Health Care for Transgender and Gender Diverse Individuals

ABSTRACT: An estimated 150,000 youth and 1.4 million adults living in the United States identify as transgender. This Committee Opinion offers guidance on providing inclusive and affirming care as well as clinical information on hormone therapy and preventive care; it also cites existing resources for those seeking information on the care of transgender adolescents. The social and economic marginalization of transgender individuals is widespread, which leads to health care inequities and poorer health outcomes for this population. To reduce the inequities experienced by the transgender community, the provision of inclusive health care is essential. Obstetrician–gynecologists should strive to make their offices open to and inclusive for all individuals and should seek out education to address health care disparities, both in their individual practices and in the larger health care system. In order to provide the best care for patients, it is useful to know which health care professionals to include in a referral network for primary care and to have many clinician and surgeon options given the many different therapies available and the different sites at which these therapies are offered. It is important to remember that although hormone therapy is a medically necessary treatment for many transgender individuals with gender dysphoria, not all transgender patients experience gender dysphoria and not everyone desires hormone treatment. Gender-affirming hormone therapy is not effective contraception. Sexually active individuals with retained gonads who do not wish to become pregnant or cause pregnancy in others should be counseled about the possibility of pregnancy if they are having sexual activity that involves sperm and oocytes. Although being knowledgeable about the medications used for gender transition and potential risks and side effects is important, specific certification for prescribing them is not required and should not be a limiting factor in helping patients access care.

Recommendations and Conclusions
The American College of Obstetricians and Gynecologists makes the following conclusions and recommendations regarding health care for transgender and gender diverse individuals:

- Obstetrician–gynecologists should make their offices inclusive and inviting to all individuals who need obstetric or gynecologic health care. They should take steps to educate themselves and their medical teams about appropriate language and the health care needs of transgender patients.
- Fertility and parenting desires should be discussed early in the process of transition, before the initiation of hormone therapy or gender affirmation surgery.
- Gender-affirming hormone therapy is not effective contraception. Sexually active individuals with retained gonads who do not wish to become pregnant...
or cause pregnancy in others should be counseled about the possibility of pregnancy if they are having sexual activity that involves sperm and oocytes.

- The majority of medications used for gender transition are common and can be safely prescribed by a wide variety of health care professionals with appropriate training and education, including, but not limited to, obstetrician–gynecologists, family or internal medicine physicians, endocrinologists, advanced practice clinicians, and psychiatrists.
- Hysterectomy with or without bilateral salpingo-oophorectomy is medically necessary for patients with gender dysphoria who desire this procedure.
- To guide preventive medical care, any anatomical structure present that warrants screening should be screened, regardless of gender identity.

**Background**

Transgender and gender diverse individuals face harassment, discrimination, and rejection within society. Lack of awareness, knowledge, and sensitivity as well as bias from health care professionals leads to inadequate access to, underuse of, and inequities within the health care system for transgender patients. Throughout this document, the term transgender will be used to refer to anyone who identifies as transgender, gender diverse, and genderqueer, while acknowledging that there are vast individual differences and variations in preferred terminology. (See Box 1 for related terminology and definitions.) This Committee Opinion provides guidance for obstetrician–gynecologists on both routine screening and transition care. Obstetrician–gynecologists should be aware of the unique needs of transgender individuals and be prepared to assist them with preventive health care, as well as have knowledge of hormone and surgical therapies. The American College of Obstetricians and Gynecologists opposes discrimination on the basis of gender identity, urges public and private health insurance plans to cover necessary services for individuals with gender dysphoria and advocates for inclusive, thoughtful, and affirming care for transgender individuals. Although there is some overlap in clinical and psychosocial care for adolescents and adults, there are some issues specific to adolescents. The American College of Obstetricians and Gynecologists supports the provision of appropriate and evidence-based care for transgender and gender diverse adolescents. For guidance on the medical and surgical care of transgender adolescents, see the World Professional Association for Transgender Health (1), the Endocrine Society (2), and the Pediatric Endocrine Society (3).

It is important for obstetrician–gynecologists and other health care professionals to be familiar with appropriate terminology when caring for patients. Transgender is a broad term used for people whose gender identity or gender expression differs from their assigned sex at birth. For the purposes of clarity, sex is

**Box 1. Terminology and Definitions**

Chestfeeding: Some masculine-identified individuals use this term to describe the act of feeding their child from their chest regardless of whether they have had chest surgery.

Cisgender: A term used to describe a person whose gender identity aligns with those typically associated with the sex assigned to them at birth.

Gender Identity: A person’s internal sense of self and how they fit into the world, from the perspective of gender.

Gender Dysphoria: Distress that accompanies the incongruence between one’s experienced and expressed gender and one’s assigned or natal gender.

Gender Expression: The outward manner in which individuals express or display their gender. This may include choices in clothing and hairstyle or speech and mannerisms. Gender identity and gender expression may differ; for example, a woman (transgender or cisgender) may have an androgynous appearance, or a man (transgender or cisgender) may have a feminine form of self-expression.

