

STI CONSIDERATIONS FOR TRANS AND GENDER DIVERSE INDIVIDUALS

Asa Radix, MD, PhD, FACP, FIDSA

January 18, 2023



Disclaimer

Funding for this presentation was made possible [in part, if applicable] by U1OHA29296 from the Human Resources and Services Administration HIV/AIDS Bureau. The views expressed do not necessarily reflect the official policies of the Department of Health and Human Services nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government. *Any trade/brand names for products mentioned during this presentation are for training and identification purposes only.*



Disclosures

- No conflicts of interest or relationships to disclose

Learning Objectives

1. Describe the epidemiology of STIs among trans & gender diverse people
2. Review the WPATH Standards of Care version 8 guidance on sexual health
3. Review guidelines on how to apply sex-based STI recommendations to patients of transgender experience

How many transgender patients do you currently provide care for (in any capacity)?

- A. 0**
- B. 1-5**
- C. 6-10**
- D. >10**

How would you rate your competence in dealing with a transgender patient's sexual health concerns?

- A. Very comfortable**
- B. Somewhat comfortable**
- C. Somewhat uncomfortable**
- D. Very uncomfortable**

Gender Affirmation

- The process of recognizing, accepting and expressing one's gender identity
 - Medical – hormones, surgery
 - Social/Emotional – Name, pronoun, dress, coming out to others
 - Psychological - Gender validation
 - Legal – Identity documents (name/gender marker)
- Diagnosis code usually required for medical interventions
 - DSM-5-TR - gender dysphoria clinically significant distress or impairment related to gender incongruence
 - ICD-10 F64 - Gender identity disorder

Gender-affirming Medical Interventions

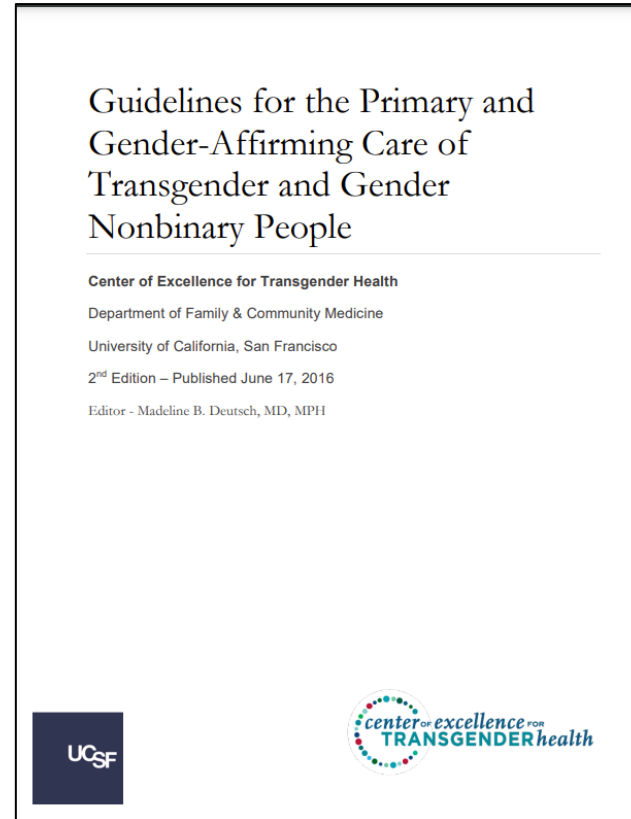
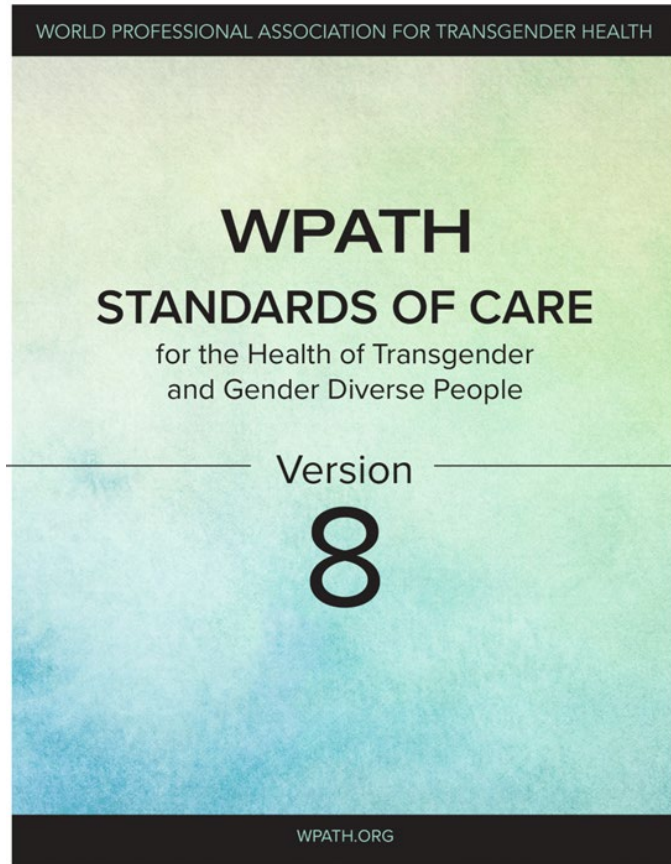
FEMINIZING

- **Hormones:** Estrogen, androgen blockers
- **Chest/breast surgeries:** Breast augmentation
- **Face:** rhinoplasty, chondrolaryngoplasty, glottoplasty, brow lift...
- **Genital:** orchiectomy, vaginoplasty, vulvoplasty, flat front
- Silicone and soft tissue fillers

MASCULINIZING

- **Hormones:** Testosterone
- **Chest/breast:** Chest reconstruction (reduction/mastectomy)
- **Face:** forehead lengthening, chin contouring, rhinoplasty...
- **Genital surgeries:** metoidioplasty, phalloplasty, urethroplasty, scrotoplasty, vaginectomy, TAH/BSO

Clinical Practice Guidelines



Coleman E et al, IJTH 2022; UCSF Center of Excellence for Transgender Health, 2016; Hembree WC et al, J Clin Endocrinol Metab 2017

World Professional Association of Transgender Health

- International, multidisciplinary, professional association to promote evidence-based care, education, research, public policy in transgender health
- First SOC in 1979, 8th version published in 2022
- SOC-8 includes 18 chapters, with new chapter on **sexual health**

