Treatment for Pediatric Gender Dysphoria

Review of Evidence and Best Practices

Foreword & Executive Summary

Department of Health and Human Services

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Minor corrections to May 1 documents made May 15, 2025; see Errata.

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Foreword

Over the past decade, the number of children and adolescents who question their sex and identify as transgender or nonbinary has grown significantly. Many have been diagnosed with a condition known as “gender dysphoria” and offered a treatment approach known as “gender-affirming care.” This approach emphasizes social affirmation of a child’s self-reported identity; puberty suppressing drugs to prevent the onset of puberty; cross-sex hormones to spur the secondary sex characteristics of the opposite sex; and surgeries including mastectomy and (in rare cases) vaginoplasty. Thousands of American children and adolescents have received these interventions.

While sex-role nonconformity itself is not pathological and does not require treatment, the use of pharmacological and surgical interventions as treatments for pediatric gender dysphoria has been called “medically necessary” and even “lifesaving.” Motivated by a desire to ensure their children’s health and well-being, parents of transgender-identified children and adolescents often struggle with how best to support them. Many of these children and adolescents have co-occurring psychiatric or neurodevelopmental conditions, rendering them especially vulnerable. When they seek professional help, they and their families should receive compassionate, evidence-based care tailored to their specific needs.

Society has a special responsibility to safeguard the well-being of children. Given that the challenges faced by these patients intersect with deeply contested issues of moral and social significance—including social identity, sex and reproduction, bodily integrity, and sex-based norms of expression and behavior—the medical practices that have recently emerged to address their needs have become a focus of significant controversy.

This Review is published against the backdrop of growing international concern about pediatric medical transition. Having recognized the experimental nature of these medical interventions and their potential for harm (which has been inadequately studied, especially with respect to long-term outcomes), health authorities in a number of countries have imposed restrictions. For example, the U.K. has banned the routine use of puberty blockers as an intervention for pediatric gender dysphoria.

Health authorities have also recognized the exceptional nature of this area of medicine. That exceptionalism is due to a convergence of factors. One is that the diagnosis of gender dysphoria is based entirely on subjective self-reports and behavioral observations, without any objective physical, imaging, or laboratory markers. The diagnosis centers on attitudes, feelings, and behaviors that are known to fluctuate during adolescence.

Additionally, the natural history of pediatric gender dysphoria is poorly understood, though existing research suggests it will remit without intervention in most cases. Medical professionals have no way to know which patients may continue to experience gender dysphoria and which will come to terms with their bodies.

Nevertheless, the “gender-affirming” model of care includes irreversible endocrine and surgical interventions on minors with no physical pathology. These interventions carry risk of significant harms including infertility/sterility, sexual dysfunction, impaired bone density accrual, adverse cognitive impacts, cardiovascular disease and metabolic disorders, psychiatric disorders, surgical complications, and regret, and there has been inadequate research into the frequency and severity of these harms. Meanwhile, systematic reviews of the evidence have revealed deep uncertainty about the purported benefits of these interventions.

The controversies surrounding the medical transition of minors extend beyond scientific debate; they are deeply cultural and political. Public discourse is dominated by intensely polarizing narratives. Some view the medical transition of minors as a pressing civil rights issue, while others regard it as a profound medical failure and a sobering reminder that even modern medicine is vulnerable to serious error. In the midst of this highly charged debate, children and adolescents, and their families—who seek only to support their flourishing—have found themselves caught between competing perspectives. They require, and are entitled to, accurate, evidence-based information to guide their decisions.

This Review of evidence and best practices was commissioned pursuant to Executive Order 14187, signed on January 28, 2025. It is not a clinical practice guideline, and it does not issue legislative or policy recommendations. Rather, it seeks to provide the

most accurate and current information available regarding the evidence base for the treatment of gender dysphoria in this population, the state of the relevant medical field in the United States, and the ethical considerations associated with the treatments offered.

