General Prevention and Screening for Transgender Patients

Most medical problems that arise in the transgender patient are not secondary to cross-sex hormone use.

The most important principle to apply in general prevention and screening is to provide care for the anatomy that is present, regardless of the patient's self-description or identification, presenting gender, or legal status, and always to provide that care in a sensitive, respectful, and affirming manner that recognizes and honors the patient's self-description or identification.

This protocol emphasizes the areas of special consideration in which transgender-related medical treatments may have an impact on a patient's well-being.

Cancer

Screen transgender or transsexual people who have not used cross-sex hormones or had gender-affirming surgery using the same criteria and risk parameters as for persons of their natal sex.

- **Transwomen, past or current hormone use:** Breast-screening mammography in patients over age 50 with additional risk factors (e.g., estrogen and progestin use > 5 years, positive family history, BMI > 35).
  - *Prostate*: PSA is falsely low in androgen-deficient setting, even in presence of cancer; only consider PSA screening in high risk patients. Use a digital rectal exam to evaluate the prostate in all transwomen. (Grade C)

    Pap smears in neovaginas are not indicated; the neovagina is lined with keratinized epithelium and cannot be evaluated with a Pap smear. Perform periodic visual inspection with a speculum, looking for genital warts, erosions, and other lesions. If STI is suspected, do a culture swab, not PCR. Neovaginal walls are usually skin, not mucosa; when it is mucosa, it is urethral or colon mucosa.

    Follow standard screening recommendations for other cancers.

- **Transmen, past or current hormone use:**
  - *Breast cancer*: annual chest wall/axillary exam; mammography as for natal females (not needed following chest reconstruction, but consider if only a reduction was performed).
  - *Cervical cancer*: following total hysterectomy, if prior history of high-grade cervical dysplasia and/or cervical cancer, do annual Pap smear of vaginal cuff until 3 normal tests are documented, then continue Pap every 2-3 years.
  - *Cervical cancer if ovaries were removed, but uterus/cervix remain intact*: follow Pap guidelines for natal females; may defer if no history of genital sexual activity; inform pathologist of current or prior testosterone use (cervical atrophy can mimic dysplasia);
  - *Uterine cancer*: evaluate spontaneous vaginal bleeding in the absence of a mitigating factor (missed testosterone doses, excessive testosterone dosing leading to increased estrogen levels, weight changes, thyroid disorders, etc.) as for post-menopausal natal females; consider hysterectomy if fertility is not an issue, patient is > 40 years, and health will not be adversely affected by surgery.

- *If no hysterectomy*: follow current published recommended guidelines for natal females. (Grade C)

  Follow standard screening recommendations for other cancers.

Cardiovascular Disease

Transgender or transsexual people who have not used cross-sex hormones require the same screening criteria as persons of their natal sex.

Aggressively screen and treat for known cardiovascular risk factors. Consider daily aspirin therapy in patients at high risk for CAD.

- **Transwomen planning to start feminizing hormones within 1-3 years:** try to bring systolic pressure to ≤ 130 Hg and diastolic pressure to ≤ 90 mm Hg, and bring LDL to ≤ 135 mg/dL (3.5 mmol/L).
- **Transwomen currently taking estrogen:**
  - *CAD/Cerebro-vascular disease*: closely monitor for cardiac events or symptoms, especially during the first 1-2 years of hormone therapy; in patient at high risk (including pre-existing CAD) use transdermal estrogen, reduce estrogen dose, and omit progestin from the regimen. (Grade A, C)
  - *Hypertension*: monitor blood pressure every 1-3 months: goal = systolic pressure ≤ 130 mm Hg and diastolic pressure to ≤ 90 mm Hg; consider using spironolactone as part of antihypertensive regimen.
  - *Lipids*: annual fasting lipid profile; treat high cholesterol to LDL goal of to ≤ 135 mg/dL (3.5 mmol/L) for low-moderate risk patients, and to ≤ 96 mg/dL (2.5 mmol/L) for high risk patients.
- **Transmen not currently taking testosterone:** screen and treat hyperlipidemia as with non-transgender patients.
- **Transmen planning to start masculinizing hormones within 1-3 years:** try to bring systolic pressure to ≤ 130 mm Hg and diastolic pressure to ≤ 90 mm Hg, and bring LDL to ≤ 135 mg/dL (3.5 mmol/L).
- **Transmen currently taking testosterone:** Same as for transwomen taking estrogen, except with respect to lipids. Annual fasting lipid profile; if hyperlipidemia, avoid supraphysiologic testosterone levels; daily topical or weekly IM testosterone regimens are preferable to biweekly IM injection. LDL goal of to ≤ 135 mg/dL (3.5 mmol/L) for low-moderate risk patients, and to ≤ 96 mg/dL (2.5 mmol/L) for high risk patients.