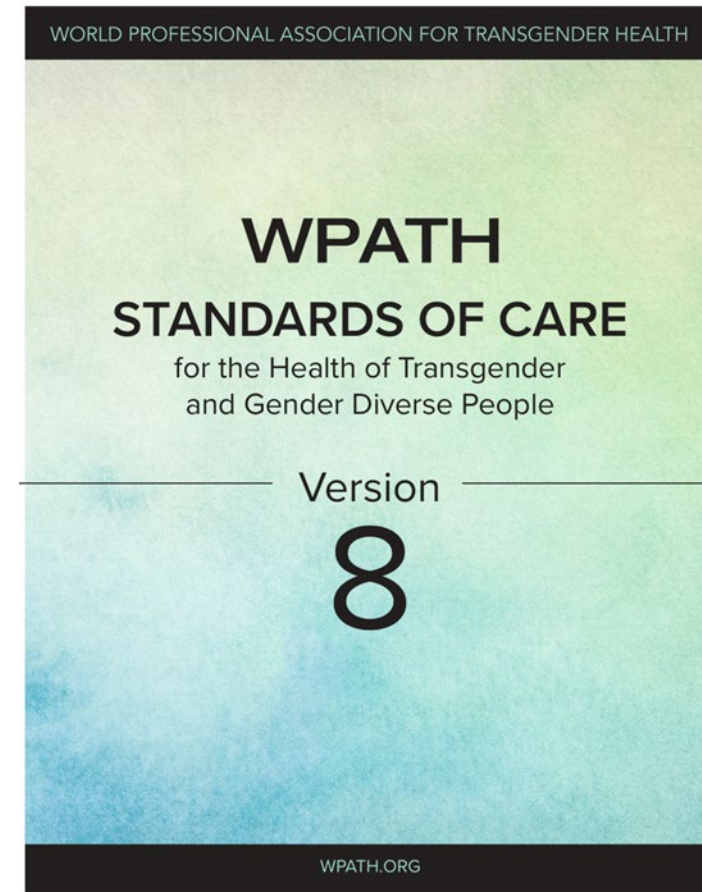


Image source: [WPATH.org](https://www.wpath.org)

Chapter 17. Sexual Health

- Acknowledges the profound impact of sexual health on physical and psychological well-being for trans and gender diverse (TGD) people
- Advocates for sexual functioning, pleasure, and satisfaction to be included in TGD-related care

Statements of Recommendations

17.1- We recommend health care professionals who provide care to transgender and gender diverse people acquire the knowledge and skills needed to address sexual health issues (relevant to their care provision).

17.2- We recommend health care professionals who provide care to transgender and gender diverse people discuss the impact of gender-affirming treatments on sexual function, pleasure, and satisfaction.

17.3- We recommend health care professionals who provide care to transgender and gender diverse people offer the possibility of including the partner(s) in sexuality-related care, if appropriate.

17.4- We recommend health care professionals counsel transgender and gender diverse people about the potential impact of stigma and trauma on sexual risk behavior, sexual avoidance, and sexual functioning.

17.5- We recommend any health care professional who offers care that may impact sexual health provide information, ask about the expectations of the transgender and gender diverse individual and assess their level of understanding of possible changes.

17.6- We recommend health care professionals who provide care to transgender and gender diverse people counsel adolescents and adults regarding prevention of sexually transmitted infections.

17.7- We recommend health care professionals who provide care to transgender and gender diverse people follow local and World Health Organization guidelines for human immunodeficiency virus/sexual transmitted infections (HIV/STIs) screening, prevention, and treatment.

17.8- We recommend health care professionals who provide care to transgender and gender diverse people address concerns about potential interactions between antiretroviral medications and hormones.

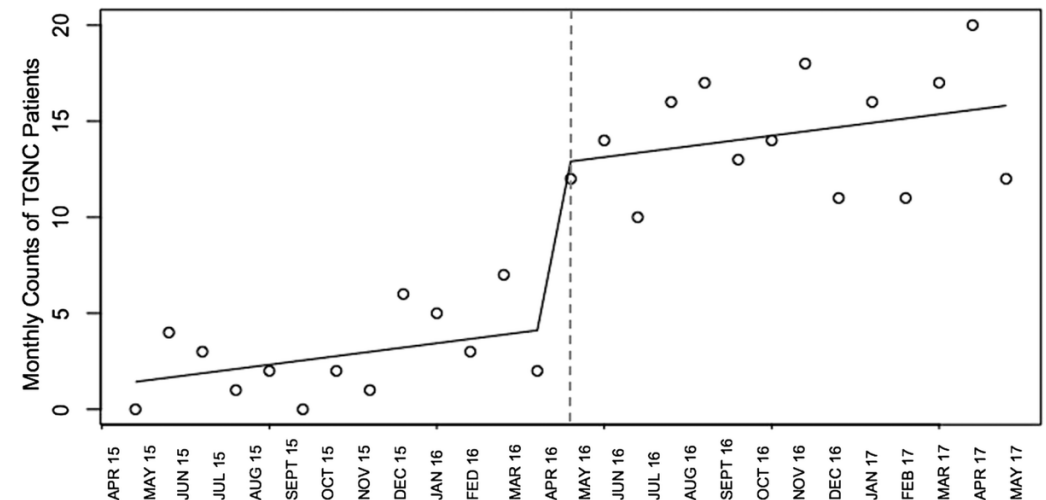
Key Points from Guidelines

- 1. Document gender identity and sex assigned at birth for all patients to improve sexual health care for TGD persons**
2. Screen for asymptomatic infections on the basis of the patient's sexual practices and anatomy
3. Adapt gender-based screening based on anatomy (e.g., routine screening for trachomatis and *N. gonorrhoeae*) as recommended for all sexually active females should be extended to transgender men and nonbinary persons with a cervix among this age group
4. Create welcoming environments that facilitate disclosure of gender identity and sexual orientation

2-Step Question Improves Ascertainment of TGD People

- STI Clinic switched to 2-step question
- Resulted in a 4.8-fold increase in patients identified as TGD, 0.5% to 2.4%
- Chlamydia infection (self report) in the last year:
 - nonbinary 18%
 - cisgender MSM 17%
 - transgender women 15%
 - transgender men 9%,

