

# Psychological and Medical Care of Gender Nonconforming Youth

This is the 5th in our series on Adolescent Health.

## abstract

Gender nonconforming (GN) children and adolescents, collectively referred to as GN youth, may seek care to understand their internal gender identities, socially transition to their affirmed genders, and/or physically transition to their affirmed genders. Because general pediatricians are often the first point of contact with the health care system for GN youth, familiarity with the psychological and medical approaches to providing care for this population is crucial. The objective of this review is to provide an overview of existing clinical practice guidelines for GN youth. Such guidelines emphasize a multidisciplinary approach with collaboration of medical, mental health, and social services/advocacy providers. Appropriate training needs to be provided to promote comprehensive, culturally competent care to GN youth, a population that has traditionally been underserved and at risk for negative psychosocial outcomes.

*Pediatrics* 2014;134:1184–1192

**AUTHORS:** Stanley R. Vance Jr, MD,<sup>a</sup> Diane Ehrensaft, PhD,<sup>b</sup> and Stephen M. Rosenthal, MD<sup>b</sup>

<sup>a</sup>*Division of Adolescent Medicine, and* <sup>b</sup>*Division of Endocrinology, Benioff Children's Hospital, University of California, San Francisco, San Francisco, California*

### KEY WORDS

gender nonconforming, transgender, gender identity, gender dysphoria, affirmed gender, cross-sex hormones, pubertal suppression, gender-affirming surgery

### ABBREVIATIONS

DSM—*Diagnostic and Statistical Manual of Mental Disorders*  
GID—gender identity disorder  
GN—gender nonconforming  
GnRH—gonadotropin-releasing hormone  
MHP—mental health professional  
WPATH—World Professional Association for Transgender Health

Dr Vance conceptualized the outline of the manuscript; wrote the introduction, epidemiology, medical interventions, and conclusion sections; and revised the manuscript; Dr Ehrensaft wrote the psychological interventions section, and revised the manuscript; Dr Rosenthal supervised the drafting of the initial manuscript and critically reviewed and revised all sections of the manuscript; and all authors approved the final manuscript as written.

[www.pediatrics.org/cgi/doi/10.1542/peds.2014-0772](http://www.pediatrics.org/cgi/doi/10.1542/peds.2014-0772)

doi:10.1542/peds.2014-0772

Accepted for publication Jun 18, 2014

Address correspondence to Stephen M. Rosenthal, MD, Department of Pediatrics, Division of Endocrinology, University of California, San Francisco, 513 Parnassus Ave, Suite S-672-D, San Francisco, CA 94143-0434. E-mail: [rosenthals@peds.ucsf.edu](mailto:rosenthals@peds.ucsf.edu)

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2014 by the American Academy of Pediatrics

**FINANCIAL DISCLOSURE:** The authors have indicated they have no financial relationships relevant to this article to disclose.

**FUNDING:** No external funding.

**POTENTIAL CONFLICT OF INTEREST:** The authors have indicated they have no potential conflicts of interest to disclose.

Gender is increasingly viewed as a continuum between maleness and femaleness. At birth, most children are assigned a sex based on genital anatomy, and with that assigned sex comes the societal expectation of gender roles, behaviors, and expressions, which are sometimes referred to as a child's assigned gender. However, some children's internal gender identities are not congruent with their genders implied by their birth sex assignments. These youth fall under the umbrella of gender nonconforming (GN), and their gender expressions (their outward presentation to the world as male or female) may align with their internal gender identities rather than with their assigned gender (Table 1). However, when in a nonaccepting or unsafe environment, they may feel a need to hide their true gender selves. Some GN youth have gender identities that are different from their assigned genders, and most often are referred to as "transgender." Some youth declare that their gender identities are neither male nor female, and others accept the genders assigned to them but not the cultural expectations for those genders; these youth may be referred to as "gender queer," "gender fluid," "gender creative," or "gender independent."

Gender dysphoria, which is distress caused by the incongruence between one's expressed or experienced (affirmed) gender and the gender assigned at birth, may develop in some GN youth, prompting them to seek care to understand their gender nonconformity or physically transition to their affirmed gender. Gender dysphoria, the psychiatric diagnosis that has replaced the earlier diagnosis of gender identity disorder (GID) in the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5), elaborates on the noted clinical profile of gender dysphoria. With this change in the DSM, a cross-gender identity itself is no longer considered pathological, as it had been with the previous