Transgender: A person whose gender identity differs from the sex that was assigned at birth. May be abbreviated to trans. A transgender man is someone with a male gender identity and a female birth assigned sex; a transgender woman is someone with a female gender identity and a male birth assigned sex. A non-transgender person may be referred to as cisgender (cis means same side in Latin).

Gender Nonconforming: A person whose gender identity differs from that which was assigned at birth, but may be more complex, fluid, multifaceted, or otherwise less clearly defined than a transgender person.

Genderqueer: Blurring the lines around gender identity and sexual orientation. Genderqueer individuals typically embrace a fluidity of gender identity and sometimes sexual orientation.

Nonbinary: Transgender or gender nonconforming person who identifies as neither male nor female.

Sex: Historically has referred to the sex assigned at birth, based on assessment of external genitalia, as well as chromosomes and gonads. In everyday language is often used interchangeably with gender, however there are differences, which become important in the context of transgender people.

Sexual Orientation: Describes sexual attraction only and is not directly related to gender identity. The sexual orientation of transgender people should be defined by the individual. It is often described based on the lived gender; a transgender woman attracted to other women would be a lesbian, and a transgender man attracted to other men would be a gay man.

Gender Fluidity: Having different gender identities at different times

(Continued)
Agender: “Without gender”; individuals identifying as having no gender identity

Gender Expansiveness: Conveys a wider, more flexible range of gender identity or expression than typically associated with the binary gender system

Transmasculine and Transfeminine: Terms to describe gender nonconforming or nonbinary persons, based on the directionality of their gender identity. A transmasculine person has a masculine spectrum gender identity, with the sex of male listed on their original birth certificate. A transfeminine person has a feminine spectrum gender identity, with the sex of male listed on their original birth certificate. In portions of these Guidelines, in the interest of brevity and clarity, transgender men or women are inclusive of gender nonconforming or nonbinary persons on the respective spectra.

They/Them/Their: Neutral pronouns used by some who have a nonbinary or nonconforming gender identity.

Transsexual: A more clinical term which had historically been used to describe those transgender people who sought medical intervention (hormones, surgery) for gender affirmation. This term is less commonly used in present day; however, some individuals and communities maintain a strong and affirmative connection to this term.

Cross Dresser/Drag Queen/Drag King: These terms generally refer to those who may wear the clothing of a gender that differs from the sex which they were assigned at birth for entertainment, self-expression, or sexual pleasure. Some cross dressers and people who dress in drag may exhibit an overlap with components of a transgender identity. The term transvestite is no longer used in the English language and is considered pejorative.


defined as the presence of specific anatomy or chromosomes. Gender is a social construct, made up of attitudes, feelings, and behaviors that a culture associates with either males or females; terminology often varies by geographic region, culture, and individual preference (4) (Box 1). Gender nonconformity is the extent to which a person’s gender identity, role, or expression differs from the cultural norms described for a specific sex (5). Sexual orientation refers to sexual attraction only and is separate from gender identity. It is important to differentiate these concepts and terms when caring for patients (Fig. 1).

An estimated 150,000 youth (aged 13–17 years) and 1.4 million adults (aged 18 years and older) living in the United States identify as transgender (6). Analysis of data collected on adults in 19 states by the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System found that 55% of transgender individuals identified as White, 16% identified as African American or Black, 21% identified as Latino or Hispanic, and 8% identified as another race or ethnicity (7). Although more data on the experiences and needs of the transgender community is now available, there are important gaps in the literature and additional research is needed.

The World Professional Association for Transgender Health (an international, multidisciplinary professional society representing the specialties of medicine, psychology, social sciences, and law) released the following statement in 2010: “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). Although a diagnosis of gender dysphoria as defined in the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, currently is the only way for many individuals to obtain insurance coverage for necessary services, many experts agree that gender dysphoria is not a psychological condition and does not necessarily belong in the Diagnostic and Statistical Manual of Mental Disorders (Box 2). Gender dysphoria can result in psychologic dysfunction, depression, suicidal ideation, and even death (9). It is important to remember that although some gender nonconforming people will experience gender dysphoria at some point in their lives, not all will; and for many, dysphoria is not persistent if appropriately addressed. The term “gender incongruence” is slated to replace “gender dysphoria” in the International Classification of Diseases, 11th edition.

The social and economic marginalization of transgender individuals is widespread, which leads to health care inequities and poorer health outcomes for this population. The 2015 National Transgender Discrimination Survey, comprised of 27,715 participants from throughout the United States who identified as transgender, trans, genderqueer, nonbinary, and other identities on the transgender identity spectrum, reported that 29% of respondents were currently living in poverty, compared with 14% of the general U.S. population (10). Thirty percent had experienced homelessness during their lifetime and 12% did so during the past year. Notably, homeless transgender individuals may be denied access to shelters or placed in inappropriate housing because of their gender; 26% of homeless
respondents reported avoiding shelters because of fear of being mistreated, and 70% of those using shelters reported some form of mistreatment. Additionally, 20% of respondents reported experience in sex work, drug sales, and other work currently criminalized (10).