1-Step Question Used Prior to May 2016	2-Step Question Implemented in May 2016
Are you male, female or transgendered? <ul style="list-style-type: none">• Male• Female• Transgender Male to Female• Transgender Female to Male	What gender do you consider yourself? <ul style="list-style-type: none">• Male• Female• Transgender Male to Female• Transgender Female to Male• Non-binary/Genderqueer• Something else (write in option)
	What sex was recorded on your original birth certificate? <ul style="list-style-type: none">• Male• Female
	Which pronouns do you use? <ul style="list-style-type: none">• He/him• She/her• They/them• Something else (write in option)



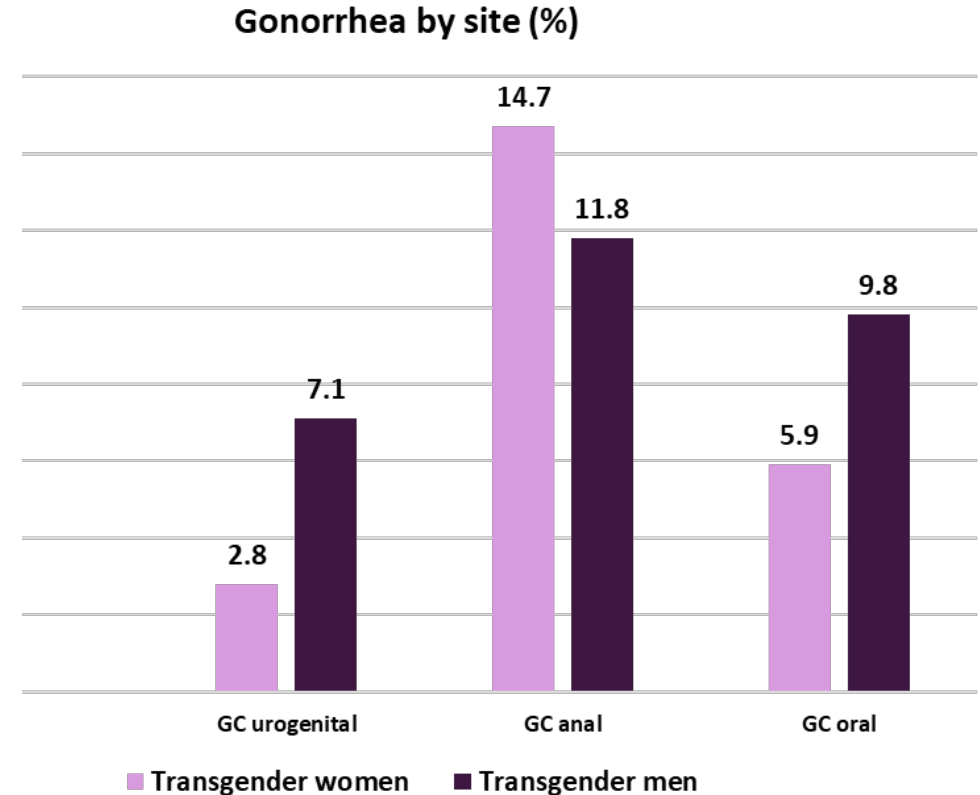
Key Points from Guidelines

1. Document gender identity and sex assigned at birth for all patients to improve sexual health care for TGD persons
2. **Screen for asymptomatic infections on the basis of the patient's sexual practices and anatomy**
3. Adapt gender-based screening based on anatomy (e.g., routine screening for trachomatis and *N. gonorrhoeae*) as recommended for all sexually active females should be extended to transgender men and nonbinary persons with a cervix among this age group
4. Create welcoming environments that facilitate disclosure of gender identity and sexual orientation

High Prevalence of STIs in Trans Populations

- **Transgender women (compared with cis-MSM)**
 - Higher rates of extragenital infections: pharyngeal GC; pharyngeal CT, rectal STIs, lifetime syphilis
- **Transgender men (SSuN)**
 - STI clinic data (USA) - high rates genital/extragenital CT/GC
 - Syphilis, CT, GC, HCV prevalence similar to TW
 - HBV & HCV similar to TW
 - Highest risk in trans-MSM
- Not disaggregated by surgery status

(GC = gonorrhea, CT = chlamydia, HCV = hepatitis C, HBV = Hepatitis B)



USA STD Surveillance Network (SSuN)(Pitasi, 2019)

HIV and Transgender People – high prevalence

Global Prevalence

- Transgender women 19.9% (CI 14.7% - 25.1%)
- Transgender men 2.56% (CI 0.0% - 5.9%)



Considerations for Transgender Women

- **Individual**

- >70% cis-male partners
- High rates of sex work (>40%)
- Lower rates condom use (financial, primary partner)
- Needle sharing for hormones/silicone? HCV, HBV, HIV

- **Biological**

- Anal receptive sex
- 12% vaginoplasty (USA) - neovaginal sex risk? Mainly case reports
- Impact of estrogens? (Increased expression of TH1-associated chemokine receptors, CCR1, CXCR3, and CCR5)

Considerations for Trans Men

- **Individual**

- 26% transgender men start having sex with cis men after initiation of hormones
- High rates of condomless anal/frontal sex (30%)
- Substance use during sex
- Sex work

- **Biological**

- Testosterone → atrophic vaginitis
- Gender affirming surgeries – 1-3% phallo/meta, no data on STI/HIV risk after surgery

Table 2. HIV prevalence and gender identity of sexual partners ^a

Gender of sex partners	<i>n</i>	HIV positive	%	(95% CI)
Cisgender men only	18	2	11.1	(1.37, 34.71)
Cisgender men	86 (34.4)	3	3.49	(0.73, 9.86)
Cisgender women	163 (65.2)	3	1.84	(0.38, 5.28)
Transgender men	3 (1.2)	1	33.3	(0.84, 90.57)
Transgender women	6 (2.4)	0	–	–
No sexual partner	23 (9.2)	0	–	–
Declined to state	37	1	2.7	(0.07, 14.16)
Total screened for HIV	250	7	2.8	(1.13, 5.68)

Key Points from Guidelines

1. Document gender identity and sex assigned at birth for all patients to improve sexual health care for TGD persons
2. Screen for asymptomatic infections on the basis of the patient's sexual practices and anatomy
3. **Adapt gender-based screening based on anatomy (e.g., routine screening for trachomatis and N. gonorrhoeae) as recommended for all sexually active females should be extended to transgender men and nonbinary persons with a cervix among this age group**
4. Create welcoming environments that facilitate disclosure of gender identity and sexual orientation

Case 1

36-year-old trans woman. New sexual partner, cis male

- Increase in vaginal discharge and odor x 2 weeks
- Never uses condoms for sex (anal/vaginal)

PSH: 4 years before had vaginoplasty (penile inversion)

She's worried she might have STI

What neovaginal STIs have been reported in transgender women?

