable well-documented evidence that is

inconsistent with the hypothesis of a biological basis for gender identity—at least in the large majority of currently-presenting patients.

A. No theory of biological basis has been scientifically validated.

111. At the outset, the attempt to identify a single, biological cause for psychiatric conditions (including gender dysphoria) has been strongly criticized as “out of step with the rest of medicine” and as a lingering “ghost” of an understanding of the nature of psychiatric conditions that is now broadly disproven. (Kendler 2019 at 1088–1089.) Gender dysphoria is defined and diagnosed only as a psychiatric, not a medical, condition. Courts need to have clarified that just because some physicians use medication and surgery to treat gender dysphoria does not make it a “medical condition” or that the psychological identity has been determined by a biological mechanism.

112. While some have pointed to very small brain scan studies as evidence of a biological basis, no studies of brain structure of individuals identifying as transgender have found any statistically significant correlation between any distinct structure or pattern and transgender identification, after controlling for sexual orientation and exposure to exogenous hormones. (Saraswat et al. 2015 at 202; Frigerio et al. 2021 at 3345.) High quality scientific studies end with a limitations section. Therein authors recognize the need for caution in interpreting the preliminary findings and urge the next research steps. When authors declare that a trans identity is created by neuroanatomic structures that have always been present, they seem to be ignoring the caution that the original researchers have emphasized. Science repeatedly emphasizes that correlation does not equate to causation.

113. Indeed, the Endocrine Society 2017 Guidelines recognizes: “With current knowledge, we cannot predict the psychosexual outcome for any specific child,” and “there are currently no criteria to identify the GD/gender-incongruent children” who may benefit from social transition. “At the present time, clinical

experience suggests that persistence of GD/gender incongruence can only be reliably assessed after the first signs of puberty.” (Hembree et al. 2017 at 3876, 3879.) Based on the increasing numbers of adolescents who were assessed after puberty began, it is clear that even when a child has severe distress over his or her periods, breast, penile growth and erections, there is no guarantee of persistence. Detransitioners represent the uncertainty of pediatric decisions to medically treat distressed adolescents first with hormones.

114. In short, no biological test or measurement has been identified that provides any ability to predict which children will exhibit, and which children will persist in, gender dysphoria or a transgender identification. Unless and until such a test is identified, the theory of a biological basis is a hypothesis still searching for support.

B. Large changes across time and geography in the epidemiology of transgender identification are inconsistent with the hypothesis of a biological basis for transgender identity.

115. In fact, there is substantial evidence that the “biological basis” theory is incorrect, at least with respect to the large majority of patients presenting with gender dysphoria today.

116. **Vast changes in incidence:** Historically, there were very low reported rates of gender dysphoria or transgender identification. In 2013, the DSM-5 estimated the incidence of gender dysphoria in adults to be at 2–14 per 100,000, or between 0.002% and 0.014%. (DSM-5 at 454.) Recently, however, these numbers have increased dramatically, particularly in adolescent populations. Recent surveys estimate that between 2–9% of high school students self-identify as transgender or “gender non-conforming.” with a significantly large increase in adolescents claiming “nonbinary” gender identity as well. (Johns et al. 2019; Kidd et al. 2021.) Consistent with these surveys, gender clinics around the world have seen numbers of referrals increase rapidly in the last decade, with the Tavistock clinic in London seeing a 30-

fold increase in the last decade (GIDS 2019), and similar increases being observed in Finland (Kaltiala-Heino et al. 2018), the Netherlands (de Vries 2020), and Canada (Zucker 2019). The rapid change in the number of individuals experiencing gender dysphoria points to social and cultural, not biological, causes.

117. **Large change in sex ratio:** In recent years there has been a marked shift in the sex ratio of patients presenting with gender dysphoria or transgender identification. The Tavistock clinic in London saw a ratio of 4 biological females(F):5 biological males(M) shift to essentially 11F:4M in a decade. (GIDS 2019.) One researcher summarizing multiple sources documented a swing of 1F:2M or 1F:1.4M through 2005 to 2F:1M generally (but as high as 7F:1M) in more recent samples. (Zucker 2019 at 2.) This phenomenon has been noted by Dr. Erica Anderson, who said: “The data are very clear that adolescent girls are coming to gender clinics in greater proportion than adolescent boys. And this is a change in the last couple of years. And it’s an open question: What do we make of that? We don’t really know what’s going on. And we should be concerned about it.” (Davis 2022.) Again, this large and rapid change in who is experiencing gender dysphoria points to social, not biological, causes.

118. **Clustering:** Dr. Littman’s 2018 study documented “clustering” of new presentations of gender dysphoria among natal females in specific schools and among specific friend groups. This again points strongly to social causes for gender dysphoria at least among the adolescent female population. (Littman 2018.) It is increasingly rare to have only one adolescent identifying as transgender in large junior or senior high schools.

119. **Desistance:** As I discuss later, there are very high levels of desistance among children diagnosed with gender dysphoria, as well as increasing (or at least increasingly vocal) numbers of individuals who first asserted a transgender identity during or after adolescence, underwent substantial medical interventions to “affirm”

that trans-identity, and then “desisted” and reverted to a gender identity congruent with their sex. (See Section VI.B below.) These narratives, too, point to a social and/or psychological cause, rather than a biological one.

120. **“Fluid” gender identification:** Advocates and some practitioners assert that gender identity is not binary but can span an almost endless range of gender identity self-labels, which a given individual may try on, inhabit, and often discard. (A recent article identifies 72.⁶) I have not heard any theory offered for how there is or could be a biological basis for gender identity as now expansively defined.

121. I frequently read attempts to explain away the points in this Section. They include: these problems always existed, but children are now learning that there are effective treatments for their dilemma and are simply seeking them. And children have hidden their trans identity throughout childhood and now that trans-identifying people are recognized and accepted, they are presenting themselves. And now pediatricians realize that girls can have gender dysphoria and are referring them to gender clinics. But these are all mere hypotheses unsupported by concrete evidence. One set of unproven hypotheses cannot provide support for the unproven hypothesis of biological basis. And none of these hypotheses could even potentially explain the failure of science thus far to identify any predictive biological marker of transgender identification. There is much sociological evidence that in the last decade, increasing numbers of adolescents do not identify as the gender consistent with their sex. Biological phenomena do not evolve suddenly.

122. Therapies affect gender identity outcomes: Finally, the evidence shows that therapeutic choices can have a powerful effect on whether and how gender identity does change, or gender dysphoria desists. Social transition of juveniles, for

⁶ Allarakha, What Are the 72 Other Genders?, MedicineNet, available at: https://www.medicinenet.com/what_are_the_72_other_genders/article.htm.

instance, strongly influences gender identity outcomes to such an extent that it has been described a “unique predictor of persistence.” (Singh et al. 2021 at 14. *See* Section VII.B below.) Again, this observation cuts against the hypothesis of biological origin.

C. Disorders of sexual development (or DSDs) and gender identity are very different phenomena, and it is an error to conflate the two.

123. Some have pointed to individuals who suffer from disorders of sexual development (DSDs) as evidence that sex is not binary or clearly defined, or as somehow supporting the idea that transgender identification has a biological basis. I have extensively detailed that sex is clear, binary, and determined at conception. (Section III.A.) Here I explain that gender dysphoria is an entirely different phenomenon than DSDs—which unlike transgender identity are indeed biological phenomena. It is an error to conflate the two distinct concepts.

124. Every DSD reflects a genetic enzymatic defect with negative anatomic and physiological consequences. As the Endocrine Society recognized in a 2021 statement: “Given the complexities of the biology of sexual determination and differentiation, it is not surprising that there are dozens of examples of variations or errors in these pathways associated with genetic mutations that are now well known to endocrinologists and geneticists; in medicine, these situations are generally termed *disorders of sexual development (DSD) or differences in sexual development.*” Gender Identity on the other hand is consistently defined as a subjective sense of being, a feeling or state of mind. (Section III.A.)

125. The vast majority of those who experience gender dysphoria, or a transgender identity, do not suffer from any DSD, nor from any genetic enzymatic disorder at all. Conversely, many who suffer from a DSD do not experience a gender identity different from their chromosomal sex (although some may). In short, those who suffer from gender dysphoria are not a subset of those who suffer from a DSD,

nor are those who suffer from a DSD a subset of those who suffer from gender dysphoria. The two are simply different phenomena, one physical with psychological effects, the other mental with physical effects only if treated medically or surgically. The issue here is not whether biological forces play a role in personality development; it is whether there is strong evidence that it is determinative. Science has come too far to revert to single explanations for gender dysphoria or any psychiatric diagnosis.

126. The importance of this distinction is evident from the scientific literature. For example, in a recent study of clinical outcomes for gender dysphoric patients, Tavistock Clinic researchers *excluded* from their analysis any patients who did not have “normal endocrine function and karyotype consistent with birth registered sex.” (Carmichael et al. 2021 at 4.) In other words, the researchers specifically excluded from their study anyone who suffered from genetic-based DSD, or a DSD comprising any serious defect in hormonal use pathways, to ensure the study was focused only on individuals experiencing the psychological effects of what we might call “ordinary” gender dysphoria.

D. Studies of individuals born with DSDs suggest that there may be a biological predisposition towards *typical* gender identifications, but they provide no support for a biological basis for *transgender* identification.

127. Studies of individuals born with serious DSDs have been pointed to as evidence of a biological basis for transgender identification. They provide no such support.

