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# *Providing Care to Transgender Persons: A Clinical Approach to Primary Care, Hormones, and HIV Management*

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*Transgender (TG) persons have had historically difficult interactions with health care providers, leading to limited care and risks for a broad spectrum of health problems. This is of particular concern for TG persons with or at risk for HIV infection. This article discusses care providers' roles in establishing TG-friendly clinical care sites; conducting appropriate and thorough physical examinations for TG patients; managing hormones, especially in conjunction with antiretroviral therapy; and engaging TG persons in education about prevention and treatment of HIV.*

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**T**ransgender (TG) persons are presenting in growing numbers to clinical settings for primary care, hormone therapy, and treatment of HIV. TG people are a poorly understood, frequently invisible, and high-risk population, and many health care providers find it difficult to care for them because of a lack of formal training and few professional resources. TG people need routine care as well as care for concerns specific to TG people. Additionally, some TG persons are at risk for or have already been infected with HIV. Although there is a paucity of solid clinical evidence on which to base medical decisions for TG patients, clinicians are required to proceed as best as possible. This article will provide information

on how to (a) establish a TG-friendly practice, (b) conduct a thorough physical examination, (c) provide clinical management for hormones, and (d) educate TG persons about prevention and treatment of HIV.

## **Background**

TG persons suffer from discrimination and inequities that may directly affect their overall health status and increase risks for specific health problems, including HIV infection (Herbst et al. 2008; Kenagy & Hsieh, 2005). TG persons may experience rejection, ridicule, and alienation from their families, employers, and coworkers, as well as discrimination in religious, military, education, and health care institutions. Living a marginalized existence can lead to problems, including depression, unemployment, loss of health insurance, victimization through hate crimes and violence (Lombardi, Wilchins, Priesing, & Malouf, 2001), and suicide.

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Disclosure: This article contains graphic language and content. JANAC's editorial staff understands that HIV infection is related to sexual activities and drug use, and we believe that these topics deserve frank and sometimes-explicit discussions. We are dedicated to preserving the integrity of the HIV-related work of our authors in all areas of concern.

TG persons are more likely to become homeless at a young age and to experience hate crimes in school (Gay, Lesbian, and Straight Education Network, 2008). TG teens are particularly vulnerable and are at higher risk of attempting suicide (Garofalo, Deleon, Osmer, Doll, & Harper, 2006).

TG persons are more likely to engage in risky behaviors such as unprotected sex and substance use (Nuttbrock et al., 2009). These behaviors may be even more common because of the need for acceptance and approval from others (Kammerer, Mason, Connors, & Durkee, 2001), leading to less negotiation for safer sex and increased risks of acquiring sexually transmitted diseases (STDs), especially if the TG person prefers sexual activity with biologic males.

Because of complex psychosocial factors, TG persons may delay or avoid seeking health care (Kaufman, 2008). When TG patients do present for care, clinicians must establish trust and provide medically appropriate care that protects the client's dignity.

### Creating a Transgender-Friendly Practice

Creating a TG-friendly practice environment is important. Forms should include *transgender* and *other* as options in addition to male and female. At least one restroom should be generically labeled as *unisex* or *restroom* to avoid the dreaded bathroom problem (Kaufman, 2008). A safe and friendly clinical practice gives the client the good first impression needed to establish a professional relationship.

### History Taking

A health history and risk assessment should be obtained to determine potential problems and identify areas that may require patient education. The use of gender appropriate language is essential, and is a powerful and clear indication of the clinician's ability and sensitivity. Providers should ask the client for their preferred name and pronoun (Dutton, Koenig, & Fennie, 2008). For example, James Smith may ask to be called Margaret, her chosen name, and Ericka Williams may prefer to be addressed as Eric or Mr. Williams.

Some basic questions that can be used to initiate this process (Feldman, 2008) are as follows. Do you identify more as male or female? Is your identity always male (or female) or is it fluid? When did you start to realize that your body did not match your identity? Have you ever taken hormones? Have you experienced rejection or violence because of transitioning? Have you worked in the sex industry or traded sex for drugs? Do you use needles to inject hormones, silicone, narcotics, or other drugs? Do you use needles for tattoos or other cosmetic purposes?

