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Emergency Care for Transgender and Gender-Diverse Children and Adolescents

Abstract

Transgender and gender-diverse (TGD) youth may present to the emergency department with a range of medical problems and health concerns. Some of these may be directly related to their gender identity, but the vast majority are not. While gender diversity is not considered a mental illness, TGD youth are at increased risk for suicide, anxiety, depression, and other psychological conditions, as well as family rejection, homelessness, food insecurity, and poverty. Lack of knowledge and cultural competency among emergency clinicians can create a barrier to effective care. This issue will review relevant terminology, epidemiology, and clinical best practices. It will help emergency clinicians understand common gender-affirming practices and recognize possible complications.

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Case Presentations

You pick up the chart of a 12-year-old female with a chief complaint of "behavioral issue." According to her parents, they have noticed the child increasingly dressing in baggier clothing and that the child had changed their pronoun to "he" on Facebook. They have overheard the child's friends calling them "Alex," when their given name is Andrea. The child also has become what they describe as "increasingly moody." They are concerned about these changes and wonder if they are related to the new friends the patient is hanging out with at school. How should you initiate a conversation with the patient? What advice should you give to the parents? What are the next steps and referrals you can make from the ED?

The nurse in triage comes to tell you that a 15-year-old male was brought in by EMS. The patient has a deformed right wrist after falling at school. When you walk into the room, you encounter an individual with long hair, who is wearing mascara and lipstick and is dressed in a skirt and blouse. The registration clerk is explaining to the patient that their driver's license says "male" and the legal name is "Evan," and that the gender and name listed in the EMR have to correspond. The nurse then says, "Evan, why do you want to be a woman? You're such a handsome young man!" The patient asks, "Can you please just take care of my arm?" The patient tells you that they tripped and fell onto an outstretched arm and are experiencing subsequent pain. They have no other pain or injuries. On examination, you encounter an anxious but well-appearing teenager. There is soft-tissue swelling over the wrist, which appears deformed. It is neurovascularly intact. What questions should you ask, and how should you ask them? Are there any systems changes you can advocate for at your hospital?

A nurse calls you over to triage to evaluate a 16-year-old transfeminine adolescent who is presenting with lower extremity swelling. The patient reports that the swelling started several days ago. There has been no trauma or inciting event. She does report smoking 5 to 10 cigarettes a day. She says that she has not traveled recently. You ask if she is taking birth control pills, and she says, "Um, I don't have a uterus, so no." On examination, the leg is erythematous and warm, with tenderness in the posterior calf. You obtain a DVT ultrasound, which is positive. You begin to consider the complications that may occur with the use of hormonal therapy in transgender individuals. You also consider the possibility that the patient may be taking hormones without a doctor's supervision. What questions do you need to ask the patient? Should you recommend discontinuation of hormone therapy in individuals with a complication?

Introduction

Many clinicians have received little or no training on how to provide appropriate care for transgender and gender-diverse (TGD) individuals, particularly those presenting as children or adolescents. Two recent surveys estimate that 0.7% to 1.8% of youth are transgender.^{1,2} It is therefore essential that emergency clinicians recognize and address the unique needs and challenges these patients can experience. Although most of the healthcare needs of a transgender patient have nothing to do with their gender identity, mishandling of the patient's identity can create barriers to providing care. In addition, some TGD individuals are reticent to reveal their gender identity to their healthcare providers, either not appreciating the relevancy to their presenting medical complaint or fearing that they may be mistreated.

TGD patients have significant barriers to seeking care in the emergency department (ED). While most studies on these issues primarily involved adults, many of these issues are consistent with barriers seen in adolescent and pediatric populations as well. In the 2015 National Transgender Survey (NTS) of 27,715 individuals, 28% of respondents reported having postponed necessary healthcare when sick or injured.³ An ED-specific survey of transgender patients in Ontario, Canada showed that 21% of transgender patients avoid the ED because of their concerns about care. That same survey showed that 52% of transgender patients had specifically negative ED experiences,⁴ and the NTS showed that 33% of transgender individuals reported having at least 1 negative experience with healthcare in the last year related to their gender identity.³ A qualitative study performed by Samuels et al showed that the greatest influences on ED avoidance were fear of discrimination, wait times, previous negative experiences, and use of a primary care clinician instead of the ED.⁵

Statistically, transgender individuals have stark disparities compared to their cisgender peers in terms of mistreatment, discrimination, and barriers to basic elements of everyday life including employment, housing, access to medical care, familial support, and safety. Transgender individuals experienced nearly double the rates of poverty of the general population, more frequently experienced homelessness, and were more often victims of violent crime and sexual assault; race, ethnicity, and immigration status compounded the effects of these disparities.³

This issue of *Pediatric Emergency Medicine Practice* will discuss the current evidence surrounding best practices for caring for TGD children and adolescents in the ED, including approaches to the history and physical examination; benefits and complications of social, medical, and surgical affirmation; and disposition concerns.

Critical Appraisal of the Literature

A literature search was performed in PubMed and the Cochrane Database of Systemic Reviews for articles and studies from 2000 to 2019. The following search terms were used: *transgender emergency*, *transgender pediatrics*, *transgender injury*, *transgender suicide*, *transgender interpersonal violence*, and *transgender EMS*. The search was focused on English-language publications relating to patients/subjects aged birth to 20 years that would be relevant to the pediatric emergency medicine clinician. Additional searches were performed for adult studies, surveys, and reports in areas where little evidence exists for the adolescent population. The reference lists were reviewed for additional relevant publications. A total of 134 publications were reviewed, and 78 were chosen for inclusion. The majority of these were cross-sectional and cohort studies; however, a number of systematic reviews have been conducted recently, although only 1 focused exclusively on the pediatric population. Also included were national and international guidelines, including the World Professional Association for Transgender Health (WPATH) standards of care, which is widely viewed as the guiding document for transgender care worldwide.

Terms Relating to Gender Identity and Expression

Learning the terminology around gender identity, expression, and affirmation can improve communication and rapport with patients. Of note, as knowledge and culture evolve, some terms that were once used widely are now not acceptable, and in the future, some of the terms presented here may change. Sometimes the patient may have their own terminology or way of referring to themselves. The patient is the expert in their own identity, and all efforts should be made to use terms that are consistent with the individual patient's identity and the diverse ways they define themselves. The abbreviations *MTF* for "male-to-female" or *FTM* for "female-to-male" have traditionally been used in the medical record. These terms should be avoided because they emphasize the sex assigned at birth. Instead, it is best practice to use terms that affirm a person's current gender identity, such as transgender woman, transfeminine, transgender man, or transmasculine. Other patients may describe their identity as "gender nonbinary," "genderqueer," "gender fluid," etc. When possible, use their chosen words for their gender in the medical record. See **Table 1** for definitions

Table 1. Terminology and Definitions Relating to Gender Identity and Expression

Term	Definition
Gender identity	A person's deeply held sense of being a man, a woman, some of both, or neither (nonbinary). Gender identity is self-defined and cannot be assigned by others.
Gender expression	The manner in which a person represents their gender identity through speech, mannerisms, and/or clothing.
Cisgender	A person whose gender identity matches their sex assigned at birth.
Transgender	A person whose gender identity is different from their sex assigned at birth.
Transgender man/transmasculine person	A person whose sex assigned at birth was female who now identifies as male.
Transgender woman/transfeminine person	A person whose sex assigned at birth was male who now identifies as a female.
Gender nonbinary/genderqueer/gender diverse/third gender	A person who does not identify as male or female or experiences their gender outside the traditional gender binary.
Gender fluid	A person whose gender identity is not static and can change over time.
Sexual orientation	A person's physical, romantic, or sexual attraction to others.
Gay	A man attracted to other men. Some women who are attracted to other women also use this term.
Lesbian	A woman attracted to other women.
Bisexual	A person who is attracted to more than 1 gender.
Pansexual	A person who is attracted to a person regardless of their gender identity.
Queer	An umbrella term that may be used in place of almost any of the above terms or to indicate all of them collectively (while this term is used widely to self-identify, some individuals still perceive it as a slur).

