

Background

- The New York City (NYC) Department of Health and Mental Hygiene (DOHMH) conducted an HIVST Giveaway (HTG) to distribute free HIVSTs online¹
 - Potential participants were recruited on MSM-centric dating mobile apps and LGBTQ-interest websites
 - Eligible participants provided email addresses for HIVST redemption and a follow-up survey
- The HIV self-test (HIVST) can increase status awareness in domestic urban settings, but barriers to access² exist along a proposed continuum from awareness, to pharmacy availability, to use
- The HTG follow-up survey presented an opportunity to explore the HIVST continuum among a large, urban sample of men and transgender people who have sex with men (MTSM)

Objectives

We examined associations between sociodemographic and behavioral factors and:

- Prior HIVST awareness
- Exposure to HIVST in pharmacies
- Ever using HIVST

Methods

Study population Eligible HTG participants (≥18 years old, assigned male sex at birth or currently identifying as a man, not previously diagnosed with HIV, living in NYC) who completed a follow-up survey

Data collection Self-administered online surveys at eligibility (11/2015-12/2015) and follow-up (3/2016-4/2016)

Outcomes Self-report of the following *prior to participation in HTG* (“Before the Home Test Giveaway, I had...”):

- HIVST awareness (“...heard of the home HIV test”)
- HIVST pharmacy exposure (“...seen the home HIV test at a pharmacy”)
- HIVST use (“...used at least one home HIV test”)

Characteristics examined

- Sociodemographics** Age^a; race/ethnicity^a (non-Hispanic Black, Hispanic, non-Hispanic white, other); education^b (≤high school equivalent, some college, 4-year degree, graduate degree); annual income^b (<\$40,000, ≥\$40,000); borough of residence^a (Manhattan, other); doctor’s visit in the past year^b (yes, no); sexual identity^b (gay, non-gay); insurance status^b (insured, uninsured)
- HIV-related behaviors** Timing of last HIV test^a (≤1, >1 year ago, never) and last condomless anal sex^b (CAS; <1, 1-3, >3 months ago, never); in the past 6 months: number of CAS partners^b (0-1, >1); gender and HIV status of partner(s)^b; sexually transmitted infection (STI) diagnosis^b; pre-exposure prophylaxis (PrEP) use^b; drug use^b (cocaine, meth, MDMA, GHB, poppers, injection)

Data analysis Factors associated with outcomes in bivariate analysis (p<0.05) were assessed via multivariable logistic regression, adjusted for age, race/ethnicity, education, and income

^aCollected at eligibility; ^bCollected at follow-up

Results

Continuum

- Eighty-five, 57% and 23% of respondents were aware of, had seen, and had used the HIVST, respectively (Figure 1)
- Age and race/ethnicity were associated with *pharmacy exposure* and *use*, but not *awareness* (Table, Figure 2)
- Income and time since last HIV test were associated *across the continuum* (Table, Figure 2)

Other factors associated with awareness

- PrEP use in the past 6 months [adjusted odds ratio (aOR) 1.85, 95% confidence interval (CI) 1.12-3.06]
- HIV-positive partner in the past 6 months (aOR 2.35, CI 1.20-4.63)
- CAS in the past month vs. never (aOR 3.26, CI 1.61-6.57)
- Partnering only with men (aOR 2.10, CI 1.05-4.18)

Other factors associated with pharmacy exposure

- Manhattan residence vs. other (aOR 1.37, CI 1.05-1.79)
- Doctor’s visit in the past year (aOR 1.43, CI 1.02-2.01)
- PrEP use in the past 6 months (aOR 2.10, CI 1.49-2.97)
- HIV-positive partner in the past 6 months (aOR 1.71, CI 1.13-2.58)

Other factors associated with use

- >1 CAS partner in the past 6 months (aOR 1.68, CI 1.22-2.31)

Other Factors not independently associated with any HIVST continuum outcomes include: education, sexual identity, insurance status, STI diagnosis and drug use in the past 6 months

Figure 2. Proportion of HIV Self-Test Giveaway Participants Reporting HIVST Continuum Outcomes by Select Characteristics, New York City, 2015-16.