128. One well-known study by Meyer-Bahlburg reviewed the case histories of a number of XY (i.e., biologically male) individuals born with severe DSDs who were surgically “feminized” in infancy and raised as girls. (Meyer-Bahlburg 2005.) The majority of these individuals nevertheless later adopted male gender identity—suggesting a strong biological predisposition towards identification aligned with genetic sex, even in the face of feminized genitalia from earliest childhood, and

parental “affirmation” in a transgender identity. But at the same time, the fact that some of these genetically male individuals did not later adopt male gender identity serves as evidence that medical and social influences can indeed encourage and sustain transgender identification.

129. Importantly, the Meyer-Bahlburg study did not include any individuals who were assigned a gender identity congruent with their genetic sex who subsequently adopted a transgender identity. Therefore, the study can provide no evidence of any kind that supports the hypothesis of a biological basis for transgender identity. A second study in this area (Reiner & Gearhart 2004) likewise considered exclusively XY subjects, and similarly provides evidence only for a biological bias towards a gender identity congruent with one’s genetic sex, even in the face of medical and social “transition” interventions. None of this provides any evidence at all of a biological basis for transgender identity.

VI. GENDER IDENTITY IS EMPIRICALLY NOT FIXED FOR MANY INDIVIDUALS.

130. There is extensive evidence that gender identity changes over time for many individuals.⁷ That evidence is summarized below.

A. Most children who experience gender dysphoria ultimately “desist” and resolve to cisgender identification.

131. A distinctive and critical characteristic of juvenile gender dysphoria is that multiple studies from separate groups and at different times have reported that in the large majority of patients, absent a substantial intervention such as social transition or puberty blocking hormone therapy, it does *not* persist through puberty.

132. A 2019 article reviewed all existing follow-up studies that the author could identify of children diagnosed with gender dysphoria (11 studies) and reported that “every follow-up study of GD children, without exception, found the same thing:

⁷ See *supra* note 1.

By puberty, the majority of GD children ceased to want to transition.” (Cantor 2019 at 1.) Another author reviewed the existing studies and reported that in “prepubertal boys with gender discordance . . . the cross gender wishes usually fade over time and do not persist into adulthood, with only 2.2% to 11.9% continuing to experience gender discordance.” (Adelson et al. 2012 at 963; *see also* Cohen-Kettenis et al. 2008 at 1895 and Singh et al. 2021.) The Endocrine Society recognized this important baseline fact in its 2017 Guidelines. (Hembree et al. 2017 at 3879.) It should be noted that the reason that the Dutch Protocol waited until age 14 to initiate puberty blockers was that it was well known that many children would desist if left free of hormonal intervention until that age.

133. Findings of high levels of desistance among children who experience gender dysphoria or incongruence have been reaffirmed in the face of critiques through thorough reanalysis of the underlying data. (Zucker 2018.)

134. As I explained in detail in Section V above, it is not yet known how to distinguish those children who will desist from that small minority whose trans identity will persist.

135. It does appear that prevailing circumstances during particularly formative years can have a significant impact on the outcome of a juvenile’s gender dysphoria. A 2016 study reviewing the follow-up literature noted that “the period between 10 and 13 years” was “crucial” in that “both persisters and desisters stated that the changes in their social environment, the anticipated and actual feminization or masculinization of their bodies, and the first experiences of falling in love and sexual attraction in this period, contributed to an increase (in the persisters) or decrease (in the desisters) of their gender related interests, behaviors, and feelings of gender discomfort.” (Ristori & Steensma 2016 at 16.) In 2022, Olson et al. published data about the very low rates of desistence five years after social transition of children between ages of 3 and 12. (Olson et al. 2022.) As I discuss again in Section VII below,

there is considerable evidence that early transition and affirmation causes far more children to persist in a transgender identity.

B. Desistance is increasingly observed among teens and young adults who first manifest GD during or after adolescence.

136. Desistance within a relatively short period may also be a common outcome for post-pubertal youths who exhibit recently described “rapid onset gender disorder.” I have observed an increasingly vocal online community of young women who have reclaimed a female identity after claiming a male gender identity at some point during their teen years, and young “detransitioners” (individuals in the process of reidentifying with their birth sex after having undergone a gender transition) are now receiving increasing attention in both clinical literature, social media channels, and increasingly in mainstream media.⁸

137. Almost all scientific articles on this topic have appeared within the last few years. Perhaps this historic lack of coverage is not entirely surprising—one academic who undertook an extensive review of the available scientific literature in 2021 noted that the phenomenon was “socially controversial” in that it “poses significant professional and bioethical challenges for those clinicians working in the field of gender dysphoria.” (Expósito Campos 2021 at 270.) This review reported on the multiple reasons for why individuals were motivated to detransition, which included coming to “understand[] how past trauma, internalized sexism, and other psychological difficulties influenced the experience of GD.”

138. In 2021, Lisa Littman conducted a ground-breaking study of 100 teenage and young adults who had transitioned and lived in a transgender identity for a number of years, and then “detransitioned” or changed back to a gender identity

⁸ See, e.g. Pamela Paul, As kids, they thought they were trans. They no longer do., *New York Times*, February 2, 2024, available at: <https://www.nytimes.com/2024/02/02/opinion/transgender-children-gender-dysphoria.html>

matching their sex. Littman noted that the “visibility of individuals who have detransitioned is new and may be rapidly growing.” (Littman 2021 at 1.) Of the 100 detransitioners included in Littman’s study, 60% reported that their decision to detransition was motivated (at least in part) by the fact that they had become more comfortable identifying as their natal sex, and 38% had concluded that their gender dysphoria was caused by something specific such as trauma, abuse, or a mental health condition. (Littman 2021 at 9.)

139. A significant majority (76%) did not inform their clinicians of their detransition. (Littman 2021 at 11.)

140. A similar study that recruited a sample of 237 detransitioners (the large majority of whom had initially transitioned in their teens or early twenties) similarly reported that a common reason for detransitioning was the subject’s conclusion that his or her gender dysphoria was related to other issues (70% of the sample); 62% reported that health concerns was the reason; 50% said that transition did not help their gender dysphoria; 45% found different ways of coping, and 43% explained that their political views changed. (Vandenbussche 2021.)

141. The existence of increasing numbers of youth or young adult detransitioners has also been noted by Dr. Edwards-Leeper and Dr. Anderson. (Edwards-Leeper & Anderson 2021.) Edwards-Leeper and Anderson noted “the rising number of detransitioners that clinicians report seeing (they are forming support groups online)” which are “typically youth who experienced gender dysphoria and other complex mental health issues, rushed to medicalize their bodies and regretted it.” Other clinicians working with detransitioners have also noted the recent phenomenon. (Marchiano 2021 at 823–25. *See also* Paragraph 104 above (noting Swedish recognition of increased incidence of detransition and regret).)

142. A growing body of evidence suggests that for many teens and young adults, a post-pubertal onset of transgender identification can be a transient phase

of identity exploration, rather than a permanent identity, as evidenced by a growing number of young detransitioners. (Entwistle 2020; Littman 2021; Vandebussche 2021.) Previously, the rate of detransition and regret was reported to be very low, although these estimates suffered from significant limitations and were likely undercounting true regret. (D’Angelo 2018.) Dr. Kaltiala—the head of Finland’s national pediatric gender program—has expressed doubt over the low reported rates of detransition, noting that the studies asserting this “rest on biased questions, inadequate samples, and short timelines,” and believes that regret is far more widespread than reported. (Kaltiala 2023.) As gender-affirmative care has become popularized, the rate of detransition appears to be accelerating.

143. A study from a UK adult gender clinic observed that 6.9% of those treated with gender-affirmative interventions detransitioned within 16 months, and another 3.4% had a pattern of care suggestive of detransition, yielding a rate of probable detransition in excess of 10%. Another 21.7%, however, disengaged from the clinic without completing their treatment plan. While some of these individuals later re-engaged with the gender service, the authors concluded, “detransitioning might be more frequent than previously reported.” (Hall et al. 2021.)

144. Another study from a UK primary care practice found that 12.2% of those who had started hormonal treatments either detransitioned or documented regret, while the total of 20% stopped the treatments for a wider range of reasons. The mean age of their presentation with gender dysphoria was 20, and the patients had been taking gender-affirming hormones for an average 5 years (17 months-10 years) prior to discontinuing. Comparing these much higher rates of treatment discontinuation and detransition to the significantly lower rates reported by the older studies, the researchers noted: “Thus, the detransition rate found in this population is novel and questions may be raised about the phenomenon of overdiagnosis, overtreatment, or iatrogenic harm as found in other medical fields.” (Boyd et al. 2022)

at 15.) Indeed, given that regret may take up to 8-11 years to materialize (Dhejne et al. 2014; Wiepjes et al. 2018), many more detransitioners are likely to emerge in the coming years.

145. In 2023, Littman et al. published a further study of 78 U.S.-based teenagers and young adults who had who previously identified as transgender and had stopped identifying as transgender for at least six months. Among other findings, the results of that study indicated that while 61.5% of participants had obtained cross-sex hormones using the “informed consent” model of care, 66.7% felt they were inadequately informed about risks, and only one participant reported that a clinician provided information about treatment alternatives. (Littman et al. 2023 at 70.)