Diabetes Mellitus

Transgender or transsexual people who have not used cross-sex hormones require the same screening criteria as persons of their natal sex.

- **Transwomen currently taking estrogen:** consider annual fasting glucose test, esp. if family history of diabetes and/or > 12 pounds weight gain. Consider glucose tolerance testing and/or A1C test if evidence of impaired glucose tolerance without diabetes. Treat diabetes according to guidelines for non-transgender patients; if medications are indicated, include insulin sensitizing agent. Consider decreasing estrogen if glucose is difficult to control or patient is unable to lose weight. (Grade A, C)
- **Transmen currently taking testosterone:** screen and treat as with non-transgender patients. Consider screening (by patient history) for polycystic ovarian syndrome (PCOS); diabetes screening is indicated if PCOS is present.

Diet and Lifestyle

- **Transmen** who have not had top surgery may intentionally carry extra weight to obscure breast and hip appearance. Some transmen with larger breasts may be hesitant to exercise due to physical discomfort or feeling uncomfortable in tight-fitting athletic apparel. Conversely, some transmen may not realize the increased metabolic demands when taking testosterone. Patients having difficulty gaining weight or muscle mass, with fatigue or anxiety should be screened for dietary protein, calorie and micronutrient/vitamin deficits. Appropriate intake should be adjusted to appropriate male age and activity levels.
- **Transwomen** may have eating disorders such as anorexia or may intentionally take in fewer calories than necessary in order to maintain a slight build. Some transwomen might feel that exercise is a more masculine trait and therefore avoid it. Remind transwomen that exercise does not have to involve bodybuilding and that many non-transgender women exercise regularly.

Mental Health

Screen for depression, anxiety, bipolar disorder or history of trauma. Refer, if needed, to a mental health provider who is capable of assessing and treating transgender people without denying their gender identity. (See section *Mental Health*)

Musculoskeletal Health

Transgender or transsexual people who have not used cross-sex hormones require the same screening criteria as persons of their natal sex.

All trans patients who take cross-sex hormones and/or have had or anticipate gonadectomy are recommended to take supplemental calcium and vitamin D in accordance with current osteoporosis prevention guidelines to help maintain bone density. Note that this may be applied to transmen at ages younger than typical starting age for osteoporosis prevention treatment due to the unknown effect of testosterone on bone density. (Grade B, C)

- **Transwomen currently taking estrogen:** Exercise may help maintain muscle tone.
- **Transwomen, pre-orchiectomy, regardless of hormone use:** To prevent osteoporosis, recommend calcium and vitamin D supplementation.
- **Transwomen, post-orchiectomy:** To prevent osteoporosis either maintain estrogen therapy or consider combination of calcium/vitamin D supplementation and bisphosphonate; consider bone density screening for agonadal patients who have been off estrogen for over 5 years. (Grade A, B, C)
- **Transmen currently taking testosterone:** To avoid tendon rupture in transmen involved in strength training, increase weight load gradually, with an emphasis on repetitions rather than weight. Emphasize stretching.
- **Transmen taking testosterone > 5-10 years, no oophorectomy:** To prevent osteoporosis, consider bone density screening if over age 50, earlier if additional risk factors are present; recommend supplemental calcium and vitamin D in accordance with current osteoporosis prevention guidelines to help maintain bone density.
- **Transmen, past or present testosterone use, post-oophorectomy (or total hysterectomy):** continue testosterone therapy to reduce risk of bone density loss; if contradictions to testosterone therapy, consider bisphosphonate. Consider bone density screening if over age 60 and taking testosterone for less than 5-10 years; if taking testosterone for over 5-10 years, consider at age 50+, earlier if additional risk factors for osteoporosis;

recommend supplemental calcium and vitamin D in accordance with current osteoporosis prevention guidelines to help maintain bone density. Note that this may be applied to transmen at ages younger than typical starting age for osteoporosis prevention treatment due to the unknown effect of testosterone on bone density. (Grade A, B, C)

Pulmonary Screening

Screen for asthma, COPD, TB. Encourage smoking cessation. Presence of these conditions may preclude surgical interventions.

