HIV Prevention for Gender-Diverse Populations

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Key Takeaways

• For trans women, PrEP and HIV treatment are effective when adherent; less known about trans men and non-binary people
• Limited data on efficacious integrated bio-behavioral interventions
• Need for integrated status-neutral biobehavioral HIV interventions
• Need to address trans-specific multilevel drivers of HIV epidemic
• Need for structural interventions that promote resilience (e.g. name change, training HCWs to provide culturally competent care, economic (e.g. conditional cash transfer, skills building)
• Tailored interventions need to be developed in collaboration with TGD communities ("nothing about us without us")
Sex and Gender are Different

• **Sex ≠ gender; sexual orientation ≠ gender identity**

• **Sex** – assigned at birth
  • Male, female
  • Based on biology: Anatomy, chromosomes, hormones

• **Gender** – social and cultural distinctions
  • Gender identity, one’s sense of self as a gendered or nongendered person (man, woman, both, neither)
  • Multidimensional: identity, expression, roles

• Need to routinely ask assigned sex and gender identity

Reisner et al., BMC Public Health, 2014; Reisner et al., Trans Studies Quarterly, 2015
Transgender and Gender Diverse (TGD) People

- Everyone has a Sexual Orientation and Gender Identity
- Cisgender: sex assigned at birth is congruent with Gender Identity
- TGD people have a GI or expression different than assigned sex at birth
  - Transgender woman: Trans woman, trans female, transgender girl → Male assigned sex at birth
  - Transgender man: Trans man, trans male, transgender boy → Female assigned sex at birth
  - Nonbinary: outside the gender binary
  - Cultural specificity of gender identities
  - >25 million TGD people globally

travesti, meti, waria, hijra, kothi, fa'afafine, kinnar, genderqueer, transpinoy, aravani, jagappa, shiv-shakthis, jogti, two spirit, third gender, thirunangi, twin spirit, muxhe, omeguid, leiti mahu
Nonbinary People

• Gender identity or expression not exclusively male or female
  • Outside traditional male-female gender binary
  • Genderqueer, gender fluid, gender expansive, agender, pangender
• Pronouns: They/ them/ their, Ze/ hir/ hirs

- 98 studies from Jan 1, 2000 – Jan 28, 2019, lab-confirmed HIV infection
- **N=48,604 trans feminine individuals from 34 countries (78 studies)**
- HIV prevalence: **19.9% (95% CI=14.7% - 25.1%)**
- Comparing Trans feminine vs adults age 15+ in each country

<table>
<thead>
<tr>
<th>Region</th>
<th># of countries</th>
<th># of Samples</th>
<th>Sample size</th>
<th>TGW HIV Prevalence (95% CI)</th>
<th>Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>9</td>
<td>9</td>
<td>1192</td>
<td>29.9 (22.5–37.3)</td>
<td>21.5 (6.3–73.7)</td>
</tr>
<tr>
<td>Asia</td>
<td>11</td>
<td>35</td>
<td>14798</td>
<td>13.5 (2.3–17.7)</td>
<td>68.0 (42.9–107.8)</td>
</tr>
<tr>
<td>Global North</td>
<td>5</td>
<td>35</td>
<td>24697</td>
<td>17.1 (13.1–21.1)</td>
<td>48.4 (28.2–83.9)</td>
</tr>
<tr>
<td>Latin America</td>
<td>9</td>
<td>23</td>
<td>7917</td>
<td>25.9 (20.0–31.8)</td>
<td>95.6 (73.7–122.7)</td>
</tr>
</tbody>
</table>

Stutterheim, van Dijk, Wang, et al., PLOS One, 2021
HIV Prevalence in TW in Sub-Saharan Africa

- “MSM” studies at 14 sites across 8 countries: Burkina Faso, Cote d’Ivoire, The Gambia, Lesotho, Malawi, Senegal, Swaziland, and Togo
  - RDS/PLACE ⇒ Survey ⇒ rapid HIV testing
  - Among 4,586 male SAB participants, 20% identified as TW or female (remaining were cis MSM) ⇒ 937 TW
  - HIV prevalence among TW: 25% (vs. 14% among cis MSM)

Table 6. Multivariable logistic regression of odds of HIV infection.