146. Detransitioner research is still in its infancy, but the Littman and Vandebussche studies report that detransitioners from the recently transitioning cohorts feel they were rushed into medical gender-affirmative interventions with irreversible effects, often without the benefit of appropriate, or in some instances any, psychologic exploration. In the last two years, two U.S. studies (Roberts et al. 2022 at 3; Cohen et al. 2023) each demonstrated a 29% drop out rate from hormone administration in four and two years, respectively. Since continued administration of hormones is necessary to continue the desired transgendered appearance, these reports suggest substantial desistance.

VII. TRANSITION AND AFFIRMATION ARE IMPORTANT PSYCHOLOGICAL AND MEDICAL INTERVENTIONS THAT CHANGE GENDER IDENTITY OUTCOMES.

A. If both a typical gender or a transgender long-term gender identity outcome are possible for a particular patient, the alternatives are not medically neutral.

147. Where a juvenile experiences gender dysphoria, the gender identity that is stabilized will have a significant impact on the course of their life. Living in a

transgender identity for a time will make desistance, if it is ever considered, more difficult to accomplish.

148. If the juvenile desists from the gender dysphoria and becomes reasonably comfortable with a gender identity congruent with their sex—the most likely outcome from a statistical perspective absent affirming intervention—the child will not require ongoing pharmaceutical maintenance and will not have their fertility destroyed post-puberty.

149. However, if the juvenile persists in a transgender identity, under current practices, the child is most likely to require regular administration of hormones for the rest of their lives, exposing them to significant physical, mental health, and relational risks (which I detail in Section X below), as well as being irreversibly sterilized chemically and/or surgically. The child is therefore rendered a “patient for life” with complex medical implications to further a scientifically unproven course of treatment.

B. Social transition of young children is a powerful psychotherapeutic intervention that radically changes outcomes, almost eliminating desistance.

150. Social transition has a critical effect on the persistence of gender dysphoria. It is evident from the scientific literature that engaging in therapy that encourages social transition before or during puberty—which would include participation on athletic teams, being addressed as a member of a new gender with a new name and pronouns, and using different bathrooms—designated for the opposite sex—is a psychotherapeutic intervention that dramatically changes outcomes. A prominent group of authors has written that “The gender identity affirmed during puberty appears to predict the gender identity that will persist into adulthood.” (Guss et al. 2015 at 421.) Similarly, a comparison of recent and older studies suggests that when an “affirming” methodology is used with children, a substantial proportion of children who would otherwise have desisted by adolescence—that is, achieved

comfort identifying with their sex—instead persist in a transgender identity. (Zucker 2018 at 7.) Olson’s publication not only affirmed Zucker’s observation but provided very low rates of retransition or desistance among those socialized before or after grade school years. (Olson et al. 2022.)

151. Indeed, a review of multiple studies of children treated for gender dysphoria across the last three decades found that early social transition to living as the opposite sex severely reduces the likelihood that the child will revert to identifying with the child’s sex, at least in the case of boys. That is, while, as I review above, studies conducted before the widespread use of social transition for young children reported desistance rates in the range of 80-98%, a more recent study reported that fewer than 20% of boys who engaged in a partial or complete social transition before puberty had desisted when surveyed at age 15 or older. (Zucker 2018 at 7⁹; Steensma et al. 2013.¹⁰) Another researcher observed that a partial or complete gender social transition prior to puberty “proved to be a unique predictor of persistence.” (Singh et al. 2021 at 14.)

152. Some vocal practitioners of prompt affirmation and social transition even proudly claim that essentially *no* children who come to their clinics exhibiting gender dysphoria or cross-gender identification desist in that identification and return to a gender identity consistent with their biological sex.¹¹ This is a very large change as compared to the desistance rates documented apart from social transition.

⁹ Zucker found social transition by the child to be strongly correlated with persistence for natal boys, but not for girls. (Zucker 2018 at 5.)

¹⁰ Only 2 (3.6%) of 56 of the male desisters observed by Steensma et al. had made a complete or partial transition prior to puberty, and of the twelve males who made a complete or partial transition prior to puberty, only two had desisted when surveyed at age 15 or older. (Steensma 2013 at 584.)

¹¹ *See, e.g.*, Ehrensaft 2015 at 34: “In my own clinical practice . . . of those children who are carefully assessed as transgender and who are allowed to

153. Even voices generally supportive of prompt affirmation and social transition are acknowledging a causal connection between social transition and this change in outcomes. As the Endocrine Society recognized in its 2017 Guidelines: “If children have completely socially transitioned, they may have great difficulty in returning to the original gender role upon entering puberty. . . [S]ocial transition (in addition to GD/gender incongruence) has been found to contribute to the likelihood of persistence.” (Hembree et al. 2017 at 3879.) The fact is that these unproven interventions with the lives of kids and their families have systematically documented outcomes. Given this observed phenomenon, I agree with Dr. Ken Zucker who has written that social transition in children must be considered “a form of psychosocial treatment.” (Zucker 2020 at 1.)

154. Moreover, as I review below, social transition cannot be considered or decided alone. Studies show that engaging in social transition starts a juvenile on a “conveyor belt” path that almost inevitably leads to the administration of puberty blockers, which in turn almost inevitably leads to the administration of cross-sex hormones. The emergence of this well-documented path means that the implications of taking puberty blockers and cross-sex hormones must be considered even where “only” social transition is being considered or requested by the child or family. As a result, there are important “known risks” associated with social transition.

155. This pathway was acknowledged in the final report of Dr. Cass, which noted that: “those who had socially transitioned at an earlier age and/or prior to being seen in clinic were more likely to proceed to a medical pathway.” (Cass 2024 at 31.) The report went on to urge a cautious approach to social transition for children given that “sex of rearing seems to have some influence on eventual gender outcome, and it is possible that social transition in childhood may change the trajectory of gender

transition to their affirmed gender, we have no documentation of a child who has ‘desisted’ and asked to return to his or her assigned gender.”

identity development for children with early gender incongruence.” (Cass 2024 at 164.)

C. Administration of puberty blockers is a powerful medical and psychotherapeutic intervention that radically changes outcomes, almost eliminating desistance on the historically observed timeline.

156. It should be understood that puberty blockers are usually administered to early-stage adolescents as part of a path that includes social transition. Yet medicine does not know what the long-term health effects on bone, brain, and other organs are of a “pause” between ages 11–16. Medicine also does not know if the long-term effects of these compounds are different in boys than in girls. The mental health professional establishment likewise does not know the long-term effects on coping skills, interpersonal comfort, and intimate relationships of this “pause” while one’s peers are undergoing their maturational gains in these vital arenas of future mental health. I address medical, social, and mental health risks associated with the use of puberty blockers in Section X. Here, I note that the data strongly suggests that the administration of puberty blockers, too, must be considered to be a component of a “psychosocial treatment” with complex implications, rather than simply a “pause.”

157. Multiple studies show that the large majority of children who begin puberty blockers go on to receive cross-sex hormones. (de Vries 2020 at 2.) A study by the Tavistock and Portman NHS Gender Identity Development Service (UK)—the world’s largest gender clinic at the time—found that 98% of adolescents who underwent puberty suppression continued on to cross-sex hormones. (Carmichael et al. 2021 at 12.)¹²

158. These studies demonstrate that going on puberty blockers virtually eliminates the possibility of desistance in juveniles. Rather than a “pause,” originally

¹² See also Brik 2020, where Dutch researchers found nearly 97% of adolescents who received puberty blockers proceeded to cross-sex hormones.

a rhetorical device to minimize its dangers, puberty blockers appear to act as a psychosocial “switch,” decisively shifting many children to a persistent transgender identity. Therefore, as a practical and ethical matter, the decision to put a child on puberty blockers must be considered as the equivalent of a decision to put that child on cross-sex hormones, with all the considerations and informed consent obligations implicit in that decision.

VIII. TRANSITION AND AFFIRMATION ARE EXPERIMENTAL THERAPIES THAT HAVE NOT BEEN SHOWN TO IMPROVE MENTAL OR PHYSICAL HEALTH OUTCOMES BY YOUNG ADULTHOOD.

159. At the outset of this section, it is worth commenting on the word “experimental” which I have used several times in this report. To be clear, I am not using it in the sense of a respect-worthy clinical process. A clinical “experiment” poses a question to be answered, employs a pre-defined, psychometrically validated instrument of measurement, has a control group, plans a statistical analysis of the data, and provides a careful follow-up of the subjects at various points in time. The experiment’s conclusions are provided in the context of possible limitations to its conclusions. Even studies that lack a clinical control group may qualify as an experiment if other criteria are met.

160. The other meaning of “experimental” that I am employing in this report is quite the opposite. It denotes proceeding therapeutically without the requisite scientific planning. It means providing an intervention that may seem innovative but lacks previous data to define the types of and rates of harms (or risks), and to define the hoped-for benefits and means of ascertaining them. “Experimental” in this context conveys an intervention without a conceptualized risks/benefits ratio—it implies a disregard of the underlying uncertainty and connotes professional irresponsibility.

A. The knowledge base concerning therapies for gender dysphoria is “very low quality.”

161. It is important for all to admit that the knowledge base concerning the causes and treatment of gender dysphoria has low scientific quality. In evaluating claims of scientific or medical knowledge, it is axiomatic in science that no knowledge is absolute, and to recognize the widely accepted hierarchy of reliability when it comes to “knowledge” about medical or psychiatric phenomena and treatments. Unfortunately, in this field opinion is too often confused with knowledge, rather than clearly locating what exactly is scientifically known. In order of increasing confidence, such “knowledge” may be based upon data comprising:

- a. Expert opinion—it is perhaps surprising to educated laypersons that expert opinion standing alone is the lowest form of knowledge, the least likely to be proven correct in the future. Reliance on well-known or well-credentialled “experts,” or the head of a gender clinic, is sometimes referred to as eminence-based medicine. Their opinions do not garner as much respect from professionals as what follows;
- b. A single case or series of cases (what could be called anecdotal evidence) (Levine 2016 at 239);
- c. A series of cases with a control group;
- d. A cohort study;
- e. A randomized double-blind clinical trial;
- f. A review of multiple trials;
- g. A meta-analysis of multiple trials that maximizes the number of patients treated despite their methodological differences to detect trends from larger data sets.