To reduce the inequities experienced by the transgender community, the provision of inclusive health care is essential. Obstetrician–gynecologists should strive to make their offices open to and inclusive for all individuals and should seek out education to address health care disparities, both in their individual practices and in the larger health care system.

**Barriers to Health Care**

Transgender individuals face substantial barriers to accessing health care, including health care professionals’ bias and lack of general knowledge about best practices, as well as the failure of many health insurance plans to cover the cost of hormone therapy and supplies, mental health services, or gender affirmation surgery and restrictions on care imposed by prohibitive health care systems. One in four respondents to the Transgender Discrimination Survey had experienced insurance coverage obstacles, such as coverage denials for care related to gender transition or routine care. More than half (55%) had been denied coverage for transition-related surgery, and 25% were denied coverage for hormone therapy (10). These barriers exist despite evidence that such interventions are safe, effective, and medically necessary. The consequences of inadequate care are substantial. Providing accessible, inclusive, gender-affirming care helps to reduce barriers and allow more individuals to obtain the care they need.

Creating a safe and affirming health care environment for all patients, including transgender individuals, is essential. Transgender individuals face discrimination from health care professionals and staff. One-third of respondents reported having at least one negative experience in a health care office related to being transgender, such as being refused care or verbally harassed or having to teach the health care professional about transgender people in order to get appropriate care. In addition, some respondents have experienced physical or sexual abuse in this setting (10). Even higher rates of negative experiences were reported for transgender individuals with disabilities and American Indian, Middle Eastern, and multiracial transgender individuals. For instance, in 2015, 23% of the respondents did not see a doctor when they needed to because of fear of being mistreated as a transgender person.
Box 2. The American Psychiatric Association’s Diagnostic Criteria for Gender Dysphoria in Adolescents and Adults

A. A marked incongruence between one’s experienced/expressed gender and assigned gender, of at least 6 months’ duration, as manifested by at least two of the following:

1. A marked incongruence between one’s experienced/expressed gender and primary and/or secondary sex characteristics (or in young adolescents, the anticipated secondary sex characteristics).

2. A strong desire to be rid of one’s primary and/or secondary sex characteristics because of a marked incongruence with one’s experienced/expressed gender (or in young adolescents, a desire to prevent the development of the anticipated secondary sex characteristics).

3. A strong desire for the primary and/or secondary sex characteristics of the other gender.

4. A strong desire to be of the other gender (or some alternative gender different from one’s assigned gender).

5. A strong desire to be treated as the other gender (or some alternative gender different from one’s assigned gender).

6. A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one’s assigned gender).

B. The condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning.


(10). Individuals concerned about the way they may be treated by a health care professional are more likely to obtain hormones from friends or unlicensed sources, putting them at risk of inappropriate dosing and the subsequent sequelae. Accessing care from an obstetrician–gynecologist is specifically challenging because these offices have generally been very gendered, women-specific environments, which can be perceived and experienced as exclusive.

Creating an Inclusive Environment

Presenting to a health care office can be stressful and anxiety provoking for a transgender individual. Obstetrician–gynecologists and office staff can create an inclusive environment for transgender patients that will encourage patients to be forthcoming with their concerns and confident that they will be able to obtain the care that they need.

Steps to create a more inclusive environment include the following:

- Increase health care professional knowledge of and comfort with providing care for transgender and gender nonconforming individuals. This includes avoiding making assumptions about patients’ sexual orientation, sexual practices, and surgeries and being cognizant of what questions are appropriate (eg, is the question relevant to the care being provided?).
- Train and empower front desk staff, nursing staff, phone staff, billing staff, and others who interact with patients on appropriate ways to ask about names and pronouns (Box 3).
- Review the office space to ensure that images chosen for signage, educational materials, and artwork represent all individuals who may seek health care services.
- Ask all patients what pronouns they use (Box 3).
- Clearly post a sign with the office’s nondiscrimination policy.
- Ensure that at least one restroom is gender neutral and accessible to all patients.
- Use patient forms that include check boxes for all gender and sexual orientation options, include blanks for patients to write in their responses, or both. Both the Institute of Medicine (now the National Academies of Sciences, Engineering, and Medicine [11]) and the Joint Commission (12) recommend collection of sexual orientation and gender identity data. Studies demonstrate that patients want to be asked these questions because they feel it is important for their health care professionals to have this information (13).

Box 3. Pronouns

Obstetrician–gynecologists should ask patients about their name and which pronouns they use. Asking all patients routinely for their gender identity and gender pronouns normalizes the interaction and allows patients to disclose without being targeted; good practice includes reciprocal disclosure (eg, “Hello, I am Dr. X and I use she/her pronouns. Is the name on your chart what you would like me to call you? What pronouns do you use?”).

The patient’s pronouns should be documented in the patient chart.

Common choices include (note: this is not an exhaustive list):

- She/her/hers
- He/him/his
- They/them/their: Neutral pronouns used by some who have a nonbinary or diverse gender identity.