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR (95% CI)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (transgender women versus cis MSM)</td>
<td>2.17 (1.65–2.87)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Age (1-year intervals)</td>
<td>1.10 (1.08–1.12)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Condomless receptive anal sex</td>
<td>2.12 (1.66–2.72)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Depression screen</td>
<td>1.48 (1.21–1.81)</td>
<td>0.001</td>
</tr>
<tr>
<td>Interpersonal stigma</td>
<td>1.04 (0.93–1.16)</td>
<td>0.507</td>
</tr>
<tr>
<td>Law enforcement stigma</td>
<td>1.13 (1.02–1.24)</td>
<td>0.016</td>
</tr>
<tr>
<td>Violence</td>
<td>1.20 (1.07–1.35)</td>
<td>0.002</td>
</tr>
<tr>
<td>Gender × condomless receptive anal sex</td>
<td>2.14 (1.56–2.92)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Poteat et al. 2017
• Vanguard study of HIV risk in African MSM and TGW
• Enrolled 401 pts. In Blantyre, Cape Town, Kisumu, Soweto
• 20.1% pts. identified as TGW, transsexual, female, or male+ female
• Challenge: People’s identities changed in the course of the study
• HIV incidence **8.4% for TGW** (6.8% for cisgender MSM; NS)
• *27.5% engaged in transactional sex; 24.8% reported forced sex
• *50.5% reported sex while under the influence of drugs or alcohol
• *Rectal GC, CT prevalence: 16.1%
• *Only 28.4% virally suppressed
• Stigma and health care discrimination common

*Data from whole sample

Sandfort et al, 2021
### Gender nonconforming more likely to report...

<table>
<thead>
<tr>
<th>Event</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexually abused as a child</td>
<td>2.93</td>
<td>(1.70, 5.05)</td>
</tr>
<tr>
<td>Forced sex in past year</td>
<td>2.26</td>
<td>(1.50, 4.45)</td>
</tr>
<tr>
<td>Engaged in transactional sex</td>
<td>2.05</td>
<td>(1.23, 3.43)</td>
</tr>
<tr>
<td>Receptive anal sex w/o condom</td>
<td>3.56</td>
<td>(2.10, 6.03)</td>
</tr>
<tr>
<td>HIV positive</td>
<td>3.02</td>
<td>(1.71, 5.33)</td>
</tr>
<tr>
<td>Sexually attracted exclusively to men</td>
<td>2.1</td>
<td>(1.27, 3.48)</td>
</tr>
<tr>
<td>Homophobic experiences</td>
<td>1.46</td>
<td>(1.18, 1.80)</td>
</tr>
</tbody>
</table>
Global Burden of HIV in Transgender Men

- 2021 meta-analysis:
  - 98 studies from Jan 1, 2000 – Jan 28, 2019
  - Lab-confirmed HIV infection
  - 30 studies, 5 countries
  - **N=6460 trans masculine individuals**
  - HIV prevalence: **2.56 (95% CI=0.0% - 5.9%)**
  - Trans masculine vs all adults age 15+: **OR=6.8 (95% CI=3.6 - 13.1)**

- No studies reporting HIV incidence
- Sexual risk behaviors
  - **7% - 69%** genital-genital sexual risk

Becasen et al., AJPH, 2018; Reisner & Murchison, Global Public Health, 2016; Poteat et al., JAIDS, 2016; Scheim et al., JAIDS, 2017; Stutterheim, van Dijk, Wang, et al., PLOS One, 2021
HIV/STI Burden: Non-binary (NB) People

**US Transgender Survey** (N=27,715):
- 35% of respondents were NB (n=9,700)
- Self-reported NB HIV prevalence (overall): 0.4%
  - Among female SAB: 0.2%
  - Among male SAB: 1.0%

NO studies identified with STI data on NB individuals

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Transgender Health and Social Inequities

• HIV infection and other STIs
  • Poor self-rated general health
  • Mental health conditions
  • Substance (ab)use
  • Cancer-related risks (e.g., smoking)
  • Cardiovascular disease risks
  • Violence/ victimization
  • Delays in preventive screening
  • Lack of access to gender-affirming care
  • Social and economic stigma and exclusion (e.g., poverty, homelessness, incarceration)
Stigma and Social Exclusion