Words to Avoid*

Transsexual, transvestite, transgendered, transgenders, transgenderism, sex-change, hermaphrodite, cross-dressing, sex reassignment surgery

*Some patients may use these terms to self-identify. While their use should be avoided when discussing transgender care in general, the terminology the patient most closely identifies with should be used. For example, if a patient identifies as transsexual, that term should be used with that patient.

of terms relating to gender identity and expression, as well as words to avoid.

Gender Identity and Exploration

Neonates are assigned a sex at birth based on their primary sex characteristics. Some TGD individuals begin to express that their sex assigned at birth does not match their internal sense of gender as early as toddlerhood, although this can occur at any point in the patient's life. TGD is an umbrella term for any person whose internal sense of gender is not aligned with their sex assigned at birth. One misconception (or incorrect model) about gender is that a person's gender identity is focused primarily around their genitalia or the hormones active in their bodies. In this incorrect model, a person's identity matches their sex assigned at birth until they undergo surgical affirmation to modify their genitals. Then, based on that one-time event, they are now finally a different gender. The reality is that there are many ways that people experience and express their gender, most of which have nothing to do with surgical alteration of their genitalia. The process of aligning one's body and expression to an internal sense of true gender is a process that may have multiple components (eg, social, hormonal, and/or surgical) and occur over a long period of time. In addition, the majority of TGD individuals never undergo genital surgery. For this reason, clinicians should avoid referring to a patient as a "pre-op transgender patient" or a "post-op transgender patient," implying that the patient is not really "transgender" until they have had surgery.

Historically, TGD individuals were viewed by the healthcare community as mentally ill. Through the 4th edition, the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-4) classified transgender and gender nonbinary individuals as having "Gender Identity Disorder."⁶ In the 5th edition (DSM-5), "Gender Identity Disorder" was replaced by "Gender Dysphoria." The DSM-5 outlines diagnostic criteria for gender dysphoria for adults and adolescents, as well as for children.⁷ The WPATH released a statement arguing for the depsychopathologization of gender identity, arguing that "the expression of gender characteristics, including identities, that are not stereotypically associated with one's assigned sex at birth is a common and culturally diverse human phenomenon [that] should not be judged as inherently pathological or negative."⁸ It is also important to note that while patients may have their medical care reimbursed by using gender dysphoria as an ICD-10 code, some transgender patients do not experience dysphoria related to their gender identity.

In a cross-sectional survey of TGD youth aged 14 to 21 years, respondents were asked at what age

they first identified that they were transgender;⁹ the mean age was 13 ± 4 years, and the range was from age 2.5 years to 20 years. This is consistent with the range of experiences seen by those who work with TGD youth: some become aware of their gender identity very young, as toddlers or early school-age; many identify around the time of puberty; and some do not identify as TGD until young adulthood or later in life. However, all of these data are limited by source of information and questions asked, with some surveys not including gender-diverse identities beyond transgender. The proportion of people identifying as TGD is steadily increasing over time, which may be related more to changes in societal acceptance of TGD identities than a shift in people's actual personal experience of their gender. There are still many unanswered questions about how to best assess a child who expresses gender dysphoria or exhibits gender-nonconforming characteristics.¹⁰ Each person's experience is unique and there is no set expected pathway for a TGD child to follow. Gender identity can arise from many factors, "including biology, socialization, and culture."⁸ Gender exploration or dysphoria may evolve over time. Parents should be encouraged to make space for this normal process, allowing time for consistent and persistent patterns around gender identity/expression to emerge.

Gender exploration can take many forms, and gender-affirming interventions may be necessary at different stages of development to help children and adolescents feel more aligned with their gender identity. Since gender identities are diverse and each person's experience is individual, there is not one set of interventions that applies to all individuals. There are several broad categories of gender affirmation, including: (1) Social affirmation: affirming one's gender identity through name, pronoun use, and outward expression. This can include bathroom use, participation in gender-specific clubs or sports teams, as well as devices to modify external appearances such as padding, packing, tucking, and binding devices.^{8,11} (2) Legal affirmation: the process by which individuals can choose to legally change their name or gender on official documents. (3) Medical affirmation: the use of medications to halt unwanted secondary sex characteristics at the onset of puberty and/or modify sex hormones in the body to align with the patient's gender identity. (4) Surgical affirmation: surgeries to align one's body with their gender identity. Surgeries are uncommon in children but may be seen in older adolescents^{8,12} and are discussed in the "Surgical Gender-Affirming Interventions" section on page 9.

Gender identity and sexual orientation are not the same, as the former refers to a person's identification of one's gender, whereas the latter refers to an individual's attraction to another person. For

instance, a transfeminine person can identify anywhere along the sexual orientation spectrum, including, but not limited to queer, lesbian, gay, questioning, asexual, etc.

Prehospital Care

A patient's experience with prehospital clinicians may set the tone for their experiences at the hospital. Consider the case of Tyra Hunter.¹³ Ms. Hunter was a transfeminine person who was seriously injured in a motor vehicle crash in Washington D.C. in 1995. According to testimony from witnesses, when paramedics removed her clothing at the scene of the accident and were surprised to find her "male genitals," they refused to care for her, making crude jokes. This unprofessional behavior continued in the ED, leading to delays in care. Hours later, Tyra died of her injuries. A jury later awarded her family millions of dollars in damages from the fire department and hospital.¹³

It is important for emergency medical services (EMS) personnel to treat TGD patients with the same level of care and respect as anyone else receiving care. If EMS providers misgender (ie, use incorrect pronouns) or otherwise alienate the patient, this can affect the rest of the ED visit. Having basic training about lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) identities can enhance these interactions. One study evaluating prehospital training in Maryland showed that, despite National EMS Education Standards mentioning LGBTQ training as part of cultural competency curriculum, only one-third of the programs provided any training.¹⁴ Emergency clinicians should give feedback to EMS personnel when they observe potentially harmful interactions and should model best-practice behavior.

Emergency Department Evaluation

History

Name, Gender, and Pronouns

A good first step is to ask the patient's name and the patient's pronouns. Introduce yourself and your pronouns and ask the patient, "What is your name, and what pronouns do you use?" This approach can signal to a transgender patient that you are a safe person to be open with. For teens, pronouns should be elicited both at the beginning of the encounter as well as later, when parents or other caregivers are not present, as the patient may not be out to their parents about their gender identity. Alternatively, you can avoid using an incorrect name/pronouns by addressing the patient directly with "you/your" and using neutral terms like "your child/your child's" until you can ask the child about their name/pronouns in a private setting.

The concept of the "legal name" is not always entirely clear if there are multiple identity docu-

ments with different names. For example, a patient may have formally changed their name on their driver's license and birth certificate but not their passport or insurance card. There may be situations in which the name on the patient's medical record must be used; for example, when signing a consent or performing a time-out. Recognize that using this name may be a negative experience for the patient. Many TGD people refer to their given name as their "deadname," which they no longer use or want to hear. As a result, do not use the patient's deadname casually or without warning the patient and explaining why you are using it. For example, "We are about to do safety check. We will have to use the name on your medical record, but I know your name is actually Martha."

Use caution with terms like "preferred pronouns" or "real name." Many transgender advocates believe these terms contain subtle judgments that the person's birth sex and name are the correct identifiers and that the patient's affirmed name/gender are a mere preference. Use nonjudgmental terms that are factual, such as, "What was your sex assigned at birth?" or "What name is on your identification?" Use affirmative language when talking about the patient's name, for example, "The patient's name is Sergio" or "Their pronouns are them and they," rather than "The patient goes by Sergio" or "The patient prefers to be called they."¹⁵

Different languages handle gender and pronouns differently. For example, Spanish has traditionally used *el* and *ella* as male and female pronouns, respectively. Some TGD individuals may use those, but the term *elle* has emerged as a gender-neutral option. Other languages, such as Tagalog or Hungarian do not have gender-specific pronouns. In any case, use the pronoun that the patient states.

If at some point during the history and physical examination you inadvertently use an incorrect name or pronoun, the best course of action is to apologize and move on. Avoid burdening the patient with a long explanation of how difficult it is for you to keep track of their name and identity. Whatever small inconvenience you experience is minimal compared to the time and effort this patient has put into understanding their identity.

