Gender Affirming HIV Prevention and Treatment

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Learning Objectives
Upon completion of this presentation, learners should be better able to:

• Institute gender-affirming HIV care into your medical practice
• Increase utilization of PrEP in at-risk, gender diverse patients
• Discuss the known and perceived interactions between gender-affirming hormone therapy and antiretroviral therapy

Faculty and Planning Committee Disclosures
Please consult your program book or the Conference App.

Off-Label Disclosure
The following off-label/investigational uses will be discussed in this presentation:
• Use of estrogen, spironolactone and testosterone for gender-affirming hormone treatment is standard of care, but off label.
Understanding Terminology

- Gender identity may not be the same as a person’s sex
- Gender identity may include: Transfemale/Transmale, Trans, Cisgender, Genderqueer, Gender fluid, Gender non-conforming, Agender, etc
- Transfemale: assigned male at birth, but identifies on the feminine spectrum
- Transmale: assigned female at birth, but identifies on the masculine spectrum
- Sexual orientation also relates to gender identity: gender diverse individuals can be of any sexual orientation

Taken from The Canadian Center for Gender and Sexual Diversity: https://ccgsd-ccdgs.org/gender-elephant/
**What is Gender-Affirming Medical Care?**

- Creating gender-affirming spaces, including gender neutral bathrooms
- Developing non-binary clinic forms that allow for gender diversity
- Asking ALL patients about their gender identity and pronouns
- Working with EMRs to include pronouns and names used by patients, forms such as organ inventory
- Using patient’s language when asking about types of sexual activity & partners
- Acknowledging our own unconscious bias and how it impacts the care we provide
- Learning about hormone therapies, gender confirmation surgeries & legal affirmation

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**Using EMRs Creatively!**

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Using EMRs Creatively!

Each “click” automatically adds the correct corresponding ICD-10 code to the patient’s Problem List and includes the date and surgeon who performed the surgery.

Marginalization of a Community

Compared to non-trans residents of DC, trans people are:

- Education: less likely to have a hold a post HS degree, but 5x more likely to be unemployed even if they have a bachelor’s degree.
- Income: 4x more likely to earn < $10k/yr, be discriminated against during hiring, & experience workplace harassment.
- Housing: more likely to be homeless, & engage in sex work for housing, particularly trans women of color who are also more likely to be HIV+

Marginalization of a Community

Compared to non-trans residents of DC, trans people are:
- Sex work: more likely to engage in sex work
- HIV status: 7x more likely to be HIV+ with trans women of color making up nearly 30%
- Healthcare: denied access to healthcare due to being perceived as trans, 2x as likely to be uninsured


Marginalization of a Community

Compared to non-trans residents of DC, trans people are:
- Suicide risk: 60% had seriously considered suicide, 34% had attempted suicide, nearly half reported current or past drug use.
- Assault: 75% had been verbally assaulted, 42% physically assaulted, and 35% sexually assaulted. Trans women of color disproportionately affected

The Trans Experience with the Medical Community

- Pathologizing gender: Only in 2013 did the DSM-5 change Gender Identity Disorder to Gender Dysphoria.
- 24% of trans and gender non-conforming people reported discrimination in healthcare settings that resulted in increased:
  - Emotional and physical symptoms
  - Postponement of acute or preventative care
  - Postponement of care that resulted in a ER visit
  (Reisner, et al, 2015)

Gender Affirmation and Engagement in Care

If we affirm gender, then we can improve health outcomes and quality of life in our transgender patients
- Decrease in depression, anxiety, somatization, interpersonal sensitivity, hostility, phobic anxiety (agoraphobia)
- Improvement in sexual function
Medial Gender Affirmation: Transmasculine

- Hormonal therapies:
  - Testosterone (injectable, topical, subdermal)
- Surgery:
  - Chest reconstruction: “top surgery”
  - Metoidioplasty
  - Phalloplasty: “bottom surgery”
  - Hysterectomy