### Taking a Sexual Health History

When obtaining a sexual health history, the provider should ask about sexual behaviors, the use of condoms, and preferred sex partners (female or male or both), as TG persons may be gay, straight, or bisexual (Bockting, Benner, & Coleman, 2009). The provider should ask whether the client has had unprotected receptive intercourse with biologic males. Remember that not all TG persons engage in risky behaviors: They may be in stable, monogamous relationships with uninfected persons, not be sexually active, or use condoms consistently and reliably. Behavior is the important thing to assess. For example, if a transwoman (male-to-female, a TW) prefers male partners (i.e., a heterosexual TW) and engages in unprotected receptive vaginal or anal sex with a biologic male partner, unprotected sex is the risk factor not the fact that she is a TW. Similarly, if a transman (TM) prefers sex with men (i.e., a gay TM) and is the receptive partner in unprotected intercourse with a biologic male, he is at risk for HIV. TM who prefer female partners (heterosexual TMs) and TW who prefer sex with female partners (lesbian TWs) have lower HIV risks. The highest risk is being the receptive partner during unprotected sex with a biologic male who ejaculates internally (Varghese, Maher, Peterman, Branson, & Steketee, 2002).

The details are in the anatomy. For example, a TW who has not had surgery and still has a functioning penis could pass HIV to her partner if the sex act was such that her partner received semen in unprotected intercourse. What needs to be known is: Who is HIV positive? Who has a penis? Can the penis

ejaculate? (Ejaculation is not biologically possible for a TM, but may be possible for a TW who has not had lower surgery). Is the penis inserted vaginally or anally? Is there a condom on the penis? Obtaining an accurate and detailed sexual history allows the health care provider to offer safer sex recommendations that are specific, appropriate, and useful.

### Taking a Mental Health History

Providers should determine if the client has seen a mental health provider (MHP) about gender issues. Many TG people experience frustration, self-hatred, social isolation, and depression as they uncover their identities and pursue transition. It can be a painful and lonely path, with rejection and loss of family and friends. An experienced MHP can help TG persons navigate anticipated difficulties; develop plans for disclosure to family, friends, and colleagues; and negotiate legal issues such as changing drivers' licenses and birth certificates.

MHPs can help determine readiness for hormones. Clients need to have realistic expectations about what hormones can and cannot do and potential benefits and side effects of hormone therapy (Meyer et al., 2001). Some clinicians require a letter from an MHP supporting a diagnosis of gender identity disorder, readiness for hormones, and psychological and cognitive ability to provide informed consent. Some providers also require *real life experience* (i.e., having the client live as the preferred gender for 3-12 months) before recommending hormones or gender confirming surgery. Other providers think these recommendations are patronizing double standards because nontransgender people who request cosmetic alterations to their bodies are not required to take these steps.

Determination of hormone readiness is sometimes difficult. The provider may decide not to prescribe hormones based on MHP recommendations. For instance, an MHP may determine that a TG person has a confounding major psychiatric illness (such as paranoid schizophrenia with delusions) and suggest that hormone therapy is currently inappropriate. The lack of a prescription for hormones may not, however, prevent clients from seeking drugs from other, less safe, sources such as the Internet, friends, acquaintances, or drug dealers.

### Examination

Many TG persons have not had a complete physical examination for years because they were embarrassed or thought that the provider was not qualified, uncomfortable, or judgmental. Alternately, the patient may not have been examined because the provider did not offer an exam, felt uneasy, or was ill-prepared. Clinicians should determine when the client last had a complete physical exam, including chest and genitalia. Use gender-neutral words such as chest and genitals, and avoid terms such as breast or testicular exam, which may be offensive to individuals with ambivalent feelings about incongruent anatomy. A routine physical examination can cause anxiety for any patient, but may be particularly stressful for TG persons who may not be at-one with their genitalia (Feldman, 2008). TG persons may also be uneasy about physical changes caused by hormones, surgical scars, and disfigurement from other body altering techniques.