Patients may not have revealed their gender identity to all of their friends and family members. The patient may state one name and pronouns initially, then reveal a different name and pronouns when they speak to you privately. Avoid accidentally outing individuals to their family and clarify the name and pronouns the patient wishes you to use in front of visitors. This is particularly important given that 10% of respondents to the NTS reported that a family member was violent to them because of their gender identity, 8% were kicked out of their homes, and 10% ran away from home.³ When patients are

unable to communicate because they are unconscious, inaccurate information gathered by police or EMS at the scene can lead to confusion about the patient's gender identity. Until the patient or a trusted individual can clarify the patient's gender identity, protect the patient's privacy.

Medical/Surgical History

Most ED presentations will be for conditions or injuries that have little to do with a person's gender identity. For example, treatment for cough and fever for a transgender child is—in most cases—probably the same as for a cisgender child. In those circumstances, detailed probing of nonrelated information should be avoided. TGD advocates warn clinicians about repeating the so-called “transgender broken arm syndrome,” wherein a TGD patient goes to the ED with a broken arm, and the clinician focuses on the patient's gender instead of their arm.¹⁶

Some TGD patients may be taking hormone therapy, which may or may not be under the care of a clinician. A simple way of asking this is, “Have you ever taken any hormones or other medications related to your gender?”¹⁷ A surgical history is often taken as part of the evaluation, especially if the patient is presenting for a potentially surgically related complaint, and this can help guide the physical examination. In these cases, questions about gender-affirming surgeries should be asked only if necessary and with a brief explanation of their importance to the medical care. For example, “Because you have pain in your stomach, it is important for me to know about any surgeries you may have had.” In general, gender-affirming surgeries are not commonly performed in children and adolescents, but they are possible. One suggestion is to ask, “Have you made any changes in your appearance or body to bring it closer to your sense of self?” Do not use language such as, “When are you having ‘the operation?’” or other statements that seem to indicate that patient is not “really transgender” without having surgeries.³

Sexual History

Remember that gender identity and sexual orientation are distinct. If the patient is sexually active, ask, “Can you tell me about the gender or genders of the persons you have had sex with?,” which is more inclusive than, “Do you have sex with men, women, or both?” Ask what pelvic organs the patient has only if it is relevant to the visit. Some patients may use less gender-specific terms for their body parts, such as saying “birth canal” or “front hole” instead of vagina. Take the patient's lead and use their terminology. Be sure to consider pregnancy in any adolescent patient with a uterus, regardless of their gender identity or their stated sexual orientation.

Social History

As with cisgender adolescent and pediatric patients, take a thorough social history. TGD individuals are at particular risk for substance abuse and social and economic disparities such as homelessness, poverty, and food insecurity.¹⁸⁻²⁰ Allow time to speak with the patient without parents, friends, or other caregivers in the room to confirm the social history.

Screening for social determinants of health is particularly important, especially with adolescents and young adults. According to the NTS, 29% of transgender individuals were living in poverty, which is twice that of the general population, and 30% have experienced homelessness at some point in their lifetime, with 12% reporting homelessness in the last year. These risks are compounded by minority race and ethnicity, being disabled, or being an undocumented immigrant.³

As discussed, violence and familial rejection is a reality for many TGD adolescents. When speaking to adolescents and young adults, keep in mind that those who reported their families were unsupportive were much more likely to have financial difficulties, poor health, experience homelessness, attempt suicide, or experience psychological distress. Use open-ended questions that do not carry judgments or labels with them. For example, ask, “Where are you sleeping nowadays and do you feel safe there?” This is preferred to, “Are you homeless?”

Screen for intimate partner, caregiver, and societally inflicted physical and sexual violence, especially because TGD individuals—particularly trans-feminine individuals—are at higher risk. The NTS found that more than half of all respondents (54%) experienced some form of intimate partner violence, including acts of coercive control and physical harm, which is congruent with other studies that place that percentage between 30% and 50%.³ Childhood abuse and minority stressors increased the risk of intimate partner violence.²¹ Individuals who had engaged in income-based sex work were even more likely to have experienced violence, with over 75% reporting intimate partner violence, and 72% saying they had been sexually assaulted.³

Physical Examination

Examine only the relevant anatomy. Examination of the breasts and genitals may be particularly sensitive and should be performed only if necessary. If a sensitive examination is necessary, approach the topic in an incremental and respectful manner. Ask the patient what terms they use to refer to their body. Explain the purpose behind the examination and offer alternative focus mechanisms. For example, if you have to perform a pelvic examination on a patient with a uterus and ovaries, you may consider using the smallest-sized speculum and allowing the patient to wear headphones. Ask the patient

if they want to be talked through each step of the examination. Finally, never perform any examination without the explicit permission of the patient. Some may not be able to tolerate an examination regardless of options offered, and if so, the patient's decision should be honored, and counseling should be provided as to what that means regarding evaluation and treatment. As mentioned, surgeries are uncommon in adolescents; however, if an examination is needed after vaginoplasty genital surgery, an anoscope can be used.

A staff member should chaperone examinations of the genitals, rectum, and breasts. If resources permit, ask the patient if they prefer for the chaperone to be of a particular gender. Discuss the involvement of any trainees ahead of time; a common complaint of TGD patients is that extra observers were brought in out of curiosity.

Tucking and Binding

The patient may need to be asked about tucking, packing, or binding. *Tucking* is a practice wherein transfeminine patients manually displace the testes upward into the inguinal canal and position the penis and scrotum between the legs toward the anus. This is held in place sometimes by the use of tape, tight underwear, or a gaff, which is a special garment with a reinforced front area. Tucking places the urethral meatus close to the anus, increasing the risk of urinary tract infection from enteric pathogens. Prolonged periods of tucking can lead to *Candida* infections, cystitis, epididymo-orchitis, prostatitis, or pyelonephritis. If the patient is complaining of acute scrotal pain, a workup to rule out conditions requiring emergency treatment such as strangulated hernia, torsion, or malignancy should be completed as well.²²

Transmasculine individuals may sometimes adopt the practice of packing and/or chest binding as a way to align their external appearance with their gender identity and/or to increase their sense of safety in public places. *Packing* refers to padding or using a phallic object to create a masculine contour to the groin. *Chest binding* is any activity that involves the compression of breast tissue in order to create a flatter appearance of the chest. Chest binding is very common, with 87% of the transmasculine respondents in one study reporting this activity.²³ Common methods for binding include wrapping the chest in elastic bandages, commercial binders (made specifically for this purpose), wearing multiple sports bras, or taping. Binding has been shown to have substantial mental health and safety benefits; however, it also can cause unwanted physical side effects. Ninety-seven percent of individuals who reported chest binding had at least 1 negative symptom from binding—most commonly skin/tissue concerns (76.3%), back pain (53.8%), overheating

(53.5%), chest pain (48.8%), and shortness of breath (46.6%). More severe sequelae are rare and include scarring, rib fractures, and pneumonia.²⁴ In a study published in 2018, only 14.8% of individuals sought care for their binding-related health concerns, and one of the strongest predictors of seeking care was whether an individual felt safe initiating a conversation with a healthcare provider.²⁵

Many of the negative health outcomes associated with tucking and binding can be mitigated by cessation. However, advocating for this as a clinician does not take into consideration the emotional and social safety of these measures for TGD patients and their use in reducing dysphoria. For example, tucking and binding may keep a patient safe by concealing their TGD identity in situations where they could be vulnerable to attack, such as public restrooms. It may be helpful to suggest that the patient take regular breaks from tucking and binding such as when at home or during sleep. Avoiding tape or elastic bandages can also minimize complications with binding.

Gender-Affirming Care

Once considered cosmetic or “experimental,” clinicians and medical organizations worldwide now widely consider gender-affirming care to be medically necessary. The WPATH has published evidence- and consensus-based standards of care for clinicians. These are commonly used by healthcare organizations and insurance companies to guide transgender care. The University of California, San Francisco Center for Excellence in Transgender Health also has comprehensive guidelines available online as a reference (<https://transcare.ucsf.edu/guidelines>).