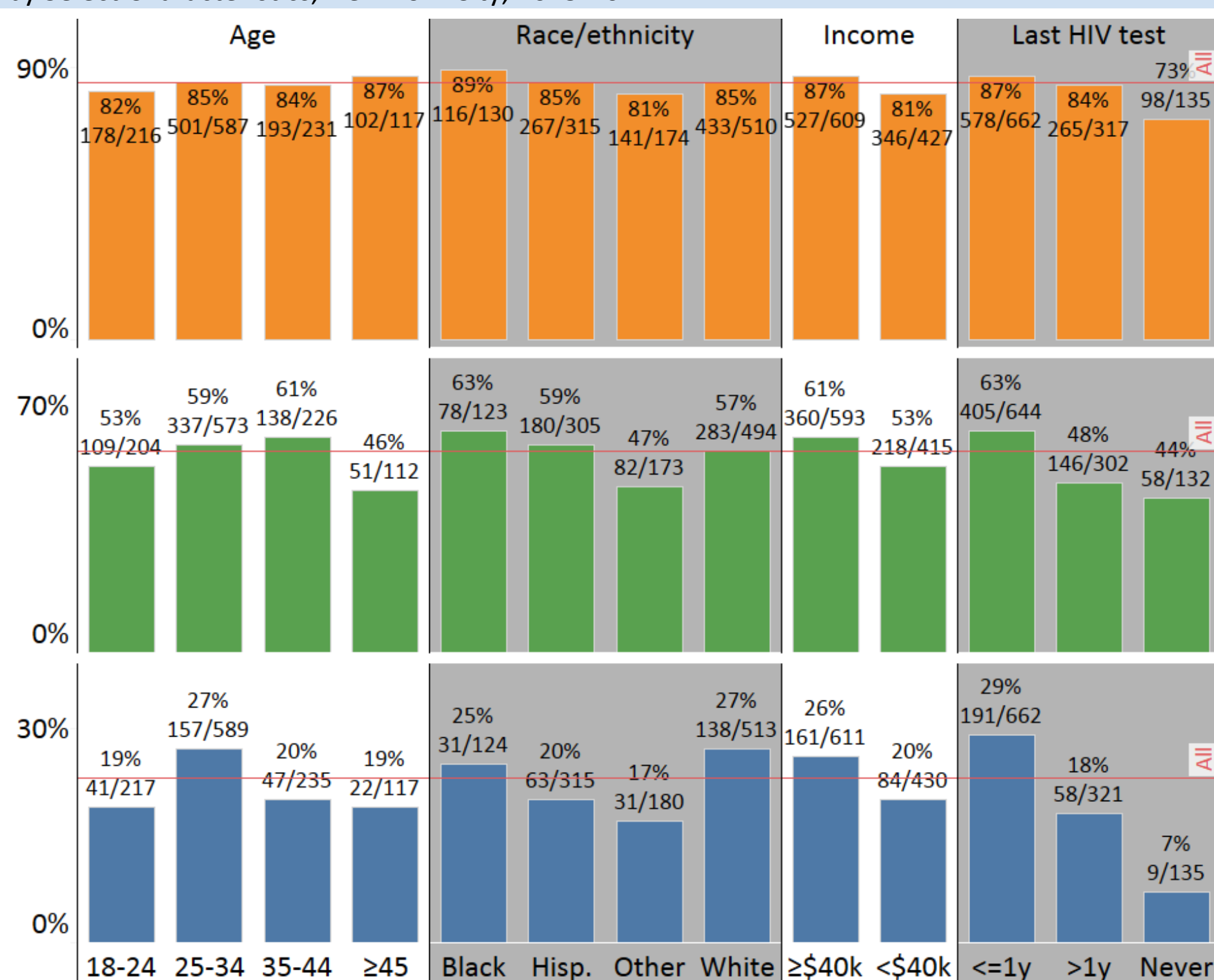


Figure 1. Proportion of HIV Self-Test Giveaway Participants Reporting HIVST Continuum Outcomes, Overall, New York City, 2015-16.