Other gender-neutral pronouns include zie (ze) or hir.
• Create a system where names used by patients (if other than their legal names), gender markers (eg, on medical charts), and pronouns are used for every patient every time.
• Examine the electronic health record system available in offices and hospitals to determine a universal process to ease the communication process for all staff. The Fenway Institute has an excellent resource to guide this process. (14). The patient’s name, if different from the individual’s legal name, and pronouns used should be noted in the electronic health record.
• Train employees how to apologize for mistakes if they happen.

Gender Transition
Each individual patient will desire different outcomes. Not all patients will want hormone therapy, and not everyone will desire surgery. Some transmasculine patients may desire only masculinizing chest surgery, and other patients will desire hysterectomy and phalloplasty in addition to chest surgery. Medication and surgery are not required parts of transition and should not be required for legally changing one’s name or gender marker on official documents (eg, birth certificate, passport, driver’s license). Legal transition will vary depending on state laws. Some patients may request letters of support for changing their name or sex on legal documents, and these should be provided. It is important to remember that although hormone therapy is a medically necessary treatment for many transgender individuals with gender dysphoria, not all transgender patients experience gender dysphoria and not everyone desires hormone treatment.

Historically, a referral letter from a mental health professional was required before initiating a patient’s gender-affirming hormone therapy. However, current consensus is that an informed consent process without a separate letter from a mental health care professional is more than adequate for initiating therapy for those patients who wish to medically transition. The majority of medications used for gender transition are common and can be safely prescribed by a wide variety of health care professionals with appropriate training and education, including, but not limited to, obstetrician-gynecologists, family or internal medicine physicians, endocrinologists, advanced practice clinicians, and psychiatrists. Although being knowledgeable about the medications used for gender transition and potential risks and side effects is important, specific certification for prescribing them is not required and should not be a limiting factor in helping patients access care. Standards of Care (SOC) for the Health of Transsexual, Transgender, and Gender Nonconforming People, published by the World Professional Association for Transgender Health, is an important resource for health care professionals working with transgender patients (15).

Fertility, Pregnancy, Contraception, and Abortion
Health care professionals’ knowledge and awareness about reproductive options need improvement. Pregnancies are possible after transitioning, and perhaps, most important, contraceptive counseling is crucial to prevent undesired pregnancies. Fertility and parenting desires should be discussed early in the process of transition, before the initiation of hormone therapy or gender affirmation surgery. Fertility preservation options for transgender individuals are the same as for those cisgender individuals who desire preservation before gonadotoxic cancer therapy or for elective preservation. These options include sperm banking, oocyte preservation, embryo preservation, and in some cases, ovarian or testicular tissue cryopreservation. In addition to the expected pregnancy outcomes with these procedures, patients should be informed of the potential for out-of-pocket costs, which vary by state and insurance coverage.

Transmasculine Individuals
Transmasculine individuals taking testosterone who desire biologically related children may safely achieve pregnancy after the cessation of testosterone. Whether they choose insemination from partner or donor sperm and carry a pregnancy themselves or in vitro fertilization with embryo transfer to a partner or surrogate, transgender masculine individuals have many options for facilitating pregnancy. A 2013 survey of 41 transgender men who experienced pregnancy after transitioning found that two-thirds had used testosterone before pregnancy, with 81% using their own oocytes. Many of the respondents became pregnant within 4 months of stopping testosterone therapy and 32% of these pregnancies were unintended (16). As with cisgender patients, obstetrician–gynecologists should discuss pregnancy intention and prepregnancy health, if appropriate, with transgender patients. The Society of Family Planning provides guidance on contraceptive counseling for transgender and gender diverse people who were assigned female sex at birth (17). Given that contraception can be underutilized in this population because of concerns about adverse effects or access to care, undesired pregnancy is a substantial concern. Abortion access is a critical component to comprehensive reproductive health care for transgender individuals. The 2013 survey also demonstrated that patients experienced low levels of health care professional awareness and knowledge of the needs of transgender individuals (16).

Obstetrician–gynecologists and other health care professionals who care for transmasculine individuals during pregnancy should keep in mind that pregnancy is a gendered experience and pregnancy may trigger feelings of dysphoria or isolation for some patients (18). In addition, some postpartum transgender individuals may not identify as “mothers;” thus, obstetrician–gynecologists and other health care professionals
Many patients will choose hormonal intrauterine device, to add estrogen to their system; however, little change is seen with estrogen-containing methods because they do not want to conceive. Many transmasculine patients prefer to avoid disruption with cabergoline can be discussed with those individuals.

Transfeminine Individuals
For those transfeminine individuals preferring to retain their gonads, some may need to use assisted reproductive technologies to achieve pregnancy and others may have return of fertility within months of ceasing hormone therapy. For transfeminine individuals wishing to use their sperm for a pregnancy in a partner or surrogate, some data indicate that long-term estrogen exposure may be associated with testicular damage (20); however, discontinuing hormones for a few months may lead to the return of normal sperm counts. It is best practice to encourage sperm banking before initiation of hormones. Transfeminine individuals who wish to breastfeed may have success with induction of lactation using modifications to the Newman-Goldfarb method (21). A 2018 case report described a transgender woman successfully inducing lactation and continuing breastfeeding at 6 months follow-up (22).