**TABLE 1** Gender-Related Terminology

Term	Definition
Gender	Behavioral, cultural, and psychological characteristics associated with femaleness or maleness.
Sex	Physical attributes that characterize maleness and femaleness (eg, the genitalia).
Gender identity	Person's internal sense of being male, female, or somewhere on the gender spectrum.
Gender role	Behaviors, attitudes, and personality traits a society designates as masculine or feminine.
Gender expression	The way a person outwardly communicates gender. A person's gender expression may or may not be consistent with internal gender identity.
Gender nonconforming people	Persons with behaviors, appearances, or identities that are incongruent with those culturally assigned to their birth sex. Gender nonconforming individuals may refer to themselves as transgender, gender queer, gender fluid, gender creative, gender independent, or non-cisgender.
Transgender	This term can be synonymous with GN. Some use this term to refer to individuals with gender identities that are the opposite of their assigned gender; this article uses the latter definition.
Transsexual	This term refers to individuals who seek to change or have changed their physical sex characteristics through medical interventions (hormones and/or surgery) and through permanently changing their gender role.
Affirmed gender	A person's true gender identity. The gender that people communicate to others as their authentic gender in expressions and/or identity.
MTF; affirmed female	Terms used to describe individuals assigned male sex at birth who have changed their body and/or role to a more feminine body and/or role.
FTM; affirmed male	Terms used to describe individuals assigned female sex at birth who have changed their body and/or role to a more masculine body and/or role.
Gender affirmation surgery/sexual reassignment surgery	Surgery to change sex characteristics to those associated with the person's gender identity.
Cross-sex hormones	Exogenous hormones administered to promote development of secondary sexual characteristics consistent with a person's gender identity. Examples include testosterone for an affirmed male (FTM) and estrogen for an affirmed female (MTF)
Gender dysphoria	A clinical symptom characterized by a sense of alienation to some or all of the physical characteristics or social roles of one's assigned gender. Also, "gender dysphoria" is the psychiatric diagnosis in the DSM-5, which has more focus on the distress stemming from the incongruence between one's expressed or experienced (affirmed) gender and the gender assigned at birth, compared with the previous DSM-IV diagnosis of GID.
Gender identity disorder	A psychiatric diagnosis defined previously in the DSM-IV. This term was changed to gender dysphoria in the DSM-5. The primary criteria include a strong, persistent cross-gender identification and significant distress and social impairment.

This table is not all-inclusive of the terminology used in the medical community or GN community.<sup>1,3,52,53</sup> FTM, female to male; MTF, male to female.

edition's (DSM-IV) GID diagnosis; instead, the psychiatric focus is on distress stemming from incongruence between assigned gender and affirmed gender identity.<sup>1</sup>

As recently as 2009, the Endocrine Society and cosponsoring professional organizations, including the Pediatric Endocrine Society, World Professional Association

for Transgender Health (WPATH), European Society of Endocrinology, and European Society for Pediatric Endocrinology, published guidelines for treating eligible transgender adolescents with pubertal suppression and/or cross-sex hormone therapy for severe gender dysphoria.<sup>2</sup> Of note, in 2011, WPATH released similar

guidelines.<sup>3</sup> In recent years, an increasing number of multidisciplinary clinics have emerged in the United States that are dedicated to providing care to this population.<sup>4–8</sup> A challenge to all of these programs is that even with published clinical guidelines and standards of care, management of GN youth remains controversial, with a key factor being that these documents are based primarily on expert opinion rather than scientific data, given the paucity of outcomes data on the effects of mental health and medical interventions. An increasing number of GN youth are presenting for gender-sensitive health services.<sup>6,9,10</sup> Therefore, pediatric providers, from primary care pediatricians to pediatric subspecialists, need to familiarize themselves with the medical and psychosocial issues that impact this population. This review describes the general approach to and management of GN youth.

## EPIDEMIOLOGY

There are no formal epidemiologic studies exploring the prevalence and incidence of gender nonconformity in youth, but estimates of these parameters are more delineated in GN adults.<sup>3</sup> However, they may not be generalizable to GN youth because (1) adult estimates are based on a subset that presented for cross-sex hormones and gender-affirming surgery, and not all GN individuals seek phenotypic transition or even have gender dysphoria; (2) estimates do not capture the GN population that seek care outside of the health care system; and (3) the majority of children diagnosed with GID under the DSM-IV criteria do not have the disorder as adolescents or adults.<sup>11–13</sup> Nevertheless, the estimated prevalence for GN adults seeking gender-affirming surgery range from 0.005% to 0.014% for affirmed females and 0.002% to 0.003% for affirmed males.<sup>1</sup> Although the prevalence of gender nonconformity in youth is unclear, there has been a notable

increase in the number of GN youth presenting to specialty clinics over the past decade.<sup>6,9,10</sup>

## CLINICAL PRESENTATION

GN youth may present for care in a variety of ways. For example, parents may bring their son to the pediatrician with a concern that he prefers to play with dolls or wear dresses or bring their daughter because she prefers to be called a traditionally male name or even explicitly wishes she were a boy. These parents may want to know if their child's atypical behavior or gender role is a "phase," an indicator of being transgender, or perhaps an early manifestation of homosexuality. Other GN youth may present in adolescence after progression of puberty triggers increased gender dysphoria.<sup>2</sup> Depression, anxiety, or suicidal ideation may be presenting symptoms, which some clinicians initially diagnose as a primary mood disorder when the symptoms are, in fact, sequelae of gender dysphoria.

