

Increasing PrEP Use among Men who Have Sex with Men, New York City, 2013-2015

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Abstract # 888

Background

- New York City (NYC) continues to have one of the largest HIV epidemics in the US with 2,718 new HIV diagnoses in 2014, of which, 61% were among men who have sex with men (MSM)¹
- Pre-exposure prophylaxis (PrEP) is effective at preventing HIV, yet has been underutilized²
- Starting in 2012, NYC Department of Health and Mental Hygiene (DOHMH) has supported programs to increase PrEP awareness and uptake, including large-scale social marketing campaigns to potential PrEP consumers, provision of PrEP and supportive services to uninsured MSM, and education/outreach to health care providers
- Through routine behavioral surveillance, we observed a substantial increase in PrEP awareness among NYC MSM from 2012 to 2014 (34% to 81%, respectively), yet PrEP use appeared to remain low³

Objective

We examined trends and associations with recent PrEP use among NYC MSM surveyed as a part of routine behavioral surveillance, 2013-2015

Methods

Data source: Sexual Health Survey (SHS), a cross-sectional survey conducted among NYC MSM since 2009, developed to track behaviors that may increase risk for HIV and to monitor impact of DOHMH HIV Prevention Programs

Survey administration:

- In-person:** MSM-focused bars/clubs and one public outdoor space popular among MSM of color; interviewer administered and incentivized (\$15 gift card)
- Online:** 5-7 dating/hook-up sites popular among MSM of color (e.g., BGCLive, GayAd Network, Grindr); self-administered without incentive

Eligibility: NYC resident, born male, aged 18-40, anal sex with a man (past 6 months)

Analytic sample: Includes surveys conducted spring 2013, 2014 and 2015; excludes respondents who reported being diagnosed with HIV

Data measures:

- PrEP use:** use in the past 6 months
- Demographic characteristics:** age (18-29/30-40 years), race/ethnicity (black/Hispanic/white/other), education (college degree vs. not) and insurance status (insured vs. not insured)
- Behavioral characteristics:** no condom use at last sexual encounter (receptive or insertive), known HIV-positive partner (last sexual encounter), number of partners (</>3) with whom no condom used (receptive or insertive, past 6 months) and post-exposure prophylaxis (PEP) use (past 6 months)

Data analysis:

- Logistic regression used to assess associations between PrEP use and year, characteristics, and year-characteristic interaction terms
- Multivariate models constructed for each characteristic bivariately associated with PrEP use ($p < 0.05$); adjusted for age, race/ethnicity, insurance, survey type (in-person/online) and year
- PEP use was not collected in 2013; this model included data from years 2014 and 2015 only

Results

Trends in PrEP use: PrEP use in the past 6 months increased significantly, from 2.1% in 2013 to 14.8% in 2015 (Figure 1, Table 1)

Bivariate models: Characteristics significantly associated with PrEP use in bivariate models included

- More recent calendar year (Table 1)
- Being insured (Table 1)
- All behavioral characteristics examined: no condom use at last sex, sex with a known HIV-positive partner, ≥ 3 partners with whom no condom used and PEP use (Figure 2)

Figure 1. PrEP Use in the Past 6 Months among Men who have Sex with Men (MSM) Participating in the Sexual Health Survey, New York City, 2013-2015