Adapted from lgbthealtheducation.org

Medial Gender Affirmation: Transmasculine

Chest Reconstruction: Dr. Johnson
Pioneer Valley Plastic Surgery

Metoidioplasty: Dr. Crane
Brownstein & Crane Surgical Assocs
Medical Gender Affirmation: Transfeminine

- Hormonal therapies:
  - 17-B-Estradiol (oral, topical, injectable)
  - Anti-androgen (spironolactone, finasteride, cyproterone acetate (not in the US))

- Surgery:
  - Facial feminization
  - Electrolysis / laser hair removal
  - Breast augmentation
  - Vaginoplasty
  - Tracheal shave
  - Orchiectomy

Adapted from lgbthealtheducation.org

Medical Gender Affirmation: Transfeminine

Vaginoplasty: Dr. McGinn
Papillon Center

Facial Feminization Surgery: Dr. Spiegel
Spiegel Center

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HIV Prevalence in Transgender Individuals

- Pooled global HIV prevalence in transwomen was 19%
- Dearth of data on HIV prevalence in transmasculine individuals (0%-4.3%).
- 1 in 10 new HIV dx in the US are transmen (Lemons, et al, 2017)

US HIV Prevalence in Transgender Individuals

Transwomen have a 22% prevalence of HIV infection in the US, 3x greater than the general population

(Barai, et al, JAIDS 2016)
PrEP Utilization in Transgender Individuals

- Many young transwomen who might benefit from PrEP haven’t heard of it (68%), but 2/3 of young transwomen were interested in it once informed (Restar, et al. 2018).
- Reasons for not initiating:
  - Side effects 21%
  - Mistrust of medical providers 17%
- How are we assessing risk in our trans patients? How are we addressing the needs of patients: hormones, PrEP, housing, legal status, insurance?


- If you can answer yes to any of the questions below, then PrEP may be one HIV prevention strategy to consider.
- Do you use condoms sometimes or not at all?
- Do you get often get STIs in your butt?
- Do you often get STIs in your vagina?
- Have you taken post-exposure prophylaxis (PEP) more than once in the past year?
- Are you in a serodiscordant relationship, where your sexual partner is HIV positive and you are HIV negative?
- Are you in an open relationship or having anal and/or vaginal sex with multiple partners?
- Are you having sex with someone whose HIV status you don’t know?
- Are you having sex with someone in a city or region where the HIV prevalence is high—that is, where there are large numbers of people living with HIV?
What Does the CDC Say About PrEP?

Although the effectiveness of PrEP for transgender women has not yet been definitively proven in trial, and trials have not been conducted among transgender men, PrEP has been shown to reduce risk for HIV acquisition during anal sex and penile-vaginal sex. Therefore, its use may be considered in all persons at risk of acquiring HIV sexually.

CDC, 2017 PrEP Guidelines Update

How Effective is PrEP in Transgender Populations?

- Estrogen and progesterone increase vulnerability of vaginal epithelium to HIV infection. What is the effect on a neo-vagina?
- Lack of studies looking at PrEP effectiveness particularly in transfemale individuals
  - However, there does not appear to be an interaction between gender-affirming hormones and PrEP (Anderson, et al 2016).
2018 International AIDS Conference

- Hiransuthikul et al, 2018
  - PrEP does not lower levels of gender-affirming hormones in transwomen
  - Lower plasma tenofovir levels, but unclear if this is clinically significant
- Cotrell et al, 2018
  - There was a reduction in rectal tenofovir levels among transwomen
  - Tenofovir levels were lower the higher the estradiol or progesterone
  - ? Impact on PrEP efficacy, need more research

PrEP in Transgender Women: iPrEx Subgroup Analysis (Deutsch MG, et al. 2015)

- Transwomen were 14% of trial participants
- 11 transwomen seroconverted in the intervention group, versus 10 in the placebo group.
  - TDF not detected in transwomen at time of seroconversion
  - No HIV seroconversions in TGW with TDF levels consistent with taking >4 pills/wk.
- PrEP use was protective with drug adherence
- Transwomen who reported use of feminizing hormones were less likely to have any drug detected or protective drug concentrations
Increasing PrEP Use!

