

## **Statement on Gender Affirmative Approach to Care from the Pediatric Endocrine Society Special Interest Group on Transgender Health**

The purpose of this Position Statement is to emphasize the importance of an affirmative approach to the health care of transgender individuals, as well as to improve the understanding of the rights of transgender youth. The Endocrine Society and the World Professional Association of Transgender Health provide detailed clinical practice guidelines elsewhere [1, 2] . The need for this Statement emerged in light of controversies in the medical community around the approach to mental health and medical care of transgender youth, including the risks involved in this care, and around support of transgender rights such as restroom use. This document provides a summary of relevant definitions, information and current literature on which the medical management and affirmative approach to care of transgender youth are based.

The Pediatric Endocrine Society Special Interest Group on Transgender Health supports the concept that sex chromosomes and/or genitalia do not determine one's gender identity, and endorses a gender affirmative approach to care for transgender youth.

The American Psychological Association defines gender as “a non-binary construct that allows for a range of *gender identities* and that a person's *gender identity* may not align with sex assigned at birth” [3]. Gender identity is the innermost concept of self as male, female, a blend of both or neither. It also encompasses how individuals perceive themselves and what they call themselves.

Sex is not equivalent to gender identity. Sex, typically but not always, categorized as male or female, is determined by factors that include chromosomes, gonads, internal reproductive organs and external genitalia.

Sex and gender identity align in the majority of the population, and when they do not, individuals may categorize themselves as transgender. Transgender refers to a transient or persistent identification with a gender that is different from the gender implied by the birth sex assignment. Gender dysphoria, defined in the DSM-5, refers to the discomfort or distress that may occur when one's gender identity does not match the sex assigned at birth [4]. Gender dysphoria may or may not be present in transgender individuals [4], since it may improve or even disappear with a gender affirmative approach

or treatment such as social transition (change in clothing, attire, name and pronouns), parental and social support, as well as hormonal therapy with or without surgical intervention [5-11]. In our experience, transgender children and adolescents often suffer from discrimination if they do not have a supportive environment in school, e.g. if they are not allowed to use the restroom, locker room, or participate in the sports teams and other activities consistent with their gender identity.

There are no data to support the use of “reparative or conversion” therapy with the intention of changing one’s gender identity or sexual orientation. Furthermore, the American Psychological Association, the American Psychiatric Association and the American Academy of Pediatrics, reject this form of therapy and support a more “trans-affirmative” model of care [3, 12, 13].

While rates of depression are 2-3 times higher in transgender youth vs. non-transgender peers [14], there are data to suggest that much of the psychiatric comorbidity in transgender adolescents derives from discrimination, peer rejection and lack of social support [15]. On the other hand, the best predictor of positive psychological outcomes is parental support [16], and a recent study published in the journal “Pediatrics” showed that transgender children that undergo a social transition have rates of depression comparable to non-transgender children [17].

It is important to note that not all young gender-nonconforming children will persist as such into adolescence, and that there might be different paths of gender development and degrees of complexity [18, 19]. This has raised the concern about supporting an early social transition in young children who may not persist into adolescence. However, previous studies may have underestimated or misunderstood the likelihood of long-term persistence. It is worth noting, common terms used to describe this are “persisters” for those individuals for whom gender dysphoria persists into and beyond adolescence and “desisters” for those individuals for whom it does not. A key issue is that criteria for gender identity disorder (GID) from earlier versions of the DSM on which the studies were based included diagnosis on the basis of gender atypical expression alone, which may or may not be independent of gender identity. Some have suggested that the proportion of persisters would likely be higher by applying current gender dysphoria criteria and, for example, including individuals who continued to express a desire to be of the opposite sex or to believe that they were the opposite sex, regardless of gender-stereotypical behaviors per se. A second methodologic criticism is that most of the youth studied had not actually been followed into adulthood, suggesting that with longer follow-up, the number of apparent desisters might be lower. It seems clear, however, that most (>90%) children whose

gender-variant identity persists into adolescence develop an adult transgender identity [7, 20, 21]. In these cases puberty, with attainment of secondary sex characteristics, is often a source of significant distress [18, 20].

Referral to a mental health provider with experience in gender identity concerns is always preferred to guide families in a variety of ways, such as: helping youth understand and reflect on their gender issues and choices; helping youth and family with difficult decisions such as potential benefits and risks of social transition and medical intervention [22, 23]; providing counseling at times of family conflict and distress; assisting with advocacy in schools and other community settings; helping youth and families navigate and problem-solve social challenges; assessing for and treating mental health and developmental morbidities and assessing for risk; and to provide continuity of care throughout a child's gender exploration and hormonal treatment. Medical intervention before adulthood in transgender adolescents is recommended by the Endocrine Society and the Pediatric Endocrine Society for selected patients that have undergone an appropriate psychological assessment [1, 24]. This protocol includes puberty suppression with gonadotropin releasing hormone (GnRH) agonists after initiation of puberty (Tanner stage  $\geq$  II for breast or testicular development), followed by cross-sex hormones around age 16 (though most experts agree that there may be compelling reasons not to wait until age 16 years in some adolescents). Puberty suppression has the purpose of delaying the development of secondary sex characteristics while providing time for continued exploration of the adolescent's gender identity, as well as allowing for gender continuity in those who have already socially transitioned. This treatment has been used by pediatric endocrinologists for more than 30 years for patients with precocious puberty and its safety and efficacy profile is well known [25-27].