Medical Gender-Affirming Therapies and Complications

Medical gender-affirmation may include pubertal suppression, feminizing or masculinizing hormones, contraception, and fertility preservation. While these therapies are not generally initiated in the ED, emergency clinicians are responsible for understanding their use and possible complications. All of the medication uses discussed following are off-label. The majority of the evidence about complications comes from extrapolation from studies involving adults, but a 2018 systematic review focusing on adolescent patients has expanded the literature focusing on the pediatric population.²⁶

Pubertal Suppression

Pubertal changes often cause tremendous distress in TGD youth, and pubertal suppression can mitigate physical or emotional discomfort. Gonadotropin-releasing hormone (GnRH) analogues, also known as *puberty blockers*, are the class of medication most

commonly used to temporarily halt puberty. They are generally initiated when the individual is in early puberty (Tanner stage 2-3), with the later addition of gender-affirming hormones at around age 16.²⁷ GnRH analogues are generally reversible, in contrast to gender-affirming hormones. An increasing number of children are receiving puberty blockers.²⁸ A recent prospective cohort study showed that, after 2 years of pubertal suppression, TGD-identified patients showed fewer behavioral and emotional problems, fewer depressive symptoms, and improvement in their general functioning.²⁹

For adolescents with testes, GnRH analogues such as leuprolide, histrelin, and nafarelin are commonly used to stop luteinizing hormone secretion and thus testosterone secretion. Alternatively, progestins (eg, medroxyprogesterone) or other medications that block testosterone secretion or neutralize its action are also sometimes used.¹¹ Additionally, spironolactone and cyproterone acetate have been used for their antiandrogen effects, although the latter is not available in the United States.

For TGD youth with ovaries, GnRH analogues stop the production of estrogen and progesterone, which leads to the cessation of menses in most cases, although they can sometimes cause withdrawal bleeding in postmenarchal individuals. Alternatively, these patients may also be treated with high-dose progestin to decrease the levels of serum sex hormones, or they may be placed on continuous oral contraceptives or medroxyprogesterone to suppress menses, if that is contributing to dysphoria.¹¹

Complications of Pubertal Suppression

A systematic review published in 2018 showed that the most common side effect of GnRH analogues in transmasculine adolescents was hot flashes. No other side effects from GnRH analogues were reported for transmasculine or transfeminine patients. Given the limited side effect profile of these medications, clinicians should be wary of ascribing a patient's symptoms to puberty-suppressive agents, and organic etiologies should be fully explored. Progestins were also relatively safe, with the most common side effects being initial metrorrhagia, headaches, hot flashes, and acne.²⁶ The main concerning complication from spironolactone is hyperkalemia, but this is relatively rare.²⁰

Hormonal Therapies for Adolescents

Adolescents may choose to begin feminizing or masculinizing hormone therapy, which cause effects that are only partially reversible. The risks of hormone therapy need to be weighed against the potential benefits of aligning the patient's body with their identified gender.

Feminizing Hormones and Complications

In transfeminine persons, feminizing hormones allow for physical changes such as breast growth, decreased testicular size, and increased percentage of body fat. Decreased erectile function may also occur. There are a variety of different medication regimens for transfeminine persons. The medications used generally fall into 3 classes: (1) estrogens, (2) progestins, and (3) androgen-reducing medications. Estrogens are the most commonly used medication in adolescents and can be administered in oral, sublingual, transdermal, intramuscular, subcutaneous, or pellet preparations. Androgen blockers such as spironolactone or finasteride are also sometimes used in adolescents.

The side effects that would most likely be relevant to the emergency clinician are venous thromboembolism (VTE), gallstones, hypertriglyceridemia, and elevated liver function tests, although these risk factors are derived from studies in the adult population. A systematic review of studies focusing on adolescents showed no effect from estrogen on blood pressure, carbohydrate and lipid metabolism, liver enzymes, or thyroid function. An increase in serum creatinine was observed, from an average of 0.79 mg/dL at baseline to 0.81 mg/dL after 1 year on combined estrogen and cyproterone acetate, which was statistically but not clinically significant.²⁶

VTE, in particular, has garnered significant attention from clinicians. Early literature from Europe reported that the incidence of VTE in transfeminine adults who were taking ethinyl estradiol estrogen was increased up to 20 fold in comparison to their cisgender counterparts.^{30,31} This marked increased risk of VTE was associated specifically with the use of an ethinyl estradiol preparation that was being used at the time. Currently, the 17-beta estradiol "bioidentical" preparation of estrogen used for gender-affirming therapy carries much less risk for VTE.³⁰ Additionally, the route of delivery is relevant, with transdermal preparations carrying the lowest risk for VTE.³² Increased VTE risk has also been attributed to the use of estrogens taken without the supervision of a physician, which can lead to supratherapeutic levels (see the "Unsupervised Medical Care" section on page 12).³³

A study of 162 Austrian transfeminine adults receiving only transdermal estrogen and an androgen-reducing medication found that none of the patients developed VTE,³⁴ which corresponds with a more recent study published in 2016 showing a similarly low incidence of 7.8 events per 10,000 person-years for patients taking oral estradiol.³⁰ A systematic review from 2019 that evaluated 13 relevant studies showed that the route of hormone administration, concomitant medication use, demographics, and comorbidities all affect the overall risk of VTE. Only 1 study was identified that showed occurrence of

VTE in the absence of risk factors beyond hormone therapy.³⁵ This review contradicts a meta-analysis from the same year showing the overall incidence to be 2.3 events per 1000 patients, which is a significant increase over the general population, although the absolute risk is low overall. This meta-analysis included older studies that assessed individuals using ethinyl estradiol, which may be the reason for the divergence and could have overestimated risk.³⁶ Taking all of this into consideration, the absolute risk for VTE from modern forms of estrogen is low, in the absence of other risk factors. However, the current evidence is insufficient to determine whether estrogen therapy constitutes a risk factor for VTE, and it should be considered when determining pretest probability.

Evidence from adult TGD populations has also shown a possible increased risk of hypertension, type 2 diabetes, and cardiovascular disease with the presence of additional risk factors in individuals on hormone therapy. The evidence thus far is insufficient, and these risks are rarely applicable to the TGD adolescent population.

Masculinizing Hormones and Complications

In transmasculine patients, masculinizing hormones lead to deepened voice, clitoral enlargement, growth of facial and body hair, cessation of menses, atrophy of breast tissue, and decreased percentage of body fat. Of note, transmasculine patients who are on testosterone and who still have ovaries and a uterus can become pregnant, despite testosterone therapy.

Testosterone can be given via intramuscular, subcutaneous, or transdermal routes. Reported side effects and complications come mostly from research involving adults but can be extrapolated to adolescents. Transmasculine persons on masculinizing hormones have an increased risk for polycythemia, weight gain, acne, alopecia, vaginal atrophy, and sleep apnea. They also have increased risk of liver function test abnormalities and hyperlipidemia. A systematic review of adolescent patients showed similar findings; however, there was no significant effect on carbohydrate and lipid metabolism or liver function test levels. This study did show decreased thyrotropin and free T4 that was clinically and biochemically insignificant, without evidence of true thyroid dysfunction. Serum creatinine was also found to be increased in this population, thought to be secondary to increased muscle mass.²⁶

In the presence of additional risk factors, including age, research has shown a possible increased risk of destabilization of certain psychiatric disorders, cardiovascular disease, hypertension, and type 2 diabetes.¹¹ There have been some case studies that report a higher risk of VTE in adults on testosterone, but those small studies were generally of cisgender men or postmenopausal cisgender women.³⁷⁻³⁹

While more robust evidence is lacking, several larger studies support the idea that testosterone does not increase the risk of VTE in transmasculine individuals. In a database study of adults including 2118 transmasculine patients, the hazard ratio estimate for VTE in transmasculine individuals using testosterone was low, at 1.6 (95% confidence interval [CI], 0.9-2.9) compared to cisgender men and at 1.1 (95% CI, 0.6-2.1) compared to cisgender women.⁴⁰ In addition, several large population-based studies evaluating elevated testosterone levels in cisgender men showed no increased risk of VTE.^{41,42} A case control study of men diagnosed with VTE and testosterone use within 15 days prior showed an adjusted odds ratio of 0.9 (95% CI, 0.73-1.12).⁴³ Lastly, a study of 694 hypogonadal cisgender men treated with testosterone showed that only 3 developed nonprovoked VTEs over the mean 25-month follow-up.⁴⁴ Most studies suggest that testosterone alone does not increase the risk of VTE compared to cisgender women except in those individuals with an underlying thrombophilic predisposition or with standard VTE risk factors such as smoking.^{45,46}

Overall Considerations for Management

When deciding on management of conditions such as VTE in TGD patients, it is important to recognize that stopping hormones must be weighed against the significant psychological risks of cessation. While it may be prudent in some cases to stop medical interventions, this should be done as part of a shared-decision model and in consultation with the prescribing clinician, an endocrinologist, and a hematologist (in the case of VTE). Clinicians should also provide information about lifestyle changes (such as smoking cessation) that will reduce the overall risk of certain conditions.