Findings during physical examination of TG individuals can vary tremendously. A history of hormone use and surgical procedures can partially predict findings, but any variety or combination of findings is possible. TW may present in female attire, yet be entirely biologically male. TM may present in masculine attire with a beard and mustache, yet have full figured breasts and biologic female genitalia. Even without hormones, female voice intonation may be present in TW, and male intonation may be present in TM because of speech and language therapy (Royal College of Psychiatrists, 2006).

Some nonoperative TG persons do not desire surgery, whereas others would like surgery but cannot afford it. Although many TG persons report high levels of satisfaction after gender-affirming surgery (Nelson, Whallett, & McGregor, 2009), do not assume that this is the goal of every patient.

### TW Examination: No Hormones, No Surgery

Thorough examination of preoperative or nonoperative TW may reveal extraordinarily smooth skin on the face, neck, chest, genitalia, and extremities due to electrolysis (Schroeter, Groenewegen, Reineke, & Neumann, 2003), but other skin problems may be present. Adhesives used to secure false eyelashes,

fingernails, and wigs may lead to irritation and infection. Excoriation, superficial infections, and rashes may develop beneath padded undergarments or under areas on the chest taped to create cleavage. Tight packing to conceal male genitalia can cause fungal rashes with severe excoriation in creases around the penis, buttocks, and scrotal sac.

Some TW attend “Pump Parties” to receive inexpensive, nonmedical-grade silicone injections into the hips, buttocks, breasts, face, and chin to create feminizing results (Salazar, 2010). Repeated silicone injections may produce small to full-figured female-appearing breasts. Scars from infected injection sites may cause adjacent areas to be lumpy, disfigured, or atrophied; persistent lower extremity edema has been associated with silicone injections (Gaber, 2004). Uncontained liquid silicone can shift, seep into surrounding tissues, and migrate into the lungs, causing pulmonary embolism, pneumonia, renal failure, and death (Centers for Disease Control and Prevention, 2008). TW who use silicone from unlicensed sources are also at risk of acquiring HIV from shared needles.

### **TW Examination: Hormones, No Surgery**

The use of feminizing hormones may soften the skin texture of the face and body. Breast development may occur as early as 3 to 6 months, revealing small to large amounts of natural appearing breast tissue, and female pattern fat distribution may increase hip and buttock size. Genital examination may show moderate or advanced hypogonadism, where testicles are so small that they feel absent. This finding may indicate low testosterone and result in erectile dysfunction. When questioned about possible problems with erections, TW can express significant distress or great relief.

### **TW Examination: Hormones and Surgery**

Postoperative TW may have scalp and facial scarring because of cosmetic surgery to enhance the female profile (i.e., eyebrow, nose, cheek, Adam’s apple, and jaw line reductions). Evidence of “top surgery” is seen with breast implant scars under the breasts or in the axilla. Partial “lower surgery,” as with orchiectomy, allows for lower estrogen dosing and, therefore, less risk of estrogen-related side

effects. In such cases, an empty scrotal sac is seen. Complete lower surgery includes removal of the phallus and creation of a neo-urethra, neo-clitoris, neo-labia, and neo-vagina, usually constructed of inverted scrotal sac tissue, skin from the arm, lower abdomen, or penis (Soli et al., 2008). The newly formed vagina is not as elastic or durable as a biologic female vagina. Even if postoperative graduated dilators are used properly, the newly constructed vulva and vagina are prone to infections, strictures, and fistulas, which may be serious and difficult to repair, and which, therefore, may never meet the possible goal of receptive vaginal intercourse. Penile modification performed by nonmedical persons is, obviously, more dangerous and can lead to high risk of life threatening infections (Thomson et al., 2008).

Postoperative genital tissue does not hold up well because of scarring and decreased blood supply, leaving the client more susceptible to STDs. Repeat surgical procedures for modification or repair (e.g., for recto-vaginal fistulas), come with a high risk of infection and failure (van Trotsenburg, 2009). Despite potential problems, many surgeries are successful and produce natural-appearing female genitalia.