- 35% bullied in schools
- 47% face family rejection
- 40% attempted suicide, 10% last year
- 29% live in poverty
- 14% homelessness
- 1 in 3 discrimination in healthcare
- 1 in 4 avoided medical care due to fear of mistreatment
- 46% publicly harassed in last year
- 47% sexually assaulted in lifetime

Bauer et al., 2015; James et al., USTS, 2016; Johns et al., MMWR, 2019

- Trans murders have doubled from last year in the USA
- 53 trans people murdered in 2021
- 89% people of color
Gender Non-Affirmation

- Gender non-affirmation and stigma
- Nov-Dec 2017
- 843 trans masculine adults who report sex with a cis male in last 6 mo
- 77.7% non-affirmation
  - 33.2% low, 30.6% moderate, 13.9% high
- Higher frequency of non-affirmation associated with increased odds of ...
  - Depressive distress (p<0.05)
  - Symptoms of anxiety (p<0.05)
  - Condomless sex (p<0.05)
  - No HIV test in last 6 mo (p<0.05)

4-item scale:
1. being referred to with the incorrect pronouns/ mis-gendered during sex;
2. feeling disrespected by words/terms used to describe their body;
3. crossing boundaries sexually which they later felt uncomfortable with or were ashamed about in order to validate their gender identity or expression;
4. dealing with a sex partner questioning his sexual orientation after having sex with them.

Reisner, Moore, Asquith, Pardee, Mayer, AIDS Behav, 2020
PrEP in Transgender Women: iPrEx

- iPrEX RCT of once daily oral FTC/TDF for PrEP
- Transgender women: 339/2499 (14%)
- Lack of efficacy in trans women
  - 11 TW seroconverted in intervention vs 10 in placebo; HR 1.1, 95% CI 0.5 to 2.7; p=0.77
  - TDF detected in no trans women at seroconversion
- No HIV seroconversions in trans women with TDF levels consistent with taking >4 pills/week
  - PrEP use protective in the setting of drug adherence
- TDF levels not linked to behavioral risk factors
- TW vs MSM: less consistent PrEP use (OR=0.39, 95% CI 0.16 to 0.96, p=0.04)

PrEP and Gender-Affirming Hormones
PrEP Continuum in Trans Women: LITE Baseline Data, USA (n=1293)

HIV-Negative, Sexually Active Participants, PrEP Indicated

- Sexually active in last 12 mo: 100%
- Ever heard about PrEP: 82%
- PrEP adherent (7 pills/week): 13%
- Lifetime PrEP use: 31%
- Recent PrEP use (30 days): 20%
- % among those indicated for PrEP: 38%
- % among those in previous stage continuum: 66%

PrEP use associated with:
- Sex work
- Substance misuse
- Ages 18-24 years

NIH UH3AI13366903 (MPI: Wirtz & Reisner)  
https://www.litestudy.org/  
Malone, Reisner, et al., JAIDS, 2021
PrEP Experiences in Trans Women: LITE Baseline Data, USA

If found to be effective, how interested would you be in taking injectable PrEP?
• 43% “Very” or “Somewhat” Interested (24 Mo Follow-up)

- Dislike daily pill: 39%
- Side effects: 37%
- Perceived promiscuity: 37%
- Perceived low risk for HIV: 30%
- Reduced partner condom use: 30%
- Dislike clinical visits/testing: 24%
- People think you have HIV: 22%
- Interaction with hormones: 9%
- Other experiences: 9%
PrEP in Trans MSM in US

Most common reasons for non-interest in PrEP:
- not perceiving HIV risk (77%)
- cost (35%)
- side effects (27%)
- concerns about hormone interactions (25%)

Heard of PrEP: 84.1%
Currently taking PrEP, of lifetime: 21.8%
Stopped taking PrEP, of lifetime: 11.5%
Life time PrEP, of heard of it: 33.3%
Medical Gender Affirmation Improves Mental Health and Quality of Life

Original Article

Hormonal therapy and sex reassignment: a systematic review and meta-analysis of quality of life and psychosocial outcomes


*Knowledge and Encounter Research Unit, †Division of Preventive Medicine, Mayo Clinic, Rochester, MN, USA, ‡Department of Psychiatry, Centre Hospitalier de Rouffach, France, §Mayo Clinic Libraries and ‡Division of Endocrinology, Diabetes, Metabolism, Nutrition, Mayo Clinic, Rochester, MN, USA

