

PrEP Awareness, Interest, and Use Among Women of Color in New York City, 2016

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Abstract #378

Background

- Pre-exposure prophylaxis (PrEP) is an effective HIV prevention option for heterosexually active women.¹⁻³
- PrEP initiation has increased dramatically among U.S. men since its FDA approval, but available data suggest no similar increase among women.*
- While a few prior studies have indicated low PrEP awareness among U.S. women,^{5,6} scant research exists on the correlates of awareness or use among women at highest risk of HIV acquisition.

Objective

Using data collected in a survey of women of color in New York City (NYC), we examined the prevalence of PrEP awareness, use, and interest, and correlates of PrEP awareness.

Methods

Study Design: Fall 2016 data from annual cross-sectional survey conducted among Black and/or Hispanic/Latina women in NYC.

Recruitment: Street-intercept at transit hubs and commercial centers in areas in top quartile of HIV diagnosis rates among women.

Survey Administration: 15-minute anonymous, interviewer-administered survey; in English or Spanish via tablet; \$15 gift card given upon completion.

Participant eligibility: NYC resident; age 18-64; assigned female sex at birth; self-reported Black and/or Hispanic/Latina; at least 1 male sexual partner (prior 6 months); women reporting HIV-positive status excluded from this analysis.

Outcomes Examined

PrEP awareness: "Sometimes people who do not have HIV take HIV medications (Truvada) on a daily basis to keep from getting HIV. This is called Pre-Exposure Prophylaxis, or PrEP. Have you ever heard of PrEP?"

Among those aware:

PrEP use: "Have you ever used PrEP to prevent yourself from becoming infected with HIV?"

PrEP discussion with healthcare provider: First asked, "In the past 6 months, have you discussed PrEP with your doctor or healthcare provider?" If no, "How comfortable or uncomfortable would you be asking your doctor about PrEP?"

Belief that PrEP is effective: "If taken daily, how effective would you say PrEP is at preventing a new HIV infection?"

PrEP interest: Among those not taking PrEP, "How interested are you in taking PrEP as a daily pill?"

Potential Correlates

Participant characteristics: age (18-34; 35-64 years), race/ethnicity (Hispanic/Latina vs. not), education (high school diploma/GED/more vs. less); annual income (<\$20,000/year vs. more); country of birth (foreign vs. US-born); partnership status (in a mutually monogamous partnership vs. not).

Indications for PrEP (derived from New York State and national guidelines): reported any of following, past 6 months: MSM or HIV-positive sexual partner; engaged in condomless sex with multiple partners; transactional sex; stimulant or injection drug use; PEP use; or STI diagnosis in last 12 months.

Data Analysis

- Described prevalence of each outcome overall, and by indication for PrEP with significance analyzed using Chi-square and Fisher's exact tests (p<0.05).
- Examined correlates of PrEP awareness using binomial regression for prevalence ratios (PR) and 95% confidence intervals (CI); potential correlates bivariate associated (p<0.10) included in multivariable model.

Results

Description of Study Population

Among 420 survey participants, 411 were eligible for this analysis based on not reporting HIV-positive diagnosis.

Among eligible respondents:

- Median age was 34
- 37% were Hispanic/Latina, 63% were Black and non-Hispanic/Latina
- 23% were foreign-born
- 83% lived in a high-burden neighborhood
- 48% earned <\$20,000/year
- 84% had a high school diploma, GED, or higher education
- 25% reported being in a mutually monogamous partnership

PrEP Indication and Use

- While 13% of women in the analytic sample had indications for PrEP based on guidelines, 2/411 women (<1%) reported ever using PrEP

Other Key Results (Table 1):

- PrEP awareness among participants was low (24%).
- Among those aware, 89% either had or would be comfortable asking their doctor about PrEP.
- 40% of those aware of PrEP believed it was very effective.
- An even smaller proportion (19%) were interested in using PrEP.

Table 1. PrEP awareness, discussion, beliefs, and interest among women with HIV-negative or unknown status and among women with indication(s) for PrEP, New York City, Fall 2016*

Characteristic	Total Sample		Has Indication for PrEP	
	n	%	Yes (n)	No (n)
Total	411		54	357
Aware of PrEP				
Yes	97	24.1	13	24.1
No	305	75.9	41	75.9
264				
PrEP discussion with healthcare provider**				
Yes	12	13.2	3	23.1
No, but comfortable asking doctor	69	75.8	8	61.5
No, but not comfortable asking doctor	10	11.0	2	15.4
8				
Believes PrEP is effective**				
Yes	59	61.5	9	69.2
No	3	3.1	1	7.7
2				
Don't Know/Not Sure	34	35.4	3	23.1
31				
Interest in PrEP**				
Somewhat or Very	17	18.9	4	33.3
13				
Not at all	69	76.7	8	66.7
61				
Don't Know/Not Sure	4	4.4	0	0.0
4				

* Differences in proportions of PrEP awareness, discussion, beliefs, and interest between total sample and the subset of participants with indication for PrEP were not statistically significant.