Surgical Gender-Affirming Interventions

Gender-affirming surgery for minors is uncommon. The WPATH guidelines recommend reserving genital surgery for adults. This could include individuals as young as 18 to 20 years who could present to a pediatric ED. Chest surgery may be performed earlier in specific cases, with many centers setting age 16 years as a minimum. Boston Children's Hospital is developing the first gender surgery center housed in an academic pediatric hospital, and many institutions are currently performing surgically affirming interventions on older adolescents. Among TGD people, "top" surgery (ie, chest surgery) is much more common than "bottom" surgery (ie, genital surgery). WPATH standards of care for the treatment of TGD individuals recommend that patients are not eligible for genital surgery until they reach the age of maturity, have been on hormonal therapy for 1 year, and have lived for at least 1 year in their affirmed gender. Per the WPATH guidelines, chest surgeries

in transmasculine patients can be considered at an earlier age, provided the patient has had 1 year of testosterone therapy and ample time living in the affirmed gender. This is in conjunction with the presence of persistent dysphoria, the capacity to make the decision, and evidence that any mental health issues are well controlled.⁴⁷ In general, the quality of evidence is low and relies on short-term follow-up in adolescents. Nonetheless, research suggests that surgical interventions can improve gender congruence, body image, quality of life, and well-being, and decrease depression and anxiety.^{48,49} A 2019 review article on gender-affirming surgery in TGD adolescents showed that chest wall masculinization (bilateral mastectomy with chest reconstruction) in transgender men improves mental health and quality of life; however, to date there is a scarcity of data surrounding other surgeries in adolescents.⁵⁰ Clinicians treating these individuals in the ED should remember the importance of these surgical interventions and their cosmetic outcomes to the patient. Many patients will present with high levels of anxiety when presenting with a complication. Emergency clinicians should be generally familiar with the anatomy, complications, and management pathways.

Chest Surgery

Breast augmentation in transfeminine adolescents is possible. Breast augmentation surgeries are similar to those done in cisgender women, although there are some physiologic differences between the chests of those assigned male and female at birth. Some transfeminine individuals considering breast augmentation will use estrogen therapy for a period of time prior surgery in order to achieve maximal hormonal breast growth, although not everyone chooses this path. The most common complications of surgical breast augmentation are bleeding, infection, numbness, skin breakdown, and implant failure or extrusion.⁵¹

For transmasculine persons, bilateral mastectomy is the most common gender-affirming surgery in adolescents.⁵² It decreases chest dysphoria (a sense of discomfort with a person's chest anatomy, such as having breasts), anxiety, and depression and improves psychological functioning. A 2018 study showed that surgical complication rates were similar between transmasculine persons who were aged > 18 years at the time of surgery and those who were aged < 18 years.¹² Complications from top surgery are similar to those of mastectomies performed for other reasons in cisgender women. Jackson-Pratt drains are typically left in the axillae after surgery, and the most common complications include wound infection, drain blockage, and dehiscence. Complications should be evaluated by a surgeon.

Genital Surgery

Vaginoplasty for transfeminine persons can be achieved through a variety of techniques. The 2 most common techniques are penile inversion and intestinal vaginoplasty. Penile inversion involves the creation of a neovagina via blunt dissection of the urethra, prostate, and bladder anteriorly and the rectum posteriorly. Scrotal and penile tissue is then used to create the labia and wall of the neovagina. Intestinal vaginoplasty (used less commonly) creates a partial colectomy of the distal sigmoid colon, with the segment of the distal end of the sigmoid then anastomosed to the perineum to form the neovagina. The residual sigmoid colon is attached by end-to-end anastomosis to the rectum.

Postoperatively, gauze packing or stents are placed inside of the neovagina to create a negative space, with patients using vaginal dilators to increase the diameter of the neovagina. Without regular use of the dilator, the neovagina can shrink and even close. A dilator is an important piece of medical equipment and must stay accessible to the patient if they are admitted, incarcerated, or cared for in another group setting. The complications of this surgery are similar to other postsurgical candidates and include bleeding, infection, and delayed wound healing. Additional complications include complete or partial necrosis of the vagina, clitoris, or labia; rectovaginal or vesicovaginal fistula; and urethral stenosis or malposition that present as a weak, off-centered, or skewed urinary stream. All of these complications require specialist consultation and ED treatment of infections.^{53,54} In the short term and long term, there is an increased incidence of urinary tract infections. Most of these infections can be treated with intravenous or oral antibiotics in the ED. There is also a long-term risk of colon cancer of the neovagina if the neovagina was created using intestinal tissue, although the risk is low in adolescents.

For transmasculine persons desiring a phallus, metoidioplasty and phalloplasty are genital surgical techniques, both of which rely on the shared embryologic origin of the clitoris and penis. Metoidioplasty—the simpler technique—releases the hormonally enlarged clitoris from tethering ligaments so it can form a small, sensate phallus anatomically positioned similar to a native penis. The urethra can be lengthened to allow for urination through the phallus. Some transmasculine persons also choose to get a vaginectomy or scrotoplasty with this procedure. *Phalloplasty* refers to techniques to create a phallus through the use of skin flaps, usually from the forearm or thigh and then recruiting tissue from the labia majora to create a neoscrotum. Testicular prostheses may also be used. Despite the rapid advancement of surgical techniques, phalloplasty remains highly complex and is not commonly performed in adolescents.

Possible complications of these surgeries include bleeding, infection, necrosis or infection of the phallus, and rectal injury. Most early complications of phalloplasty tend to be flap-related, including delayed healing and flap failure, and usually require more emergent intervention. Most late complications are urologic in nature and include urethral stricture, urethrocutaneous fistula, urethral diverticula, and hair within reconstructed urethra. These usually present with weak urinary stream, leakage of urine from the penile shaft, dysuria, urinary frequency, and retention. A careful examination of the neophallus and perineum should be performed looking for fistulas, fluid collections, and patency of the phallus itself. A postvoid residual and urinalysis are often needed. All of these complications should be evaluated by a surgeon, preferably the surgeon who performed the phalloplasty. Many of the complications of these surgeries can be treated as an outpatient. It is important to remember that many urinary symptoms can be secondary to sexually transmitted infections; testing and empiric treatment should be completed using standard clinical protocols.⁵³⁻⁵⁵

Hysterectomy, with or without oophorectomy, is sometimes performed in adolescence for transmasculine persons. These patients should be evaluated similarly to their cisgender counterparts, and they have similar complications.

Other Gender-Affirming Interventions

Other gender-affirming interventions include facial feminization, liposuction, voice surgery (surgery to the vocal cords to change the pitch), thyroid cartilage reduction (laryngeal shave to reduce the appearance of an Adam's apple), hair reconstruction (eg, hair removal/electrolysis, hair transplant, or wigs), and various other aesthetic procedures.¹¹

Mental Health Concerns

Gender incongruence is not a mental illness; however, TGD persons have higher rates of psychological comorbidities such as anxiety, depression, and suicidal ideation than their cisgender peers. Much of this data originates from outside of the United States but shows that TGD youth have increased internalizing and externalizing behavioral and emotional problems.¹⁰ However, it has been shown that these comorbidities are a response to external factors such as stigma, rejection, and societal bias rather than something intrinsic to a youth's gender identity.⁸

A 2016 review article published by the Society of Adolescent Health and Medicine that evaluated the current literature on TGD youth mental health showed that these patients continue to have increased rates of psychiatric morbidity compared to their cisgender peers.⁵⁶ All of the articles included showed that TGD youth had levels of depression that were 2- to 4-fold higher than matched counterparts.