- A. Gonorrhea
- B. Chlamydia trachomatis
- C. Herpes simplex
- D. Condyloma acuminatum (Genital warts)
- E. All of the above

Vaginoplasty

- Creation of vagina using penile/scrotal skin, other skin, intestinal graft, peritoneal graft, urethral tissue
- ✓ Important to know surgical technique

Intestinal vaginoplasty	Penile-inversion vaginoplasty	PI vaginoplasty-peritoneal graft
Inflammatory bowel disease	Squamous cell carcinoma	?
Diversion Colitis	N/A	?
Colon polyps	N/A	?
Adenocarcinoma	N/A	?
STIs - GC, HPV	GC, syphilis, HSV, HPV	GC,CT

Screening after Vaginoplasty

- Routine exam – visual inspection (small speculum, anoscope)
- Look for granulation tissue, warts, lesions, polyps, STI screen
- Prostate is palpable at the anterior neovaginal wall
- No cervix (pap unnecessary)



Hontscharuk et al, Andrology, 2021

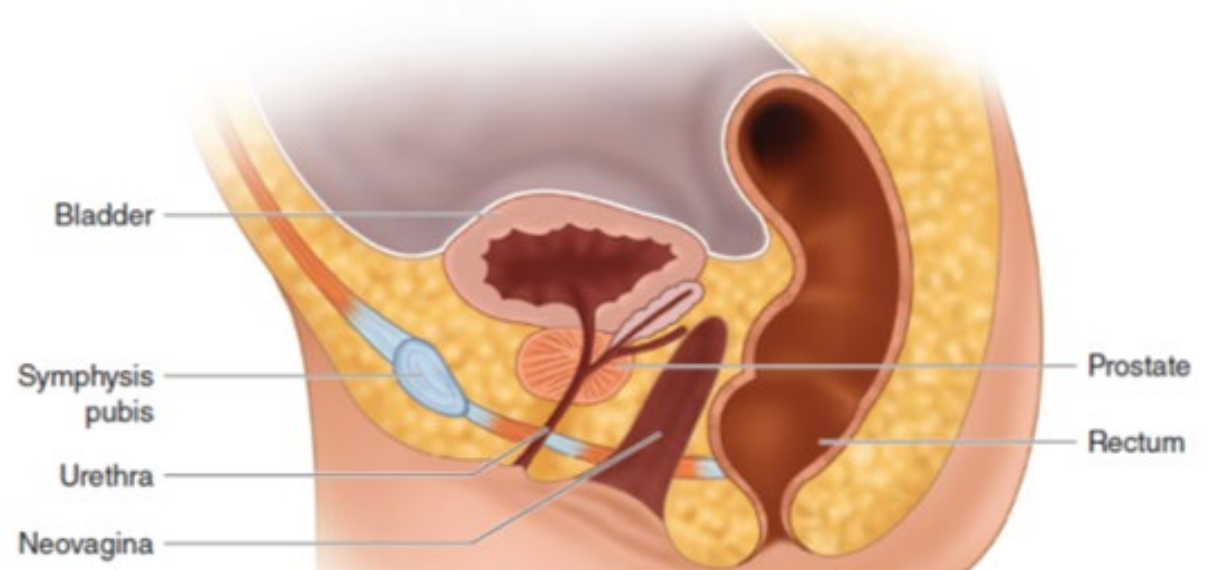
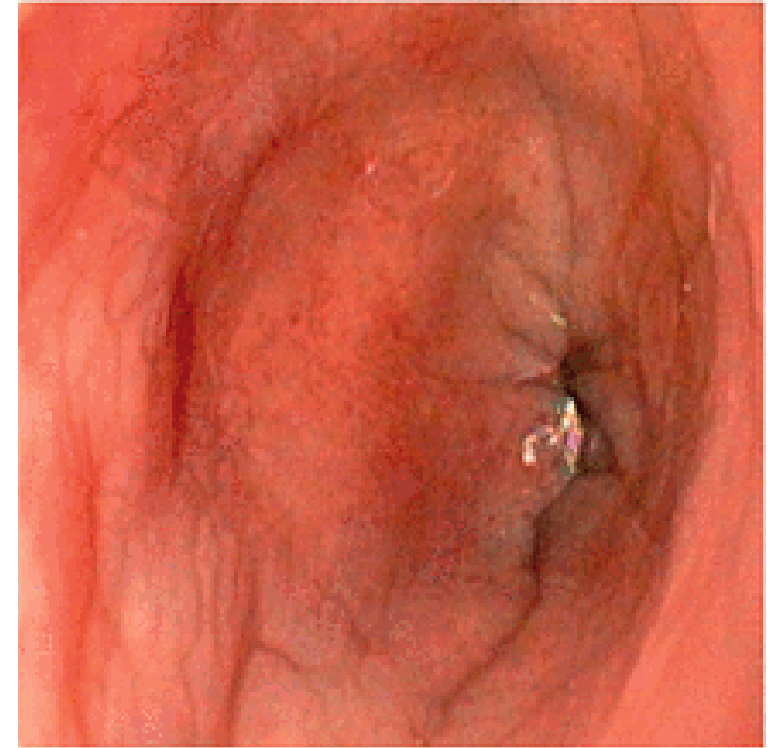


Illustration: Poteat & Radix, 2017 Springer

Case Cont.

- Examination of the neovagina shows no active bleeding
- pH 9.0
- Vaginal swab PCR positive for *N. gonorrhoeae*
- Urine/rectal swab NAAT negative GC/CT
- Treated with ceftriaxone IM
- Vaginal swab negative at 4 weeks after treatment



Case 2

A 21-year-old HIV-negative transgender woman presented in January 2019 with 3 weeks vaginal irritation, discharge, and malodor

PSH: vaginoplasty 4 months before. The procedure utilized penile skin and included a urethral mucosa graft (1 × 4 cm)

Sexual hx: multiple cis-male partners

She's worried that she has an STI

Case Cont

Vaginal swab was negative for *Candida* species, *Gardnerella vaginalis*, and *Trichomonas vaginalis* (BD Affirm VPIII DNA Probe Test)

Anal and pharyngeal specimens negative for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* (Gen-Probe APTIMA)

Urine sample positive for *C. trachomatis*

She responded to treatment with azithromycin 1 g orally, with resolution of symptoms within 4 days. Subsequent tests negative for *C. trachomatis*

Case 3



September 2022: 44 y/o with genital lesions perianal and vulva
Other skin lesions noted, PCR positive for Monkeypox

Case 4

26-year-old trans woman with recurrent painful lesion at neovaginal introitus. Advised it was due to inadequate preoperative hair removal

PMH: Estrogen therapy since age 20

PSH: (penile inversion) vaginoplasty 6 months earlier

Exam: Watery discharge, dime sized white plaque noted

- Vaginal swabs for GC/CT
- Vaginal swabs for trichomonas, candida, HSV
- Wet mount



Image: Callen-Lorde

Diagnosis?