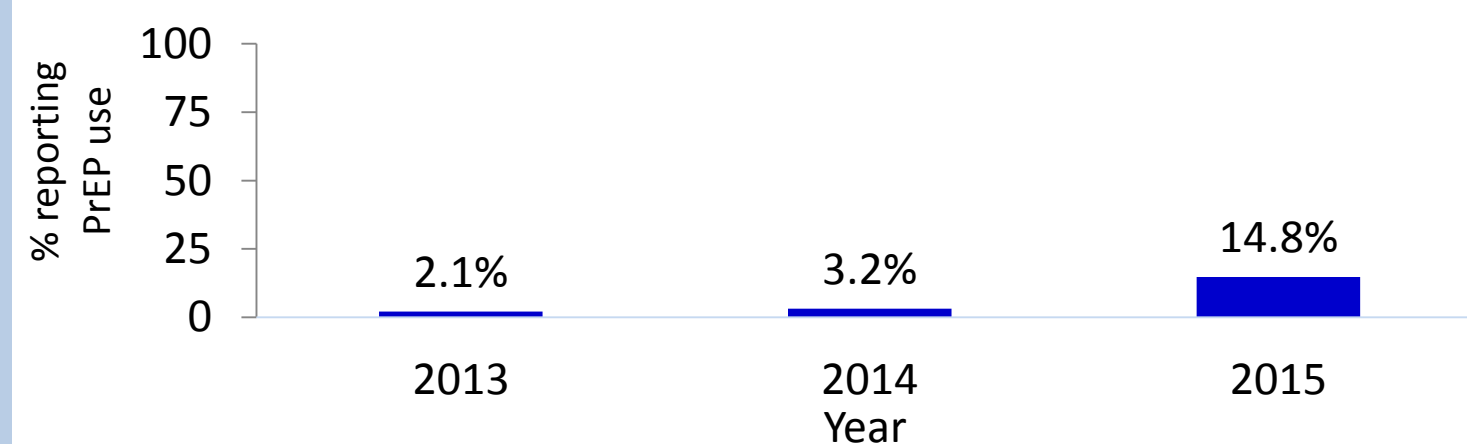


Table 1. Sample Characteristics and PrEP Use in the Past 6 Months among Men who have Sex with Men (MSM) Participating in the Sexual Health Survey, New York City, 2013-2015

Characteristic	N	Column %	n of PrEP users	% using PrEP	Bivariate Odds Ratio (95%CI)
Total	1,572	100.0	99	7.2	n/a
Survey Year*†					
2013	388	24.7	8	2.1	Reference
2014	587	37.3	15	3.2	1.5 (0.7-3.7)
2015	597	38.0	76	14.8	8.2 (3.9-17.3)
Survey administration method					
In-person	655	41.7	45	7.1	Reference
Online	917	58.3	54	7.2	1.0 (0.7-1.5)§
Age (years)					
18-29	992	63.1	54	6.2	Reference
30-40	580	36.9	45	8.9	1.48 (1.0-2.2)
Race/Ethnicity					
Black	311	23.8	17	5.5	0.75 (0.4-1.4)
Hispanic	422	32.2	36	8.6	1.22 (0.8-2.0)
White	481	36.8	34	7.2	Reference
Other	95	7.3	5	5.4	0.72 (0.3-1.9)
Education					
Less than college	519	39.9	35	6.8	Reference
College or more	780	60.1	57	7.4	1.1 (0.7-1.7)
Insurance status*					
Insured	1067	83.2	84	7.9	2.5 (1.1-5.5)
Not insured	215	16.8	7	3.3	Reference

* Significantly associated with PrEP use ($p < 0.05$)