Eating Disorders

A survey of 289,024 college students showed increased levels of eating disorders in TGD persons compared to cisgender heterosexual women (15.8% vs 1.85%), past-month diet pill use (13.5% vs 4.29%), and past vomiting or laxative use (15.1% vs 3.71%).⁵⁷ This is consistent with other studies that have, in general, showed a higher risk of disordered eating among TGD youth.^{56,58}

Suicide and Suicidal Ideation

Studies both in the United States and around the world have shown consistently that TGD youth have a much higher rate of suicidal ideation, nonsuicidal self-injury, and suicide. A large-scale population study of 81,885 TGD adolescents in Minnesota showed that just over 60% of TGD youth reported suicidal ideation, 3 times greater than that of their cisgender classmates, and 31% reported a suicide attempt in comparison to 7% of cisgender adolescents.⁵⁹ A database analysis of a school-based population sample derived from the California Healthy Kids Survey (n=576,380) and California Student Survey (n=25,493) showed that the prevalence of self-reported suicidal ideation was twice as high for TGD youth.⁶⁰ A secondary data analysis of the Profiles of Student Life: Attitudes and Behaviors study from 2012-2015 showed that between 30% and 51% of transgender youth have attempted suicide, with the highest risk among transmasculine persons.⁶¹ Additional risk factors include gender-related victimization, depressive symptoms, history of self-directed harm, family rejection, and substance abuse.⁶²⁻⁶⁴

Substance Abuse

TGD youth have an increased risk of substance abuse compared to their cisgender counterparts. One study showed that the prevalence of reported substance use was 27.1% for cocaine, 26.1% for heroin, 24.9% for methamphetamines, and 35.9% for prescription opioid misuse.² Another study showed that even when adjusting for age, race/ethnicity, family socioeconomic status, and urbanicity, TGD youth were at increased odds of alcohol, cigarette, marijuana, and nonmarijuana illicit drug use in the past 12 months, as well as regular use of marijuana and illicit drugs.

Psychiatric Consultation

Given that TGD individuals are at increased risk for anxiety, depression, eating disorders, self-harm, and suicidality, psychiatric consultation may be needed in the ED if the patient is an immediate danger to themselves or others. If any patient is expressing suicidal ideation, ask about the patient's gender identity and sexual orientation, as LGBTQ individuals have an additional risk factor that may alter disposition and treatment planning.

Role of Gender-Affirming Social and Medical Treatments

While data specific to pediatric patients are sparse, the findings from the small number of studies evaluating the role of gender-affirming social and medical transitions suggest that these processes are associated with improvement in gender dysphoria, decrease in emotional and behavioral problems, and improvements in overall mental health, which is similar to what has been observed in larger studies with adults.^{50,65} Ideally, EDs should have a list of local clinics and clinicians that specifically work with TGD children.

Special Circumstances

Unsupervised Medical Care

Emergency clinicians may see patients who have engaged in gender-affirming medical or surgical therapies outside of an organized healthcare system. When they are unable to access care from a qualified health professional, patients may resort to so-called “do-it-yourself transitions.”⁶⁶ Even in health systems in which gender-affirming care is available, many barriers can prevent patients from accessing care. For example, a lack of awareness among both patients and clinicians about what care is covered, or prolonged bureaucratic processes to authorize care may prevent care, even though the treatments may technically be covered.

Nonprescribed Hormones

In a survey of TGD persons in Ontario, Canada, approximately 25% of patients currently using hormones reported that they had used nonprescribed hormones, and 6% were currently using them. This included respondents as young as 16 to 24 years of age.⁶⁶ In several cases, patients were both obtaining prescriptions for hormones from their clinician and supplementing with additional hormones from nontraditional sources. Reasons for this vary—some patients may believe that additional hormones speed up the transition, or they may be concerned about a loss of healthcare access in the future. Factors associated with nonprescribed hormone usage included low income, lack of insurance, having been denied a prescription for hormones in the past, a history of transgender-specific negative experiences with healthcare clinicians, and participation in sex work. None of the individuals receiving nonprescribed hormones in this survey were having regular monitoring or serum testing.

Self-Performed Surgeries

The same survey showed that, although rare, some TGD persons resort to self-performed surgeries of the chest or genitals, with most cases occurring in patients in the early-twenties age group.⁶⁶

While many of the patients who reported having attempted self-performed surgery also reported mental health conditions, it is unclear whether the mental health condition directly contributed to that extreme action.

Injection of Silicone

Injection of subcutaneous silicone, without medical supervision, for the purpose of body sculpting has also been reported among TGD patients. When individuals gather for this purpose it is sometimes known as a “pumping party.” Complications include soft-tissue inflammation, infection, tissue necrosis, and silicone embolization syndrome. Silicone embolization syndrome can occur acutely after accidental intravascular injection, or gradually over years, as silicone seeps into vessels. Embolization can also be triggered by instrumentation of the injection site, such as incision and drainage of a local abscess. Silicone embolization syndrome can present as a pulmonary embolism, systemic inflammatory response syndrome, or damage to other vital organs.⁶⁷

Insurance Issues

For many years, gender-affirming treatments were considered experimental or cosmetic and were rarely covered by health insurance. More recently, many health insurance programs cover an expanding range of gender-affirming care, although there are often exclusions for certain treatments. Many managed-care plans require the WPATH standards of care be followed in order for care to be covered.

In 2014, the Centers for Medicare and Medicaid Services rescinded its long-standing ban on coverage for gender-affirming care. This means that coverage is decided on a case-by-case basis just as any other medical treatment. Because Medicaid is a program co-funded by state and federal governments, coverage may vary from state to state. Several states have passed laws specifically excluding transgender patient care from Medicaid coverage.

In the 2015 NTS, 25% of respondents reported that they experienced a problem with their insurance in the past year related to being TGD, such as being denied coverage for gender-affirming care or being denied coverage for routine care because they were transgender. More than half (55%) of those who sought coverage for gender-affirming surgery in the past year were denied, and 25% of those who sought coverage for hormones in the past year were denied.³ For example, a transmasculine patient identified as male in their medical record may have insurance claims for care of ovarian cysts denied because the insurance company believes the coding is in error. Systems that are friendly to transgender patients use separate data fields for the gender identity and the sex assigned at birth in order to avoid these bureaucratic barriers to care.

Controversies

Desistance

Many parents whose children are expressing gender-nonconforming thoughts or behaviors wonder whether their child will have a TGD identity that will persist into adulthood or if their child will eventually identify as cisgender, a phenomenon known as *desistance*. A 2016 review article identified this as a poorly understood and underinvestigated area of TGD health.¹⁰ While most individuals who identify as transgender in adolescence will persist into adulthood (*persistence*), estimates for prepubertal children vary widely. The earliest studies from the 1980s estimated rates of persistence at only 2% to 9%, with more recent studies reporting rates of 12% to 39%.⁶⁸⁻⁷³ Some critics believe that methodological flaws in the research vastly underestimate persistence rates.⁷⁴ For instance, one of the studies assumed patients lost to follow-up had desisted.⁷² In addition, children in these studies may not have actually met current criteria for gender dysphoria and appeared to desist because they were never actually TGD in the first place. Others suggest that a fluid gender identity is a normal developmental pathway, and changes in gender identity over time are natural. The reduction in rates of desistance over time may be more closely related to changes in societal acceptance of transgender identities rather than changes in the TGD individuals themselves.

Dutch investigators found that desistance was less likely in children who experienced more intense gender dysphoria, were assigned female at birth, and were older at the time of presentation. They also identified a difference in how children answered the question, "What is your gender?" Those more likely to desist indicated they *wished* to be another gender, while those who persisted were more likely to indicate that they *were* another gender.⁷² Nonetheless, it is not the role of the emergency clinician to ask this question or focus on possibilities of desistance.