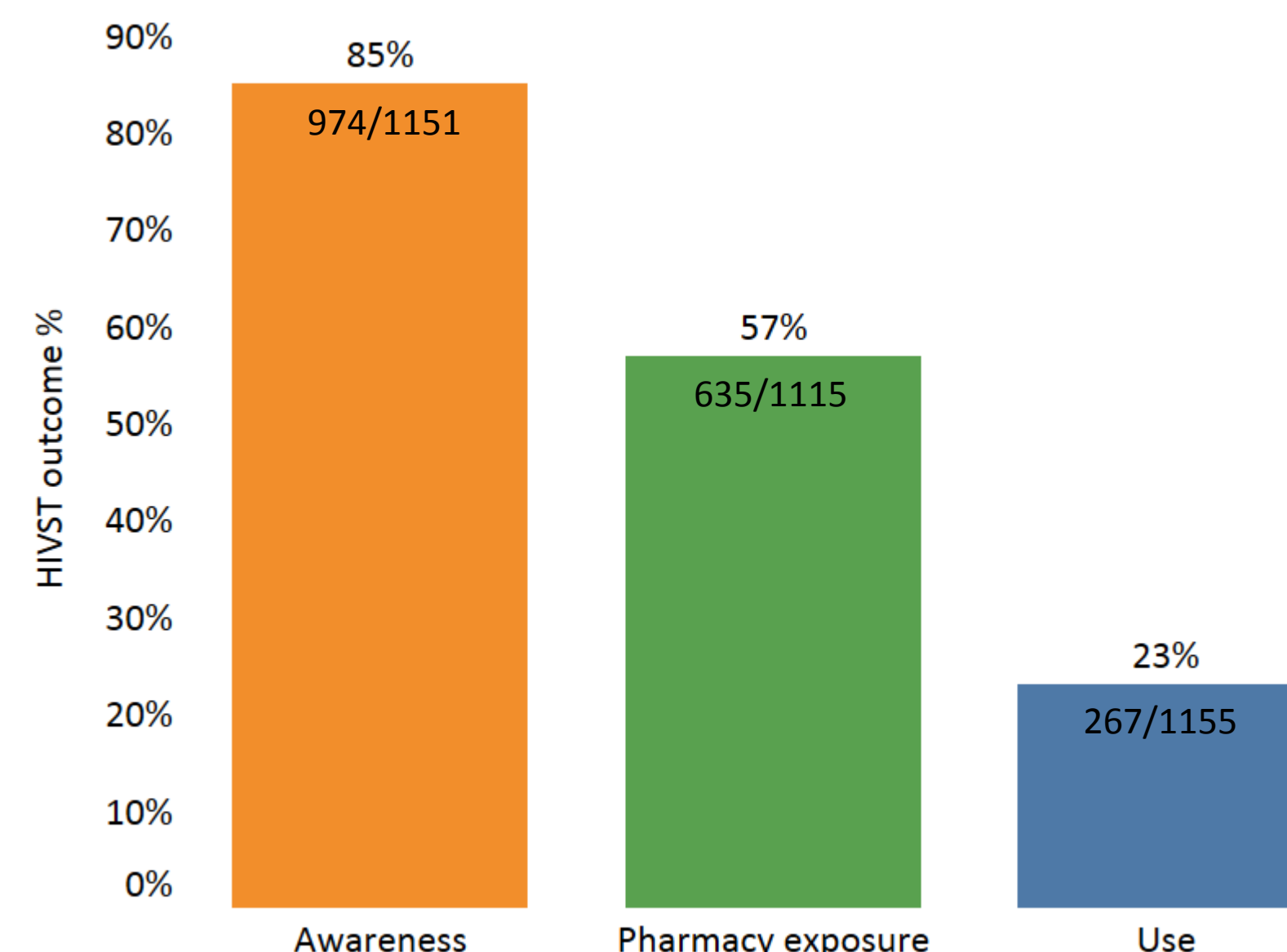


Table. Select Associations with HIV Self-Test Continuum Outcomes among HIVST Giveaway Participants, New York City, 2015-16.