Sexual Health

Take a sexual history: inquire about past and current sexual contacts/total numbers; gender(s) and number of partners. Check for sexual orientation changes; ask if patient is aware that sexual orientation may change as they change their gender presentation or as hormonal changes occur; contraception, condom and barrier use/frequency; STI history; sexual abuse history; potentially risky sex practices (e.g., bondage, S&M, auto-erotic asphyxia, etc.). Self-destructive behaviors may indicate a need for mental health referral (see section *Mental Health*).

- **HIV and Hepatitis B/C screening/prevention:** if ongoing risk behaviors for sexual or blood-borne transmission (e.g., unprotected penile-vaginal or penile-anal intercourse, history of prior STIs, sharing needles for injection of hormones or illicit drugs), consider HIV and Hepatitis B/C screening every 6-12 months; otherwise consider HIV and Hepatitis B/C screening at least once during lifetime. Treat STIs according to recommended guidelines for non-transgender patients; offer Hepatitis B vaccination if patient is not already immune.

  HIV is not a contraindication or precaution for any transgender treatment. Treatment with hormones is frequently an incentive for patients to address their HIV disease. Providers of care for transgender people should enhance their HIV expertise, and vice versa.

- **Considerations for both transwomen and transmen:** If patient reports ongoing risk factors (recurrent STIs, unprotected sex with a partner who might be at risk, unprotected anal/vaginal sex with more than one partner, psychosocial cofactors relating to unsafe sex), screen every 6 months for gonorrhea, chlamydia, and syphilis. Treat all patients with STIs and their partners according to recommended guidelines.

  Internal genital exam should be based on patient's past and recent sexual history and comfort with exam, and discussion of the risks and benefit of the procedure. Use a gloved finger and/or an appropriate-sized speculum.

  Discuss fertility issues with patients considering hormone therapy. Cross-sex hormone use may reduce fertility, and this may be permanent even if hormones are discontinued. Estrogen may have the effect of reducing libido, erectile function, and ejaculation. Testosterone generally increases libido. Note: Even though testosterone reduces fertility in patients, testosterone is not a contraceptive substance; transmen having unprotected sex with non-trans men are at risk for pregnancy as well as STIs.

- **Special considerations for transwomen:** Pap smears in neovaginas are not indicated. Perform periodic visual inspection with a speculum, looking for genital warts, erosions, and other lesions. If STI is suspected, do a culture swab, not PCR. Neovaginal walls are usually skin, not mucosa; when it is mucosa, it is urethral or colon mucosa.

Silicone Injections

Some transgender women may seek or have sought injections of free silicone oil into their hips, buttock, thighs, breasts, lips, or face. This may be performed by unscrupulous practitioners and may have happened abroad. Additionally, some laypersons may hold "pumping parties" where transwomen are injected using in some cases industrial grade silicone oil using minimal or absent sterile techniques. Risks associated with these procedures include local and systemic infection, embolization, painful granuloma formation, and a systemic inflammatory syndrome that can be fatal. Transwomen should be screened for prior or risk of future silicone injections and counselled appropriately.

Substance Use

Assess substance use. Screen for past and present use of tobacco, alcohol, and other drugs. Refer, if needed, to a transgender-competent chemical dependency program. (For tools, see *SAMHSA/CSAT Treatment Improvement Protocols*. Center for Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1993-.)

Thyroid Screening

Maintain a high index of suspicion for thyroid disorders and screen appropriately. Use of cross-sex hormone replacement with or without gonadectomy may cause overall endocrine imbalances.

Vaccinations

Assess whether vaccinations are up to date. Most recommended vaccinations are not sex-specific and therefore are the same as for any patient. Both transwomen and transmen who have sex with men may have increased risk of Hepatitis A and Meningococcal C: discuss vaccination.

Source: *Primary Care Protocol for Transgender Patient Care*, Center of Excellence for Transgender Health, University of California, San Francisco, Department of Family and Community Medicine, April 2011