Emergency clinicians must remember that gender identity is complex. For children expressing gender incongruous features or gender dysphoria, an appropriate referral should be made to a professional with experience with TGD youth. It is not the role of the emergency clinician to determine a patient's gender identity or to pressure a child or parents to respond in a particular way. However, emergency clinicians can be helpful in normalizing a child's exploration of their gender identity and can refer patients to resources.

Privacy Concerns

A minor patient may reveal their transgender status to their emergency clinician but request that this information not be shared with their parents. This should be considered carefully. Unwanted disclo-

sure of TGD status to parents could compromise the patient's housing status or even lead to abuse. Laws vary from state to state, but generally nonemancipated minors do not have the right to consent to most healthcare, and on that basis, parents generally have a right to be informed about care their child is receiving. Some states have specific exemptions for certain types of care.⁷⁵ For example, California makes an exemption for care related to sexually transmitted infections or reproduction and gives minors as young as 12 years of age the right to care without parental consent.⁷⁶ It is important to know the laws in the area(s) you practice. This resource from the CDC can provide state-specific information about consent for adolescents: www.cdc.gov/hiv/policies/law/states/minors.html

The American Medical Association gives guidance for this situation in their code of ethics, stating that "physicians have the responsibility to protect the privacy of minor patients, within certain limits."⁷⁷ In general, their guidelines support maintaining confidentiality for the minor patient except in cases where disclosure is necessary to prevent life-threatening harm to the patient or others, or if the threat to the patient's health is great and there is no reason to believe that disclosure would harm the patient. For this reason, it is important to discuss with the patient what the possible impacts of disclosure would be. If not disclosing is believed to be in the child's best interest, inform the patient that disclosure could occur accidentally, through mechanisms such as insurance billing. Offer to assist in disclosure, if appropriate. In some cases, parental knowledge of a patient's TGD status could put the patient's personal safety at risk. Involve Child Protective Services if parental rejection rises to the level of neglect, physical, verbal, or emotional abuse.

Conversion Therapy

Patients or their families may express interest in "conversion" therapy to assist a TGD youth in becoming a cisgender youth. To date, there is no scientific evidence that conversion therapy is safe or effective. It is denounced by several prominent organizations such as the American Academy of Pediatrics, American Psychiatric Association, and the American Medical Association. Conversion therapy is illegal in several jurisdictions in the United States.⁷⁸

Disposition

Most disposition decisions for a TGD youth are based on the same considerations as cisgender children. Personal safety is an important factor to consider, as TGD youth are at risk for physical and emotional abuse. If there is any concern for safety, explore these factors prior to discharge.

If handing the patient off to the next care provid-

er, inform the clinician of the patient's name and pronouns so the patient is not inadvertently misgendered and does not need to be asked repeatedly. However, use caution before spreading this confidential information unnecessarily. The patient's TGD identity should be shared on a need-to-know basis.

When the patient is being admitted to a shared room in which patients are cohorted by gender, placing the patient in a room matching the gender they present is generally appropriate unless the patient

has a different preference. If there are concerns, use of a private room may be appropriate. For more information on transgender-affirming hospital policies, go to: www.hrc.org/resources/transgender-affirming-hospital-policies

If the visit was related to the patient's gender identity, at discharge, a referral to appropriate resources may be helpful. Inquire whether the patient's primary care clinician has experience providing care to transgender patients. If not, a local LGBTQ+ center may

Risk Management Pitfalls for Transgender and Gender-Diverse Children and Adolescents

- 1. "The patient was a boy, and his legal name was Jerome. I was not going to call him Louise!"**
Intentionally misgendering a patient serves no legal or medical purpose. Instead it causes distress to the patient and creates unnecessary barriers between healthcare providers and the patient.
- 2. "I didn't mean to call the patient by the wrong name, so I explained to her that this was very difficult for me. I haven't had a lot of transgender patients before, and I'm not that comfortable with this yet."**
Do not make the encounter about you. The patient is working hard to understand themselves and their identity. TGD youth face discrimination and barriers to care. Whatever difficulty you are having is miniscule in comparison to what they have likely experienced.
- 3. "I thought my patient said they were transgender, but they hadn't had 'the surgery' yet?"**
The patient's gender identity arises from an internal experience of self. Medical and surgical therapies to align the patient's physical body with their gender do not define gender identity.
- 4. "I asked my patient if they were a boy or a girl, and told them they had to pick one."**
Many individuals do not experience their gender as a static classification between 2 binary opposites. Some experience themselves as genderqueer, third gender, or nonbinary; others experience their gender as fluid, which may change over time.
- 5. "The boy was wearing a girl's jacket, so I thought he must be transgender."**
People dress in different ways for lots of reasons. Do not make assumptions about their gender identity.
- 6. "I didn't think my patient could be pregnant; they said they were transgender."**
Being transgender does not preclude pregnancy. Avoid assumptions about someone's sexual activity. If a person with a uterus has a sexual partner with a penis, pregnancy can occur, and needs to be in the differential.
- 7. "Because the boy was transgender, I referred him to an endocrinologist."**
Do not assume that pediatric patients have disclosed their gender identity to their parents. Ask the patient before discussing the issue with their parents. If they are not out to their parents, the issue of disclosure needs careful consideration and could put the child at risk for serious consequences, such as homelessness or abuse.
- 8. "My patient seemed fine, so I didn't ask about suicidal thoughts."**
TGD youth are at substantial risk for suicide, and a variety of factors can increase that risk. Consider routinely assessing TGD patients for suicide risk.
- 9. "I thought this was probably just a phase, so I asked the parents if they were making a mistake with their daughter."**
Decisions about how a family will respond to a child's gender expression are complex. In most cases, it is not your role as an emergency clinician to place judgment about this.
- 10. "The patient told me they were not taking any medications, so didn't think I needed to ask about nonprescription medications."**
Use of nonprescribed hormones or usage at higher doses than prescribed is common. Ask specifically about medications obtained from friends or other sources.

be able to refer the patient to a specialty center. Many children's hospitals are developing expertise in transgender care and may be an appropriate referral. The Gay and Lesbian Medical Association (GLMA) operates an online referral website (www.glma.org/), as do a number of private websites that can be easily located online. Patients living in rural areas or smaller towns may need to travel or access care through telemedicine.

Summary

Lack of knowledge of appropriate care and interactions for TGD youth can have a serious negative effect on the quality of emergency care a patient receives. Healthcare providers have an obligation to learn about this population and the issues surrounding their care. Most of the healthcare needs of a TGD youth will be the same as those of a cisgender patient. However, there are unique considerations around cultural competency, behavioral health, use of hormone therapies, and do-it-yourself therapies performed outside of medical supervision. Enhanced knowledge about gender identity and gender-affirming treatments will help emergency clinicians provide better care in a safe, supportive environment.

Case Conclusions

You introduced yourself to the 12-year-old patient by saying, "I'm Doctor Turner, what is your name?" The patient said, "Andrea." You said, "My pronouns are she and her, what pronouns do you use?" The patient said, "she and her." Even though the patient did not disclose her gender identity initially, you signaled to the patient that you were a safe and open person with whom to discuss these issues. When you spoke to the patient privately, they revealed they have felt more comfortable with a male gender identity for a year and have been starting to experiment with their gender expression. They were not sure if they wanted to use a different name or pronouns. You honored this and used Andrea and female pronouns. She was afraid to disclose this to her parents but she agreed to disclose it to her mom, with you in the room for support. You urged both the patient and her mother to review the section of the PFLAG website (www.pflag.org) on transgender youth. You told them that PFLAG is an organization that provides support to LGBTQ+ people, their families, and allies. You also referred them to the local LGBTQ+ center's programs for transgender youth and parents. You recommended that they discuss these concerns with their primary care doctor, and recommended assessment by a mental health professional. You clarified that being transgender is not a mental illness, but a social worker, psychologist, or family therapist could help explore gender identity and assist families.

You introduced yourself to the 15-year-old patient with the wrist injury by saying, "I'm Doctor Turner.

