

Low PrEP Awareness and Willingness Among Transgender Women in South Africa

Tonia Poteat¹, Leigh Ann van der Merwe², Allanise Cloete³, Dee Adams⁴, Mannat Malik⁴, David Hanna⁵, Andrea Wirtz⁴

¹University of North Carolina School of Medicine, Chapel Hill, NC, USA, ²Social Health and Empowerment, East London, South Africa, ³Human Sciences Research Council, Pretoria, South Africa, ⁴Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA, ⁵Albert Einstein College of Medicine, Bronx, NY, USA

Background

- Transgender women (TGW) are at disproportionately high risk for HIV
- Recent studies indicate a pooled HIV prevalence of 25% among TGW across 8 sub-Saharan African countries (Burkina Faso, Côte d'Ivoire, The Gambia, Lesotho, Malawi, Senegal, Swaziland and Togo)
- Compared with men who have sex with men, TGW had twice the odds of testing positive for HIV (OR=2.09, CI: 1.76-2.49) and half the odds of condom use during last receptive anal sex act (OR=0.47, CI: 0.4-0.56)
- In 2016, the South African National Department of Health implemented PrEP for high-risk populations at select sites; transgender people were only included as a subset of sex workers
- Fourteen demonstration projects are planned or ongoing to understand how best to implement PrEP in South Africa, yet none focus on transgender populations



Photo source: <https://www.abc.com.au/news/2016-08-04/transgender-women-in-south-africa/7834840>

- While PrEP has demonstrated efficacy in multiple clinical trials and implementation projects, uptake and adherence among TGW has been low
- A sub-analysis of data from the seminal iPrex study (6 countries, including South Africa) found that TGW had low levels of adherence to PrEP (18%) with subsequent lack of efficacy
- U.S. studies have identified prioritization of hormone use as a key barrier to PrEP uptake for TGW and that unmet gender affirmation needs can lead to engagement in HIV risk behaviors
- The effects of gender affirmation dynamics on HIV prevention has not been explored in South Africa
- Data are urgently needed to guide strategies for effective PrEP implementation and scale-up with TGW in South Africa

Participant Sociodemographics

Table 1. Sociodemographics of Overall Sample and Participants who Self-reported HIV-negative or Status Unknown

Sample Sociodemographics	N _{total} =214	N _{HIV-negative or unknown} =130
Location		
East London	83 (38.8)	66 (50.8)
Cape Town	58 (27.1)	25 (19.2)
Johannesburg	73 (34.1)	39 (30.0)
Mean age (median, range)	27 (26, 18-59)	26 (25, 18-47)
Race		
Black	183 (85.5)	111 (85.4)
Coloured*	25 (11.7)	14 (10.8)
Black and coloured	1 (0.5)	1 (0.8)
White	5 (2.3)	4 (3.1)
Sexual orientation		
Straight or heterosexual	71 (33.3)	47 (36.4)
Gay	87 (40.9)	49 (38.0)
Bisexual	9 (4.2)	7 (5.4)
Other*	46 (21.6)	26 (20.2)
Current living situation		
Rent or own house/apartment	72 (33.6)	44 (33.8)
Staying with family or friends	128 (59.8)	84 (64.6)
Streets, no place to live	14 (6.5)	2 (1.5)
Education*		
Less than secondary school	49 (23.0)	21 (16.3)
Secondary school complete	92 (43.2)	54 (41.9)
Technical/professional training in complete	22 (10.3)	18 (14.0)
Technical/professional training complete	36 (16.9)	27 (20.9)
University complete	14 (6.6)	9 (7.0)
Unemployed	83 (39.2)	31 (24.0)

*The term "Other" refers to South African citizens of European and African or Asian ancestry, defined by the South African government from 2016-2017. Majority of participants who selected "Other" described their sexual orientation as "transgender" or "transgender woman". *Education includes the missing data.

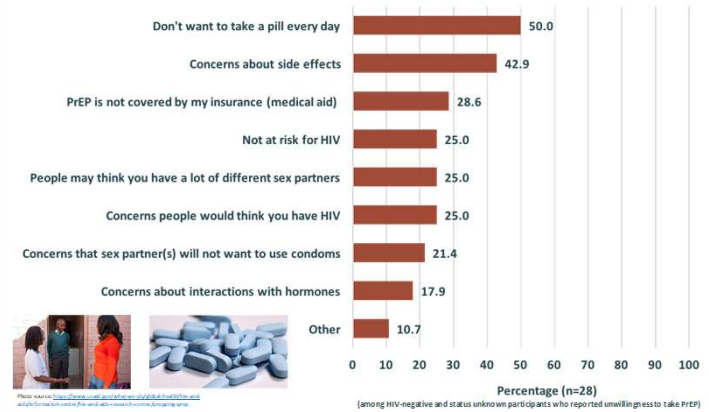
Factors Associated with PrEP Awareness and Willingness