- Utilize gender neutral risk assessment for PrEP risk calculators
- Acknowledge patients concerns about interactions between PrEP & hormones
- Sex-positive messaging directed at trans individuals
- Integrate PrEP care into primary care, discuss at STI screening & preventive health visits
- Counsel on when PrEP reaches protective concentration in rectal v. vaginal mucosa

HIV Acquisition Among Transgender People

- Sexual contact
  - Condomless sex
  - Increased number of sexual partners
  - Transactional sex
- Needle-sharing
  - Intravenous Drug Use
  - Injectable hormones
  - Silicone/fillers

By Newser Editors and Wire Services
HIV Treatment in Transgender People

• Transwomen are wary of antiretroviral therapy (ART)
  – Many transwomen prioritize hormone therapy over ART
  – Many transwomen (25%) used medically unsupervised hormones
  – 14% used medically unsupervised injections (body fillers, silicone)
  – Half of transwomen were concerned about side effects of ART with hormones, but only 25% of those spoke to their providers

(Braun et al, 2017)

HIV Treatment in Transgender People

• Barriers to care:
  – Late access and poor retention in care
  – Low initiation and adherence to ART
  – Less confidence to integrate regimens into their daily lives
  – Reported fewer positive interactions with their healthcare providers
  – Have higher viral load
  – Fear of medical providers/facilities that aren’t trans-friendly
Engaging and Working *With* Trans Communities

“In many parts of the world, it will not be possible to achieve the 90-90-90 target for key populations solely by looking to mainstream service systems. Tailored approaches and strategies, developed collaboratively with key populations themselves, will be needed to achieve treatment goals for the populations most heavily affected by the epidemic. Investments in community infrastructure will also be required.”

UNAIDS 90-90-90 Treatment Target to End HIV

Interactions between gender affirming hormonal therapies and first-line ART regimens? *Not likely!*

<table>
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<tr>
<th>Recommended Initial Regimens for Most People with HIV</th>
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<td>Recommended regimens are those with demonstrated durable virologic efficacy, favorable tolerability and toxicity profiles, and ease of use.</td>
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- **INSTI plus 2 NRTIs:**
  - **Note:** For individuals of childbearing potential, see Table 6b before prescribing one of these regimens.
  - BIC/TAF/FTC (AI)
  - DTG/ABC/3TC (AI) — if HLA-B*5701 negative
  - DTG plus tenofovir /FTC (AI for both TAF/FTC and TDF/FTC)
  - RAL plus tenofovir /FTC (BI for TDF/FTC, BII for TAF/FTC)

What to Start: Initial Combination Regimens for the Antiretroviral-Naive Patient
Last Updated: October 25, 2018; Last Reviewed: October 25, 2018
CROI 2019 Highlights

- DISCOVER Phase 3 trial (B. Hare): evaluate efficacy and safety of F/TAF for PrEP among cis-MSM & TGW at high risk of HIV
  - N = 5387, ONLY 74 were TGW, which is 1%. 22 new infections, none were TGW
- PrEP: 3 new demonstration studies: TRIUMPH, The Stay Study, IM-PrEPT! Study
- HPTN 091: Integrating HIV prevention, gender-affirmative medical care, and peer health navigation to prevent HIV acquisition and HIV transmission for transgender women

CROI 2019 Highlights

Take Home Points:

- Transgender women are disproportionately affected by HIV, let’s work to increase utilization of PrEP in this population
- Providing gender-affirming care is essential to engagement and retention into care
- There are no definitive interactions between PrEP, ART and gender-affirming hormones
- Engage transgender communities into strategies for HIV prevention and treatment
References/Resources

Websites:

- The Canadian Center for Gender and Sexual Diversity: https://ccgsd-ccdgs.org/gender-elephant/
- Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD and TP Prevention, Center for Disease Control and Prevention: https://www.cdc.gov/hiv/group/gender/transgender/index.html
- https://prepfacts.org/prep/the-questions/