Contraception
Gender-affirming hormone therapy is not effective contraception. Sexually active individuals with retained gonads who do not wish to become pregnant or cause pregnancy in others should be counseled about the possibility of pregnancy if they are having sexual activity that involves sperm and oocytes. Transmasculine individuals should be counseled that lack of menses does not mean they are unable to conceive. All patients should be counseled on barrier use for prevention of sexually transmitted infections. For transmasculine individuals interested in hormonal contraception, testosterone is not a specific contraindication to using any form of contraception. Many transmasculine patients prefer to avoid estrogen-containing methods because they do not want to add estrogen to their system; however, little change is seen in masculinization when these methods are used. Many patients will choose hormonal intrauterine device, contraceptive implant or, depot medroxyprogesterone acetate injection.

Medical Transition
Identifying the patient’s goals before initiating masculinizing or feminizing hormone therapy is important. Hormone therapy can be provided in the office, and obstetrician–gynecologists can broaden their skill sets by educating themselves on the provision of transition care. For more details on the provision of hormone therapy for these populations, obstetrician–gynecologists should see resources from the World Professional Association for Transgender Health (8) and the Endocrine Society (20).

Masculinizing Therapy
For many patients, goals of masculinization therapy will include the development of facial hair, deepening of the voice, and increasing body hair and muscle mass. Other effects of masculinizing hormone therapy include the redistribution of subcutaneous fat, change in sweat and odor patterns, and hairline recession, including possible male pattern baldness. Patients also may experience increased libido, cessation of menses, vaginal atrophy, and increased clitoral size. Although testosterone generally causes temporary, and possibly permanent, decreased fertility, discussion about the possibility of continued ovulation is important for those patients with sexual practices that leave them with the potential for pregnancy. Patients should be counseled on current contraception options and their future reproductive life plan. The only absolute contraindications to masculinizing hormone therapy are current pregnancy, unstable coronary artery disease, and polycythemia (hematocrit greater than 55%) (15). Lipid profiles should be monitored in transmasculine patients receiving testosterone therapy (23). High-density lipoprotein levels decrease and triglycerides increase in transmasculine individuals receiving testosterone therapy. Studies have not shown an increased risk of cardiovascular events despite these adverse changes in the lipid profile.

There are many testosterone preparations available in the United States, including injectables, gels, creams, patches, and implantable pellets. Injectable testosterone cypionate is most commonly used subcutaneously, which allows for use of a smaller, less painful needle, but other formulations may be used based on patient preferences or adverse effects. Target ranges for testosterone levels are in the normal physiologic male range (typically 320–1,000 ng/dL) (20). See Table 1 for details on formulations and dosing. In addition to standard health care screening, it is recommended that testosterone levels and hematocrit be monitored every 3 months for the first year and then once or twice a year thereafter.

Patients should be counseled that menses likely will cease within a few months after initiating hormone therapy. If bleeding continues, the obstetrician–gynecologist may consider adding progesterone therapy to facilitate
Cyproterone is not available in the United States because characteristics and the amount of estrogen needed (15).

Testosterone levels, which will decrease masculine characteristics after the addition of estrogen. Patients should be counseled to decrease risk factors for hepatotoxicity. Gonadotropin-releasing hormone agonists are often expensive, so are not widely used. Spironolactone, which directly inhibits secretion of testosterone and androgen receptor binding, is the most commonly used antiandrogen in the United States. Because of the risk of hyperkalemia with these medications, it is important to monitor patients’ blood pressure and potassium levels (23).

Although currently available data do not provide clear guidance on titration of dosing, it generally should be based on patient goals. Doses should be titrated to physiologic effects, while adjusting estrogen and antiandrogen dosing until in female physiologic range; then, dosing can be modified to focus on further increasing androgen blocking. The goals are to maintain estradiol levels at the mean daily levels for premenopausal women (less than 200 ng/ml) and testosterone in female range (less than 55 ng/dl) (20). Progestins may increase breast development as well as improve libido and mood in some patients. Recommended laboratory surveillance includes estradiol and total testosterone levels, sex hormone binding globulin, and albumin levels every 3 months in the first year to titrate estrogen dosing. After the first year, laboratory tests are necessary only if there are patient or health care professional concerns about adverse effects or after a change in dosage. Patients taking spironolactone also should be tested for potassium and creatinine levels every 3 months for first year and then yearly.

Notably, feminizing hormones do not result in substantial changes to voice. Vocal pitch is secondary to the size and mass of folds of the vocal cords, which are not reversed by the addition of estrogen. Patients with concerns that their voice is incongruent with their gender can be referred to a speech language pathologist who has specific training in this area. If speech therapy does not adequately help, surgical procedures can be considered.