- A. Retained hair
- B. Chlamydia trachomatis
- C. HPV/genital warts
- D. Syphilis
- E. Herpes simplex

Herpes Virus I/II DNA (Collection Date: 09/04/2018 17:07, Status: Final)

Component	Result	Units	Flag	Range
HSV-1	Negative			Negative
HSV-2	Positive		A	Negative

Bacterial Vaginosis Screen, DNA - BD AFFIRM (Collection Date: 09/04/2018 17:07, Status: Final)

Component	Result	Units	Flag	Range
CANDIDA, DNA	NEGATIVE			NEGATIVE
GARDNERELLA, DNA	NEGATIVE			NEGATIVE
TRICHOMONAS, DNA	NEGATIVE			NEGATIVE

After treatment with valacyclovir



Neovaginal STIs

- Condyloma acuminatum
- Neisseria gonorrhoeae (often asymptomatic)
- Chlamydia trachomatis
- Herpes simplex
- Monkeypox
- Bacterial vaginosis (ok, not an STI!)
- No case reports of Trichomoniasis

Recommendation: Screen for STIs at all exposed sites (vaginal swab vs urine?)

Author	Study	STI
Fiumara, 1973	Case report	Gonorrhea and genital warts (PI)
Fiumara, 1978	Case report	Gonorrhea (PI)
Buscema, 1987	Case report	Condyloma acuminata
Haney, 1990	Case series (2)	Condyloma accuminata
Bodsworth, 1994	Case report	Gonorrhea (PI)
Von Engeland, 2000	Case report	Condyloma accuminata
Harder, 2002	Case report	SSC (PI)
Harder, 2002	Case report	SCC (PI)
Liguori, 2004	Case report	Condyloma accuminata
Wasef, 2005	Case report	Condyloma accuminata
Jain, 2007	Case report	Bacterial vaginosis
Yang, 2009	Case report	Condyloma gigantean (CV)
Weyers, 2009	Case series (50)	Bacterial vaginosis 64%
Kokcu, 2011	Case report	SSC (PI)
Matsuki, 2014	Case report	Condyloma acuminata (PI)
Fernandes, 2014	Case report	SS (PI)
Van der Sluis, 2015	Case report	Gonorrhea (CV)
van der Sluis STI 2016	Case series (4)	Condyloma (PI)
Effluring 2017	Case report	HSV
Radix 2019	Case report	Chlamydia trachomatis

Genital Warts (Condylomata acuminata)



Image: Matsuki, Int J STD AIDS. 2015 Jun;26(7):509-11



Image: Neovagina squamous cell cancer, penile inversion. Depart. Microb.
www.aaf-online.org Vienna. Austria. 2011

Case 5

- 41 y/o transgender man, here for routine health screen
- Has a long-term monogamous cisgender female partner
- Has never had a pap
- Survivor of sexual trauma
- Taking testosterone

“My last doctor said I do not need a pap”

Question

What is the best option for this patient?

- A. High vaginal swab for high-risk HPV
- B. Defer the pap, he is low risk for cervical cancer
- C. Refer to another surgeon
- D. Defer the pap due to unreliable results in testosterone

WPATH SOC-8 Statement 15.10

We recommend health care professionals offer cervical cancer screening to transgender and gender diverse people who currently have or previously had a cervix, following local guidelines for cisgender women

Transgender Men and Hr-HPV

Bivariate and adjusted logistic regression analyses examining the association between sexual behavior and cervical HPV in a sample of trans masculine adults (N = 123).

Provider-Collected Cervical hr-HPV DNA						
Sexual Behavior	Bivariate			Adjusted Model		
	Odds ratio	95% CI	P-value	Odds ratio	95% CI	P-value
Yes, receptive penile vaginal sex	5.06	1.69–15.12	0.01	5.23	1.61–17.02	<0.01
Yes, penile sex, but not receptive vaginal	1.48	0.15–14.28	0.74	1.42	0.13–15.04	0.77
No penile sex	Referent	---	---	Referent	---	---

Cervical Cancer Screening

- Transgender men with a cervix require cervical cancer screening, and engage in screening at much lower rates than cisgender women (Peitzmeier 2014)
- Transgender men also have a higher rate of unsatisfactory cytology results (Peitzmeier 2014)
- Evidence shows HPV self-swabs are preferred by transgender men and may increase adherence rates to cervical cancer screening (McDowell 2017)
- HPV self-swabs are also as sensitive as provider-collected specimens in detecting high-grade disease (Snijders 2013)