162. Prominent voices in the field have emphasized the severe lack of scientific knowledge in this field. This is especially true with respect to very young, preschool-age children. The American Academy of Child and Adolescent Psychiatry

has recognized that “Different clinical approaches have been advocated for childhood gender discordance. There have been no randomized controlled trials of any treatment. [T]he proposed benefits of treatment to eliminate gender discordance ... must be carefully weighed against ... possible deleterious effects.” (Adelson et al. 2012 at 968–69.) Similarly, the American Psychological Association has stated, “because no approach to working with [transgender and gender nonconforming] children has been adequately, empirically validated, consensus does not exist regarding best practice with pre-pubertal children.” (APA 2015 at 842.) The European Society of Child and Adolescent Psychiatry recently issued similar warnings, urging caution, outlining grave ethical concerns, and labelling hormonal interventions as experimental. (Drobnič Radobuljac et al. 2024.)

163. Critically, “there are no randomized control trials with regard to treatment of children with gender dysphoria.” (Zucker 2018 at 8.) On numerous critical questions relating to cause, developmental path if untreated, and the effect of alternative treatments, the knowledge base remains primarily at the level of the practitioner’s exposure to individual cases, or multiple individual cases. As a result, claims to certainty are not justifiable. (Levine 2016 at 239.)

164. Within the last two years, at least five formal, independent, systematic evidence reviews concerning hormonal interventions for gender dysphoria have been conducted. All five found all the available clinical evidence to be very low quality.

165. The British National Health Service (NHS) commissioned formal “evidence reviews” of all clinical papers concerning the efficacy and safety of puberty blockers and cross-sex hormones as treatments for gender dysphoria. These evidence reviews were performed by the U.K. National Institute for Health and Care Excellence (NICE), applying the respected “GRADE” criteria for evaluating the strength of clinical evidence.

166. Both the review of evidence concerning puberty blockers and the review of evidence concerning cross-sex hormones were published in 2020, and both found that all available evidence as to both efficacy and safety was “very low quality” according to the GRADE criteria. (NICE 2020a; NICE 2020b.) “Very low quality” according to GRADE means there is a high likelihood that the patient will not experience the hypothesized benefits of the treatment. (Balslem et al. 2011.)

167. Similarly, the highly respected Cochrane Library—the leading source of independent systematic evidence reviews in health care—commissioned an evidence review concerning the efficacy and safety of hormonal treatments now commonly administered to “transitioning transgender women” (i.e., testosterone suppression and estrogen administration to biological males). That review, also published in 2020, concluded that “We found insufficient evidence to determine the efficacy or safety of hormonal treatment approaches for transgender women in transition.” (Haupt et al. 2020 at 2.) It must be understood that both the NICE and the Cochrane reviews considered all published scientific studies concerning these treatments. A McMaster University’s skillful methodological unit reached the same conclusion, (Brignardello-Petersen & Wiercioch 2022), as did a team of authors from the United Kingdom and Sweden, (Thompson et al. 2023).

168. As to social transition, as I have noted above, considerable evidence suggests that socially transitioning a pre-pubertal child puts him or her on a path from which very few children escape—a path which includes puberty blockers and cross-sex hormones before age 18. And for some, surgery before the age of majority. A decision about social transition for a child must be made in light of what is known and what is unknown about the effects of those expected future interventions. Social transition, therefore, is not merely reversible behavioral change. It is the beginning of a medically dependent future and should be explained as such.

169. I discuss safety considerations in Section X below. Here, I detail what is known about the effectiveness of social and hormonal transition and affirmation to improve the mental health of individuals diagnosed with gender dysphoria.

B. Youth who adopt a transgender identity show no durable improvement in mental health after social, hormonal, or surgical transition and affirmation.

170. As I noted above, the evidence reviews for the efficacy and safety of hormonal interventions published in 2020 concluded that the supporting evidence is so poor that there is “a high likelihood that the patient will not experience the hypothesized benefits of the treatment.” (Thompson 2022.) There is now some concrete evidence that, on average, they do not experience those benefits.

171. An important paper published in 2021 by Tavistock clinic clinicians provided the results of the first longitudinal study that measured widely used metrics of general psychological function and suicidality before commencement of puberty blockers, and then at least annually after commencing puberty blockers. After up to three years, they “found no evidence of change in psychological function with GnRHa treatment as indicated by parent report (CBCL) or self-report (YSR) of overall problems, internalizing or externalizing problems or self-harm” as compared to the pre-puberty-blocker baseline evaluations. “Outcomes that were not formally tested also showed little change.” (Carmichael et al. 2021 at 18–19.) Similarly, a study by Bränström and Pachankis of the case histories of a set of adults diagnosed with GD in Sweden found no positive effect on mental health from hormonal treatment in terms of psychiatric service utilization. (Bränström & Pachankis 2020; Landéen 2020.)

172. Kiera Bell, who was diagnosed with gender dysphoria at the Tavistock Clinic, given cross-sex hormones, and treated by mastectomy, before desisting and reclaiming her female gender identity, and a Swedish teen girl who appeared in a

recent documentary after walking that same path, have both stated that they feel that they were treated “like guinea pigs,” experimental subjects. They are not wrong.

173. A cohort study by authors from Harvard and Boston Children’s Hospital found that youth and young adults (ages 12–29) who self-identified as transgender had an elevated risk of depression (50.6% vs. 20.6%) and anxiety (26.7% vs. 10.0%); a higher risk of suicidal ideation (31.1% vs. 11.1%), suicide attempts (17.2% vs. 6.1%), and self-harm without lethal intent (16.7% vs. 4.4%) relative to the matched controls; and a significantly greater proportion of transgender youth accessed inpatient mental health care (22.8% vs. 11.1%) and outpatient mental health care (45.6% vs. 16.1%) services. (Reisner et al. 2015 at 6.) Similarly, a longitudinal study of transgender and gender diverse youth and young adults in Chicago found rates of alcohol and substance abuse “substantially higher than those reported by large population-based studies of youth and adults.” (Newcomb et al. 2020 at 14.) Members of the clinical and research team at the prominent Dutch VU University gender dysphoria center compared mental health metrics of two groups of subjects before (mean age 14.5) and after (mean age 16.8) puberty blockers. But they acknowledged that the structure of their study meant that it “can . . . not provide evidence about . . . long-term mental health outcomes,” and that based on what continues to be extremely limited scientific data, “Conclusions about the long-term benefits of puberty suppression should . . . be made with extreme caution.” In other words, we just don’t know. (van der Miesen et al. 2020 at 703.)

174. A recent two-year prospective uncontrolled multisite NIMH study of 315 adolescents found that at the average age of 18 the primary benefit of hormones was happiness with their aesthetic appearance. The effects on depression and anxiety were very small and highly variable. There were two suicides in the study population, a strikingly high proportion. (Chen et al. 2023 at 243.) This work did not address the relevant long term mental health outcomes of such treatment before their two-year

finding. The authors did not report on many of the parameters they initially intended to present. In May 2022, a group from Sweden performed a systematic review of the mental health effects of hormonal transition. They concluded that candidates for hormones had a high percentage of mental health problems, and the methodological quality of the 32 papers studied (representing between 3,000 and 4,000 patients) did not allow for a firm answer as to whether mental health was improved by hormonal treatment. (Thompson et al. 2022.)

175. Recently, two large studies have been published that drew data from public healthcare system central registries in Denmark (Glintborg et al. 2023) and Finland (Kaltiala et al. 2023). Because both were registry studies, they had largely complete reliable datasets to analyze, and effectively no loss to follow-up. This is a powerful improvement over most follow-up studies that have large percentages of missing data.

176. In Denmark, the dataset encompassed 3812 patients who were diagnosed with gender identity disorders, spanning a period of 21 years. The authors found that measures of preexisting poor mental health did not decrease after date of first prescription of hormones. (Glintborg et al. 2023 at 342.) They found that in the year after medicalized transition, levels of psychiatric illness increased relative to control groups. (*Id.* at 343.)

177. In Finland, the dataset encompassed 3665 patients who were referred to national gender clinics across 28 years. The authors similarly found that “the proportion requiring specialist-level psychiatric treatment actually increased more among those who underwent medical [gender reassignment]” as compared to otherwise comparable patients who did not. They concluded that their “findings . . . do not suggest that medical GR interventions resolve psychiatric morbidity among people experiencing gender distress.” (Kaltiala et al. 2023).

178. As for social transition, a recent study examining data from the Tavistock clinic in London found that social transition was not associated with an improvement in mental health. (Morandini et al. 2023.) The study compared mental health outcomes for children and adolescents diagnosed with gender dysphoria who socially transitioned to those who had not. They found that there were no significant effects of social transition or name change on mental health status. Specifically, the study found that social transition or name change did not impact patients' mood, anxiety, or suicide attempts. (*Id.* at 1052.)