## GENDER DEVELOPMENT

Evidence of gender nonconformity is often apparent in early childhood, as early as age 2 years.<sup>14</sup> For some, gender nonconformity persists throughout their lifetimes. For children who establish a transgender identity, the main factor associated with persistence into adolescence and adulthood is intensity of their gender dysphoria in childhood.<sup>12,15</sup> For others, gender nonconformity may change over the years or disappear altogether.<sup>16</sup> Many children in this latter group explore gender at its margins in a developmental progression toward their later gay identity, at which point the gender nonconformity may dissipate or disappear.<sup>8</sup> For another group, the gender exploration or gender-related stress may emerge in adolescence, often with the onset of puberty as the trigger.<sup>17</sup> Thus, there is no consistent developmental trajectory, and it may be erroneous

to mislabel any of these developmental progressions as "just a phase" when it is possible that they are not. For pediatricians, who may be the first contact for the family of a GN youth, the principal task is to recognize the youth's current gender status to provide the parents with the best strategies to support their child, including referral to a gender specialist who can further explore the gender nonconformity.<sup>18</sup>

The "why" of gender and gender nonconformity continues to be a mystery, but all evidence points to gender development being an intricate interweaving of nature, nurture, and culture.<sup>19</sup> There have been data (endocrine, genetic, and neurologic) to support a biological component to gender.<sup>20–23</sup> The prevailing psychosocial paradigm until recently had been that parents have the greatest influence on a child's deviation from acceptable social gender norms or a child's refusal to accept the implied gender based on the natively assigned sex.<sup>24–26</sup> Currently, the explanation that parents are primarily responsible for their child's gender variations is being challenged. Instead, gender development is understood to be a "feedback loop" with the child shaping the parents as much, if not more, than the parents shaping the child. In this interaction, the child's gender is perceived as generated from within while also being influenced by the social environment. Clinical observations have revealed that a child's gender identity is resistant to parental or social intervention, whereas gender expressions are more socially malleable.<sup>15</sup> Recent evidence also indicates that as culture becomes more open about and supportive of gender diversity, more children are affirming a GN identity or set of expressions.<sup>27</sup>

GN youth are at increased risk for a number of adverse mental health and medical outcomes, including anxiety, depression, suicidality, oppositional defiance, lower school performance,

nonsuicidal self-injury, drug abuse, and alcohol abuse.<sup>6,28–31</sup> Of note, the measures used in some of the research studies have been questioned because they often use binary measures of gender; rely heavily on parent reports, which may be biased; and may fail to integrate measures of social stigma or rejection that may be related to if not causal of the psychological difficulties reported. Many of these outcomes are likely due to the social rejection experienced by GN youth along with the lack of family support for their gender nonconformity.<sup>29,31–33</sup> The manifestations of anxiety, depression, or self-harm can also be caused by distress from the body not matching one's affirmed gender. Recent studies have indicated that when social supports are put in place that recognize and affirm the child's gender nonconformity, the symptoms are significantly alleviated with improved mental health outcomes.<sup>33,34</sup>

## INTERVENTIONS

### Psychological Interventions

A mental health professional (MHP), specifically one trained as a gender specialist, plays several roles in the care of GN youth: clinical assessment of gender nonconformity; psychotherapy; family support; evaluation for social transitions to affirmed gender, and later, for psychological readiness for medical interventions, especially puberty blockers and cross-sex hormones.<sup>35</sup> Ideally, these interventions are done as part of a collaborative multidisciplinary approach that will include the MHP, pediatrician, pediatric endocrinologist, and social worker.<sup>2</sup> It may be of additional benefit to patients and families to have advocacy (for interactions with schools and other social institutions) and legal services available in the multidisciplinary clinical program, as offered by the Child and Adolescent Gender Center at the Benioff Children's Hospital, University of California, San Francisco.<sup>5</sup> The

most important task of the MHP is to listen and learn what the youth is experiencing and feeling about gender. In addition to clinical interviewing and observation, standardized measures have been constructed to assess a child's gender status.<sup>14</sup> Recently, some of these measures, based on a binary model of male–female, are being reevaluated to accommodate youth who are more complex and nonbinary in their gender identities or presentations, rather than fitting into a binary mode of male–female.<sup>8</sup> Additional information will come from the parents, requiring a comprehensive gender history from birth to the present. Importantly, the gender history should also be obtained directly from the youth. This can start with clarifying their name, gender identity, and preferred gender pronoun.<sup>36</sup>

Two challenging tasks for MHPs are assessing if a youth's gender nonconformity is a signal of or solution to an independent underlying emotional or psychiatric issue and determining the authenticity of the affirmed gender identity.<sup>15,36,37</sup> Children who early in life indicate that they are rather than wish to be a gender different from that implied by their birth sex assignment, are tenacious in both their gender-fluid or gender-crossing expressions and identity affirmations, and demonstrate distress about the incongruence between their physicality and affirmed gender will more likely evolve into transgender teens or adults.<sup>12,36</sup> An area of controversy is whether those children should be allowed to socially transition early in life<sup>8</sup> or whether it would be better to “wait and see” given that so many children appear to outgrow their early gender dysphoria.<sup>9,14</sup> A third (and the oldest) clinical approach has been to intervene to help youth accept the gender implied by their birth sex assignment, with (1) the premise that this will reduce social stigma and allow better social acceptance and (2) the underlying

assumption that young children are malleable in their gender development.<sup>26,38</sup> This third strategy of intervention has recently been less in favor and has been questioned as causing potential psychological harm.<sup>39,40</sup>