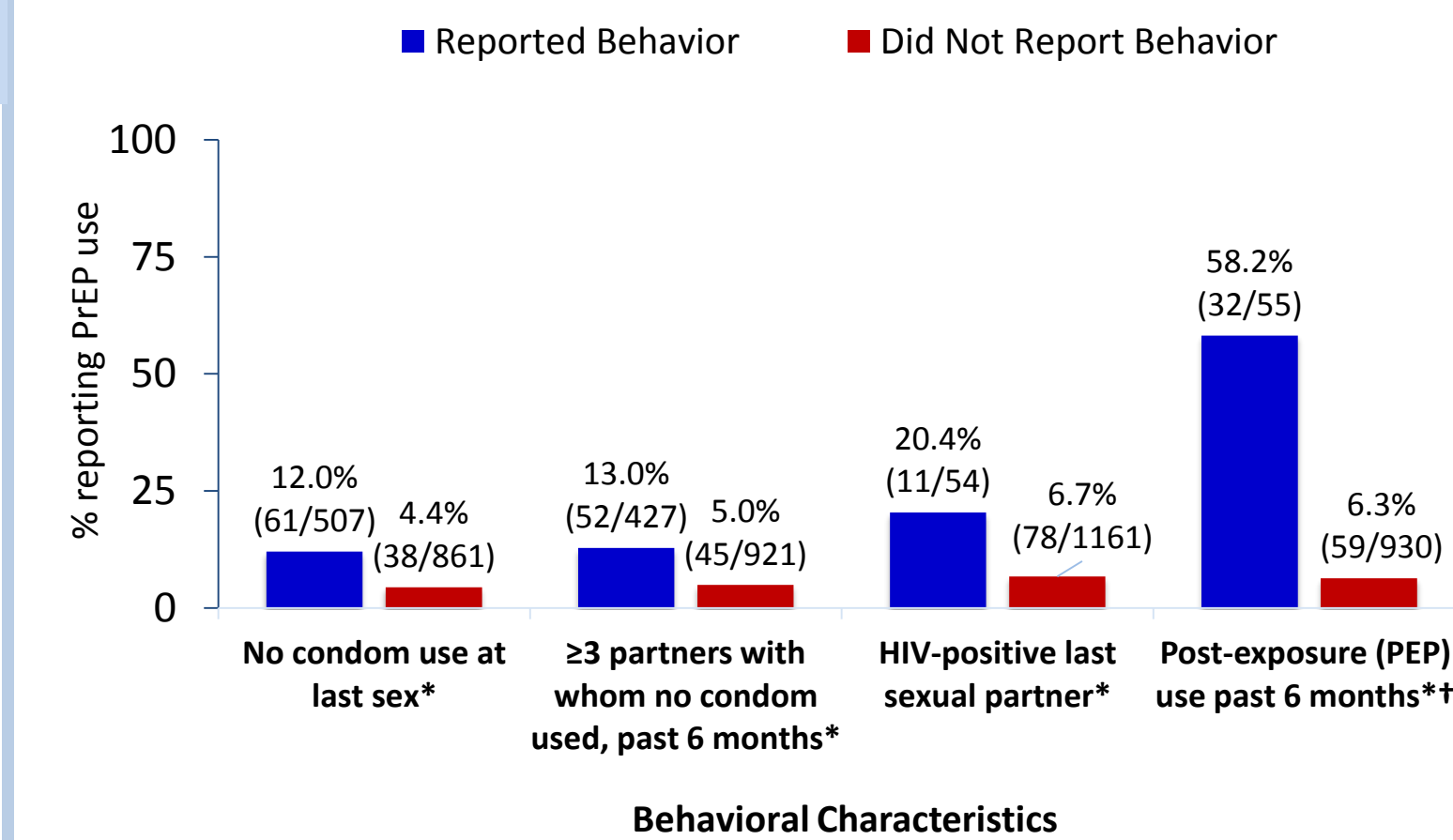
† Modeled categorically

§ Not significantly associated with PrEP use ($p > 0.05$)

Multivariate models:

- In the multivariate models, all behavioral characteristics examined remained significantly associated with PrEP use (Table 2)
- None of the associations with PrEP differed by year (interaction term $p > 0.05$, data not shown)

Figure 2. PrEP Use in the Past 6 Months by Behavioral Characteristics among Men who have Sex with Men (MSM) Participating in the Sexual Health Survey, New York City, 2013-2015



* Significantly associated with PrEP use ($p < 0.05$)

† PEP use not collected in 2013, thus this model included data from years 2014 and 2015 only

Table 2. Multivariable association of PrEP use in the past 6 months with selected characteristics among Men who have Sex with Men (MSM) Participating in the Sexual Health Survey, New York City, 2013-2015

Characteristic	Adjusted Odds Ratio (95% Confidence Interval)†
Calendar Year**	3.5 (2.4-5.1)
Insurance§	2.1 (1.0-4.8)
No condom use at last sex*	3.8 (2.4-6.2)
≥ 3 partners with whom no condom used, past 6 months*	2.8 (1.8-4.5)
HIV-positive last sexual partner*	3.1 (1.4-7.1)
PEP use, past 6 months*¶	26.8 (12.8-56.2)