** Calculated among those aware of PrEP

Table 2. Bivariate and multivariable associations with PrEP awareness among women with HIV-negative or unknown status, New York City, Fall 2016

Variable	Aware of PrEP (n)	Bivariate Models		Adjusted model	
		Prevalence Ratio	95% CI	Adjusted Prevalence Ratio	95% CI
Age					
18-34	59	1.5*	1.0, 2.1	1.41	1.0, 2.0
35-40 (ref)	38	1		1	
Ethnicity					
Hispanic/Latina	31	0.8	0.5, 1.2		
Black, not Hispanic/Latina (ref)	66	1			
Reside in high-diagnosis neighborhood					
Yes	80	1.1	0.7, 1.7		
No (ref)	15				
US-Born					
Yes	82	1.4*	1.2, 1.5	1.2	0.7, 2.1
No (ref)	15	1		1	
Income					
<20,000/year	31	0.6**	0.4, 0.8	0.6**	0.4, 0.9
20,000+/year (ref)	58	1		1	
Education Completed					
Less than HS diploma	10	0.6*	0.3, 1.1	0.6	0.3, 1.4
HS diploma/GED or more education (ref)	87	1		1	
Partnership status					
Not in mutually monogamous partnership	26	0.9	0.6, 1.3		
In monogamous partnership (ref)	71	1			
PrEP indication per guidelines					
Yes	13	1.2	0.8, 1.8		
No (Ref)	90	1			

* Significant at p<0.10

† Significant at p<0.05

Correlates of PrEP Awareness

Key results (Table 2):

- In bivariate analysis, PrEP awareness was significantly associated with age <35, being US-born, income ≥\$20,000, and having a high school education or more. In multivariable analysis, only higher income was associated with PrEP awareness.

- Having an indication for PrEP was not significantly associated with being aware of PrEP.

Other Findings (data not shown)

- All participants who had either a recent HIV-positive partner or a partner who had sex with men (n=3) were aware of PrEP.
- There were no statistically significant differences in PrEP awareness based on whether women reported individual indications for PrEP use, including recent STI diagnosis, exchange sex, PEP use, or multiple condomless partners.

Limitations

- Data collected by self-report and potentially subject to recall error and social desirability bias.
- Modest sample size and small numbers of those aware of PrEP may limit ability to identify statistically significant correlates of outcomes.
- Generalizability of our findings outside NYC may be limited.

Discussion

- Only one in four Black or Hispanic/Latina women in high-diagnosis NYC neighborhoods were aware of PrEP.
- In multivariable analysis, only income was significantly associated with PrEP awareness.
- In spite of 13% of respondents having indications for PrEP based on recent sexual behavior and partner characteristics, almost none had used it.
- Among those aware of PrEP, 19% reported interest in use.
- Standardization of guidelines regarding indications for PrEP use among women may help identify more individuals who could benefit from this prevention option.
- NYC DOHMH is utilizing these data to inform social marketing and provider education campaigns to increase PrEP awareness among women and PrEP provision by women's healthcare providers.

References

- US Centers for Disease Control and Prevention (CDC). Pre-Exposure Prophylaxis for the Prevention of HIV Infections in the United States- 2014. A Clinical Practice Guidelines. <http://www.cdc.gov/hiv/pdf/PrEPguidelines2014.pdf>
- Baeten JM, Donnell D, Ndase P, et al. Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. The New England Journal of Medicine. 2012; 367(5):399-410.
- Thigpen MC, Kebaabetswe PM, Paxton LA, et al. Antiretroviral preexposure prophylaxis for heterosexual HIV transmission in Botswana. The New England Journal of Medicine. 2012; 367(5):423-34.
- Bush S, Magnuson D, Rawlings MK, et al. Racial Characteristics of FTC/TDF for Pre-exposure Prophylaxis (PrEP) Users in the US. ASM Microbe/CAAC Abstract #2651. Boston, MA, June 2016.
- Auerbach JD, Kinsky S, Brown G, et al. Knowledge, Attitudes, and Likelihood of Pre-Exposure Prophylaxis (PrEP) Use Among US Women at Risk of Acquiring HIV/AIDS Patient Care and STDs. 2015. 29(2): 102-110.
- Collier KL, Colarossi LG, Sanders K. Raising Awareness of Pre-Exposure Prophylaxis (PrEP) among Women in New York City: Community and Provider Perspectives. J Health Communication. 2017; 22(3):183-189.

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