Avoiding Trans-mission: Transgender Sexual Health

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LearningObjectives

• The nexus of gender and sex
• Sexual functioning in transgender persons
• Epidemiology of HIV/STIs
• Factors affecting STI transmission
• Tools to improve transgender sexual health
The Nexus of Gender and Sex
Gender Spectra

- In many, but not all, human societies there has been a dichotomy between male and female

- The idea of a gender spectrum has evolved, but generally has been a continuum with male and female at the poles

- Genderqueer, nonbinary, nonconforming or variant persons define their gender outside the binary construct of male/female – may be androgynous, be masculine/feminine of center or have elements of both, not necessarily neatly placed on the line between the poles

- Gender expression is how a person presents outwardly

- Gender fluidity could be considered another spectrum
Gender Spectra

masculine gender identity

cis men

assigned male at birth (sex)

trans women

genderqueer or non-binary

intersex

trans men

assigned female at birth (sex)

feminine gender identity

cis women
Sexual Spectra

• The Kinsey scale describes sexual orientation, with attraction to the same or opposite sex at the poles, with intermediate classifications of bisexual/polysexual/pansexual

• Asexual <-> hypersexual another spectrum
Gender identity does not equate with sexual orientation

But sexual orientation can become fluid if a patient is undergoing gender transition
Transgender people come from all walks of life

Their risk for STIs depends on the particulars of their life and behaviors, so each person must be individually assessed.
Sexual Functioning in Transgender Persons
Cross Sex Hormone Use

- Study of sexual function in trans persons on hormones without surgery is very limited, but data trend positively

- Studies in natal men: increased libido with increased testosterone levels; this is affirmed clinically with transmen

- Studies in natal women who use estrogen replacement have better desire, lubrication & orgasmic capacity, but high doses of estrogens may decrease sexual desire

- Transfeminine persons are often on androgen blockers as well

- A study in post-vulvovaginoplasty MTF patients found there was no relationship between testosterone levels and desire
Sexual Functioning After Gender Affirming Genital Surgery

Transmen

• Sexual activity and masturbation increased (4 studies)
• Orgasmic capacity 78-100% (3 studies)
• Orgasms evolved to be more intense but shorter

Sexual Functioning After Gender Affirming Genital Surgery

Transwomen

• Studies of sexual desire are all over the map

• Functioning sometimes complicated by surgical results, eg, narrow/shallow neovagina

• All require use of exogenous lubrication

• Orgasmic capacity 27-100% (14 of the 18 studies >66%)

• Orgasms more diffuse and longer lasting

Epidemiology of HIV/STIs in Transgender People
Demographics

• No reliable data on demographics

• Estimated prevalence rates have increased, possibly due to lesser stigmatization & reflecting those less polarized on the gender spectrum
  • Early estimate 1 in 11,900 MTF; 1 in 30,400 FTM were treated (Bakker, 1993, the Netherlands)
  • More recent data suggest 1:500-1:2000 MTF (Olyslager, Conway, 2007)

• These rates may still be at the low end
Transgender People and HIV

• Transgender women: HIV prevalence 19% worldwide (21% US), i.e., 49x background rate

• HIV prevalence in transgender men (FTM) is estimated to be lower (2 - 3%)

• HIV infection is highest among transgender women of color: in a review of published US studies, Hispanics 17%, African-Americans 56%, white 16%*

• MTF transgender youth are at high risk for HIV infection in some settings

Transgender Women Sex Workers and HIV

• Transwomen sex workers’ HIV prevalence worldwide is 27%

• In the US, a meta-analysis estimated 24-75% of transgender women sell sex

• Benefits of sex work for TWSW:
  • Funds for livelihood + hormones/surgeries
  • Sense of community from other TWSW
  • Gender validation from male clients
Transgender Women Sex Workers and HIV

- TWSW receive lower pay despite engaging in higher risk activity
- In some settings, they have a higher volume of work to make ends meet
- In some locales, police use possession of condoms as evidence of sex work
- UNAIDS: TWSW are a key group at risk
Transgender Women Sex Workers and HIV Prevention

Epidemiological modeling suggests different interventions in differing settings

• Lima, Peru: Most helpful intervention = **Condom use at work**, then fewer transactions, then condom use with usual partner, then PrEP, then testing/treating TSW & usual partner