Table 3. Predictors of PrEP Awareness and Willingness among TMAPP Participants

Variable	Associations with PrEP Awareness among TMAPP participants (n=210)		Associations with PrEP Willingness among HIV-negative TMAPP participants (n=112)	
	Bivariate OR (95% CI)	Multivariable OR (95% CI)	Bivariate OR (95% CI)	Multivariable OR (95% CI)
HIV risk perception (ref group: perceived no HIV risk)	0.52 (0.37-0.75)*	0.42 (0.07-2.54)	0.90 (0.62-1.32)	----
Lifetime history of sex work (ref group: never engaged in sex work)	3.29 (1.85-5.82)*	0.38 (0.10-1.45)	2.56 (1.09-6.03)*	1.65 (0.59-4.62)
Condomless receptive anal sex in prior 12 months	1.71 (0.96-3.04)	----	0.77 (0.35-1.68)	----
Lifetime history of sexually transmitted infections	2.31 (1.28-4.18)*	0.85 (0.21-3.32)	3.28 (0.98-10.94)	4.72 (1.17-19.1)*
Lifetime history of sexual violence victimization ^a	4.33 (2.41-7.79)*	4.69 (1.49-14.75)*	3.51 (1.60-7.67)*	2.95 (1.19-7.30)*
Lifetime history of substance use (not including alcohol)	2.11 (1.19, 3.73)*	3.62 (1.01-13.00)*	2.08 (0.92-4.73)	1.12 (0.42-3.01)

Note: multivariable models include random intercept for city, all other variables controlled for in multivariable models shown in table. *Significant at p<0.05. ^aBoth physical and sexual violence were significant, only one was included in the model due to collinearity.

Figure 1. Reported Reasons for Unwillingness to take PrEP



- Among HIV-negative and status unknown participants who had taken PrEP (n=19):
 - 21.1% reported that a healthcare provider had told them to stop hormone therapy because they were on PrEP
 - 15.8% reported that a healthcare provider had changed their hormone therapy dose because they were on PrEP

To consider: How are healthcare providers impacting PrEP uptake and use among TGW in South Africa?

Methods: TMAPP Study



Study Aim: to identify barriers and facilitators for PrEP and HIV care among TGW in South Africa

What is T-MAPP?

- Transgender Women Mobilizing and Preparing for High-Impact Prevention
- Study was initiated and led by the TGW community
- Social Health & Empowerment approached Johns Hopkins to partner on a study specifically for TGW
- Hired and trained TGW as peer research assistants
- Funded by Gilead Sciences

Quantitative Data Collection

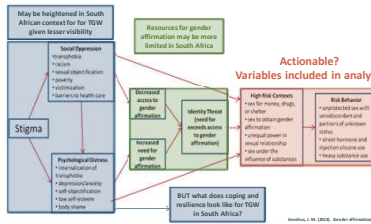
- Data collection dates: July 2018 to October 2018
- Quantitative surveys conducted in 3 cities (see map above):
 - East London (n=83)
 - Cape Town (n=58)
 - Johannesburg (n=73)
- TGW recruited by network referral and outreach by peer research assistants
- Each participant completed a face-to-face interviewer-administered survey (30-45 mins) on an electronic tablet device
- Surveys offered in English, Afrikaans, or Xhosa
- Participants received R60 South African Rand
- All survey interviews conducted by TGW peer research assistants



Analysis

- Bivariate and multivariable logistic regression models were used to test associations between outcomes (PrEP awareness and willingness to take PrEP) and exposure to high risk contexts
- Gender Affirmation Framework (2013) was developed based on qualitative research with TGW in San Francisco and applied to HIV outcomes among TGW in other US Settings.
- We considered how this framework might be applied in the South African context

Theoretical Considerations: Gender Affirmation Framework



Analysis Questions

- Are TGW in South Africa who are engaging in HIV risk behaviors or exposed to high risk contexts aware of PrEP?
- Are these TGW willing to take PrEP?
- Relationship between HIV risk perception and PrEP awareness and willingness?

Table 2. PrEP Continuum Outcomes among TMAPP Participants

Note: Full regulatory approval of PrEP in 2015 in South Africa and included in national HIV program

PrEP Continuum	Denominator	n/N (%)
PrEP awareness	All participants*	109/212 (51.4)
Know where to get PrEP	PrEP-aware participants	92/111 (82.9)
Know other TGW taking PrEP	PrEP-aware participants	44/110 (40.0)
Desire for partners to take PrEP	All participants*	135/208 (64.9)
Ever taken PrEP	HIV-negative and status unknown participants	19/130 (15.0)
Currently on PrEP	HIV-negative and status unknown participants	14/130 (10.8)
Willingness to take PrEP	HIV-negative and status unknown participants who had not taken PrEP*	13/25 (52.0)

*n=130 due to missing data

Conclusions

- PrEP awareness, willingness, and uptake remain **LOW** among TGW in South Africa
- HIV-negative TGW who perceived their risk for HIV acquisition to be high were **NOT more willing** to take PrEP than TGW with low perceived risk
- TGW sex workers were **NOT more likely** to be aware of PrEP or willing to take PrEP than TGW who had not engaged in sex work

Strategies are needed for increasing PrEP awareness and willingness that are tailored for populations with the greatest vulnerability to HIV. Findings suggest a need to raise awareness of PrEP in transgender communities and to include TGW in building strategies for increasing engagement in PrEP services