Characteristic	Awareness aOR* (95% CI)	Pharmacy exposure ¹ aOR* (95% CI)	Use aOR* (95% CI)
Age			
18-24	0.82 (0.39 - 1.74)	1.79 (1.05 - 3.04)	1.49 (0.78 - 2.85)
25-34	0.86 (0.44 - 1.68)	1.82 (1.15 - 2.88)	1.88 (1.07 - 3.29)
35-44	0.69 (0.34 - 1.41)	1.97 (1.19 - 3.26)	1.23 (0.66 - 2.30)
≥45	Ref	Ref	Ref
Race/ethnicity			
Black, NH	1.53 (0.81 - 2.89)	1.36 (0.87 - 2.12)	0.99 (0.61 - 1.60)
Hispanic	1.19 (0.77 - 1.84)	1.18 (0.85 - 1.63)	0.74 (0.51 - 1.07)
Other ²	0.75 (0.46 - 1.20)	0.60 (0.41 - 0.87)	0.55 (0.35 - 0.88)
White, NH	Ref	Ref	Ref
Income			
≥\$40,000	1.66 (1.14 - 2.41)	1.49 (1.12 - 1.97)	1.54 (1.11 - 2.15)
<\$40,000	Ref	Ref	Ref
Time since last HIV test			
≤ 1y ago	2.73 (1.67 - 4.46)	2.21 (1.45 - 3.38)	5.59 (2.64 - 11.86)
> 1y ago	1.85 (1.08 - 3.16)	1.20 (0.76 - 1.90)	2.83 (1.28 - 6.25)
Never tested	Ref	Ref	Ref

aOR: adjusted odds ratio; NH: Non-Hispanic

*Adjusted for age, race/ethnicity, education, and income.

¹Pharmacy exposure is defined as having ever seen an HIV self-test at a pharmacy.

²Other race includes Asian/Pacific Islander; Native American; mixed race, non-Hispanic; and those reporting other race.

Bold = p<0.05

Limitations

- Data based on self-report and thus subject to social desirability bias, recall error, or misrepresentation
- Advertisement and email recruitment strategy introduces self-selection bias
- Convenience sample of those participating in a NYC HIVST giveaway and thus may not be generalizable to other settings or populations
- Continuum does not account for all possible methods of HIVST access, though data (not shown) suggest the impact of alternative access pathways is minimal

Discussion

- Overall**, most respondents were aware of the HIVST prior to HTG, but fewer had seen one in a pharmacy, and only 1 in 4 had ever used one
- Associations with:**
 - Income across the continuum** suggest that socioeconomic status may affect HIVST use through mechanisms beyond its cost
 - Recent HIV testing across the continuum** suggest that less frequent testers may not be adequately informed about the HIVST
 - Recent CAS (awareness, use)** suggest those at risk may have greater access to HIVST
- The lack of association with insurance status across the continuum** suggests that self-testing can provide a suitable alternative to those without adequate access to health care
- Further research to assess residual confounding is warranted
- Ongoing HIVST Giveaways in NYC (6/2016-8/2016, 11/2016-1/2017) may increase HIVST awareness and use, with the ultimate goal of increased status awareness

References

- Edelstein ZR, et al. Results from the HIV Home Test Giveaway, New York City, 2015. Oral abstract presented at APHA Annual Meeting and Expo, November 2 2016. Denver, CO. Abstract #351399.
- Myers JE, et al. Availability, Accessibility, and Price of Rapid HIV Self-Tests, New York City Pharmacies, Summer 2013. *AIDS Behav.* Published online: Nov 1 2016 (DOI 10.1007/s10461-016-1594-4).

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