179. The team of researchers from the University of York, who conducted several systematic reviews to accompany the Cass Review, noted: "There are no prospective longitudinal studies with appropriate comparator groups which have assessed the impact of social transition on the mental health or gender-related outcomes for children or adolescents. Healthcare professionals, clinical guidelines and advocacy organisations should acknowledge the lack of robust evidence of the benefits or harms of social transition when working with children, adolescents and their families." (Hall et al. 2024 at 6.)

180. And the final report of Dr. Cass, while finding there was "no clear evidence that social transition in childhood has positive or negative mental health outcomes" (Cass 2024 at 164) specifically criticized WPATH for changing its position on social transition without appropriate justification: "WPATH 8 justifies [its] change in stance on the basis that there is more evidence on improved mental health outcomes with social transition, that fluidity of identity is an insufficient justification not to socially transition, and that not allowing a child to socially transition may be harmful. However, none of the WPATH 8 statements in favour of social transition in childhood are supported by the findings of the University of York's systematic review." (Cass 2024 at 163.)

181. Concluding, Dr. Cass’s final report instead raised concerns about the possible impact of social transition on mental health: “Given the weakness of the research in this area there remain many unknowns about the impact of social transition. In particular, it is unclear whether it alters the trajectory of gender development, and what short- and longer-term impact this may have on mental health.” (Cass 2024 at 163.)

C. Long-term mental health outcomes for individuals who persist in a transgender identity are poor.

182. The responsible MHP cannot focus narrowly on the short-term happiness of the young patient but must instead consider the happiness and health of the patient from a “life course” perspective. When we look at the available studies of individuals who continue to inhabit a transgender identity across adult years, the results are strongly negative.

183. In the United States, the death rates of trans-identifying veterans are comparable to those with schizophrenia and bipolar diagnoses—20 years earlier than expected. These crude death rates include significantly elevated rates of substance abuse as well as suicide. (Levine 2017 at 10.) Similarly, researchers in Sweden and Denmark have reported on almost all individuals who underwent sex-reassignment surgery over a 30-year period. (Dhejne et al. 2011; Simonsen et al. 2016.) The Swedish follow-up study similarly found a suicide rate in the post-SRS population 19.1 times greater than that of the controls; both studies demonstrated elevated mortality rates from medical and psychiatric conditions. (Levine 2017 at 10.)

184. A study in the American Journal of Psychiatry reported high mental health utilization patterns of adults for ten years after surgery for approximately 35% of patients. (Bränström & Pachankis 2020.) Indeed, earlier Swedish researchers in a long-term study of all patients provided with SRS over a 30-year period (median time since SRS of > 10 years) concluded that individuals who have SRS exhibit such poor

mental health that they should be provided very long-term psychiatric care as the “final” transition step of SRS. (Dhejne et al. 2011 at 6–7.) Unfortunately, across the succeeding decade, in Sweden and elsewhere their suggestion has been ignored.

185. A recent all-cause mortality study from the UK found a significant excess of deaths among trans-identifying individuals compared to age matched controls of both sexes. External causes of death (suicide, homicide, accidental poisoning) were particularly higher than control groups. The risk of death was 34% greater among trans-identified individuals than the general population. The mean age of the trans group was 36 years. (Jackson et al. 2023 at 4, 7.) A similar retrospective study from Denmark found the all-cause mortality ratio to be 1.7, significantly higher than controls. (Erlangsen et al. 2023 at 2151.) I will note that these studies do not tell us whether the subjects first experienced gender dysphoria as children, adolescents, or adults, so we cannot be certain how their findings apply to each of these subpopulations which represent quite different pathways. But in the absence of knowledge, we should be cautious.

186. Meanwhile, no studies show that affirmation of pre-pubescent children or adolescents leads to more positive outcomes (mental, physical, social, or romantic) by, e.g., age 25 or older than does “watchful waiting” or ordinary therapy. Even the Endocrine Society’s systematic review on hormone therapy and mental health noted that “[i]t was impossible to draw conclusions about the effects of hormone therapy on death by suicide.” (Baker 2021 at 12.)

187. The many studies that I have cited warn us that as we look ahead to the minor patient’s life as a young adult and adult, the prognosis for the physical health, mental health, and social well-being who transitions to live in a transgender identity is not good.

188. There is no scientific or rational basis to conclude that the science is settled that affirmative care permanently improves patient’s mental health. The

consistent findings from Europe and the United States that all-cause mortality is elevated should give health professionals, parents, teachers, and patients reason to think more clearly about the rush to affirm minors' transgender identities.

IX. TRANSITION AND AFFIRMATION DO NOT DECREASE, AND MAY INCREASE, THE RISK OF SUICIDE.

A. The risk of death by suicide among transgender youth is confused and exaggerated in the public mind.

189. Any discussion of suicide when considering younger children involves very long-range and very uncertain prediction. Suicide in pre-pubescent children is extremely rare, and the existing studies of gender identity issues in pre-pubescent children do not report significant incidents of suicide. Any suggestion otherwise is misinformed. Our focus for this topic, then, is on adolescents and adults.

190. Rates of suicidal thoughts and behaviors among trans-identifying teens or adults have been reported to range from 25% to 52%, generally through non-longitudinal self-reports obtained from non-representative survey samples. (Toomey et al. 2018.) Some advocates of affirmative care assert that the only treatment to avoid this phenomenon is to affirm gender identity. Contrary to these assertions, no studies show that the social or medical affirmation of a transgender identity in adolescents or adults reduces suicide, prevents suicidal ideation, or improves long-term outcomes, as compared to either a “watchful waiting” or a psychotherapeutic model of response, as I have described above.

191. In analyzing claims of high rates of suicidal ideation (and suicide), it is vital not to confuse death by suicide with suicide attempts that could have been lethal, from gestures that are a cry for help, from those that are manipulations to obtain something or to express rage, and from self-harming. Such distinctions are routinely made in emergency rooms when patients present with suicidal ideation, or forms of self-harm.

192. Suicidality in lesbian, gay, and bisexual youth is so common as to be considered “normal” within those communities and that sexual minority youth’s suicidal thoughts have different meanings than suicidal thoughts among similarly aged heterosexual youth. (Canneto et al. 2021.) Much of the discussion in this work refers to sexual minority youth, a term that commonly includes transgendered adolescents. Many transgendered adolescents also temporarily identify as gay, lesbian, or bisexual. This work’s understanding is relevant to them as well, since all sexual minority groups share a sexual-minority identity, attitudes, and fears.

193. Too often in public comment suicidal thoughts are blurred with suicide. Yet available data reveals that suicide among youth suffering from gender dysphoria is rare.

194. An important analysis of data covering patients as well as those on the waiting list (and thus untreated) at the UK Tavistock gender clinic—the world’s largest gender clinic—found a total of only four completed suicides across 11 years’ worth of patient data, reflecting an estimated cumulative 30,000 patient-years spent by patients under the clinic’s care or on its waiting list. This corresponded to an annual suicide rate of 0.013%. The proportion of individual patients who died by suicide was 0.03%, which is orders of magnitude smaller than trans-identifying adolescents who self-report suicidal behavior or thoughts on surveys. (Biggs 2022b.)

195. Thus, only a minute fraction of trans-identifying adolescents who report thoughts or conduct considered to represent “suicidality” commit suicide. I agree with Dr. Zucker that the assertion by, for example, Karasic and Ehrensaft (2015) that completed suicides among transgender youth are “alarmingly high” “has no formal and systematic empirical basis.” (Zucker 2019 at 3.)

196. Professor Biggs of Oxford, author of the study of incidence of suicide among Tavistock clinic patients, rightly cautions that it is “irresponsible to exaggerate the prevalence of suicide.” (Biggs 2022b at 4.) It is my opinion that telling

parents—or even allowing them to believe from their internet reading—that they face a choice between “a live son or a dead daughter” is both factually wrong and unethical. Informed consent requires clinicians to ensure that their patients understand the truth. Those clinicians who claim a high risk of suicide in adolescence confuse suicidal ideation with suicide or with a profoundly heightened risk of suicide. Suicidal ideation sometimes can be a response to have an out mechanism if things get much worse—that is, the creation of self-control, being in charge. Such discernments require an experienced clinician.

B. Transition of any sort has not been shown to reduce levels of suicide.

197. Every suicide is a tragedy, and steps that reduce suicide should be adopted. Suicidality (that is, suicidal thoughts or behaviors, rather than suicide) is common among transgender adolescents and young adults before, during, and after social and medical transition. If a medical or mental health professional believes that an individual he or she is diagnosing or treating for gender dysphoria presents a suicide risk, in my view it is unethical for that professional merely to proceed with treatment for gender dysphoria and hope that “solves the problem.” Rather, that professional has an obligation to provide or refer the patient for evidence-based therapies for addressing depression and suicidal thoughts that are well-known to the profession. (Levine 2016 at 242.)

198. This is all the more true because there is in fact no evidence that social and/or medical transition reduces the risk or incidence of actual suicide. As there are no long-term comparative studies of gender dysphoric adolescents with suicidal ideation, per se, let alone a comparative study of those who were given hormones and those who did not take hormones, there is no scientific basis for declaring affirmative care as reducing suicidal risk. In his analysis of those who were patients of or on the waiting list of the Tavistock clinic, Professor Biggs found that the suicide rate was

not higher among those on the clinic’s waiting list (and thus as-yet untreated), than for those who were patients under care. (Biggs 2022b.) And as corrected, Bränström and Pachankis similarly acknowledge that their review of records of GD patients “demonstrated no advantage of surgery in relation to . . . hospitalizations following suicide attempts.” (I assume for this purpose that attempts that result in hospitalization are judged to be so serious as to predict a high rate of future suicide if not successfully addressed.)¹³ Long-term life in a transgender identity, however, correlates with elevated rates of completed suicide. The European death rates studies quoted above are based on national registry data. Each showed elevated rates of suicide compared to the countries’ non-transgendered population groups.