<table>
<thead>
<tr>
<th>Route</th>
<th>Formulation</th>
<th>Dosage</th>
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<tbody>
<tr>
<td>Oral†</td>
<td>Testosterone undecanoate</td>
<td>160–240 mg/day</td>
</tr>
<tr>
<td>Parental (subcutaneous, intramuscular)</td>
<td>Testosterone enanthate, cypionate</td>
<td>50–200 mg/week 100–200 mg/10–14 days</td>
</tr>
<tr>
<td>Implant (subcutaneous)</td>
<td>Testosterone pellets, 75 mg</td>
<td>75 mg/pellet</td>
</tr>
<tr>
<td>Transdermal</td>
<td>Testosterone gel (1%)</td>
<td>2.5–10 g/day</td>
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<tr>
<td></td>
<td>Testosterone patch</td>
<td>2.5–7.5 mg/day</td>
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*Dosages should be individualized according to the needs, preferences, and potential contraindications for each patient. Health care professionals also should have knowledge about generics and what medications will be covered by different payers.

†Requires participation in manufacturer monitored program.

Surgical Transition
Some of the surgical procedures described here may not be considered within the scope of practice for an obstetrician–gynecologist, but this section may provide education for clinicians who care for transgender patients before and after surgery. As with any surgical procedure, the quality of care provided before, during, and after surgery greatly affects patient outcomes. Many insurance companies that cover gender affirmation procedures will require a mental health assessment letter before authorization for surgery. Box 4 provides an overview of surgical procedures. For additional information on postoperative care for patients who have had gender-affirming surgery, obstetrician–gynecologists can see resources from the University of San Francisco’s Center of Excellence for Transgender Health (4).

Masculinizing Surgery
Transmasculine individuals may choose chest reconstruction, hysterectomy with or without salpingo-oophorectomy, or metoidioplasty, phalloplasty, or both. The U.S. Transgender Survey reported that the majority (97%) of patients had or wanted masculinizing chest surgery; similarly, a majority (79%) of patients had undergone or wanted a hysterectomy. When asked about genital surgeries, only 4% had had metoidioplasty and 53% wanted the procedure in the future; for phalloplasty, 2% had had the procedure and 27% desired it in the future (10). The lower percentage of patients wanting these surgeries is likely multifactorial; limited insurance coverage is one issue. Masculinizing chest surgery, sometimes referred to as “top surgery,” generally includes a subcutaneous mastectomy and recontouring to develop a masculine-appearing chest. Factors such as surgeon

**Table 2. Hormone Preparations and Dosage: Feminizing Hormone Therapy**

<table>
<thead>
<tr>
<th>Route</th>
<th>Formulation</th>
<th>Dosage</th>
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<tbody>
<tr>
<td>Oral</td>
<td>Estradiol</td>
<td>2–4 mg daily</td>
</tr>
<tr>
<td>Parental (subcutaneous, intramuscular)</td>
<td>Estradiol valerate</td>
<td>5–30 mg every 2 weeks</td>
</tr>
<tr>
<td>Transdermal</td>
<td>Estradiol</td>
<td>0.1–0.4 mg twice weekly</td>
</tr>
<tr>
<td>Antiandrogens</td>
<td>Progesterone</td>
<td>20–60 mg by mouth daily</td>
</tr>
<tr>
<td></td>
<td>Medroxyprogesterone acetate</td>
<td>150 mg intramuscularly every 3 months</td>
</tr>
<tr>
<td></td>
<td>GnRH agonist (leuprolide)</td>
<td>3.75–7.5 mg intramuscularly monthly</td>
</tr>
<tr>
<td></td>
<td>Histrelin implant</td>
<td>50 mg implanted every 12 months</td>
</tr>
<tr>
<td></td>
<td>Spironolactone</td>
<td>100–200 mg by mouth daily</td>
</tr>
<tr>
<td></td>
<td>Finasteride</td>
<td>1 mg by mouth daily</td>
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</tbody>
</table>

*Dosages should be individualized according to the needs, preferences, and potential contraindications for each patient. Health care professionals also should have knowledge about generics and what medications will be covered by different payers.

Abbreviation: GnRH, gonadotropin-releasing hormone.


**Box 4. Surgical Procedures for Transgender Individuals**

**Masculinizing Surgical Procedures May Include the Following:**
- Breast or chest surgery: subcutaneous mastectomy, creation of a male chest
- Genital surgery: hysterectomy with or without salpingo-oophorectomy, reconstruction of the fixed part of the urethra, which can be combined with a metoidioplasty or with a phalloplasty (employing a pedicled or free vascularized flap), vaginectomy, scrotoplasty, and implantation of erection or testicular prostheses
- Nongenital, nonbreast surgical interventions: voice surgery (rare), liposuction, lipofilling, pectoral implants, and various aesthetic procedures

**Feminizing Surgical Procedures May Include the Following:**
- Breast or chest surgery: augmentation mammoplasty (implants/lipofilling)
- Genital surgery: penectomy, orchiectomy, vaginoplasty, clitoroplasty, vulvoplasty
- Nongenital, nonbreast surgical interventions: facial feminization surgery, liposuction, lipofilling, voice surgery, thyroid cartilage reduction, gluteal augmentation (implants/lipofilling), hair reconstruction, and various aesthetic procedures

expertise, body habitus, skin quality, and breast shape and size will influence the surgical approach.