Patient agrees to be screened by self-collected specimen

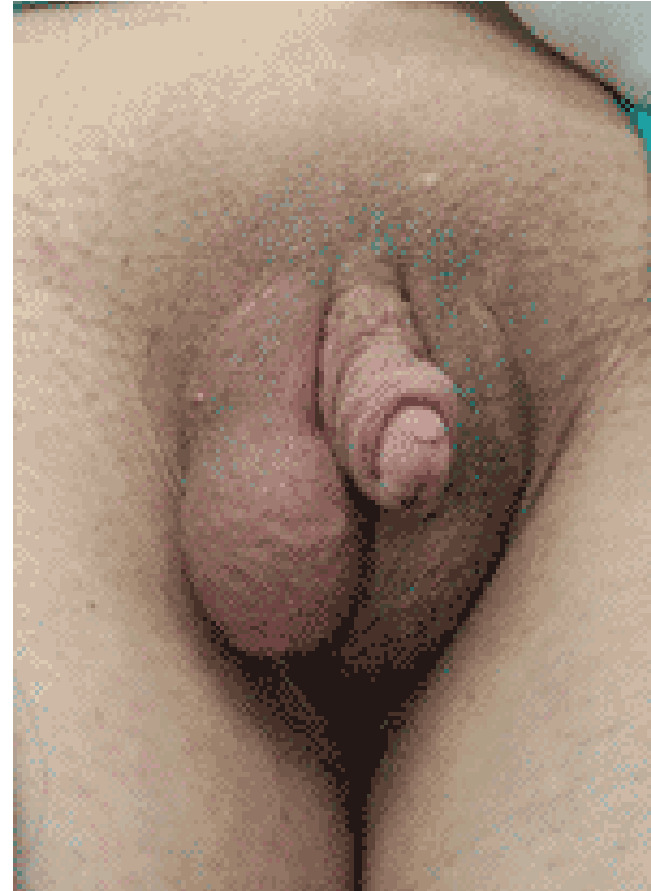
Case 6

- 28 y/o transgender man requests renewal of HIV pre-exposure prophylaxis (PrEP)
- PMH started testosterone 25 years ago. Bilateral top surgery (mastectomy) and metoidioplasty
- Meds: testosterone cypionate 100 mg SC weekly x 8 years, tenofovir disoproxil fumarate/emtricitabine
- **What STI testing would you do on this visit?**

Metoidioplasty

- Simple metoidioplasty “clitoral release”
- Can be combined with hysterectomy, oophorectomy, vaginectomy
- Urethroplasty (urethral lengthening)

Complications: urethral stenosis, fistulae

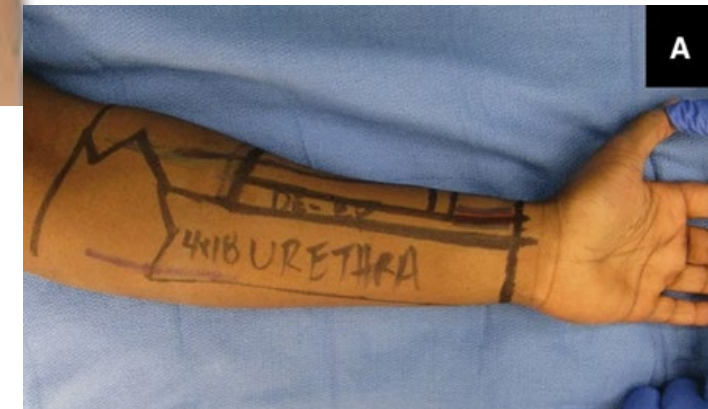


Phalloplasty

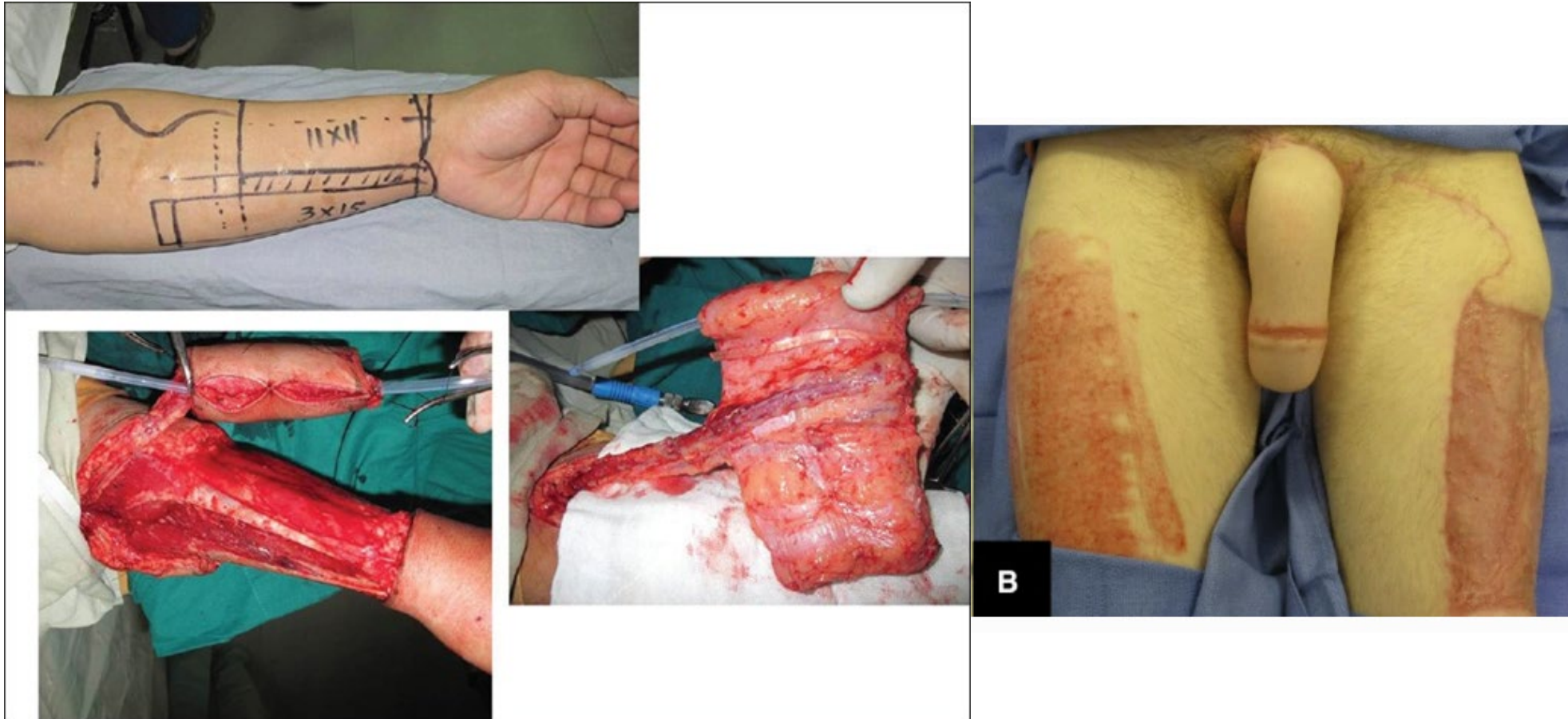
Create a tube from donor site:

- Radial forearm
- Musculocutaneous latissimus dorsi flap
- ALT (anterior lateral thigh flap)
- Abdominal flap

Complications: Urinary retention, urethral stenosis, fistulae, flap failure, excessive scarring/adhesions of donor site



Phalloplasty



Images: Rashid M, Tamimy MS. In J PS 46, 283-293 (2013);
Jahromi, et al. World J Surg 45, 3511–3521 (2021)

Other Procedures

- Vaginectomy
- Scrotoplasty with testicle implants
 - labia majora used to create a scrotum
- Mons reduction
- Penile implants, semi-rigid or inflatable (phalloplasty only)
- Vagina-Preserving Phalloplasty (cervix!)



