

Racial/ethnic disparities in pre-exposure prophylaxis use and discontinuation among men who have sex with men in New York City, 2017

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Background

- Racial/ethnic disparities in HIV among men who have sex with men (MSM) exist in New York City (NYC). In 2017, nearly three-quarters of new diagnoses among MSM were among blacks and Latinos¹, mirroring national trends.²
- Pre-exposure prophylaxis for HIV (PrEP) is a safe and effective biomedical intervention that is being promoted widely among MSM to prevent HIV transmission. Continued daily use is needed in order for PrEP to be effective.
- Given increases in PrEP awareness and adoption since FDA approval (2011), recent data measuring PrEP use and related outcomes by race/ethnicity are needed.

Objective

- To examine differences in **PrEP use, adherence, and early discontinuation of use** by race/ethnicity among MSM in NYC.

Methods

Study Design

- Data were drawn from the 2017 NYC National HIV Behavioral Surveillance Study among MSM (NHBS-MSM5).
- Participants were recruited via venue-based sampling; they underwent an interviewer-administered computerized survey and were offered optional HIV and STI testing.
- Data were collected June-November 2017.

Survey Eligibility Criteria

- Male sex at birth and currently identifies as male
- At least 18 years old
- Resident of the NYC metropolitan statistical area (MSA)
- Ever had oral or anal sex with a man
- Speaks English or Spanish

Outcome Measures

- PrEP use, in the past 12 months
- PrEP adherence, defined as daily use when using PrEP
- Discontinuation of PrEP, defined as not maintaining PrEP use for ≥ 2 months in a row after initiation

Statistical Analysis

- Analyses were restricted to MSM who were sexually active with another man in the past 12 months, reported an HIV-negative or unknown status, resided in NYC, and reported Latino, black, or white race/ethnicity.
- Log-binomial regression was used to estimate adjusted prevalence ratios (aPRs) and 95% confidence intervals (CIs) between race/ethnicity and the three outcomes of interest.
- Models were adjusted for age.

Results

Table 1. Characteristics of MSM with self-reported HIV-negative or unknown HIV status, NYC NHBS-MSM5, 2017 (n=371).¹

Race/ethnicity	n (%)
Latino	121 (33%)
Black	76 (20%)
White	174 (47%)
Age	
18-29	156 (43%)
30-39	123 (33%)
40-49	53 (14%)
≥ 50	39 (11%)
PrEP use (12m)	
Yes	116 (31%)
No	255 (69%)
PrEP adherence (12m)²	
Yes	81 (70%)
No	35 (30%)
PrEP discontinuation (12m)³	
Yes	13 (12%)
No	98 (88%)

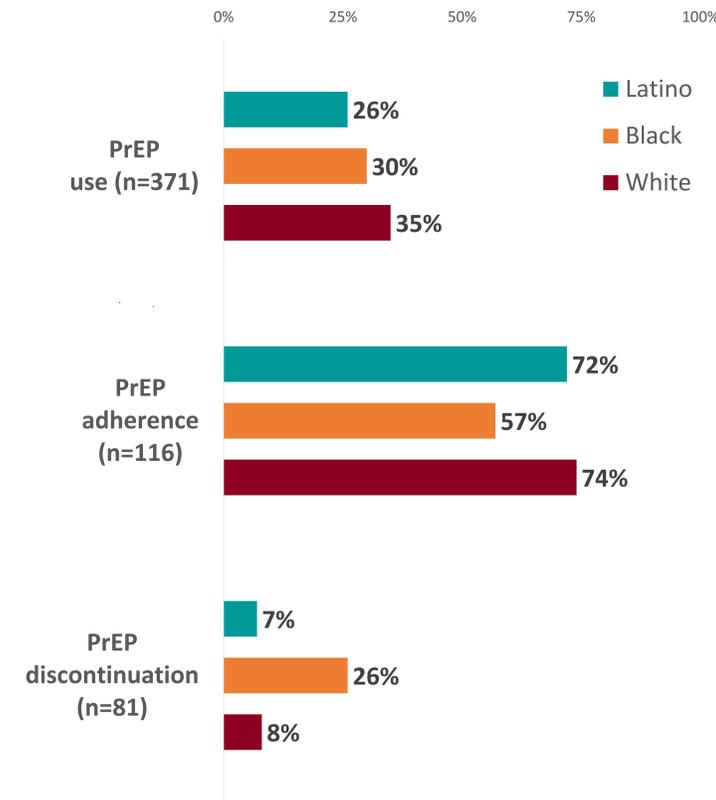
¹Excludes those who did not report Latino, black, or white race/ethnicity and did not have sex with a man in the past 12 months.

²Among those who reported PrEP use (n=116).

³Among those who reported 'almost daily' PrEP use (n=81).

31% of men reported PrEP use.

Figure 1. PrEP outcomes by race/ethnicity, NYC NHBS-MSM5, 2017.



PrEP use was highest among white MSM. Black MSM had the lowest adherence and the highest discontinuation of PrEP.

Table 2. Adjusted associations between race/ethnicity and PrEP outcomes, NYC NHBS-MSM5, 2017.*

Race/Ethnicity	PrEP use		PrEP adherence		PrEP discontinuation	
	aPR (95% CI)	p-value	aPR (95% CI)	p-value	aPR (95% CI)	p-value
Latino	0.72 (0.50-1.03)	0.0731	0.98 (0.75-1.28)	0.9008	0.89 (0.18-4.33)	0.8871
Black	0.84 (0.57-1.25)	0.3949	0.79 (0.53-1.17)	0.2352	3.40 (1.11-10.43)	0.0327
White	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>Ref.</i>

*All models adjusted for age.

Black MSM were 3.4 times more likely to discontinue PrEP compared to white MSM.

Discussion

- Reported PrEP use among MSM who participated in NYC's MSM5 cycle (31%) was higher than the national estimate of PrEP use among MSM across all NHBS cities (25%).³
- Given that HIV diagnosis rates and the need for PrEP is greater among black and Latino MSM, the similar levels of PrEP use by race/ethnicity may reflect disparities in PrEP coverage.
- The racial/ethnic disparity in PrEP discontinuation compounds racial/ethnic differences in PrEP coverage.
- These findings call for increased effort to improve PrEP coverage and long-term use among black and Latino MSM.
 - Future research is needed to identify the barriers faced by black and Latino MSM related to PrEP use and maintenance.
- HIV risk behaviors after PrEP discontinuation should be monitored.

Limitations

- Non-venue-attending MSM are not represented in the sample.
- Data are unweighted and do not account for venue-day-time sampling. Results cannot be generalized to the general population of MSM in NYC.
- PrEP data are self-reported. Blood or hair specimens may provide more accurate information on PrEP use and adherence.
- Significant differences across subgroups may not have been detected due to small sample size.

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Citations

- New York City HIV/AIDS Annual Surveillance Statistics. New York: New York City Department of Health and Mental Hygiene, 2018. Accessed 2/5/19 at <http://www1.nyc.gov/site/doh/data/data-sets/hiv-aids-annual-surveillance-statistics.page>.
- Centers for Disease Control and Prevention. HIV Surveillance Report, 2017; vol. 29. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published November 2018. Accessed 2/5/19.
- Centers for Disease Control and Prevention. HIV Infection Risk, Prevention, and Testing Behaviors Among Men Who Have Sex With Men - National HIV Behavioral Surveillance, 23 U.S. Cities, 2017. HIV Surveillance Special Report 22. <https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published February 2019. Accessed 2/8/19.