• San Francisco: Most helpful intervention = **Condoms with usual partner** > condoms with clients > testing/treating TWSW & usual partner > PrEP > fewer transactions

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Transgender People and STIs

- Per 2009 NYC study* lifetime risk of MTF for
  - Syphilis: 22% Hispanics, 15% A-A, 1.4% whites
  - Hepatitis B: 36% H, 36% A-A, 6.5% whites
  - Hepatitis C: 16% H, 7% A-A, 3.6% whites

- Large range of incidence in other studies:
  - syphilis (3 to 79 percent)
  - gonorrhea (4 to 14 percent)
  - chlamydia (2 to 8 percent)
  - herpes (2 to 6 percent)
  - human papillomavirus (HPV) (3 to 7 percent)

*Nutbrock, Lifetime Risk Factors for HIV/STIs Among MTF Transgender Persons, J Acquir Immune Defic Syndr, 52(3), 1 Nov 2009
Factors Affecting Transmission of STIs
Contextual Factors

- Economic marginalization
- Social isolation
- Mental health conditions
- Physical abuse/ intimate partner violence
- Incarceration
- Substance abuse
- Risk of infections from injected hormones/ silicone
- Lack of healthcare access
Economic Marginalization

• Twice as likely to be unemployed, 4 times as likely if a person of color & transgendered

• 90% experience mistreatment at work

• 60% live below the poverty line

• 13% homeless, twice the rate of the general population

“Injustice At Every Turn”, National Transgender Survey 2011
Social Isolation

• 57% experienced family rejection after revealing their trans identity

• 45% had their relationships end

• 19% experienced domestic violence at the hands of a family member, which related to 4x the rate of homelessness, 4x rate sex work & twice the rate of HIV infection.

• Conversely, family acceptance was strongly connected with a range of positive outcomes.
Mental Health

- Suicidal thoughts 54%
- Lifetime suicide attempts 31%
- One study: depression in 44%, anxiety 33%, somatization 27%; social stigma correlated with psychological distress*
- Gender abuse in MTF youth predicted depressive symptoms, & together predicted URAI & incident HIV/STI **


**Nuttbrock, Gender Abuse, Depressive Symptoms, & HIV/other STI Among MTF Transgender Persons: A 3 Year Prospective Study, Am J Public Health, 103(2), Feb 2013
Physical and Sexual Abuse and Intimate Partner Violence

- Physical abuse reported by 43%
  - If trans person tries to “pass” and sexual partner discovers trans status and has a violent reaction
  - IPV enabled due to power imbalance related to economic dependence & social isolation

- Forced sex reported by 20%

- These are extreme examples of the power dynamics that weaken the bargaining position for condom use more generally
Incarceration

• In National Transgender Survey 2011:
  • 21% of MTF had ever been incarcerated
  • 10% of FTM
  • 16% of total transgender population
  • 40% of black respondents

• Much of this relates to sex work

• In some places, transgender women are placed in male facilities, increasing their risk of being sexual assaulted
Transgender People and Substance Abuse

Marijuana, crack cocaine, and alcohol are the most commonly used drugs by transgender people. Studies show methamphetamine use (4 to 46 percent) & injection drug use (2 to 40 percent).

• Barriers to substance abuse treatment services:
  • provider hostility/insensitivity
  • strict binary gender segregation within programs
  • lack of acceptance in gender-appropriate recovery groups.
Risk of Bloodborne Infections

- In addition to possible IV recreational drugs
  - Transpeople may share needles when injecting hormones, especially if obtained on the street
  - Transwomen may get injections of silicone from nonmedical sources, putting them at risk of sepsis, ARDS and permanent disfigurement.
Lack of Healthcare Access

• An inadequate number of providers to provide culturally competent care due to lack of training.

• Transgender patients have often experienced neglect, ridicule or other maltreatment in medical settings & so don’t pursue care.