The Review is intended for policymakers, clinicians, therapists, medical organizations and, importantly, patients and their families. It summarizes, synthesizes, and critically evaluates the existing literature on best practices for promoting the health and well-being of children and adolescents with distress related to their sex or to social expectations associated with their sex. Treatment of adults constitutes a separate topic and is not addressed in this Review. A summary of the Review's main findings is presented below.

Executive Summary

Part I: Background

- Gender dysphoria is a condition that involves distress regarding one's sexed body and/or associated social expectations. Increasing numbers of children and adolescents in the U.S. and other countries are diagnosed with gender dysphoria. Internationally, there is intense disagreement about how best to help them.
- The term "rapid onset gender dysphoria" (ROGD) has been suggested to describe a new clinical presentation of gender dysphoria. Despite sharp disagreement about the concept's validity, symptoms consistent with ROGD have been recorded in clinics in the U.S. and other countries.
- In the U.S., the current approach to treating pediatric gender dysphoria aligns with the "gender-affirming" model of care recommended by the World Professional Association for Transgender Health (WPATH). This model emphasizes the use of puberty blockers and cross-sex hormones, as well as surgeries, and casts suspicion on psychotherapeutic approaches for management of gender dysphoria.
- The understandable desire to avoid language that may cause discomfort to patients has, in some cases, given rise to modes of communication that lack scientific grounding, that presuppose answers to unresolved ethical controversies, and that risk misleading patients and families. This Review uses scientifically accurate and neutral terminology throughout.
- In many areas of medicine, treatments are first established as safe and effective in adults before being extended to pediatric populations. In this case, however, the opposite occurred: clinician-researchers developed the pediatric medical transition protocol in response to disappointing psychosocial outcomes in adults who underwent medical transition.
- The protocols were adopted internationally before the publication of the first outcome studies. In recent years, in response to dramatic shifts in the number

and clinical profiles of minor patients, as well as to multiple systematic reviews of evidence, health authorities in an increasing number of countries have restricted access to puberty blockers and cross-sex hormones, and, in the rare cases where they were offered, surgeries for minors. These authorities now recommend psychosocial approaches, rather than hormonal or surgical interventions, as the primary treatment, and in some cases have restricted the latter to nationally-overseen research protocols.

- There is currently no international consensus about best practices for the care of children and adolescents with gender dysphoria.

Part II: Evidence Review

- Evidence-based medicine is widely recognized by health authorities worldwide as the foundation of high-quality care. Consistent with its principles, this Review undertook a methodologically rigorous assessment of the evidence underpinning pediatric gender medicine.
- Specifically, this Review conducted an overview of systematic reviews—also known as an “umbrella review”—to evaluate the direct evidence regarding the benefits and harms of treatment for children and adolescents with gender dysphoria. Existing systematic reviews of evidence, including several that have informed health authorities in Europe, were assessed for methodological quality. The umbrella review found that the overall quality of evidence concerning the effects of any intervention on psychological outcomes, quality of life, regret, or long-term health, is very low. This indicates that the beneficial effects reported in the literature are likely to differ substantially from the true effects of the interventions.
- Evidence for harms associated with pediatric medical transition in systematic reviews is also sparse, but this finding should be interpreted with caution. Inadequate harm detection in pediatric gender medicine may reflect the relatively short period of time since the widespread adoption of the medical/surgical treatment model; the failure of existing studies to systematically track and report harms; and publication bias. Despite the lack of robust evidence from population

level studies, important insights can be drawn from established knowledge about human physiology and the effects and mechanisms of the pharmacological agents used.

- The risks of pediatric medical transition include infertility/sterility, sexual dysfunction, impaired bone density accrual, adverse cognitive impacts, cardiovascular disease and metabolic disorders, psychiatric disorders, surgical complications, and regret.