199. As with mental health generally, the patient, parent, or clinician fearing the risk of suicide must consider not just the next month or year, but a life course perspective.

200. There are four long-term studies that analyze completed suicide among those living in transgender identities into adulthood that were published before 2022. I have discussed above two 2023 studies from the UK and Denmark. (See paragraph 185.) The results of the older studies vary significantly but are uniformly highly negative. Dhejne reported a long-term follow-up study of subjects after sex reassignment surgery. Across the thirty-year study, subjects who had undergone SRS committed suicide at 19.1 times the expected rate compared to general population controls matched by age and both sexes. MtF subjects committed suicide at 13.9 times the expected rate, and FtM subjects committed suicide at 40.0 times the expected

¹³ Turban et al. (2020) has been described in press reports as demonstrating that administration of puberty suppressing hormones to transgender adolescents reduces suicide or suicidal ideation. The paper itself does not make that claim, nor permit that conclusion.

rate. (Dhejne et al. 2011 Supplemental Table S1. *See also* McNeil 2017 (systematic review noting confirmed suicide rates remained elevated after transition).)

201. Asscheman, also writing in 2011, reported results of a long-term follow-up of all transsexual subjects of the Netherlands' leading gender medicine clinic who started cross-sex hormones before July 1, 1997, a total of 1331 patients. Due to the Dutch system of medical and death records, extensive follow-up was achieved. Median follow-up period was 18.5 years. The mortality rate among MtF patients was 51% higher than among the age-matched general population; the rate of completed suicide among MtF patients was six times that of the age-matched general population. (Asscheman et al. 2011.)

202. Importantly, Asscheman et al. found that “No suicides occurred within the first 2 years of hormone treatment, while there were six suicides after 2–5 years, seven after 5–10 years, and four after more than 10 years of CSH treatment at a mean age of 41.5 years.” (Asscheman et al. 2011 at 637–38.) This suggests that studies that follow patients for only a year or two after treatment are insufficient. Asscheman et al.'s data suggest that such short-term follow-up is engaging only with an initial period of optimism, and it will simply miss the feelings of disillusionment and the increase in completed suicide that follows in later years.

203. A retrospective, long-term study published in 2020 of a very large cohort (8263) of patients referred to the Amsterdam University gender clinic between 1972 and 2017 found that the annual rate of completed suicides among the transgender subjects was “three to four times higher than the general Dutch population.” “[T]he incidence of observed suicide deaths was almost equally distributed over the different stages of treatment.” The authors concluded that “vulnerability for suicide occurs similarly in the different stages of transition.” (Wiepjes et al. 2020.) In other words, neither social nor medical transition reduced the rate of suicide. This study

demonstrates that the risk of ultimate suicide is not reduced by hormonal or surgical treatment.

204. Similar to Asscheman et al., Wiepjes et al. found that the median time between start of hormones and suicide (when suicide occurred) was 6.1 years for natal males, and 6.9 years for natal females. Again, short- or even medium-term studies will miss this suicide phenomenon.

205. A 2021 study analyzed the case histories of a cohort of 175 gender dysphoria patients treated at one of the seven UK adult gender clinics who were “discharged” (discontinued as patients) within a selected one-year period. The authors reported the rather shocking result that 7.7% (3/39) of natal males who were diagnosed and admitted for treatment, and who were between 17 and 24 years old, were “discharged” because they committed suicide during treatment. (Hall et al. 2021, Table 2.)

206. And researchers conducting an ongoing study this year reported a very high rate of completed suicides by adolescents soon after (i.e., the first two years) medical transition. (Chen et al. 2023 at 245.)

207. None of these studies demonstrates that the hormonal or surgical intervention caused suicide. That is possible, but as we have seen, the population that identifies as transgender suffers from a high incidence of comorbidities that correlate with suicide. What these studies demonstrate—at the least—is that this remains a troubled population in need of extensive and careful psychological care that they generally do not receive, and that neither social, hormonal nor surgical transition and “affirmation” resolve their underlying problems and put them on the path to a stable and healthy life.

208. This conclusion is also apparent from a systematic review undertaken by Christensen et al. that sought to examine interventions for suicide prevention in transgender children and adolescents. The review identified seventeen studies, eight

of which pertained specifically to medicalized transition, and observed that “the overall quality of evidence is low, and the risk of bias is high.” (Christensen et al. 2023 at 9.) The authors noted the flaws contributing to the high risk of bias within the identified studies included “self-reporting, lack of controls for comparability, small sample sizes, and lack of generalizability.” (*Id.* at 7.)

209. Christensen et al. stated in conclusion that “[i]t is yet largely unproven what the effect of such interventions may be on rates of suicidal ideation and attempt—let alone completion—amongst transgender and gender-diverse youth.” They further noted that no randomized controlled trials were found and pressed the “urgent need” for high-quality studies in this area. (*Id.* at 9.)

210. In sum, claims that affirmation reduces the risk of suicide for children and adolescents are not based on science. Affirmation does not guarantee prevention of suicide during adolescent or young adult years, and it may increase the risk of suicide over the life cycle. It is therefore not ethical or reasonable to suggest to parents of minors that without social and/or medical transition, their child is at great risk of suicide.

X. HORMONAL INTERVENTIONS ARE EXPERIMENTAL PROCEDURES THAT HAVE NOT BEEN PROVEN SAFE.

211. A number of voices in the field assert that puberty blockers act merely as a “pause” in the process of puberty-driven maturation, suggesting that this hormonal intervention has been proven to be fully reversible. This is also an unproven belief.

212. On the contrary, no studies have been done that meaningfully demonstrate that either puberty blockers or cross-sex hormones, as prescribed for gender dysphoria, are safe in other than the short run. No studies have attempted to determine whether the effects of puberty blockers, as currently being prescribed for gender dysphoria, are fully reversible. There are only pronouncements. In fact, there

are substantial reasons for concern that these hormonal interventions are not safe. Multiple researchers have expressed concern that the full range of possible harms have not even been correctly conceptualized.

213. As I explained in Section IV.F, use of hormonal interventions for the purpose of gender affirmation in adolescents can fairly be described as experimental, unproven, and dangerously uncertain. Because, as I have explained in Section VII, recent evidence demonstrates that pre-pubertal social transition almost always leads to progression on to puberty blockers which in turn almost always leads to the use of cross-sex hormones, physicians bear the ethical responsibility for a thorough informed consent process for parents and patients that includes this fact and its full implications. Informed consent does not mean sharing with the parents and patients what the doctor believes: it means sharing what is known and what is not known about the intervention. So much of what doctors believe is based on mere trust in what they have been taught. Neither they themselves nor their teachers may be aware of the scientific foundation and scientific limitations of what they are recommending.

A. Use of puberty blockers has not been shown to be safe or reversible for gender dysphoria.

214. As I noted above, the recent very thorough literature review performed for the British NHS concluded that *all* available clinical evidence relating to “safety outcomes” from administration of puberty blockers for gender dysphoria is of “very low certainty.” (NICE 2020b at 6.)

215. In its 2017 Guidelines, the Endocrine Society cautioned that “in the future we need more rigorous evaluations of the effectiveness and safety of endocrine and surgical protocols” including “careful assessment of . . . the effects of prolonged delay of puberty in adolescents on bone health, gonadal function, and the brain (including effects on cognitive, emotional, social, and sexual development).” (Hembree

et al. 2017 at 3874.) No such “careful” or “rigorous” evaluation of these very serious safety questions has yet been done.

216. Some advocates assert that puberty blockers are “safe” because they have been approved by the Food and Drug Administration (FDA) for use to treat precocious puberty—a rare condition in which the puberty process may start at eight or younger. No such conclusion can be drawn. As the “label” for Lupron (one of the most widely prescribed puberty blockers) explains, the FDA approved the drug only until the “age was appropriate for entry into puberty.” The study provides no information at all as to the safety or reversibility of instead blocking healthy, normally timed puberty’s beginning, and throughout the years that body-wide continuing changes normally occur. Given the physical, social, and psychological dangers to the child with precocious puberty, drugs like Lupron are effective in returning the child to a puerile state like their peers without a high incidence of significant side effects—that is, they are “safe” to reverse the condition. But use of drugs to suppress normal puberty has multiple organ system effects whose long-term consequences have not been investigated.

217. **Fertility:** The Endocrine Society Guidelines rightly say that research is needed into the effect of puberty blockade on “gonadal function” and “sexual development.” The core purpose and function of puberty blockers is to prevent the maturation of the ovaries or testes, the sources of female hormones and male hormones when stimulated by the pituitary gland. From this predictable process fertility is accomplished within a few years. Despite widespread assertions that puberty blockers are “fully reversible,” there has been no study published on the critical question of whether patients ever develop normal levels of fertility if puberty blockers are terminated after a prolonged delay of puberty. The 2017 Endocrine Society Guidelines are correct that that are no data on achievement of fertility

“following prolonged gonadotropin suppression” (that is, puberty blockade). (Hembree et al. 2017 at 3880.)