• Lack of insurance (back to the bad old days)
Biological Factors

Transmen with male partners:

- Thinned epithelium in frontal hole (aka, vagina) with decreased lubrication due to effect of testosterone.
- This can be furthered by use of systemic progesterone for contraception. Progesterone use (DepoProvera) seems to increase risk of HIV infection
- Anal receptive at times, with inherent risks
# FTM Changes – Testosterone

<table>
<thead>
<tr>
<th>Effect</th>
<th>Onset (months)</th>
<th>Maximum (years)</th>
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<tbody>
<tr>
<td>Skin oiliness/ acne</td>
<td>1-6</td>
<td>1-2</td>
</tr>
<tr>
<td>Fat redistribution</td>
<td>1-6</td>
<td>2-5</td>
</tr>
<tr>
<td>Cessation of menses</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>Clitoral enlargement</td>
<td>3-6</td>
<td>1-2</td>
</tr>
<tr>
<td>Vaginal atrophy</td>
<td>3-6</td>
<td>1-2</td>
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<tr>
<td>Deepening of voice</td>
<td>6-12</td>
<td>1-2</td>
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<tr>
<td>Facial hair</td>
<td>6-12</td>
<td>4-5</td>
</tr>
<tr>
<td>Androgenic hair loss</td>
<td>6-12</td>
<td></td>
</tr>
<tr>
<td>Increased muscle mass</td>
<td>6-12</td>
<td>2-5</td>
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# MTF Changes – Estrogen and Anti-Androgen

<table>
<thead>
<tr>
<th>Effect</th>
<th>Onset (months)</th>
<th>Maximum (years)</th>
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<tbody>
<tr>
<td>Decreased erections</td>
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</tr>
<tr>
<td>Softening of skin</td>
<td>3-6</td>
<td>unknown</td>
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<tr>
<td>Decrease muscle mass</td>
<td>3-6</td>
<td>1-2</td>
</tr>
<tr>
<td>Breast growth</td>
<td>3-6</td>
<td>2-3</td>
</tr>
<tr>
<td>Decreased testicular volume</td>
<td>3-6</td>
<td>2-3</td>
</tr>
<tr>
<td>Decrease sperm production</td>
<td>unknown</td>
<td>&gt;3</td>
</tr>
<tr>
<td>Voice changes</td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>
Biological Factors

Transwomen with male partners

• May be anal receptive
• Neovaginal infections are possible
• Tucking can result in skin abrasions
The Mechanics of Tucking
MTF Gender Affirmation Surgery Aims to Recapitulate Embryology
Biological Factors

Transwomen with history of vaginoplasty

• Neovaginal construction
  • Most typical technique includes urethral flap on anterior wall of inverted penile tube, so much of the vaginal wall is keratinized squamous epithelium. The histology of this has been shown not to change postoperatively, even a decade later.
  • There is a less common type where part of the sigmoid colon is mobilized on a pedicle and used.

*Dekker, Do Histologic Changes in the Skin-Lined Neovagina of Male-to-Female Transsexuals Really Occur?, Annals Plastic Surgery, Vol 9 (5), Nov 2007*
Biological Factors

Transwomen with history of vaginoplasty

STI case reports:

• There are single case reports of gonorrhea in a patient with a history of penile skin inversion technique (1994) and in a patient with a sigmoid neovagina (2015)*

• There are a few case reports of HPV-induced neovaginal SCCa

Sexual Networks

• Transmen who have sex with men may debut into an unfamiliar gay culture with little experience in negotiating safe sex and a sudden upswing in libido due to testosterone. Also, may feel can’t negotiate for safer sex as worried about rejection

• Transwomen also may feel can’t negotiate for safer sex due to power imbalance & some have high risk partners

• Both are more likely to have to do sex work to support themselves given their economic realities
Multilevel drivers of HIV risk among transgender populations

*Hormone mediated atrophy of vaginal tissue among trans masculine MSM taking testosterone

Poteat, Tonia; Scheim, Ayden; Xavier, Jessica; Reisner, Sari; Baral, Stefan, JAIDS Journal of Acquired Immune Deficiency Syndromes. 72():S210-S219, August 15, 2016.
Yet Self-Perceived Risk of HIV Is Limited in Transgender Women

Review paper 2007:

- MTF: 27.7% tested HIV+, but self-reported as positive 11.8% of time
- African-American MTF: 56.3% tested HIV+, 30.8% self-reported as positive
Improving the Sexual Health of Transgender Patients
Tools

- Cultural competency
- Clinical considerations
- Safer sex techniques & counseling
Why Is Cultural Competency Important?