Review Article

A Systematic Review of the Effects of Hormone Therapy on Psychological Functioning and Quality of Life in Transgender Individuals

Jaclyn M. White Hughto1,2,* and Sari L. Reisner1,3,4
Purpose:
To assess the feasibility, acceptability, and preliminary impact of a multi-component strategy to improve pre-exposure prophylaxis (PrEP) uptake and adherence that integrates delivery of biomedical HIV prevention co-located with gender-affirming transgender care (hormonal therapy and medical monitoring) and Peer Health Navigation (PHN) using Strengths-Based Case Management (SBCM) professional supervision in transgender women (TGW)
HPTN 091: 99% target enrollment reached

- Enrollment completed on 16 December 2022
- 307 participants enrolled in the study

- Bridge HIV, San Francisco, CA
- Harlem Prevention Center, New York, NY
- Penn Prevention, Philadelphia, PA
- Houston AIDS Research Team, Houston, TX
- Instituto de Pesquisa Clinica Evandro Chagas (IPEC), Rio de Janeiro, Brazil

Overall Retention >90%
HPTN 083 HIV & STI Incidence: CAB vs TDF/FTC Transgender Women

- HIV incidence among TGW during the blinded phase of the trial was 1.80% (TDF/FTC) and 0.54%(CAB-LA) (hazard ratio: 0.34, 95%, CI0.08-1.56)
- Incidence of STIs among TGW were comparable between study arms

<table>
<thead>
<tr>
<th></th>
<th>Overall (n=570)</th>
<th>TDF/FTC (n=304)</th>
<th>CAB-LA (n=266)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>HIV incidence rate</td>
<td>9</td>
<td>1.19%</td>
<td>7</td>
</tr>
<tr>
<td>Syphilis incidence rate</td>
<td>16.3%</td>
<td>18.6%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Gonorrhea (rectal) incidence rate</td>
<td>11.7%</td>
<td>11.8%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Chlamydia (rectal) incidence rate</td>
<td>20.6%</td>
<td>22.6%</td>
<td>18.6%</td>
</tr>
</tbody>
</table>

Grinsztejn, B. AIDS 2022. #12707
CAB PK in TGW w/wo GAHT

Grinsztejn, B. AIDS 2022. #12707
Evidence-Based HIV Interventions: Behavior Change

- **Project LifeSkills Intervention**
  - Young TW ages 16-29 years (Garofalo et al., 2018)

- **Couples HIV Intervention Program (CHIP)**
  - TW and their primary male partners (Gamarel et al., 2020)

- **Sheroes**
  - TW adults (Sevelius et al., 2020)

- **Others in evaluation**
  - Healthy Divas, T-Sista (UCSF), Girlfriends, TWEET
Integrated and Gender-Affirming Transgender Clinical Care and Research

Sari L. Broner, ScD,* Ana Axline, MD, MPH,† and Madeline B. Deutsch, MD, MPH‡

Abstract

Transgender (trans) communities worldwide, particularly those on the trans feminine spectrum, are disproportionately burdened by HIV infection and at risk for HIV acquisition and transmission. Trans individuals represent an underserved, highly marginalized, and under-assessed population not only in HIV prevention efforts but also in delivery of primary prevention and clinical care that is gender affirming. We offer a model of gender-affirming integrated clinical care and community research to address and intervene on disparities in HIV infection for transgender people. We define new terminology, briefly review the social epidemiology of HIV infection among trans individuals, highlight gender affirmation as a key social determinant of health, describe exemplary models of gender-affirmative clinical care in Boston MA, New York, NY, and San Francisco, CA, and offer suggested “best practices” for how to integrate clinical care and research for the field of HIV prevention. Benefits and cultural competency (HEV prevention interventions must be grounded in the lived reality of the trans community) to expand disparities in HIV infection. HIV prevention interventions will be most effective if they use an empirical approach and integrate primary care and primary care of trans individuals (e.g., gender-affirmative care and management of gender transition) alongside delivery of HIV-related services (e.g., behavioral prevention, HIV testing, linkage to care, and treatment).