For MHPs who support the presenting gender of GN youth rather than attempting to alter it, a principal goal after ruling out gender dysphoria as a symptom of other coexisting psychological problems is resilience building. For youth who act outside the gender norms of the culture in which they live or who socially transition, GN status may put them at risk for bullying and social rejection.<sup>30,41</sup> The MHP can help assemble a psychological tool kit that facilitates feeling confident and positive about being a GN individual. MHPs can be helpful in reaching out to the community to ensure safety for GN youth, particularly at school and in the family. For a youth who has started puberty blockers or cross-sex hormones, the support of a MHP can be invaluable in navigating the emotional experience of having one's progression into physical puberty suspended or developing secondary sex characteristics of the affirmed gender with cross-sex hormones, as will be discussed later in the article. Also, the MHP can provide a safe environment in which youth can work through their own questions or confusions about their gender identity or expressions. For youth who are gender dysphoric, the role of the MHP is to identify the distress, work with them and their families to reduce the distress, and find pathways for them to live authentically in the genders they know themselves to be.

### Medical Interventions

Medical interventions are considered for transgender adolescents who desire phenotypic transition to align their physical attributes with their affirmed gender.<sup>2,3</sup> Available medical therapies

aim to suppress endogenous puberty and promote the development of cross-gender secondary sexual characteristics. As with any medical decision involving a minor, informed consent from the patient and parents should be obtained before phenotypic transition, with explicit discussions surrounding the varying degrees of reversibility for each intervention; requirement for ongoing physical, anthropometric, and laboratory monitoring; realistic expectations of physical changes; risks of the interventions; and potential impact on future fertility. Those who start pubertal suppression at an early Tanner stage and subsequently start cross-sex hormones will likely not develop mature sperm or ova. Youth's stage of development will influence how well they can weigh benefits and risks of medical interventions and how much guidance they will need from their parents.

### *Pubertal Suppression*

For some GN youth, gender dysphoria is exacerbated by the onset of puberty.<sup>2,6,42</sup> An affirmed male may have increased anxiety with the onset of breast development; an affirmed female may be distressed from male-pattern hair growth. Per the 2009 Endocrine Society guidelines, gender dysphoric youth are considered eligible for pubertal suppression if they meet DSM-IV criteria for GID (now gender dysphoria in the DSM-5, which was published after the guidelines); are at least Tanner stage 2 of puberty; demonstrate increased gender dysphoria with pubertal onset; have adequate mental health and social support during treatment; demonstrate no unaddressed medical or psychiatric comorbid conditions that might negatively influence evaluation and treatment of gender dysphoria; and indicate knowledge and understanding of expected outcomes of treatment.<sup>2,3</sup> The psychological evaluation by a MHP described earlier is used to determine a GN youth's eligibility and readiness.

The primary goal of pubertal suppression is to suspend endogenous pubertal progression to provide additional time for GN youth to explore their gender identity and develop psychosocial coping skills with their MHP. Pubertal suppression regimens are fully reversible, and if discontinued, as will be the case if cross-gender identification desists, endogenous pubertal development will resume.<sup>43</sup> The benefits of pubertal blockers have been demonstrated in a follow-up study of GN adolescents who had improved scores on scales assessing behavioral and emotional problems, depressive symptoms, and general functioning after treatment with such medications.<sup>44</sup> Another benefit of pubertal suppression, especially when initiated at earlier Tanner stages, is prevention of full maturation of endogenous secondary sexual characteristics. Some gender specialists purport that this approach enhances being able to present and be perceived in accordance with one's affirmed gender after going on to receive cross-sex hormones and/or gender-affirming surgery later.<sup>45</sup> Also this treatment can halt progression of physical changes that are medically irreversible once fully developed (including protrusion of the Adam's apple, male-pattern hair growth, and voice deepening for affirmed females and breast development in affirmed males) which will require surgery and other more tedious procedures to reverse. One of the concerns about pubertal suppression is the effect on bone mineral density. Without the presence of sex steroids, bone mineral density does not change or possibly accrues at a pre-pubertal rate during pubertal suppression. However, with cross-sex steroid administration, bone mineral density increases.<sup>46</sup> A 22-year follow-up study of 1 affirmed male pubertally suppressed with gonadotropin-releasing hormone (GnRH) agonist between ages 13 and 17 and maintained on testosterone thereafter had normal bone mineral density

at age 35 for both sexes.<sup>47</sup> Additional risks of pubertal suppression in GN youth include compromised fertility and unknown effects on brain development. Follow-up data examining long-term risks or side effects of puberty blockers used for the purpose of halting a normally occurring rather than precocious puberty in transgender youth have not been published, but extrapolation from follow-up studies of blockers used for precocious puberty show promising results, with no known untoward consequences.<sup>48</sup>