• Many transgender persons will not discuss their identity with their healthcare provider so important to create an inviting atmosphere
  • 45% did not inform their family physician of their transgender status (Bockting, 2000)

• Creating a comfortable environment enhances the therapeutic alliance & increases participation in medical care
Trans Cultural Competency – Beginning the Interview

• Inquire about preferred first name

• Ascertain where your patient feels they fit on the gender spectrum

• Ask for self-descriptors
  • Male, female, gender queer, gender nonbinary, trans*, transman, transwoman, transgender?
  • Even people who are non-binary may still feel transmasculine or transfeminine applies to them
  • She/her, he/him, they/them, ze/hir (pronounced zhee/her)
Trans Cultural Competency –
Beginning the Interview
Trans Cultural Competency –
Beginning the Interview

• Ask if the person is gender fluid, i.e., has variation in location along spectrum

• Record patient’s preferences, at least first name and pronouns, in a way the rest of any staff person could easily see and use the correct terms

• Respectful language goes a long way, as does a little self-deprecation: “Please correct me if I say something incorrectly.”
Trans Cultural Competency – Body Language

• Use neutral terms, eg, genitalia, gonads or “people who have a body like yours”

• Transmen
  • Was clitoris: clitoris, dick, dicklette, T-penis. If use a silicone penis, may call a cock
  • Was vagina: front hole or vagina
  • Were breasts: chest tissue
  • Was anus: anus, back hole or manhole

• Transwomen
  • Vulva and vagina

• For sexual partners, female-bodied or male-bodied can be helpful term
Safer Sex for Trans Patients – Sexual Misconceptions

• I can’t get STI’s from shared toys (yes, you can)

• I can’t get STI’s from oral sex (GC, HIV/HSV/HPV, syphilis)

• I mostly hear about gay and bisexual men getting HIV, not trans people (if you are anal receptive, your risks are higher, regardless)

• HIV positive trans people: Once I have HIV, it doesn’t matter if I use condoms (syphilis, resistant GC/ HIV)

• Transmen: If I don’t have periods on “T”, I can’t get pregnant (it’s possible)
Risk HIV Transmission/Exposure (untreated source patient)

- Receptive anal intercourse: 2%
- Receptive vaginal intercourse: 0.1%
- Insertive anal/vaginal: 0.06%
- Receptive oral sex (male partner): 0.04%
- Other sexual exposure: 0.004%
- Needle or syringe sharing: 0.3%
Assessing Risks of STIs for Trans People

• Most helpful to evaluate risk based on behavior

• Some epidemiological patterns
  • TMSM/TWSM partners: HIV, syphilis, GC, CT, viral hepatitis, HSV, HPV, MRSA
  • TWSW/TMSW: HPV, HSV
Safer Sex for Trans People

• HAV, HBV and HPV vaccines

• Barriers:
  • Condoms on penis if using or other insertive objects
  • Female condom for receptive vaginal sex
  • Female condom with one ring removed for receptive anal sex

• Clean toys according to directions

• Use water based lubricants with silicone toys

• Separate sex and substances

• Minimize number of partners
Safer Sex for Trans People

• Suppressive treatment of HIV+/HSV+ partner if serodiscordant

• HIV Pre Exposure Prophylaxis: Truvada (tenofovir/emtricitabine)

• HIV Post Exposure Prophylaxis: Truvada + raltegravir = most common PEP regimen

There are no drug interactions between estradiol/spironolactone/testosterone and tenofovir/emtricitabine (Truvada) or raltegravir.
Safer Sex for Trans People

iPrEx = only PrEP study with TGW

• PrEP not shown to be effective in TGW

• But subgroup analysis of the open label extension showed minimal blood levels

• Seroconversion only occurred among TGW with levels = fewer than 2 tabs weekly

• Unlike MSM, TGW with riskier behaviors were NOT more likely to adhere

Deutsch, HIV pre-exposure prophylaxis in transgender women: a subgroup analysis of the iPrEx trial, Lance HIV, 2:e512-19, 5 November 2015
Safer Sex for Trans People

iPrEx Open Label Extension

Deutsch, HIV pre-exposure prophylaxis in transgender women: a subgroup analysis of the iPrEx trial, Lance HIV, 2:e512-19, 5 November 2015
Safer Sex for Trans People

Barriers to PrEP Use

• Belief they are not at risk of HIV infection . . .