Key Points from Guidelines

1. Document gender identity and sex assigned at birth for all patients to improve sexual health care for TGD persons
2. Screen for asymptomatic infections on the basis of the patient's sexual practices and anatomy
3. Adapt gender-based screening based on anatomy (e.g., routine screening for trachomatis and *N. gonorrhoeae*) as recommended for all sexually active females should be extended to transgender men and nonbinary persons with a cervix among this age group
4. **Create welcoming environments that facilitate disclosure of gender identity and sexual orientation**

Create a Welcoming Environment



Image: Callen-Lorde Community Health Center

Best Practices in Meeting Patients and Collecting Health Data

Start by introducing yourself, consider using your pronouns, then asking:

“What is your name/how would you like to be addressed here?”

”What pronouns do you use?”

Use the two-step method for gender identity

Ask about current gender identity

Ask about sex assigned at birth

STI Screening for Transgender People

- Always take an anatomic inventory
 - What surgeries were done?
 - What organs are still present?
- Metoidioplasty/Phalloplasty
 - Was a vaginectomy done?
 - Is cervical screening necessary
- Vaginoplasty
 - Speculum exam

Sexual History

- Tell me about your current sexual relationships.
- What are the genders of your partners?
- What words do you use for your body parts?
- Which behaviors might expose you to your partners' fluids?
- How often do you use barriers? Tell me about the times that you don't use barriers. Tell me about the times you do

Gender inclusive language

Gendered	Less Gendered
Vulva Penis, testicles	External pelvic area Outer parts
Labia or “lips”	Outer folds
Vagina	Genital opening, frontal opening, internal canal
Uterus, ovaries Prostate	Internal organs Internal parts
Breasts**	Chest
Pap smear, prostate exam	Cancer screening, HPV screening
Bra/panties/briefs	Underwear
Pads/Tampons	Absorbent product
Period/menstruation	Bleeding

*Adapted from Potter et al. 2015. **Transgender women may prefer “breast”

Primary care recommendations – Screening after Vaginoplasty

- **Comprehensive sexual health history**
- **Assess for symptoms**
- **Exam and STI screening**
 - STIs frequently asymptomatic
 - Screen all exposed sites

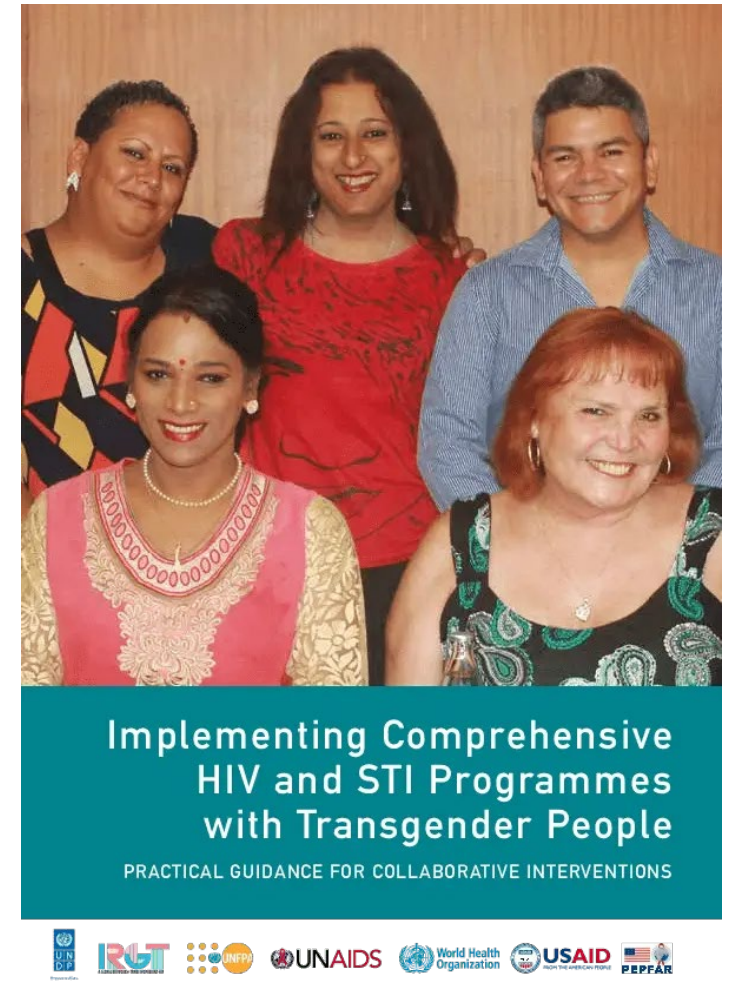
(No publications about STIs after phalloplasty)

STI Screening & Treatment

- *We recommend health care professionals who provide care to transgender and gender diverse patients follow local and World Health Organization guidelines for human immunodeficiency virus/sexual transmitted infections (HIV/STIs) screening, prevention, and treatment*

STI Treatment Guidelines

1. WHO Guidelines for the Management of Symptomatic Sexually Transmitted Infections 2021
2. Implementing Comprehensive HIV and STI Programmes with Transgender People: Practical Guidance for Collaborative Interventions (the “TRANSIT”) 2016
3. CDC (USA) Sexually Transmitted Infections Treatment Guidelines, 2021



Screening & Prevention (CDC) for TGD Individuals

- Chlamydia, gonorrhea
 - Annually, at sites of contact (urethra, rectum, oral)*
 - **TM after urethroplasty – do vaginal swab, not urine**
- Syphilis
 - At least annually if sexually active*
- HIV screen
 - Annually*
 - Offer pre-exposure prophylaxis
- Cervical cancer screen (if assigned female at birth)
- Vaccinations – Hep B, Hep A, HPV, MenACWY, MPV