The goal of pubertal suppression is to decrease the gonadal secretion of and end-organ effects of endogenous sex steroids. GnRH analogs are administered in the form of intramuscular or subcutaneous injections or subcutaneous implants. GnRH analogs are expensive and often are not covered by insurance, leading to substantial out-of-pocket costs to families.<sup>7</sup> In these situations, other medications can be used. For affirmed females, spironolactone may be used for antiandrogenic effect; for affirmed males, depot medroxyprogesterone may be used to suppress menses. Per clinical guidelines, anthropometric parameters (height, weight), Tanner stages, luteinizing hormone, follicle-stimulating hormone, and estradiol in affirmed males, and testosterone in affirmed females, are checked at baseline and serially to ensure adequate pubertal suppression. Renal function, liver function, fasting lipids, fasting glucose and insulin, hemoglobin A1c, bone density, and bone age are checked on a yearly basis.<sup>2</sup> Pubertally suppressed youth are often disenchanting and distressed by having to wait to develop secondary sex characteristics consistent with their affirmed gender, putting them out of sync with their peers; these issues can be followed by the MHP.

### *Cross-Sex Hormones*

The next phase of medical treatment of GN youth undergoing phenotypic

transition involves induction of the secondary sex characteristics consistent with their affirmed gender with cross-sex hormones. The Endocrine Society guidelines recommend initiating cross-sex hormones around age 16, based on the age of medical consent in the Netherlands, where protocols for pubertal suppression and cross-sex hormone therapies were originally developed.<sup>46</sup> Factors that may influence the gender specialist to start cross-sex hormones earlier than age 16 include the degree of gender dysphoria, distress attributable to being out of sync with the physical development of peers, number of years living stably in the affirmed gender role, number of years of pubertal suppression, and optimizing height most traditionally associated with the affirmed gender.

For affirmed males, the goals of cross-sex hormone therapy with testosterone are masculinization and physiologic levels of testosterone seen in adult natal males. Ideally, GnRH agonists are continued during testosterone therapy because lower initiating doses of testosterone will not be high enough to suppress the hypothalamic-pituitary-ovarian axis. If feasible, the GnRH agonists are continued until oophorectomy.<sup>2</sup> However, for patients who are not on GnRH agonists, higher doses of testosterone are typically required. Desired physical signs of masculinization include increased lean muscle mass, decreased subcutaneous fat, and male-pattern hair growth, which are all at least partially reversible. Those who were pubertally suppressed before growth plate closure may experience increased height velocity with initiation of testosterone and may reach an adult height within the normal range for phenotypic males. Furthermore, menses can be suppressed, although the initial dosage of testosterone may be inadequate if the patient is not concurrently on GnRH agonist, warranting the temporary use of other agents to stop

menses. Breast tissue that has developed may atrophy to some degree. Irreversible effects of testosterone include clitoromegaly and deepening of the voice.<sup>49</sup> There can be typically undesired physical effects of testosterone, including acne.<sup>49</sup> Potential adverse effects of testosterone, which are more common with supra-physiological levels, include polycythemia, dyslipidemia, transaminitis, weight gain, hypertension, and mood lability.<sup>3,46,49,50</sup>

For affirmed females, the therapeutic goals of cross-sex hormone therapy with estrogen include feminization and sex steroid levels in the normal range for natal premenopausal women.<sup>2,3</sup> GnRH agonists should be continued with estrogen initiation to keep endogenous testosterone low, enabling estrogen to have its full feminizing effect. For those affirmed females who cannot start or continue GnRH agonists, agents with antiandrogenic properties, such as spironolactone, can be used in combination with estrogen. Feminizing effects of estrogen include decreased facial and body hair, fat redistribution, decreased spontaneous erections, and softened skin, all of which are reversible to some extent. Estrogen will also lead to growth of breast tissue and growth plate closure, changes that are irreversible.<sup>2,46,49,50</sup> Estrogen cannot reverse masculine features that were already developed at the time of cross-sex hormone initiation, such as lowered voice or male-pattern facial and body hair, prompting patients to seek voice therapy and undergo electrolysis, respectively. Additional potential side effects of estrogen, especially if at supraphysiologic levels, include increased risk for thromboembolic disease, liver dysfunction, cholelithiasis, hypertension, and hyperprolactinemia.<sup>2,3,46,49</sup>

Vital signs, anthropometric, and laboratory parameters are required every 3 months until a stable cross-sex hormone regimen is established and then yearly. The same laboratory parameters

that are followed during pubertal suppression are also monitored during cross-sex hormone therapy, with the addition of testosterone levels for affirmed males and estradiol levels for affirmed females.