• Which may compounded by not being listed in the PrEP guidelines, despite having significant rates of risk behaviors

• Concern for side effects

• Concern for drug interactions that would adversely affect hormone effects (no, but could check levels to reassure)

• Lack of access to care or insurance

• Belief that care provider or clinic may not be culturally appropriate or medically informed
Safer Sex for Trans People

PrEP Use Facilitators

- Free medication
- Linkage to care, especially if allows for hormone use
- Many already on daily medication
- Not having to go to primary MD
- Knowing someone on it
Safer Sex for Transmen

• Could use Estring/Vagifem for front hole dryness and fragility, or a dab of estradiol cream to introitus if chafing

• Inform in advance of their increased libido

• Use condoms if anal receptive

• Use a “cape” if insertive
Safer Sex for Transmen (Insertive Sex)

Custom condoms:

- Use a glove to make a “cape”
- Cut off all 4 fingers
- Cut down the ulnar side
- Use the thumb extrusion for the enlarged clitoris/dick
Safer Sex for Transwomen

• Use only surgical tape for tucking to decrease risk of skin abrasions (no duct tape!).

• Or use specialized underwear available for the same purpose.
Safer Sex for Trans People

Barriers for oral sex not involving a phallus or equivalent:

• dental dams

• plastic wrap (not the microwave-able type!)

• cut up unlubricated male condom or a female condom
Safer Sex for Trans People

Sometimes transmen & transwomen try to “pass” as natal men or women in casual sex situations, which can trigger violence.

- Advise careful assessment of a situation
- If cruising, consider going with a friend or let someone know where they are; carry a cell phone
- Is there an avenue of escape if needed?
Contraception for Transmen

• IUDs and barrier methods are usually used

• Mirenas have the benefit of amenorrhea

• Estrogen-containing methods aren’t an option if on testosterone

• If not on testosterone, low dose combined oral contraceptives can be used. Continuous dosing can be used to eliminate periods, which can relieve dysphoria

• Could use Depoprovera or Nexplanon, but could cause further atrophy of vaginal mucosa
Cervical Cancer Screening for Transmen

Make the gyn exam comfortable!

• Speculums come in a range of sizes
• Let the patient be in control of the exam, which is especially important if a history of sexual abuse
• Lorazepam can be very helpful
• Consider pretreatment with topical estrogen for 3-4 weeks
• Consider HPV test only if too uncomfortable
Health Promotion for Transgender Patients

- Create comfortable environment
- Encourage self care & use of support system
- Screen for the health risks outlined
- Educate & provide resources
- Motivate to have healthy behaviors and get adequate screening
- Refer for care to non-phobic specialists
Patient Education Resources


• Sexual Health for Transgender and Gender Non-Conforming People: at http://www.genderdynamix.org.za/ under resources

• Several brochures and further links at http://transhealth.ucsf.edu/ under learning resources
Provider Resources

• “Injustice At Every Turn: A Report on the National Transgender Survey, 2011”: available at www.thetaskforce.org

Hormone therapy

• http://transhealth.ucsf.edu/

• https://www.lgbthealtheducation.org/

• http://callen-lorde.org/transhealth/

Surgical guidelines & policy

• http://www.wpath.org
Provider Resources

Non-occupational HIV post-exposure prophylaxis (2016 update)

• https://stacks.cdc.gov/view/cdc/38856

HIV pre-exposure prophylaxis

Quiz
Transgender women had limited adherence to Truvada for HIV PrEP in iPrEx, which

1. is understandable as there is a pharmacokinetic interaction between tenofovir & estrogen.

2. was true even in those with the highest risk sexual behaviors.

3. led to no demonstrated benefit, but TGW are in the guidelines as a group appropriate for PrEP.
STI risk in sexually active transmen who have sex with men

Q&A

1. is increased due to vaginal mucosal fragility if on T.

2. is decreased by progesterone, when used for contraception.

3. is heightened by network effects.

4. Both statements A & C are correct.
Significant rates of HIV and STI prevalence in transgender persons

1. occur only in developing countries.

2. has entirely to do with rates of sex work, which is necessitated by economic & social vulnerabilities.

3. is multifactorial, including biological, network, economic, legal, medical & social influences.
Which of the following statements is false?

1. If a male-bodied person is on estrogen, at least you don’t have to worry about urethritis because they don’t have insertive sex.

2. Testosterone cannot be relied on to be effective for contraception in transmen, even if they are amenorrheic.

3. A gender non-binary person may have a variety of gender expressions, & not necessarily present as androgynous.
Thank you