* Significantly associated with PrEP use ($p < 0.05$)

† Adjusted for race/ethnicity, age, insurance, survey type (in-person vs. online) and year (continuous)

‡ Entered as a continuous variable

§ Not significantly associated with PrEP use ($p > 0.05$)

¶ PEP use not collected in 2013, thus this model included data from years 2014 and 2015 only

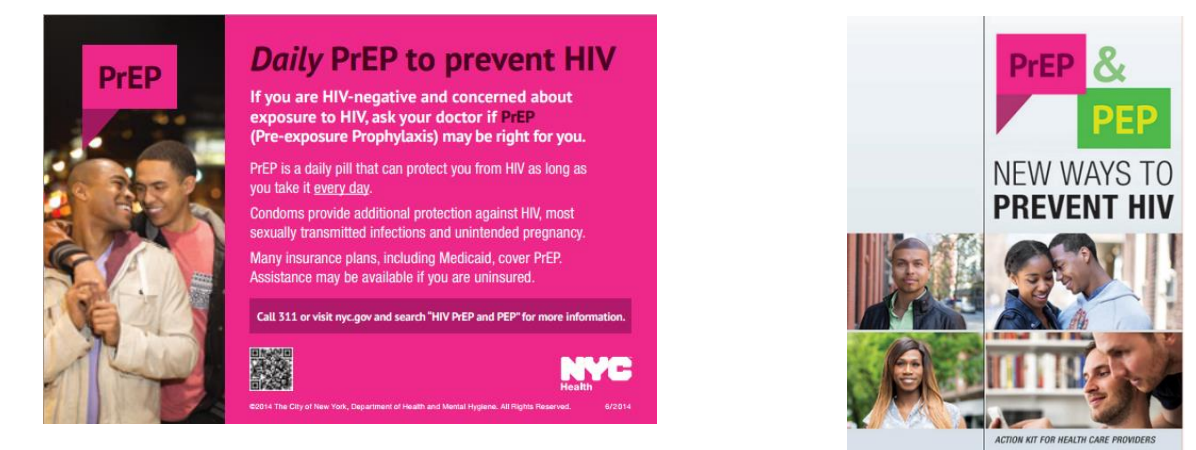
Limitations

- Data were self-reported; potentially subject to recall error and social desirability bias
- Data collected cross-sectionally; cannot measure individuals' changes over time or distinguish temporality between PrEP use and behavior
- Convenience sample; potentially subject to selection bias
- Results may not be generalizable to all NYC MSM; generalizability to MSM in other geographic areas is limited

Discussion

- Findings suggest PrEP use is increasing among MSM in NYC, especially from 2014 to 2015
- PrEP use appears to be greater among those with higher behavioral risk, consistent with public health recommendations
- Association between PrEP use and being insured underscores the importance of addressing financial barriers and monitoring for disparities as PrEP use increases
- NYC DOHMH continues to support PrEP uptake with campaigns targeting patients and providers (Figure 2) and programs to provide PrEP and supportive services for NYC MSM

Figure 2. Examples of recent NYC DOHMH materials for potential PrEP consumers (left) and providers (right)



References

- HIV Epidemiology and Field Services Program. *HIV Surveillance Annual Report, 2015*. New York City Department of Health and Mental Hygiene: New York, NY. December 2015.
- Centers for Disease Control and Prevention. Preexposure Prophylaxis for the Prevention of HIV Infection in the United States – 2014. A Clinical Practice Guideline. Available at: <http://www.cdc.gov/hiv/pdf/guidelines/PrEPguidelines2014.pdf>
- Mensah N, Scanlin K, Edelstein Z, Kobrak P, Myers J. Trends in Awareness and Use of Pre-Exposure Prophylaxis, New York City (NYC), 2012-14; [abstract# 2087]. Presented at the National HIV Prevention Conference, Dec 6-9, 2015; Atlanta GA. Abstract 2087

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