### Surgical Interventions

Some patients desire surgery to achieve their goal of living in their affirmed gender role, and the Endocrine Society and WPATH recommend patients meet specific eligibility and readiness criteria before having irreversible surgical interventions.<sup>2,3</sup> For affirmed males, the first surgery is typically mastectomy, which is referred to as “top” or “chest” surgery. This is the 1 surgical procedure that guidelines acknowledge may be considered before age 18, although some surgeons may prefer the patient to have been on androgens for at least 1 year before mastectomy.<sup>2,3</sup> Genital surgeries include oophorectomy, hysterectomy, and vaginectomy. Some affirmed males may opt to have creation of a neophallus and neoscrotum. Gender-affirming surgeries available to affirmed females include gonadectomy, penectomy, and creation of a neovagina. Depending on the estrogen-mediated breast growth and the patient’s personal preference, some affirmed females opt to have breast augmentation. Other ancillary surgeries available for affirmed females include Adam’s apple shaving, facial feminization surgery, and electrolysis for male-pattern hair growth removal.<sup>2</sup>

### Health Care Maintenance

Pediatricians are in a unique position: they may be the first medical providers from whom patients and families seek help to address a youth’s gender non-conformity. Pediatricians will also provide continuity of care, including annual physical examinations and management of acute issues. It is important to ask all adolescents if they

have questions or concerns about gender identity, just as providers should ask about sexual identity, while being careful not to make assumptions based on their gender presentation. Using appropriate language regarding a youth's affirmed gender is imperative. Establishing the youth's preferred name, gender pronoun, and terms for body parts is crucial to maintaining a therapeutic relationship with GN youth. Working with clinical staff to ensure patients are addressed by their preferred name and affirmed gender will make GN youth feel more comfortable presenting to clinics for their health care needs. The WPATH Electronic Medical Record Working Group recently provided recommendations for incorporation of the latter parameters into electronic medical records to improve the care of GN patients.<sup>51</sup> It is also important for pediatricians to be aware of the stage of social or phenotypic transition of their GN patients because they may be the first medical providers to encounter medical complications related to the youth's gender practices. For example, affirmed males often wear chest binders to conceal breasts; if binders are too tight, this can cause skin breakdown or rib pain. Some affirmed females who developed irreversible voice deepening before starting estrogen may complain of hoarseness or throat pain after chronically elevating the pitch of their voice to sound more feminine without seeking a professional voice coach. As with all youth, routine

health maintenance is important. Because gender identity, sexual orientation, and sexual behavior can exist in every imaginable combination, having open conversations about sexual behavior is important for screening for sexually transmitted infections and determining risks for pregnancy. Furthermore, pediatricians may detect symptoms of depression, self-harm, or suicidality, for which this population is, as previously noted, at significantly higher risk.

## CONCLUSIONS

The release of clinical practice guidelines for GN youth in 2009 by the Endocrine Society was a significant step forward in the care of this vulnerable and underserved population.<sup>2</sup> With the creation of an increasing number of multidisciplinary clinics dedicated to the care of the GN youth, there seems to be an increasing number of such youth and their families presenting for care.<sup>4-8</sup> Important tasks are to determine the safest and most efficacious mental and medical approaches for this population. There are many unanswered questions: the impact of pubertal suppression and cross-sex hormone therapy on long-term brain development and on bone health; risks of developing chronic medical conditions, such as diabetes, hypertension, and dyslipidemia; and mental health consequences of recommended interventions. Gender specialists working with youth weigh

the unknown risks of providing current interventions with the immediate risks of not doing so, which include depression, anxiety, poor functioning, and suicidality. Deciding to medically treat this population does not obviate the need for rigorous research to determine the safest and most efficacious regimens to help these youth physically transition to their affirmed gender selves. Randomized control trials provide the most convincing evidence of optimal interventions, but unfortunately such trials are not feasible or ethical in this high-risk group, so researchers are exploring alternative methods to provide answers to these questions.

It is paramount that pediatric providers provide culturally competent care, specifically being accepting of patients who have gender identities that do not align with traditional norms. Inclusion of transgender-specific care in medical school curricula and continuing medical education programs can promote such care. As patients' physical and mental health are influenced by the world in which they live, it is also within pediatric providers' clinical purview to ally with providers and advocates in their communities and schools to promote acceptance of GN youth. Providing sensitive health care, optimizing physical transitions that enable GN youth to live more comfortably as their true gender selves, and promoting societal gender acceptance are 3 goals we can work toward to help these youth thrive.

## REFERENCES

1. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Association; 2013
2. Hembree WC, Cohen-Kettenis P, Delemarre-van de Waal HA, et al; Endocrine Society. Endocrine treatment of transsexual persons: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2009;94(9):3132-3154
3. Coleman E, Bockting W, Botzer M, et al. Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *Int J Transgenderism*. 2011; 13:165-232
4. Olson J, Forbes C, Belzer M. Management of the transgender adolescent. *Arch Pediatr Adolesc Med*. 2011;165(2):171-176
5. Sherer I, Rosenthal SM, Ehrensaft D, Baum J. Child and Adolescent Gender Center: a multidisciplinary collaboration to improve the lives of gender nonconforming children and teens. *Pediatr Rev*. 2012;33(6):273-275
6. Spack NP, Edwards-Leeper L, Feldman HA, et al. Children and adolescents with gender identity disorder referred to a pediatric medical center. *Pediatrics*. 2012;129(3):418-425
7. Spack NP. Management of transgenderism. *JAMA*. 2013;309(5):478-484