Metoidioplasty to create a neophallus is generally chosen by patients who want genital surgery but are not interested in phalloplasty. Metoidioplasty involves releasing the clitoris, lengthening the urethra to the tip of the phallus, and covering the phallus with neighboring skin. It is possible to have concurrent vaginectomy and scrotoplasty. Patients who choose urethral lengthening will be able to void when standing if they are close to ideal body weight. If a patient desires scrotoplasty, rotational flaps of the labia majora are used to place the scrotum in an anatomic male position. Implants can be placed approximately 6 months later. Phalloplasty generally takes tissue from a donor site, which is shaped into a phallus, allowing for later penile implant to facilitate penetrative intercourse. Most commonly, tissue is taken from the radial forearm, latissimus dorsi, or anterolateral thigh. The decision on the location of the tissue donor site is based on surgeon technique and desired patient outcomes.

Hysterectomy with or without bilateral salpingo-oophorectomy is medically necessary for patients with gender dysphoria who desire this procedure. The route of hysterectomy should be based on clinical findings as well as surgeon and patient preference. Although vaginal hysterectomy will allow for recovery without abdominal scarring, some surgeons may find it to be technically difficult given likely lack of uterine descent and severe vaginal atrophy with a narrow introitus; however, it can be accomplished if desired (24). A genital examination may be challenging and worsen dysphoria for some patients. In these cases, it may be appropriate to conduct the examination under anesthesia before initiating the surgical procedure. Whether the ovaries are removed at the time of hysterectomy will be informed by the patient’s fertility desires, long-term plans for hormonal use, and personal preferences and should be considered within a shared decision-making model. Patients should be offered consultation with a fertility specialist before surgical removal of ovaries. Counseling about bone health and cardiovascular protection is challenging because of limited data. Testosterone may have an anabolic effect on cortical bone, and if provided in adequate doses will prevent bone demineralization. No studies have found an increase in the occurrence of cardiovascular events in transmasculine individuals (23), so unless the patient is planning to stop taking testosterone in the future, it is unlikely that the ovaries are necessary to maintain bone or cardiovascular health. More research is needed in this area. Notably while some patients may not plan to stop testosterone, they may do so because of issues such as lack of access. Engaging in shared decision making and counseling regarding the risks and benefits of ovarian preservation before hysterectomy is important.

**Feminizing Surgery**

Although desire for surgical transition varies depending on the individual, the U.S. Transgender Survey reported that 74% of respondents had either undergone breast augmentation or wanted it in the future. One quarter had undergone orchiectomy and 61% desired it in the future; 87% had undergone vaginoplasty or wanted to do so in the future (10). Potential procedures for transfeminine individuals include breast augmentation, orchiectomy, vaginoplasty, and facial feminization surgeries. It generally is recommended that patients wait at least 6 months after initiating feminizing hormone therapy before undergoing breast augmentation; other experts suggest waiting 2–3 years to maximize hormonal effects (4). Breast augmentation typically is performed with implants, either subglandular or subpectoral depending on a patient’s body habitus and desire.

Vaginoplasty involves penile inversion and the creation of a vaginal vault between the rectum and urethra. The vagina is lined with penile skin and labia are created using scrotal skin after orchiectomy is completed. The glans penis is used to create the clitoris. If there is not enough skin available to provide adequate depth, a skin graft is performed. Preoperative electrolysis of the scrotum is recommended to prevent hair from growing in the neovagina.

Successful recovery from this procedure requires patient commitment to a dilation regimen (up to three times per day) to maintain depth and width of the neovagina. Given the limited number of centers providing these procedures, it is not uncommon for a patient to present to their local obstetrician–gynecologist for ongoing postoperative care. The vagina is lined by skin, not mucosa; therefore, it will not lubricate naturally. For patients who are struggling with dilation, they should be counseled to increase the amount of lubricant used and to consider using a smaller-sized dilator to allow for more frequent and deeper dilation; patients can then gradually increase the size of the dilator. Individuals with persistent pain or discomfort with dilation may benefit from a referral to a pelvic floor physical therapist. For individuals presenting with vaginal discharge and odor, sources are most likely sebum, dead skin, or retained semen or lubricant. Those patients should be counseled to clean or douche with soap and water; the addition of vinegar may be considered if strong odor is noted. Patients may present with bleeding or discharge consistent with granulation tissue; this often can be easily treated with silver nitrate.

**Cancer Screening**

There are insufficient data to determine whether transfeminine individuals are at increased risk of malignancy compared with the general population. To guide preventive medical care, any anatomical structure present that warrants screening should be screened regardless of gender identity. It may be useful to comprehensively...
label laboratory specimens (eg, "male with cervix") to ensure they are appropriately processed.

**Transmasculine Individuals**

For transmasculine individuals, screening includes breast cancer screening for patients who have breast tissue and cervical cancer screening for those who have a cervix. Before ceasing breast cancer screening, it is important to review operative reports to ensure that mastectomy was performed and not just breast reduction. For those individuals who have undergone mastectomy and reconstruction, there are limited data to support clinical chest examinations in the absence of patient concern (4). The American College of Obstetricians and Gynecologists recommends genetic counseling before surgery for those with a personal or family history of breast cancer or ovarian cancer (25).