### **TM Examination: No Hormones, No Surgery**

Thorough examination of a preoperative or nonoperative TM may reveal skin infections under the breasts from wearing tight chest binders to flatten the chest to a male profile. Fungal excoriations can be dramatic, especially with larger breasts. Examination of the genitalia may reveal moderate to severe irritation of the tissue around the symphysis pubis and clitoris from wearing “soft packers” (soft penis-shaped silicone or plastic forms) to create a male bulge. Wearing a “hard packer” for penetrative sex may cause more serious excoriation even with a well-fitting harness. Some hard packers are designed to allow TM to “stand-to-pee,” which is useful in public bathrooms (Hudson’s FTM Resource Guide, 2010).

### **TM Examination: Hormones, No Surgery**

Examination of TM on hormones may show masculinizing effects such as facial and body hair,

increased musculature, acne, clitoromegaly, and hypotrophic vaginal tissue. Androgenic therapy can cause moderate or severe endometrial and vaginal atrophy (Perrone et al., 2009), resulting in decreased elasticity and fragile vaginal tissue that can be easily torn during receptive sex. Vaginal discharge may be due to atrophic vaginitis from the use of testosterone or the result of STDs.

### TM Examination: Hormones and Surgery

Evaluation of TM who have had top surgery may reveal mastectomy scars, necrotic nipple tissue, or mild neuropathy of the surrounding skin. Surgeons can leave a scar that is curve-shaped (as used for biological women after mastectomy), but most TM prefer a straight, horizontal scar that follows male pectoral muscle profile. Partial lower surgery may include total or partial hysterectomy. Complete lower surgery includes vaginectomy, urethral lengthening, metoidioplasty, prosthetic testicles, and phalloplasty, with or without a urethral pump for penetrative sex (van Trotsenburg, 2009).

### Additional Assessment

The process of transitioning, including the use of hormones, body alteration, and surgeries can compromise skin integrity, which can increase risks for infections, urinary dysfunction, abscesses, strictures, fistulas, STDs, and HIV. Lower urinary tract dysfunction can occur. Hoebeke et al. (2005) evaluated TM who underwent phalloplasty and TW who underwent vaginoplasty, and reported urinary incontinence in 16% of TW, and postvoid dribbling in 79% of TM. Other problems that have traditionally been perceived as “gender-specific” may occur: TM can develop ovarian cancer (Dizon, Tejada-Berges, Koelliker, Steinhoff, & Granai, 2006), TW may develop prostate cancer (van Trotsenburg, 2009), and squamous cell carcinoma from penile tissue surgically inverted to create a neo-vagina has been reported (Harder, Erni, & Banic, 2002). TG patients should be assessed for all of these problems.

Physical examination may also reveal evidence of sexual trauma. Urethral discharge, vaginal lesions, genital warts, herpes, internal or external hemorrhoids, anal excoriation from cocaine “booty bumps,”

bruising or raw skin at the base of the neo-phallus or penis from using leather or metal “cock rings” to enhance erections, anal fissures, and poor anal tone from fisting or inserting sex toys can all occur. These findings may be evidence of high-risk behaviors.

### Safer Sex Education

All clients, whether TG, cisgender (i.e., nontransgender), gender fluid (i.e., gender identity can change), gay, straight, or bisexual, need safer sex information. The entire range of safer sex behaviors can be reviewed in such a way as to provide information without requiring the client to reveal his or her own specific and private sexual practices. Some clients may be unwilling or uncomfortable to share these details. The use of condoms, and latex gloves and barriers should be encouraged for all types of penetrating oral, vaginal, and anal sex with fingers, tongues for “rimming,” penises, toys, and fisting. Information should be provided about proper cleansing of sex toys, leather, cutting tools, sadomasochism and bondage and discipline accessories, and harnesses, especially if toys are shared between partners or used for self-play from anal to vaginal area. The goal of safer sex education is to prevent transmission of all STDs. TG clients need information that is detailed, descriptive, and specific to their behaviors and postoperative anatomies. Discussing a full range of sexual practices provides valuable information and shows that the clinician is comfortable and willing to have detailed safer sex conversations in the future.