8. Hidalgo MA, Ehrensaft D, Tishelman AC, et al. The gender affirmative model: what we know and what we aim to learn. *Hum Dev*. 2013;56(5):285–290
9. de Vries AL, Cohen-Kettenis PT. Clinical management of gender dysphoria in children and adolescents: the Dutch approach. *J Homosex*. 2012;59(3):301–320
10. Wood H, Sasaki S, Bradley SJ, et al. Patterns of referral to a gender identity service for children and adolescents (1976-2011): age, sex ratio, and sexual orientation. *J Sex Marital Ther*. 2013;39(1):1–6
11. Wallien MSC, Cohen-Kettenis PT. Psychosexual outcome of gender-dysphoric children. *J Am Acad Child Adolesc Psychiatry*. 2008;47(12):1413–1423
12. Steensma TD, McGuire JK, Kreukels BP, Beekman AJ, Cohen-Kettenis PT. Factors associated with desistance and persistence of childhood gender dysphoria: a quantitative follow-up study. *J Am Acad Child Adolesc Psychiatry*. 2013;52(6):582–590
13. Drummond KD, Bradley SJ, Peterson-Badali M, Zucker KJ. A follow-up study of girls with gender identity disorder. *Dev Psychol*. 2008;44(1):34–45
14. Cohen-Kettenis PT, Pfäfflin F. *Transgenderism and Intersexuality in Childhood and Adolescence: Making Choices*. Vol. 46. Thousand Oaks, CA: Sage; 2003:232
15. Ehrensaft D. *Gender Born, Gender Made*. New York, NY: The Experiment; 2011
16. Steensma TD, Biemond R, de Boer F, Cohen-Kettenis PT. Desisting and persisting gender dysphoria after childhood: a qualitative follow-up study. *Clin Child Psychol Psychiatry*. 2011;16(4):499–516
17. Ehrensaft D. One pill makes you boy, one pill makes you girl. *Int J Appl Psychoanal Stud*. 2009;6(1):12–24
18. Meyer WJ III. Gender identity disorder: an emerging problem for pediatricians. *Pediatrics*. 2012;129(3):571–573
19. Diamond M. Sex and gender are different: sexual identity and gender identity are different. *Clin Child Psychol Psychiatry*. 2002;7(3):320–334
20. Dessens AB, Slijper FM, Drop SL. Gender dysphoria and gender change in chromosomal females with congenital adrenal hyperplasia. *Arch Sex Behav*. 2005;34(4):389–397
21. Coolidge FL, Thede LL, Young SE. The heritability of gender identity disorder in a child and adolescent twin sample. *Behav Genet*. 2002;32(4):251–257
22. Berglund H, Lindström P, Dhejne-Helmy C, Savic I. Male-to-female transsexuals show sex-atypical hypothalamus activation when smelling odorous steroids. *Cereb Cortex*. 2008;18(8):1900–1908
23. Heylens G, De Cuypere G, Zucker KJ, et al. Gender identity disorder in twins: a review of the case report literature. *J Sex Med*. 2012;9(3):751–757
24. Stoller RJ. *Presentations of Gender*. New Haven, CT: Yale University Press; 1985:219
25. Coates S, Friedman RC, Wolfe S. The etiology of boyhood gender identity disorder: a model for integrating temperament, development, and psychodynamics. *Psychoanal Dialogues*. 1991;1(4):481–523
26. Zucker KJ, Bradley SJ. *Gender Identity Disorder and Psychosexual Problems in Children and Adolescents*. New York, NY: Guilford Press; 1995:440
27. Hill DB, Menvielle E, Sica KM, Johnson A. An affirmative intervention for families with gender variant children: parental ratings of child mental health and gender. *J Sex Marital Ther*. 2010;36(1):6–23
28. Carver PR, Yungler JL, Perry DG. Gender identity and adjustment in middle childhood. *Sex Roles*. 2003;49(3–4):95–109
29. Roberts AL, Rosario M, Corliss HL, Koenen KC, Austin SB. Childhood gender non-conformity: a risk indicator for childhood abuse and posttraumatic stress in youth. *Pediatrics*. 2012;129(3):410–417
30. Grossman AH, D’Augelli AR. Transgender youth and life-threatening behaviors. *Suicide Life Threat Behav*. 2007;37(5):527–537
31. van Beijsterveldt CE, Hudziak JJ, Boomsma DI. Genetic and environmental influences on cross-gender behavior and relation to behavior problems: a study of Dutch twins at ages 7 and 10 years. *Arch Sex Behav*. 2006;35(6):647–658
32. Brill SA, Pepper R. *The Transgender Child*. San Francisco, CA: Cleis Press; 2008:252
33. Ryan C, Russell ST, Huebner D, Diaz R, Sanchez J. Family acceptance in adolescence and the health of LGBT young adults. *J Child Adolesc Psychiatr Nurs*. 2010;23(4):205–213
34. Travers R, Bauer G, Pyne J, Bradley K, Gale L, Papadimitriou M. *Impact of Strong Parental Support for Trans Youth*. Ontario, Canada: Trans Pulse; 2012:1–5
35. Lev AI. *Transgender Emergence: Therapeutic Guidelines for Working With Gender-Variant People and Their Families*. New York, NY: The Haworth Clinical Practice Press; 2004:467
36. Ehrensaft D. From gender identity disorder to gender identity creativity: true gender self child therapy. *J Homosex*. 2012;59(3):337–356
37. Ehrbar RD, Witty MC, Ehrbar HG, Bockting WO. Clinician judgment in the diagnosis of gender identity disorder in children. *J Sex Marital Ther*. 2008;34(5):385–412
38. Zucker KJ, Wood H, Singh D, Bradley SJ. A developmental, biopsychosocial model for the treatment of children with gender identity disorder. *J Homosex*. 2012;59(3):369–397
39. Wallace R, Russell H. Attachment and shame in gender-nonconforming children and their families: toward a theoretical framework for evaluating clinical interventions. *Int J Transgenderism*. 2013;14(3):113–126
40. Minter SP. Supporting transgender children: new legal, social, and medical approaches. *J Homosex*. 2012;59(3):422–433
41. Menvielle E, Tuerk C, Perrin E. To the best of a different drummer: the gender-variant child. *Contemp Pediatr*. 2006;22(2):38–45
42. Edwards-Leeper L, Spack NP. Psychological evaluation and medical treatment of transgender youth in an interdisciplinary “Gender Management Service” (GeMS) in a major pediatric center. *J Homosex*. 2012;59(3):321–336
43. Manasco PK, Pescovitz OH, Feuillan PP, et al. Resumption of puberty after long term luteinizing hormone-releasing hormone agonist treatment of central precocious puberty. *J Clin Endocrinol Metab*. 1988;67(2):368–372
44. de Vries AL, Steensma TD, Doreleijers TA, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study. *J Sex Med*. 2011;8(8):2276–2283
45. Cohen-Kettenis PT, Steensma TD, de Vries AL. Treatment of adolescents with gender dysphoria in the Netherlands. *Child Adolesc Psychiatr Clin N Am*. 2011;20(4):689–700
46. Delemarre-van de Waal HA, Cohen-Kettenis PT. Clinical management of gender identity disorder in adolescents: a protocol on psychological and paediatric endocrinology aspects. *Eur J Endocrinol*. 2006;155(suppl 1):S131–S137
47. Cohen-Kettenis PT, Schagen SE, Steensma TD, de Vries AL, Delemarre-van de Waal HA. Puberty suppression in a gender-dysphoric adolescent: a 22-year follow-up. *Arch Sex Behav*. 2011;40(4):843–847
48. Mul D, Hughes IA. The use of GnRH agonists in precocious puberty. *Eur J Endocrinol*. 2008;159(suppl 1):S3–S8
49. Gooren L. Hormone treatment of the adult transsexual patient. *Horm Res*. 2005;64(suppl 2):31–36
50. Moore E, Wisniewski A, Dobs A. Endocrine treatment of transsexual people: a review