218. **Bone strength:** Multiple studies have documented adverse effects from puberty blockers on bone density. (Klink et al. 2015; Vlot et al. 2016; Joseph et al. 2019.) The most recent found that after two years on puberty blockers, the bone density measurements for a significant minority of the children had declined to clinically concerning levels. Density in the spines of some subjects fell to a level found in only 0.13% of the population. (Biggs 2021.) Some other studies have found less-concerning effects on bone density. While the available evidence remains limited and conflicting, it is not possible to conclude that the treatment is “safe.”

219. **Brain development:** Important neurological growth and development in the brain occurs across puberty. (*See Shirazi 2020.*) The anatomic and functional effect on brain development of blocking the natural puberty process has not been well studied. A prominent Australian clinical team expressed concern that “no data were (or are) available on whether delaying the exposure of the brain to a sex steroid affects psychosexual, cognitive, emotional, or other neuropsychological maturation.” (Kozłowska et al. 2021 at 89.) Others have echoed this concern. (Cass 2022 at 38–39; Chen et al. 2020 at 249; Hembree et al. 2017 at 3874.) In my opinion, given the observed correlation between puberty and brain development, the default hypothesis must be that there would be a negative impact. For the purpose of protecting patients all over the world, the burden of proof should be on advocates to first demonstrate to a reasonable degree of certainty that brain structure and its measurable cognitive and affect processing are not negatively affected. This recalls the ethical principle: Above All Do No Harm.

220. The Endocrine Society Guidelines acknowledge as much, stating that side effects of pubertal suppression “may include . . . unknown effects on brain development,” that “we need more rigorous evaluations of . . . the effects of prolonged

delay of puberty in adolescents on . . . the brain (including effects on cognitive, emotional, social, and sexual development),” and stating that “animal data suggests there may be an effect of GnRH analogs [puberty blockers] on cognitive function.” (Hembree et al. 2017 at 3874, 3882–83.) Given this concern, one can only wonder why this relevant question has not been scientifically investigated in a large group of natal males and females.

221. There has been a single longitudinal study of one natal male child, assessed before, and again 20 months after, puberty suppression was commenced. It reported a reduction in the patient’s “global IQ,” measured an anomalous absence of certain structural brain development expected during normal male puberty and hypothesized that “a plausible explanation for the G[lobal] IQ decrease should consider a disruption of the synchronic [i.e., appropriately timed] development of brain areas by pubertal suppression.” (Schneider et al. 2017 at 7.) This should cause parents’ and practitioners’ serious concern.

222. Whether any impairment of brain development is “reversed” upon later termination of puberty blockade has, to my knowledge, not been studied at all. As a result, assertions by medical or mental health professionals that puberty blockade is “fully reversible” are unjustified and based on hope rather than science. A recent study from Dr. Sallie Baxendale, a professor of clinical neuropsychology at UCL in London articulated these concerns, noting that “is no evidence to date to support the oft cited assertion that the effects of puberty blockers are fully reversible.” (Baxendale 2024 at 9.) In fact, Dr. Baxendale indicated that given the significant effect of hormones on the adolescent brain during puberty, completely reversible neuropsychological effects “would not be predicted given our current understanding of the ‘windows of opportunity’ model of neurodevelopment.” (Baxendale 2024 at 3.) Noting that “[c]ritical questions remain unanswered regarding the nature, extent and permanence of any arrested development of cognitive function that may be associated

with pharmacological blocking of puberty” Dr. Baxendale urgently called for longitudinal studies to assess the educational and vocational trajectories of people undergoing these such treatments. (Baxendale 2024 at 3.)

223. Without additional case studies—or preferably statistically significant clinical studies—two questions remain unanswered: Are there brain anatomic or functional impairments from puberty blockers? And are the documented changes reversed over time when puberty blockers are stopped? With these questions unanswered, it is impossible to assert with certainty that the effects of this class of medications are “fully reversible.” Such an assertion is another example of ideas based on beliefs rather than on documentation, on hope not science.

224. **Psycho-social harm:** Puberty is a time of stress, anxiety, bodily discomfort during physical development, and identity formation for all humans. No careful study has been done of the long-term impact on the young person’s coping skills, interpersonal comfort, and intimate relationships from remaining puerile for, e.g., two to five years while one’s peers are undergoing pubertal transformations, and of then undergoing an artificial puberty at an older age. However, pediatricians and mental health professionals hear of distress, concern, and social awkwardness in those who naturally have a delayed onset of puberty. In my opinion, individuals in whom puberty is delayed multiple years are likely to suffer at least subtle negative psychosocial and self-confidence effects as they stand on the sidelines witnessing their peers developing the social relationships (and attendant painful social learning experiences) that come with adolescence. (Levine 2018a at 9.) Social anxiety and social avoidance are common findings in the evaluation of trans-identified children and teens. Are we expected to believe that creating years of being further different than their peers has no lasting internal consequences? Do we ignore Adolescent Psychiatry’s knowledge of the importance of peer groups among adolescents?

225. We simply do not know what all the psychological impacts of *not* grappling with puberty at the ordinary time may be, because it has not been studied. And we have no information as to whether that impact is “fully reversible.” We should at least consider that the normal pubertal ushering of an adolescent into the world of sexual attraction, romantic preoccupations, sexual desires, and forays into interpersonal intimate relationships can be a positive experience for an untreated trans identified child. In contrast, puberty is presented solely as a negative process to be avoided by puberty blockers. In psychiatry we have the concept that conflict is inevitable, and its resolution strengthens a person’s capacities to deal with the future. This applies to individuals of any age.

226. In addition, since the overwhelming proportion of children who begin puberty blockers continue on to cross-sex hormones, it appears that there is an important element of “psychological irreversibility” in play. The question of to what extent the physical and developmental impacts of puberty blockers might be reversible is an academic one, if psycho-social realities mean that very few patients will ever be able to make that choice once they have started down the road of social transition and puberty blockers.

B. Use of cross-sex hormones in adolescents for gender dysphoria has not been shown to be medically safe except in the short term.

227. As with puberty blockers, all evidence concerning the safety of extended use of cross-sex hormones is of “very low quality.” The U.K. NICE evidence review cautioned that “the safety profiles” of cross-sex hormone treatments are “largely unknown,” and that several of the limited studies that do exist reported high numbers of subjects “lost to follow-up,” without explanation—a worrying indicator. (NICE 2020b.)

228. The 2020 Cochrane Review reported that: “We found insufficient evidence to determine the . . . safety of hormonal treatment approaches for

transgender women in transition.” (Haupt et al. 2020 at 4.) Even the Endocrine Society tagged all its recommendations for the administration of cross-sex hormones as based on “low quality evidence.” (Hembree et al. 2017 at 3889.)

229. The low quality of evidence to support use of puberty blockers and cross-sex hormones in the transition of minors cannot be dismissed simply by citing other medical interventions such as cleft or cranial-facial surgery that are commonly used without supporting evidence. In other areas lacking in high quality evidence, the patient’s biology, eating habits, or traumas have generated a problem to be ameliorated. In gender dysphoria, other treatment approaches are possible that do not carry the significant risks of harm posed by medical and ultimate surgical interventions.

230. **Sterilization:** It is undisputed, however, that harm to the gonads is an expected effect, to the extent that it must be assumed that cross-sex hormones will sterilize the patient. Thus, the Endocrine Society 2017 Guidelines caution that “[p]rolonged exposure of the testes to estrogen has been associated with testicular damage,” that “[r]estoration of spermatogenesis after prolonged estrogen treatment has not been studied,” and that “[i]n biological females, the effect of prolonged treatment with exogenous testosterone upon ovarian function is uncertain.” (Hembree et al. 2017 at 3880.)¹⁴

231. The Guidelines go on to recommend that the practitioner counsel the patient about the (problematic and uncertain) options available to collect and preserve fertile sperm or ova before beginning cross-sex hormones. The life-long negative emotional impact of infertility on both men and women has been well

¹⁴ See also Guss et al. 2015 at 4 (“a side effect [of cross-sex hormones] may be infertility”) and at 5 (“cross-sex hormones . . . may have irreversible effects”); Tishelman et al. 2015 at 8 (Cross-sex hormones are “irreversible interventions” with “significant ramifications for fertility”)

studied. While this impact has not been studied specifically within the transgender population, the opportunity to be a parent is likely a human, emotional need, and so should be considered an important risk factor when considering gender transition for any patient. What has been documented is the low rate of acceptance of banking sperm or ova in this population, which is an expensive ongoing process. Few experienced clinicians put much weight on a 13-year-old's declaration that "I don't want to be a parent anyway!"

232. **Sexual response:** Puberty blockers prevent maturation of the sexual organs and response. Some, and perhaps many, transgender individuals who did not go through puberty consistent with their sex and are then put on cross-sex hormones face significantly diminished sexual response as they enter adulthood and are unable ever to experience orgasm. In the case of males, the cross-sex administration of estrogen limits penile genital growth and function. In the case of females, prolonged exposure to exogenous testosterone leads to vaginal atrophy and creates pain during penetration. At the same time, testosterone increases sexual drive. Much has been written about the negative psychological and relational consequences of anorgasmia among non-transgender individuals that is ultimately applicable to the transgendered. (Levine 2018a, at 6.)