### Gender Confirming Hormone Therapy

TG persons seek health care for many reasons, including primary care, HIV care, STD screening and treatment, and hormone therapy. TG people know that health care providers are the gatekeepers to hormones. It should be acknowledged that decisions about prescribing hormones for TG clients are controversial and difficult for many providers, and that these discussions can cause problems in the patient-provider relationship.

Resources such as the Harry Benjamin Standards of Care found in the World Professional Association

for Transgender Health (Meyer et al., 2001) and Vancouver Suggested Guidelines for Endocrine Therapy for Transgender Adults (Vancouver Coastal Health, Transcend Transgender Support and Education Society, and the Canadian Rainbow Health Coalition, 2006) can be used to create appropriate treatment plans and prescribing guidelines (Hembree et al., 2009). Experts in TG health care consider these resources to be the gold standards (Levy, Crown, & Reid, 2003). The Fenway Clinic in Boston also offers an extensive online list of TG resources (Fenway Health, 2010).

Before starting hormone therapy, fertility issues, loss of reproductive potential, and the possibility of gamete preservation should be addressed (De Sutter, 2009). Hormones can greatly reduce future fertility and cause permanent sterility. For TW, cryopreservation of semen or washed sperm may be used to obtain future pregnancies, even from HIV-infected persons. TM may freeze oocytes or embryos (Jain & Paulson, 2006). Cryopreservation is expensive and cumbersome but should be discussed before initiating hormone therapy.

### Gender Confirming Hormone Therapy for TW

TW may use hormones obtained by prescription or from nonlegal sources, including oral contraceptives (taken daily or double-dosed) or conjugated estrogen tablets, USP (often used at 4-8 times standard dosing, ranging from 0.625-5 mg daily). These are not the medically preferred regimens. Injectable estrogen (e.g., estradiol valerate 10-20 mg used intramuscularly [IM] every 1-2 weeks) or oral estradiol (2-4 mg daily or twice daily) are considered to be more medically appropriate than birth control pills or conjugated estrogen (Hembree et al., 2009; Vancouver Coastal Health, 2006). Spironolactone, 100 to 200 mg orally every day, is often included for an antiandrogen benefit (Oriol, 2000).

High-dose estrogen can cause side effects. The provider should assess and instruct the patient to report signs and symptoms of hypertension, elevated potassium, dyslipidemia (Sosa et al., 2004), pulmonary emboli, deep vein thrombosis, myocardial infarction, and stroke (Toorians et al., 2003). Blood levels of estradiol should be monitored to achieve

values in the physiologic range for natal females, and doses should be adjusted as indicated. Three- to 6-month follow-up visits are recommended. Clients should be aggressively counseled about the importance of smoking cessation, maintaining appropriate weight, regular exercise, and a healthy diet (Moore, Wisniewski, & Dobs, 2003).

### Gender Confirming Hormone Therapy for TM

TM may use testosterone. Injectable testosterone cypionate is preferably prescribed but may also be obtained on the streets in unpredictable strengths or tainted with dangerous substances (Tom Waddell Health Center Transgender Team, 2006). Testosterone gels and creams are available but are expensive. Injectable testosterone cypionate, 100 to 200 mg IM every 2 weeks, is the recommended and most appropriate prescription. Some patients prefer half doses on a weekly basis (i.e., 100 mg IM weekly) to avoid dramatic changes in moods and libido. Regardless of how hormones are obtained, the provider should monitor for side effects including hypertension, hyperlipidemia, acne, elevated hemoglobin and liver function tests, aggressive behaviors, and increased libido. Blood levels of free and total testosterone should be monitored to achieve values in the physiologic range for natal males. Three- to 6-month follow-up visits are recommended.