Key Words: HIV, transgender, prevention, models of clinical care, health disparities

From the *Department of Pediatrics, Harvard Medical School, Boston Children’s Hospital, Boston, MA; †Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA; ‡The Fenway Institute, Fenway Health, Boston, MA; Wilford Longfellow Community Health Center, New York.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC445642

https://fenwayhealth.org/the-fenway-institute

https://www.lgbtqiahealtheducation.org
Important to Obtain Community Perspectives

Work “with” not “on” transgender communities

Lesotho: standing up for transgender health and rights

Living proudly as a transgender man in the small but Saharan country of Lesotho has come at a serious price. My public activism on issues of sexual orientation and gender identity and expression makes me vulnerable to threats to my personal safety. The widespread instances of “corrective” rape against transgender men and lesbians means that I must constantly be careful and vigilant in every kind of public space, fear entrapment remains a daily worry from work. Gender prejudice is a norm in Lesotho, so in addition to these fears and the work I do as Director of the People’s Rights Association (Matsa Support Group), gaining my family’s acceptance is its own battle. Beyond fear for discrimination and violence in public and private settings, there are countrywide infrastructure challenges, such as poor internet connection and capacity stresses. Like many such organisations, resources are limited at the People’s Rights Association and there are few opportunities for professional development, which makes planning and implementation work extremely challenging. All of which seriously affects my professional and personal life, as I constantly must sacrifice my personal resources just to keep the organisation running. The late hours this work often requires further endangers my personal safety, not to mention affecting my relationship with partner and friends. There is hope, however, and that is that I am not alone in this struggle. In the past 6 months, I have gained a mentor guiding me in the organisational development process, and strengthening my self-esteem as I work toward achieving dignity for all transgender people in Lesotho.

Tampopo Matjoseping
Tampopo Matjoseping is the Director of the People’s Rights Association (Matsa Support Group) in Maseru, the capital of Lesotho. He is an active participant in the development, implementation, and monitoring of HIV/AIDS and gender-based violence prevention and response interventions and programmes. He was instrumental in developing the national roll-out of the “What to Do When There’s Violence” campaign, a community-based initiative. Based on a model developed in the United States, the campaign is designed to help people know what to do in the event of violence, support the health needs of women and girls, and help the community as a whole.

South Africa: access to gender-affirming health care

My own reality as a transgender woman of colour from rural South Africa is what brought me to the fight for justice for other transgender women in South Africa and beyond. In South Africa, the legacy of colonialism, institutionalised inequality, and apartheid shaped the current reality of people of colour, especially for transgender people of colour. All of these intersecting factors lead to a complex array of challenges that I can only begin to address: My legal status makes life difficult. South African law allows for transgender people to change names and gender markers, but the law is implemented inconsistently. When legal documents do not match the identities of transgender persons, it presents a huge challenge for accessing health and other services.

The health sector also affects our lives. There are only two facilities in South Africa where gender-affirming surgeries are done, and both have a shocking waiting list of many years. Often when transgender people do not get to be their authentic and true selves, the mental-physical disconnect factors into transgender people not “taking care” of themselves. This manifests in high-risk behaviours like sex work that increase HIV risk.

The social sector also presents challenges. A Trans*media study on transgender women in South Africa showed that 85% of trans women have experienced violence in one way or the other, and the picture is worse for trans women of colour. Another problem for many communities of colour is ritual circumcision. This practice is fraught with gendered implications, since the ritual represents becoming a man, which directly conflicts with the feminine identities of transgender women. However, to reject this tradition often means rejection from families, financial ruin, homelessness, and health risks.

Leigh Ann van der Merwe
Leigh Ann van der Merwe is the Coordinator and founder of SACCA (Society for the Advancement of Community Care and Advocacy for LGTBQI). She was born and raised in South Africa, having experienced first-hand the struggle for human rights and equality. She has a Bachelor of Social Science from the University of the Western Cape, and a Master of Management from the University of Stellenbosch. She is also the recipient of the 2016 YWCA Australia Women of the Year, an award recognizing women who have made a significant contribution to their community. She is also the recipient of the 2016 YWCA Australia Woman of the Year award, an award recognizing women who have made a significant contribution to their community.
Thank you
Raphy Landovitz
Tonia Poteat
Sari Reisner
Theo Sandfort

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