What is your name?" The patient said, "Elaine." You said, "Hi Elaine, it's nice to meet you. My pronouns are she and her. What pronouns do you use?" The patient responded, "them and they." You used the name Elaine and neutral pronouns for the rest of the visit. You notified the patient's nurse that although the EMR stated the name on the patient's insurance card, the healthcare team should use Elaine's identified name and gender. You asked specifically about hormone use when taking the history, and you avoided questions about the patient's gender identity or sexual history because they were not relevant to the orthopedic injury. You screened for intimate partner violence. At the end of your shift, you took the opportunity to educate the treatment team on the importance of pronoun use and providing judgment-free care. You advocated for changes to the EMR in your hospital to allow recording the patient's identified name and gender.

You informed the 16-year-old patient with a DVT that hormones can make it easier to get a blood clot, and that it was important to know if they had taken hormones recently. The patient revealed that a friend had given them estrogen shots sometimes, and that they usually presented as a female. You explained to the patient that estrogen may have contributed to the blood clot if they had an underlying risk factor for clotting. You recommended that they discontinue the hormones until they could be evaluated by a hematologist and endocrinologist who could collaborate on a safe and informed path forward regarding gender-affirming hormone use. You counseled them that the blood clot was not an absolute contraindication for hormones. If they continued, you recommended they quit smoking to decrease risk. You also explained that gender-affirming hormone therapy was covered by many health plans.

References

Evidence-based medicine requires a critical appraisal of the literature based upon study methodology and number of subjects. Not all references are equally robust. The findings of a large, prospective, randomized, and blinded trial should carry more weight than a case report.

To help the reader judge the strength of each reference, pertinent information about the study, such as the type of study and the number of patients in the study is included in bold type following the references, where available. The most informative references cited in this paper, as determined by the authors, are noted by an asterisk (*) next to the number of the reference.

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CME Questions



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1. Which of the following statements about transgender and gender-diverse (TGD) children and adolescents is TRUE?
 - a. Transgender adolescents are a rare group of patients representing approximately 1 in 200,000 American adolescents.
 - b. Transgender adolescents are relatively common in the United States and Western Europe but are rarely present in developing nations.
 - c. Gender-affirming treatments are becoming more common but are widely considered to be experimental in nature.
 - d. About half of transgender Americans surveyed reported that they have had a negative experience in an emergency department (ED).
2. You are evaluating a 16-year-old transmasculine patient complaining of abdominal pain and vomiting. He states that he was kicked out of his house by his parents and is staying at different friends' apartments. He's interested in initiating hormone therapy but doesn't know how to access it. Which of the following statements is TRUE?
 - a. Discrimination against transgender individuals can create barriers to housing and employment, which can translate into lack of access to needed healthcare.
 - b. Most ED visits by transgender patients are due to complications of hormone therapy.
 - c. On average, transgender patients have higher socioeconomic status than the general population.
 - d. Due to widely available social benefit programs for transgender Americans, homelessness is relatively uncommon in this population.
3. Which of the following statements about gender identity is TRUE?
 - a. Gender identity may be fluid over the course of a person's lifetime.
 - b. There are 2 possible gender identities: male and female.
 - c. The term *transfeminine* refers to a person assigned female at birth who now has a male gender identity.
 - d. Current terminology for transgender identities has been endorsed by the World Transgender Consortium and is expected to be the correct terminology to use through 2025.

4. Which of the following statements accurately describes the timing of when a child may express gender dysphoria?
- In most cases, the earliest that children begin expressing a transgender identity is around age 12 to 14 years.
 - If a child has not expressed a transgender identity by age 10, they are very unlikely to develop a transgender identity at an older age.
 - Once an individual becomes a young adult, they will have determined their gender identity.
 - Children as young as 2.5 years may express gender dysphoria.
5. Which of the following statements about gender identity is TRUE?
- Gender identity is defined at birth based on physical examination and primary sex characteristics.
 - Only a licensed mental health professional can determine a patient's gender identity if it does not match their sex assigned at birth.
 - A person's gender identity does not predict their sexual orientation.
 - Transgender persons have a gender identity that is the opposite of their sex assigned at birth.
6. You receive a handoff from EMS personnel who bring you a 17-year-old patient complaining of knee pain after being tackled during high school football practice. You can see the patient is wearing a PE uniform, has long hair dyed purple, with colorful earrings and bracelets. The paramedic tells you, "He is a she, but his name is Tyler." What feedback should you give the EMS personnel?
- No feedback is necessary because the interactions with prehospital personnel have little to do with how the patient is treated in the ED.
 - Unless the EMS personnel are employed by the medical center, it would be inappropriate for you to correct them about the way they addressed the patient.
 - No feedback is necessary because most EMS personnel have received extensive training in the management of transgender patients.
 - You can help EMS personnel better understand how to care for TGD patients through direct feedback.
7. What is a good approach that can be used to signal to a transgender patient that you are a safe person to be open with?
- Ask the patient if they are transgender, and tell them that you have treated many transgender patients.
 - Introduce yourself, and ask the patient, "What is your name, and what pronouns do you use?"
 - Ask the patient what they prefer to be called.
 - Tell the patient that you must use their real name that matches their driver's license, but assure them that you are comfortable treating transgender patients.
8. You see a 16-year-old patient complaining of a painful rash on their chest. The patient reveals to you that they were assigned female at birth but identify as a transgender man. You see skin irritation around both breasts and suspect the patient may be binding. Which of the following describes an appropriate approach?
- Ask, "Are there any steps you are taking to align your body with your gender identity?"
 - It is not necessary to have a chaperone when you examine the patient's breasts, because they do not identify as female.
 - Say, "I see that you're binding your breasts—you should stop. It's dangerous, and you're hurting yourself."
 - There is no need for a pregnancy test before initiating doxycycline to treat purulent cellulitis in this patient.
9. You are treating a 20-year-old transgender woman who presents with left calf swelling. She tells you that she takes oral estrogen that she gets from a friend, and that she underwent orchiectomy 1 year ago. You confirm a deep vein thrombosis. Which of the following statements is TRUE?
- Appropriate dosing and formulation of estrogen may have avoided an increased risk of venous thromboembolism.
 - The patient's friend is probably giving them an appropriate dose of estrogen.
 - Orchiectomy does not affect the dosing of feminizing hormones.
 - Spironolactone would be needed for this patient.

10. Regarding gender-diverse patients, which of the following statements is accurate?

- The patient is at substantially decreased risk of suicide due to parental rejection of their gender identity.
- Children who exhibit gender diversity prior to puberty almost always persist into adulthood with their transgender identity.
- It is not the role of an emergency clinician to determine a child's gender. Emergency clinicians can help normalize exploration of gender identity and refer families to resources for support.
- If a minor tells you they are transgender but do not want their parents to know because they fear they would be kicked out of the house, you are required to notify the parents anyway.



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Date of Original Release: September 1, 2020. Date of most recent review: August 15, 2020.
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Needs Assessment: The need for this educational activity was determined by a survey of medical staff, including the editorial board of this publication; review of morbidity and mortality data from the CDC, AHA, NCHS, an ACEP; and evaluation of prior activities for emergency physicians.

Target Audience: This enduring material is designed for emergency medicine physicians, physician assistants, nurse practitioners, and residents.

Goals: Upon completion of this activity, you should be able to: (1) demonstrate medical decision-making based on the strongest clinical evidence; (2) cost-effectively diagnose and treat the most critical ED presentations; and (3) describe the most common medicolegal pitfalls for each topic covered.

CME Objectives: Upon completion of this activity, you should be able to: (1) discuss the terminology and health concerns surrounding transgender and gender-diverse (TGD) youth; (2) describe barriers to effective healthcare that are experienced by TGD youth; (3) describe an effective approach to emergency care for TGD youth; and (4) discuss the benefits and complications of gender-affirming therapies.

Discussion of Investigational Information: As part of the journal, faculty may be presenting investigational information about pharmaceutical products that is outside Food and Drug Administration approved labeling. Information presented as part of this activity is intended solely as continuing medical education and is not intended to promote off-label use of any pharmaceutical product.

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