Cervical cancer screening should be performed according to age-related guidelines (26–28). Self-collected human papillomavirus (HPV) specimens may be appropriate for those patients who otherwise may not access screening or for whom speculum insertion may be physically difficult or emotionally traumatic; though, to date, there is no patient-collected HPV test approved by the U.S. Food and Drug Administration. Atrophy secondary to testosterone may be a 10-fold higher rate of unsatisfactory Pap tests (samples that cannot be evaluated by the laboratory due to a lack of sufficient cells or obscuring factors such as blood) compared with cisgender individuals (29). A 2018 study of transmasculine patients aged 21–64 years reported a high patient preference for self-collected vaginal HPV swabs (greater than 90% preference over swabs collected by health care professionals) and accurate self-collected results consistent with previous studies in cisgender female patients. There was a 71.4% concordance of self-collected samples compared with samples collected by health care professionals (15 of 21 cases detected) (30).

Similar to cisgender women, routine screening for endometrial cancer is not recommended for transmasculine individuals who still have a uterus. Although for transmasculine individuals there is a theoretical concern for increased risk of hyperplasia or malignancy because of the aromatization of exogenous testosterone to estrogen with anovulation leading to unopposed estrogen, there are no data to support this. In fact, most studies demonstrate that the endometrium is atrophic secondary to testosterone use. Therefore, on the basis of limited data, recommendations for screening for endometrial cancer for transmasculine individuals are no different than for cisgender women. Additionally, evaluation of transmasculine individuals with abnormal uterine bleeding are the same as those for cisgender women (31).

**Transfeminine Individuals**

A neovagina does not require routine cytologic screening. Prostate cancer screening for transfeminine individuals should follow the recommendations for cisgender men (32). Although there are some case reports of prostate cancer in transfeminine individuals, most of these were in individuals who started hormone therapy after 50 years of age; these individuals likely had preexisting lesions before initiating hormone therapy (33). It is likely that transfeminine individuals have a lower risk of breast cancer than cisgender women. A retrospective study of Dutch transfeminine individuals found an estimated breast cancer incidence of 4.1 in 100,000 person-years in comparison with 155 in 100,000 person-years in the cisgender female population (34). This decreased risk is likely because of a substantially decreased length of lifetime exposure to estrogen. However, it is notable that a study of 50 transfeminine individuals found 60% had dense or very dense breasts on mammography, leading to increased rates of false-negative mammogram results (35). General consensus is that screening should begin after 50 years of age and a minimum of 5 years of feminizing hormone use, with a health care professional-patient discussion about the potential harms of over screening (4).

**Additional Considerations for Preventive Care**

As for all patients, transgender individuals should be counseled about the importance of routine preventive health care. All individuals should be routinely screened for intimate partner violence, depression, substance use, cancer, and other health care needs and should be screened for sexually transmitted infections and counseled about appropriate immunizations based on age and risk factors, including HPV vaccination. As with the general population, screening for intimate partner violence in transgender patients is important and should be performed. A 2017 study found a higher report rate of intimate partner violence in transfeminine individuals (12.1%) when compared with cisgender women (2.7%), transmasculine individuals (6.6%), nonbinary individuals (8.2%), and transgender or gender diverse individuals who did not report a gender identity (9.1%) (36). Screening for mental health issues should be part of standard practice. Forty percent of transgender individuals have attempted suicide at some point during their lifetime (10).

Obstetrician–gynecologists should take a careful and thoughtful medical, family, and surgical history for all patients. Risk assessment for sexually transmitted infections should be based on a patient’s behaviors and present anatomy. When performing the physical examination, it is important to remember that patients may have had traumatic examinations in the past. Self-collected vaginal and rectal swabs as well as the option for urine specimens may be appropriate alternatives to physical examination. Obstetrician–gynecologists should follow guidance for transgender individuals in the Centers for Disease Control and Prevention’s 2015 STD Treatment Guidelines.
endorsed by the American College of Obstetricians and Gynecologists (37). Screening for human immunodeficiency virus (HIV) in at-risk individuals is of high importance. Among those respondents to the Transgender Discrimination Survey, 1.4% were living with HIV; this is five times higher than the rate of the general U.S. population. The rate in transfeminine individuals was 3.4%, and 19% of Black transfeminine individuals reported living with HIV (10). Obstetrician–gynecologists should counsel patients at high risk of HIV infection on safer sex practices and other prevention methods, as well as the option of preexposure prophylaxis (38).

**Conclusion**

Accessing health care as a transgender individual often is challenging. Obstetrician–gynecologists may provide comprehensive care for transgender patients at various times in their lives. Obstetrician–gynecologists should make their offices inclusive and inviting to all individuals who need obstetric or gynecologic health care. They should take steps to educate themselves and their medical teams about appropriate language and the health care needs of transgender patients. Putting the patient in the role of educator of the health care professional diminishes the patient–physician relationship. In order to provide the best care for patients, it is useful to know which health care professionals to include in a referral network for primary care and to have many clinician and surgeon options given the many different therapies available and the different sites at which these therapies are offered. Connecting with trans-friendly colleagues is a way to expand access to care for the transgender individuals in the community.

**References**


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