- of treatment regimens, outcomes, and adverse effects. *J Clin Endocrinol Metab.* 2003;88(8):3467–3473
51. Deutsch MB, Green J, Keatley J, Mayer G, Hastings J, Hall AM; World Professional Association for Transgender Health EMR Working Group. Electronic medical records and the transgender patient: recommendations from the World Professional Association for Transgender Health EMR Working Group. *J Am Med Inform Assoc.* 2013;20(4):700–703
52. American Psychological Association Task Force on Gender Identity and Gender Variance, ed. *Report of the APA Task Force on Gender Identity and Gender Variance.* Washington, DC: American Psychological Association; 2009
53. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders.* 4th ed, text revision. Washington, DC: American Psychiatric Association; 2000

## Psychological and Medical Care of Gender Nonconforming Youth

Stanley R. Vance Jr, Diane Ehrensaft and Stephen M. Rosenthal

*Pediatrics* 2014;134;1184

DOI: 10.1542/peds.2014-0772 originally published online November 17, 2014;

### Updated Information & Services

including high resolution figures, can be found at:  
<http://pediatrics.aappublications.org/content/134/6/1184>

### References

This article cites 44 articles, 6 of which you can access for free at:  
<http://pediatrics.aappublications.org/content/134/6/1184#BIBL>

### Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):  
**Administration/Practice Management**  
[http://www.aappublications.org/cgi/collection/administration:practice\\_management\\_sub](http://www.aappublications.org/cgi/collection/administration:practice_management_sub)  
**Interdisciplinary Teams**  
[http://www.aappublications.org/cgi/collection/interdisciplinary\\_teams\\_sub](http://www.aappublications.org/cgi/collection/interdisciplinary_teams_sub)  
**Psychiatry/Psychology**  
[http://www.aappublications.org/cgi/collection/psychiatry\\_psychology\\_sub](http://www.aappublications.org/cgi/collection/psychiatry_psychology_sub)

### Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:  
<http://www.aappublications.org/site/misc/Permissions.xhtml>

### Reprints

Information about ordering reprints can be found online:  
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



# PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Psychological and Medical Care of Gender Nonconforming Youth**

Stanley R. Vance Jr, Diane Ehrensaft and Stephen M. Rosenthal

*Pediatrics* 2014;134;1184

DOI: 10.1542/peds.2014-0772 originally published online November 17, 2014;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/134/6/1184>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2014 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