233. **Cardiovascular harm:** Several researchers have reported that cross-sex hormones increase the occurrence of various types of cardiovascular disease, including strokes, blood clots, and other acute cardiovascular events. (Getahun et al. 2018; Guss et al. 2015; Asscheman et al. 2011.) A recent study indicated that transgender individuals who had been put on cross-sex hormones were at a 40% greater risk of experiencing cardiovascular disease. (van Zijverden et al. 2024.) With that said, I agree with the conclusion of the Endocrine Society committee (like that of the NICE Evidence Review) that: "A systematic review of the literature found that data were insufficient (due to very low-quality evidence) to allow a meaningful

assessment of patient-important outcomes, such as death, stroke, myocardial infarction, or venous thromboembolism in transgender males. Future research is needed to ascertain the potential harm of hormonal therapies.” (Hembree et al. 2017 at 3891.) Future research questions concerning long-term harms need to be far more precisely defined. The question of whether cross-sex hormones are safe for adolescents and young adults cannot be answered by analogies to hormone replacement therapy in menopausal women (which is not a cross-sex usage). Medicine has answered safety questions for menopausal women in terms of cancer and cardiovascular safety: at what dose, for what duration, and at what age range. The science of endocrine treatment of gender dysphoric youth is being bypassed by short-term clinical impressions of safety even though physicians know that cardiovascular and cancer processes often develop over many years.

234. Further, in contrast to administration for menopausal women, hormones begun in adolescence are likely to be administered for four to six decades. The published evidence of adverse impact, coupled with the lack of data sufficient to reach a firm conclusion, make it irresponsible to assert that cross-sex hormones “are safe.”

235. **Harm to family and friendship relationships:** As a psychiatrist, I recognize that mental health is a critical part of health generally, and that relationships cannot be separated from and profoundly impact mental health. Gender transition routinely leads to isolation from at least a significant portion of one’s family in adulthood.

236. **Sexual-romantic harms associated with transition:** After adolescence, transgender individuals find the pool of individuals willing to develop a romantic and intimate relationship with them to be greatly diminished. When a trans-identifying person who passes well reveals his or her sex, many potential mates lose interest. When a trans-identifying person does not pass well, options are likely

further diminished. But regardless of a person's appearance, these adults soon learn that many of their dates are looking for exotic sexual experiences rather than genuinely loving relationships. (Levine 2017 at 5, 13; Levine 2013 at 40; Anzani et al. 2021.)

C. The timing of harms.

237. The multi-year delay between start of hormones and the spike in completed suicide reported by both Asscheman et al. 2011 and Wiepjes et al. 2020, warns us that the safety and beneficence of these treatments cannot be judged based on short-term studies, or studies that do not continue into adulthood. Similarly, several of the harms that I discuss above would not be expected to manifest until the patients reaches at least middle age. For example, stroke or other serious cardiovascular event is a complication that is unlikely to manifest during teen years even if its likelihood over the patient's lifetime has been materially increased via obesity, lipid abnormalities, and smoking. Regret over sterilization or over an inability to form a stable romantic relationship may occur sooner. Psychological challenges of being a trans adult may become manifest after the medical profession is only doing routine follow up care—or, in many cases, has lost contact with the patient altogether. Because few, if any, clinics in this country are conducting systematic long-term follow-up with their child and adolescent patients, the doctors who counsel, prescribe, or perform hormonal and surgical therapies are unlikely ever to become aware of the later negative life impacts, however severe. These concerns are compounded by the findings in the recent “detransitioner” research that 76% did not inform their clinicians of their detransition. (Littman 2021.)

238. The possibility that steps along the transition and affirmation pathway, while lessening the pain of gender dysphoria in the short term, could lead to additional sources of crippling emotional and psychological pain, are too often not considered by advocates of social transition, and not considered at all by the trans-

identifying child or adolescent. (Levine 2016 at 243.) Clinicians must distinguish the apparent short-term safety of hormones from likely or possible long-term consequences, and help the patient and parents understand these implications as well. The young patient may feel, “I don’t care if I die young, just as long I get to live as a woman.” The mature adult may take a different view. Hopefully, so will the child’s physician.

239. Individual patients often pin excessive hope in transition, believing that transition will solve what are in fact ordinary social stresses associated with maturation, or mental health co-morbidities. In this way, transition can prevent them from mastering personal challenges at the appropriate time or directly addressing conditions that require treatment. When the hoped-for “vanishing” of other mental health or social difficulties does not occur, disappointment, distress, and depression may ensue. It is noteworthy that half of the respondents to the larger “detransitioner” survey reported that their transition had not helped the gender dysphoria, and 70% had concluded that their gender dysphoria was related to other issues. (Vandenbussche 2021.) Without the clinical experience of monitoring the psychosocial outcomes of these young patients as they age into adulthood, many such professionals experience no challenge to their affirmative beliefs. But medical and mental health professionals who deliver trans affirmative care for those with previous and co-existing mental health problems have an ethical obligation to inform themselves, and to inform patients and parents, that these dramatic treatments are not a panacea.

240. Whether we consider physical or mental health, science does not permit us to say that either puberty blockers or cross-sex hormones are “safe,” and the data concerning the mental health of patients before, during, and after such treatments strongly contradict the assertion that gender dysphoria is “easily managed.”

XI. OBSERVATIONS ON THE REPORTS OF DOCTORS ABBIE GOLDBERG AND AMY TISHELMAN.

A. Dr. Abbie E. Goldberg, Ph.D.

241. The bulk of Dr. Goldberg’s report is focused on “LGBTQ+ parents” which Dr. Goldberg does not define, and which presumably encompasses a wide group of sexual minority-identified parents to a wide variety of children, one sub-set of which would be parents to a currently trans-identified minor.

242. At page 6 of her report, Dr. Goldberg indicates that such parents would wish to, and ideally access an “LGBTQ-affirming” school—a term that again she does not define. The strong implication from Dr. Goldberg is that such a school would adopt an “affirmative” approach to a trans-identified minor for purposes of restroom usage, pronouns, dress codes, and student housing during school expeditions and field trips. One cannot be certain about her generalization.

243. However, given that the minor’s identity is likely to be temporary (*see* Section V and VI above), and given many known social, psychological, and medical risks inherent in adopting an affirmative response to the affected minor (*see* Sections VII–X above), it cannot be assumed that parents would seek to adopt an affirmative response, particularly as the scientific basis for affirmative care is uncertain (*see* Sections IV and VIII above).

244. Parents of a currently trans-identified child may wish to pursue a “watchful waiting” approach or a psychotherapeutic response that would seek to alleviate distress by identifying and addressing causes of distress—all of which avoid the possible harms implicated by an “affirmative” approach. *See* Section III.E above. I have encountered many parents who have sought a more cautious approach during my years of practice. These alternative responses are facilitated by the approach taken by Darren Patterson Christian Academy.

B. Dr. Amy Tishelman, Ph.D.

245. In her use of the terms “transgender youth” and “transgender children,” Dr. Tishelman indicates that a minor’s identity is a fixed and stable biological entity that must be treated as though the minor has always been and will always be a trans person. But this assumption disregards the scientific literature demonstrating the instability of transgender identities and that desistance is the most likely outcome for a minor experiencing experience gender dysphoria or incongruence. *See* Section V and VI above.

246. The assertion is even more tenuous in the context of a preschool population with an age range of 2.5 to 5 years old¹⁵ in light of the recognition of many in the scientific community, including the Endocrine Society, that the persistence of gender dysphoria or incongruence can only be reliably assessed after the first signs of puberty. *See* Section V.A above.

247. Dr. Tishelman’s discussion of an “affirming” school environment and social transition is notably void of any discussion of the potential risks and harms facing minors who are subjected to an affirmative approach and is entirely focused on short-term ease and happiness for the minor as opposed to taking the “life course” perspective into account. *See* Sections IV, VII–X above. It also fails to mention alternative approaches to a trans-identified minor that avoid the possible harms implicated by an “affirmative” approach. *See* Section III.E above.

248. Relatedly, a significant proportion of minors who present with a transgender identity suffer from identifiable psychiatric co-morbidities, which can include developmental difficulties, autism, and ADHD. *See* Section III.C, VIII.C. It is important that these co-morbidities be identified, and that appropriate psychotherapeutic help be obtained for the affected minor. Dr. Tishelman’s discussion of behavioral issues affecting very young minors in her report centers on the identity

¹⁵ According to the Verified Complaint, ¶ 42.

issues presented and glosses over what may ultimately be complex psychiatric issues affecting those minors.

249. And Dr. Tishelman makes sweeping, generalized statements that rely on studies undertaken on older populations to support many of the assertions made in her report that are implied to pertain to the 2.5 to 5 years old age range in question. A clear example of this is on page 8 of her report: “It is well established that gender diverse youth face additional stressors or adversities compared to cisgender peers . . . particular to the experience and expression of gender diversity, and these factors (such as deliberate use of incorrect names or pronouns) can be detrimental in a school setting.” And on page 11: “In general, available literature supports the notion that transgender youth are at high risk for mental health challenges due to the experience of adversities related to their gender diverse expressions and identities.” It is a basic scientific principle that data from one population cannot be assumed to be applicable to others, particularly where there are notable cognitive and developmental differences between the populations.

250. Finally, in her discussion on social transition and its effect on mental health outcomes (pages 12–13 of her report) Dr. Tishelman fails to mention Morandini et al. 2023—the recent and more methodologically rigorous study examining data from the Tavistock clinic in London which found that social transition was not associated with an improvement in mental health. More significantly however, Dr. Tishelman fails to mention that no studies show that affirmation of transgender identity in minors reduces suicide or suicidal ideation, or improves long-term outcomes, as compared to other therapeutic approaches. *See* Sections VIII and IX.

Dated:

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