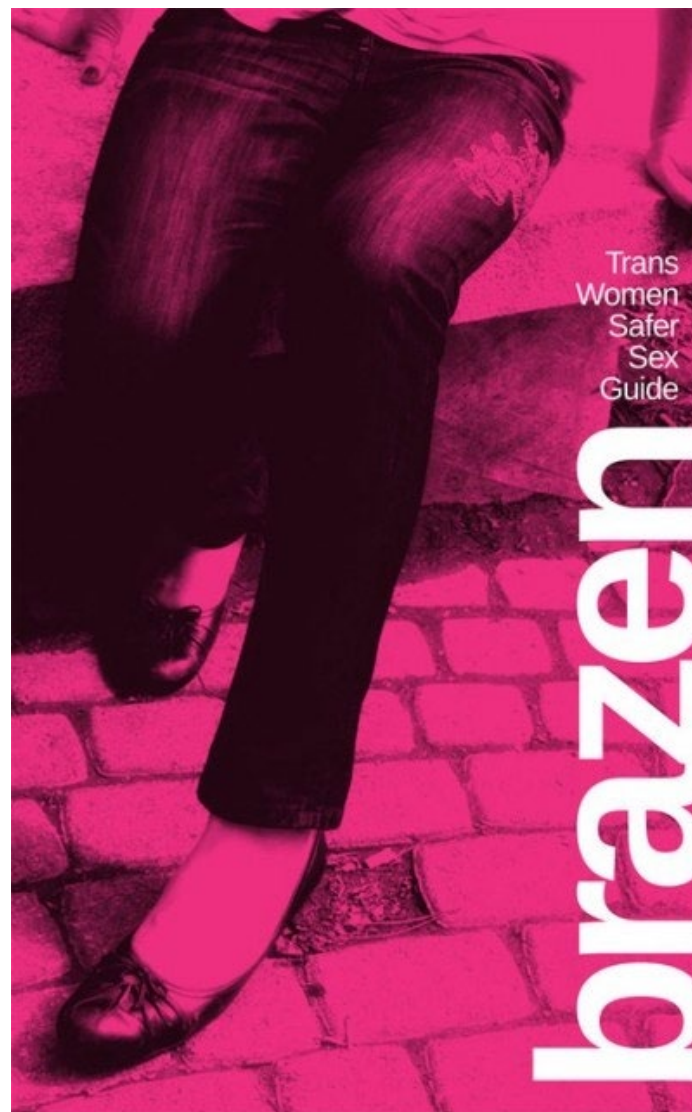
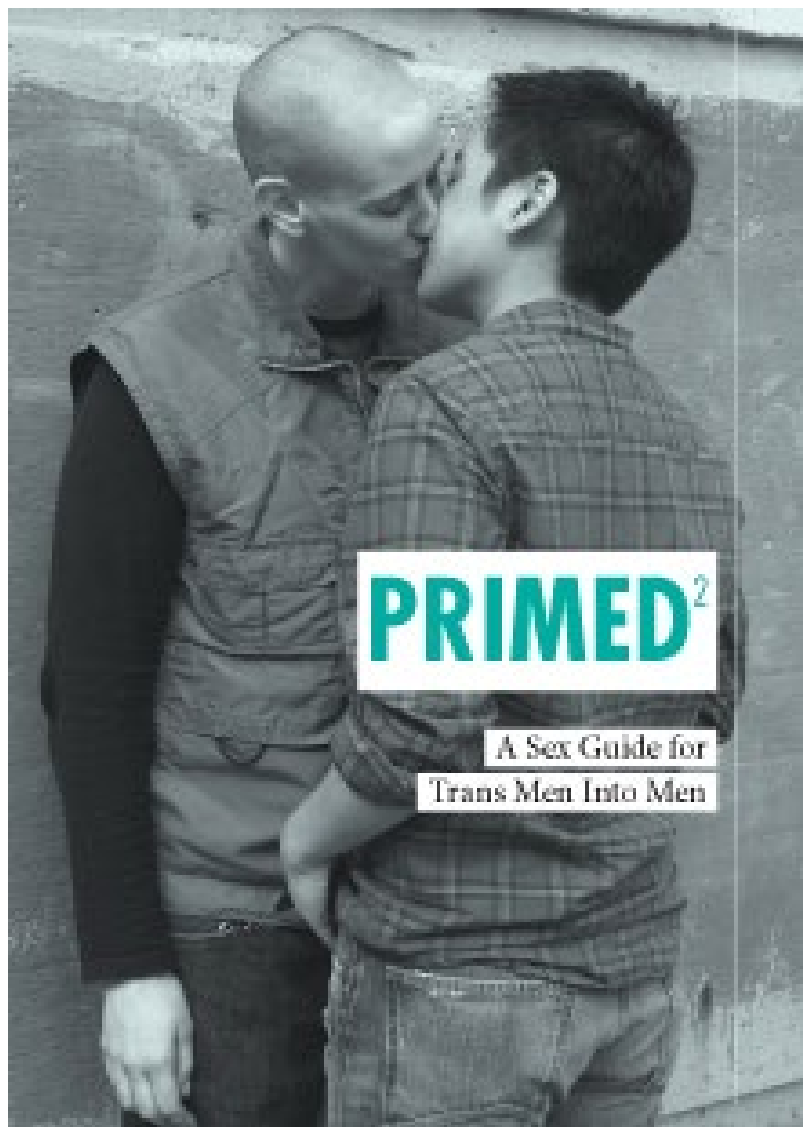
*Every 3 to 6 months if at increased risk

Key Points

- Offer HIV/STI testing preoperatively
- Counsel patients about STI/HIV risk postop and need for screening, PrEP
- STI testing if c/o odor, discharge etc

Statement 17.6

We recommend health care professionals who provide care to transgender and gender diverse people counsel adolescents and adults regarding prevention of sexually transmitted infections



Sources: <http://www.queertransmen.org>; <http://librarypdf.catie.ca/pdf/ATI-20000s/26424.pdf>; <https://calen-lorde.org/transhealth/>

HIV Nexus: A Clinical Resource

- Serves as a one-stop hub for resources designed to support clinicians
- Contains latest research and information on HIV prevention, screening, and treatment
- Provides access to free continuing medical education programs
- Highlights CDC guidelines and recommendations
- Includes patient education materials



www.cdc.gov/HIVNexus



Let's Stop HIV Together for Clinicians

- Clinicians are the front line for preventing new HIV infections and inspiring healthier outcomes for all patients.
- The Centers for Disease Control and Prevention's (CDC's) campaign, *Let's Stop HIV Together*, offers free resources and tools for health care providers and their patients on HIV screening, prevention, and treatment.



Disclaimer

Funding for this presentation was made possible [in part, if applicable] by U1OHA29296 from the Human Resources and Services Administration HIV/AIDS Bureau. The views expressed do not necessarily reflect the official policies of the Department of Health and Human Services nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government. *Any trade/brand names for products mentioned during this presentation are for training and identification purposes only.*



Questions?



aradix@callen-lorde.org



@asaradix