### Gender Confirming Hormones With Antiretroviral Therapy

Managing hormone therapies for TG persons can be difficult, but treating HIV-infected TG patients is particularly challenging because antiretroviral therapies (ART) can interact with hormones (Department of Health and Human Services [DHHS], 2009). Close monitoring for possible toxicities and drug failures is required. Little has been reported on interactions between hormones and ART, even for nontransgender persons. Testosterone replacement has been used relatively safely for hypogonadal natal males who are on ART without evidence of drug interactions, although no studies could be found regarding the use of testosterone in TM on ART.

Testosterone in combination with ART may be relatively safe, but this is not the case with estradiol. The only available studies on this clinical concern were with HIV-infected natal females (Chu et al., 2005) taking contraceptive hormones (at much lower doses than a TW would take) or studies conducted with HIV-uninfected natal women on ART and estradiol (again, at much lower doses than a TW would take). Studies reported in the DHHS (2009) guidelines generally found significant changes in estradiol levels when used in combination with nonnucleoside reverse transcriptase inhibitors and protease inhibitors (PIs) but not with CCR5 antagonists.

Studies of interactions between oral contraceptives and ART have shown decreased levels of estrogen by 29% for some nonnucleoside reverse transcriptase inhibitors such as nevirapine (Mildvan et al., 2002), but 22% to 37% increased estrogen levels with others (i.e., efavirenz, etravirine; DHHS, 2009). Interactions between oral contraceptives and PIs (without boosted ritonavir) are also varied. Some PIs (i.e., atazanavir, indinavir) increased estrogen levels by 25% to 48%, whereas others (i.e., nelfinavir) decreased estrogen by 47%. PIs (i.e., atazanavir, lopinavir-ritonavir, darunavir, fosamprenavir, saquinavir, and tipranavir) with boosted ritonavir all decreased ethinyl estradiol levels by 37% to 48% (DHHS, 2009). Other studies confirmed that PIs such as ritonavir decreased ethinyl estradiol levels in uninfected natal females by 41% (Ouellet et al., 1998), leading to a risk of contraception failure. Ritonavir levels appeared to remain constant. These changes were attributed to the induction of the cytochrome P-450 enzymes.

No significant effect was found on either ethinyl estradiol levels or CCR5 antagonist drug levels when maraviroc was studied (DHHS, 2009).

The biologic sex, estrogen dose, and HIV status of patients in these studies differed significantly from HIV-infected TG women. Extrapolating information to HIV-infected TG women on high-dose estrogen is scientifically unsound. Many studies showed significant decreases in estradiol levels in combination with certain HIV medications, supporting the need to observe patients closely for drug interactions and failures. Adjusting the dose of estrogen must be considered when changing or discontinuing HAART.

When side effects, drug failures, or confounding problems occur, stopping hormone therapy is an option to minimize polypharmacy and help simplify complex ART regimens. However, most TG clients feel strongly about staying on hormones and are willing to sign documents that they fully understand the potential risks of hormones, including death, to continue ART as well as hormone therapy. Continuing hormone therapy is vital to the TG person's self-image and core identity.

## Conclusion

Clinical care for TG clients can be challenging; providers must lead the way to insure that high-quality care is available to TG persons. Health care for TG clients requires a TG-friendly environment, knowing the physical effects of hormones and genital confirming surgery, providing thorough examinations, discussing safer sex with attention to unique anatomy and risk behaviors, and knowing about interactions between hormones and ART. A TG-friendly practice can be achieved in any setting if the staff are committed to: (a) identifying and eliminating institutional barriers to care, (b) gathering data about TG clients, (c) supporting research to improve TG clients' health, and (d) involving TG persons in all planning levels. These activities will lead to greater awareness, improved quality of care for TG clients, and the rewards associated with providing care for clients in need of these services.

## Clinical Considerations

- TG persons often do not get the care they need to stay healthy and prevent or treat HIV infection.
- TG persons need care that takes into account their specific physical and psychosocial needs.
- A TG-friendly environment can be achieved in any setting if clinicians implement changes to decrease barriers to care.

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