Fertility is likely to be will be compromised if GnRH agonists are started in early puberty (Tanner stage II-III), and endogenous puberty is not allowed to complete. Research is underway to determine if prepubertal gonadal tissue can be differentiated to result in mature sperm or oocytes [28, 29].

Cross-sex hormones (estrogen or testosterone), also known as hormone replacement therapy (HRT), have the purpose of inducing secondary sex characteristics that enable the individual to present in accordance with their affirmed gender identity. Testosterone induces amenorrhea in postmenarchal transmales; however it seems to be reversible as there are number of cases of unplanned pregnancy while on treatment, as well as planned pregnancy and uneventful child birth after interruption of testosterone treatment [30]. Estrogen treatment may lead to sterility, and implications for fertility as

well as other reproductive options need to be thoroughly discussed with the patient and legal guardian(s) [1]. In our experience, adolescent patients and parents prioritize treatment that will help affirm patients' gender identity over attaining or preserving fertility.

Long-term data from transgender patients treated as adults show that this therapy is overall safe and there are no data to suggest that use of estrogen or testosterone, when used at physiologic doses, leads to a cancer risk higher than expected for the average adult male, in the case of transmales, or the adult female, in the case of transfemales [30-32]. The thromboembolic risk was significant with ethinyl estradiol preparations [32], but is very low (<2%) with the current oral and patch 17-beta estradiol formulations [30, 31]. There is a theoretical concern that testosterone may worsen the cardiovascular profile of transmen, but this is in comparison with women; therefore, since men are known to have a higher cardiovascular risk by nature, this possible increased cardiovascular risk is not unexpected. Furthermore, this increased cardiovascular risk has not been proven, and a recent study on overall mortality in transgender individuals showed that transmen followed for more than 18 years of testosterone treatment, did not show a significant increase in mortality due to cardiovascular incidents [32]. Overall, the risk benefit ratio of puberty suppression and cross-sex hormones is low in contrast with the high rate of suicidal attempt of transgender individuals of 41% [33].

While many studies demonstrate that hormone replacement therapy and gender affirming surgery lead to improved gender dysphoria and quality of life in adults [6, 34-36], a long-term follow up study revealed persistence of psychiatric comorbidity and death from suicide in transgender patients after gender affirming surgery [37]. However, the authors comment that the results should not be interpreted such that sex reassignment increases morbidity and mortality given that the overall mortality rate was only significantly increased for the group operated on before 1989; therefore, the results might be explained by improved health care for transgender adults during 1990s, along with altered societal attitudes towards gender non-conforming individuals. Another limitation of this study is that this group was compared with non-transgender controls. A more appropriate control group would have been transgender individuals who did not undergo gender reassignment surgery, which may have revealed worse outcomes without treatment.

A recent long term study of 55 transgender adolescents who underwent puberty suppression and cross-sex hormones followed by gender affirming surgery in early adulthood, showed complete resolution of

gender dysphoria, and psychological outcomes that were similar or better than non-transgender, age-matched young adults. In addition, none of these patients regretted their decision to transition [21].

The Pediatric Endocrine Society Special Interest Group on Transgender Health supports the United States Department of Education and the Department of Justice guidance on the rights of transgender students [38], which recommends that students use the restroom that is consistent with their gender identity. School support in acknowledging a young person's true gender identity is crucial for their long-term well-being. When transgender children and adolescents present according to their gender identity but are forced to use the restroom that matches their genitalia, they are often harassed both physically and verbally, and in some cases are questioned or pulled out. While some schools have provided accommodations to use a staff (gender neutral) restroom, this leads to segregation and other psychological and medical problems including being questioned by peers and school staff not aware of their transgender status, sanctions for being late because the allowable restroom is often not close to the classrooms, avoidance of using the restroom resulting in refusing to drink fluids and withholding urination potentially leading to urinary tract infections, as well as school avoidance.

Almost universally, transgender students do not want to bring attention or expose themselves publicly; on the contrary, they want to be accepted like any other youth. There are no reported cases in which allowing a transgender child to use the bathroom that matches their gender identity has led to inappropriate self-exposure or sexual advances. Self-exposure, voyeurism and sexual assault already constitute criminal offenses and policies supporting the rights of transgender individuals do not change that.

In conclusion, transgender youth have optimal outcomes when affirmed in their gender identity, through support by their families and their environment, as well as appropriate mental health and medical care. For this reason, the Pediatric Endocrine Society Special Interest Group on Transgender Health joins other academic societies involved in the care of children and adolescents in supporting policies that promote a safe and accepting environment for gender-nonconforming/transgender youth, as well as adequate mental health and medical care.

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