Part III: Clinical Realities

- In the U.S., the most influential clinical guidelines for the treatment of pediatric gender dysphoria are published by WPATH and the Endocrine Society. A recent systematic review of international guideline quality did not recommend either guideline for clinical use after determining they "lack developmental rigour and transparency."[1]
- Problems with the development of WPATH's *Standards of Care*, Version 8 (SOC-8) extend beyond those identified in the systematic review of international guidelines. In the process of developing SOC-8, WPATH suppressed systematic reviews its leaders believed would undermine its favored treatment approach. SOC-8 developers also violated conflict of interest management requirements and eliminated nearly all recommended age minimums for medical and surgical interventions in response to political pressures.
- Although SOC-8 relaxed the eligibility criteria for access to puberty blockers, cross-sex hormones, and surgeries, there is compelling evidence that U.S. gender clinics are not adhering even to those more permissive criteria.
- The "gender-affirming" model of care, as practiced in U.S. clinics, is characterized by a child-led process in which comprehensive mental health assessments are often minimized or omitted, and the patient's "embodiment goals" serve as the primary guide for treatment decisions. In some of the nation's

[1] Taylor, Hall, Heathcote et al. (2024a, p. 7).

leading pediatric gender clinics, assessments are conducted in a single session lasting two hours.

- The voices of whistleblowers and detransitioners have played a critical role in drawing public attention to the risks and harms associated with pediatric medical transition. Their concerns have been discounted, dismissed, or ignored by prominent advocates and practitioners of pediatric medical transition.
- U.S. medical associations played a key role in creating a perception that there is professional consensus in support of pediatric medical transition. This apparent consensus, however, is driven primarily by a small number of specialized committees, influenced by WPATH. It is not clear that the official views of these associations are shared by the wider medical community, or even by most of their members. There is evidence that some medical and mental health associations have suppressed dissent and stifled debate about this issue among their members.

Part IV: Ethical Considerations

- The principle of autonomy in medicine establishes a moral and legal right of competent patients to refuse any medical intervention. However, there is no corollary right to receive interventions that are not beneficial. Respect for patient autonomy does not negate clinicians' professional and ethical obligation to protect and promote their patients' health.
- The evidence for benefit of pediatric medical transition is very uncertain, while the evidence for harm is less uncertain. When medical interventions pose unnecessary, disproportionate risks of harm, healthcare providers should refuse to offer them even when they are preferred, requested, or demanded by patients. Failure to do so increases the risk of iatrogenic harm and reduces medicine to consumerism, threatening the integrity of the profession and undermining trust in medical authority.
- Proponents of pediatric medical transition claim that regret is vanishingly rare, while critics assert that regret is increasingly common. The true rate of regret is

not known and better data collection is needed. That some patients report profound regret after undergoing invasive, life-changing medical interventions is clearly of importance. However, regret alone (just like satisfaction alone) is not a valid indicator of whether an intervention is medically justified. Patients may regret medically justified treatments or feel satisfied with unjustified ones.

- A natural response to the absence of credible evidence is to call for more and better research. Even if high quality research such as randomized controlled trials on pubertal suppression or hormone therapy were feasible, however, conducting it may conflict with well-established ethical standards for human subjects research.

Part V: Psychotherapy

- The rise in youth gender dysphoria and the corresponding demand for medical interventions have occurred against the backdrop of a broader mental health crisis affecting adolescents. The relationship between these two phenomena remains a subject of scientific controversy.
- Suicidal ideation and behavior are independently associated with comorbidities common among children and adolescents diagnosed with gender dysphoria. Suicidal ideation and behavior have known psychotherapeutic management strategies. No independent association between gender dysphoria and suicidality has been found, and there is no evidence that pediatric medical transition reduces the incidence of suicide, which remains, fortunately, very low.
- There is a dearth of research on psychotherapeutic approaches to managing gender dysphoria in children and adolescents. This is due in part to the mischaracterization of such approaches as “conversion therapy.” A more robust evidence base supports psychotherapeutic approaches to managing common comorbid mental health conditions. Psychotherapy is a noninvasive alternative to endocrine and surgical interventions for the treatment of pediatric gender dysphoria. Systematic reviews of evidence have found no evidence of adverse effects of psychotherapy in this context.