TRANS/PrEP: SOCIAL NETWORK-BASED PrEP ADHERENCE FOR TRANSGENDER WOMEN IN LIMA, PERU

P-S08

Jesse L. Clark[1], Sari Reisner[2], Amaya G. Perez-Brumer[3], Leyla Huerta- Castillo[4], Hugo Sanchez[5]. Hideaki Okochi[6], Maria Mamani Luque[4], Ximena Salazar[7], Matthew Mimiaga[8], Monica Gandhi[6], Kenneth H. Mayer[9], Javier R. Lama[4]
[1]University of California, Los Angeles Geffen School of Medicine, Los Angeles, CA, USA [2]Harvard Children's Hospital, Boston, MA, USA [3]University of Toronto Dalla Lana School of Public Health, Toronto, Canada
[4]Asociacion Civil Impacta Salud y Educacion, Lima, Peru [5]Epicentro, Lima, Peru [6]University of California, San Francisco School of Medicine, San Francisco, CA, USA
[7]Instituto de Estudios de Salud Sexual y Derechos Humanos, Lima, Peru [8]Brown University, Providence, RI, USA [9]The Fenway institute, Boston, MA, USA

BACKGROUND

- Pre-exposure prophylaxis (PrEP) is an effective HIV prevention method but uptake remains poor among transgender women (TW).
- Specific barriers include lack of knowledge of PrEP effectiveness in preventing HIV infection, mistrust of "foreign" biomedical interventions, and lack of community support for PrEP use.
- To address these issues, we conducted a pilot randomized controlled trial of a social network-based intervention to promote PrEP uptake and adherence among Peruvian TW.

METHODS

- From September, 2017-July, 2018, we screened 172 TW from three geographic areas of Lima, Peru.
- Screening visits were designed to: Determine HIV serostatus; Introduce PrEP as a prevention strategy for TW; and Discuss common issues with PrEP adherence.
- We enrolled 89 HIV-uninfected TW into 6 groups based on pre-existing social network clusters.
- Clusters were randomized on a 1:1 basis to standard of care (n=44) or the TransPrEP intervention (n=45).
- Groups assigned to TransPrEP attended 4 weekly introductory workshops to discuss principles of and barriers to PrEP adherence, and to construct and support group adherence goals.
- Subsequent biweekly maintenance workshops reviewed adherence strategies, discussed' experiences taking PrEP, and encouraged network cohesion.
- Adherence was evaluated by self-report and by measurement of TDF-FTC levels in hair.
- Intent-to-treat analyses compared intervention versus control conditions at baseline and 3-month follow-up.

ADDITIONAL KEY INFORMATION

Author Contact Information:
Jesse Clark, MD, MSc
UCLA Geffen School of Medicine
Department of Medicine, Division of Infectious Diseases
10833 Leconte Avenue, CHS 37-121
Los Angeles, CA 90095 USA
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Although 90.5% [19/21] of participants in the TransPrEP intervention reported taking "Most" or "All" TDF-FTC doses in the prior 30 days (versus 73.4% [14/19] of control participants), only 36.4% (4/11) of participants in the intervention arm and 10.0% (1/10) in the control arm had TDF levels >0.023 ng/mg (consistent with taking >4 doses TDF/FTC per week).

RESULTS

- Participants' mean age was 26.9 years (range 18-58), with 76.5% using feminizing hormones.
- At 3-month follow-up, we evaluated 40 TW and obtained 21 hair samples.
- Though no statistically significant differences were observed in ITT analysis, a higher proportion of participants in the TransPrEP arm reported taking "Most" or "All" TDF-FTC doses in the prior 30 days (90.5% [19/21] versus 73.4% [14/19]).
- In hair sample analysis, 36.4% (4/11) of participants in TransPrEP and 10.0% (1/10) in the control arm had TDF levels >0.023 ng/mg (consistent with taking >4 doses per week) while 81.8% (9/11) and 40.0% (4/10), respectively, had any detectable amount of TDF in their hair.
- Participants in the intervention arm described the workshops as "helpful," "enjoyable," and "comfortable," settings to discuss HIV prevention.

CONCLUSIONS

- Our network-based intervention improved PrEP adherence among TW in Peru according to biological and behavioral adherence markers but did not achieve statistical significance in this pilot RCT .
- Mixed-methods analysis suggested modifications to improve participant involvement and retention.
- Additional research is needed to assess the TransPrEP intervention with a larger sample.

Table 1. Baseline Demographic and Behavioral Characteristics of Participants in TransPrEP Study; Lima, Peru 2017-18.

		Intervention Arm N=44	Control Arm N=45
Age*		24 (22-35)	25 (23-28)
Education Level	Primary School Only	10 (22.7%)	9 (21.4%)
	Incomplete Secondary School	18 (40.9%)	21 (50.0%)
	≥Secondary School Graduate	16 (36.4%)	12 (28.6%)
Monthly Household Income	<300 Soles	4 (19.0%)	7 (26.9%)
	301-500 Soles	8 (38.1%)	6 (23.1%)
	501-1500 Soles	7 (33.3%)	8 (30.8%)
	>1501 Soles	2 (9.5%)	5 (19.2%)
Number of Sexual Partners (30 Days)		9 (2-25)	10 (4-25)
Baseline PrEP Knowledge Score*		23 (18-25)	23 (19-26)
Baseline PrEP Attitudes Score*		21 (18-24)	20 (15-24)

*(Median ± IQR)

Table 2. Biological and Behavioral Markers of PrEP Adherence During Prior 30 Days Among Transgender Women; Lima, Peru 2017-18

	Intervention Arm		Control Arm	
Tenofovir Levels in Hair from Prior 30-Day Period				
	N=17		N=12	
>0.038 ng/mg (7 Days/Week)	1	5.9%	0	0%
0.023-0.038 ng/mg (4-5 Days/Week)	4	23.5%	1	8.3%
0-0.0.23 ng/mg (1-3 Days/Week)	8	47.0%	3	25.0%
Not Detected (0 Days/Week)	4	23.5%	8	66.7%
Self-Report of Doses Taken in Prior 30-Day Period				
	N=21		N=19	
All Days	16	76.2%	10	52.6%
Most Days	3	25.0%	4	21.0%
Some Days	0	0%	0	0%
No Days	2	9.5%	5	26.3%

Table 3. PrEP Knowledge and Attitude Scores of TransPrEP Participants; Lima, Peru 2017-18

	Intervention Arm N=44	Control Arm N=42
PrEP Knowledge Score (Median ± IQR) (5-Point Likert Score; Each Item 1=Completely Disagree to 5=Completely Agree)		
1. "I know that taking PrEP (Truvada) can reduce my risk of becoming infected with HIV."		
2. "I know how often I should take PrEP."		
3. "I know how PrEP should be taken (e.g., with or without food, other medicines, hormones, etc.)."		
4. "I know how PrEP interacts with feminizing hormones."		
5. "I know the possible side effects of taking PrEP."		
6. "I know what to do if I forget to take a dose of PrEP."		
7. "I know how often I should see my doctor while I am taking PrEP."		
8. "I know how PrEP interacts with alcohol and drugs."		
Baseline	23 (18-25)	23 (19-26)
3-Months	23 (20-24)	23 (19-25)
PrEP Attitudes Score (Median ± IQR) (5-Point Likert Score; Each Item 1=Completely Disagree to 5=Completely Agree)		
1. "Taking PrEP, reduces my risk of acquiring HIV."		
2. "Taking PrEP is a positive change in my life."		
3. "Taking PrEP gives me more control over my risk for acquiring HIV."		
4. "I am sure that I can take PrEP every day without forgetting a dose."		
5. "I believe that the support of my friends and others will be important in helping me remember to take PrEP every day."		
Baseline	21 (18-24)	20 (15-24)
3-Months	22 (17-25)	20 (16-25)