



Acceptability of Home Self-Test Kits for HIV in New York City (NYC), 2006

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Background: Home HIV Self-Testing

- **1996:** FDA approves home *collection* kit
- **2002:** Rapid HIV tests approved
- **2003:** First CLIA waiver granted for rapid test use in non-clinical settings
- **2006:** FDA advisory committee reviews home test issue
- **2012:** FDA approves OraQuick In-Home HIV test



Now available in retail pharmacies



Background: HIV in NYC

- **~3500-4000** new diagnoses per year¹
- Most occur among:
 - Men
 - MSM
 - Persons under 40
 - Blacks/Hispanics

¹NYC HIV/AIDS Annual Surveillance Statistics: <http://www.nyc.gov/html/doh/html/ah/hivtables.shtml>



Background: HIV Testing in NYC

- Expanded testing, social marketing¹
- Since 2010, mandatory offer of HIV testing to adults 18-64 yrs seeking medical care²
- Yet, one-third of adults 18-64 yrs have never been HIV-tested³

¹NYC DOHMH HIV testing website: <http://www.nyc.gov/html/doh/html/ah/nyc-hivtesting.shtml>.

²NYC HIV Testing Public Health Law: <http://www.health.ny.gov/diseases/aids/testing/>.

³NYC Community Health Survey 2010: <http://www.nyc.gov/html/doh/html/survey/survey.shtml>.



Background:

Acceptability of Rapid Home Self-Testing

- Limited data on acceptability in the general population (prior to rapid test approval)¹
 - California adults (1999 survey): 37%
- Emerging data on very high acceptability of rapid self-testing among U.S. MSM^{2,3}

¹Phillips et al., *Am J Prev Med* 2003;24:340.

²Katz et al., *CROI 2012*; Abstract #1131.

³Carballo-Diequez et al., *J Sex Research* 2012;49:379.



Objective

1. Describe the population of NYC adults reporting acceptability of rapid home HIV test kits
2. Determine factors associated with acceptability of rapid home HIV test kits
3. Examine possible financial constraints on the purchase of test kits



Data Source:

2006 Community Health Survey

- Annual telephone survey of adult NYC residents (age \geq 18)
- Based on CDC's national Behavioral Risk Factor Surveillance System (BRFSS)
- Population-based, representative
- Tracks health conditions, risk behaviors
- 2006 survey (n=9,683)
 - Landlines telephones only
 - Question about in-home HIV testing



Primary Outcome

- Acceptability of a rapid home test kit for HIV
 - "If a rapid home test kit for HIV was available and you could get results within 20 minutes at home, would you use such a kit?"



Measures

- Demographic
 - Age, sex, race/ethnicity
- Behavioral
 - Number of sex partners, past 12 months
 - MSM behavior, past 12 months (MSM behavior vs. all other persons including women and men who do not report MSM)
 - HIV testing, past 12 months
- Economic
 - Household poverty (percent of federal poverty level)
 - Did not get medical care or fill a prescription due to cost, past 12 months



Analysis

- SAS 9.2, SUDAAN
- Limited analytic population to adults aged 18-64 years
- Weighted to be representative of the NYC adult population
- Age-adjusted to US 2000 Standard Population
- Prevalence, standard error (SE), and 95% confidence intervals (CIs) calculated
- Logistic regression (with age, variable of interest, and outcome)
- Forward step-wise multivariate model; variables selected based on previous logistic regression ($p \leq 0.05$) and others likely to impact outcome

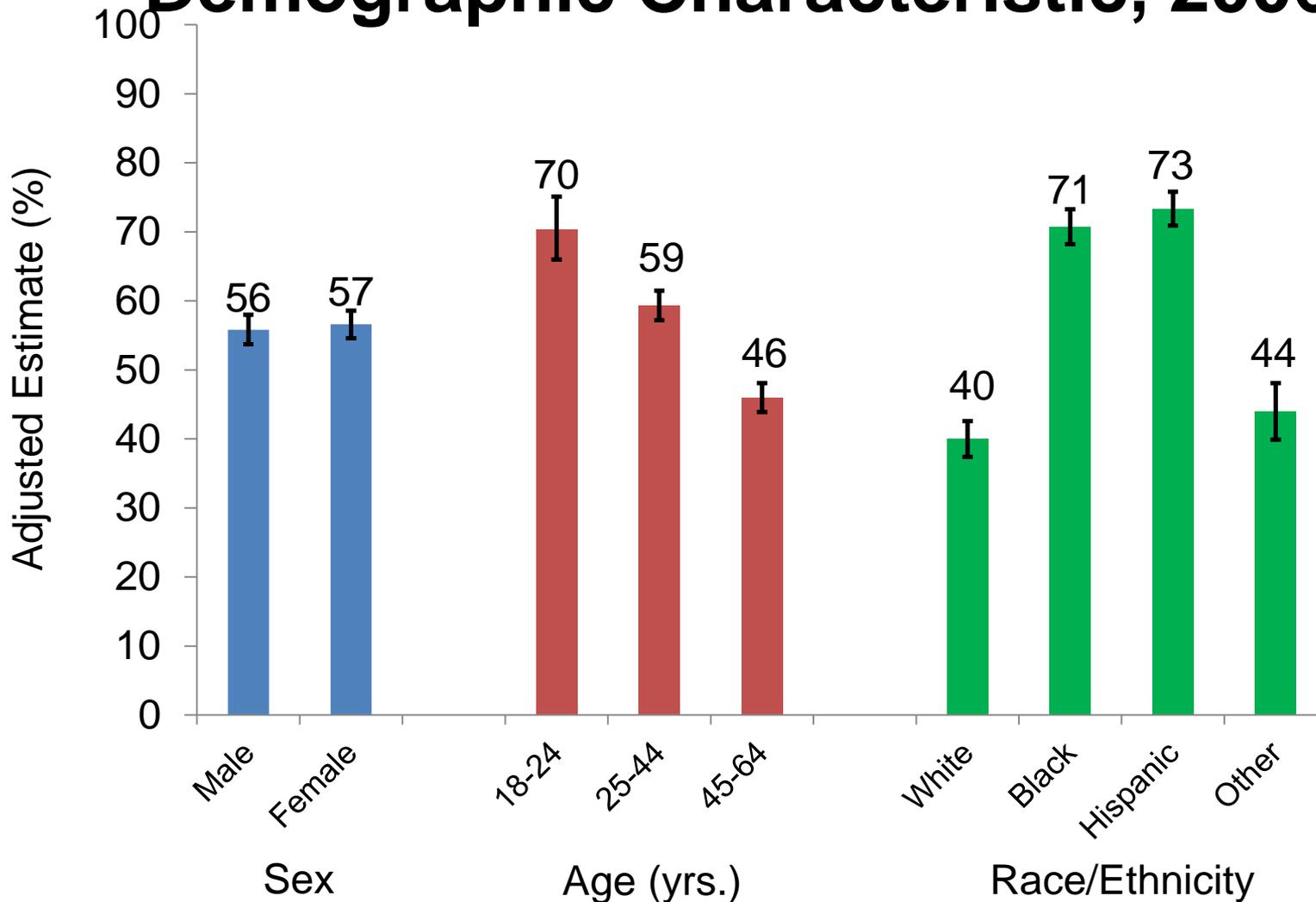


Results

- 89% (6,639) responded with “yes” or “no”
- Overall, **56.2%** (95%CI: 54.7, 57.7) of NYC adult respondents (18-64 years) who answered this question reported that they would use a rapid home HIV test

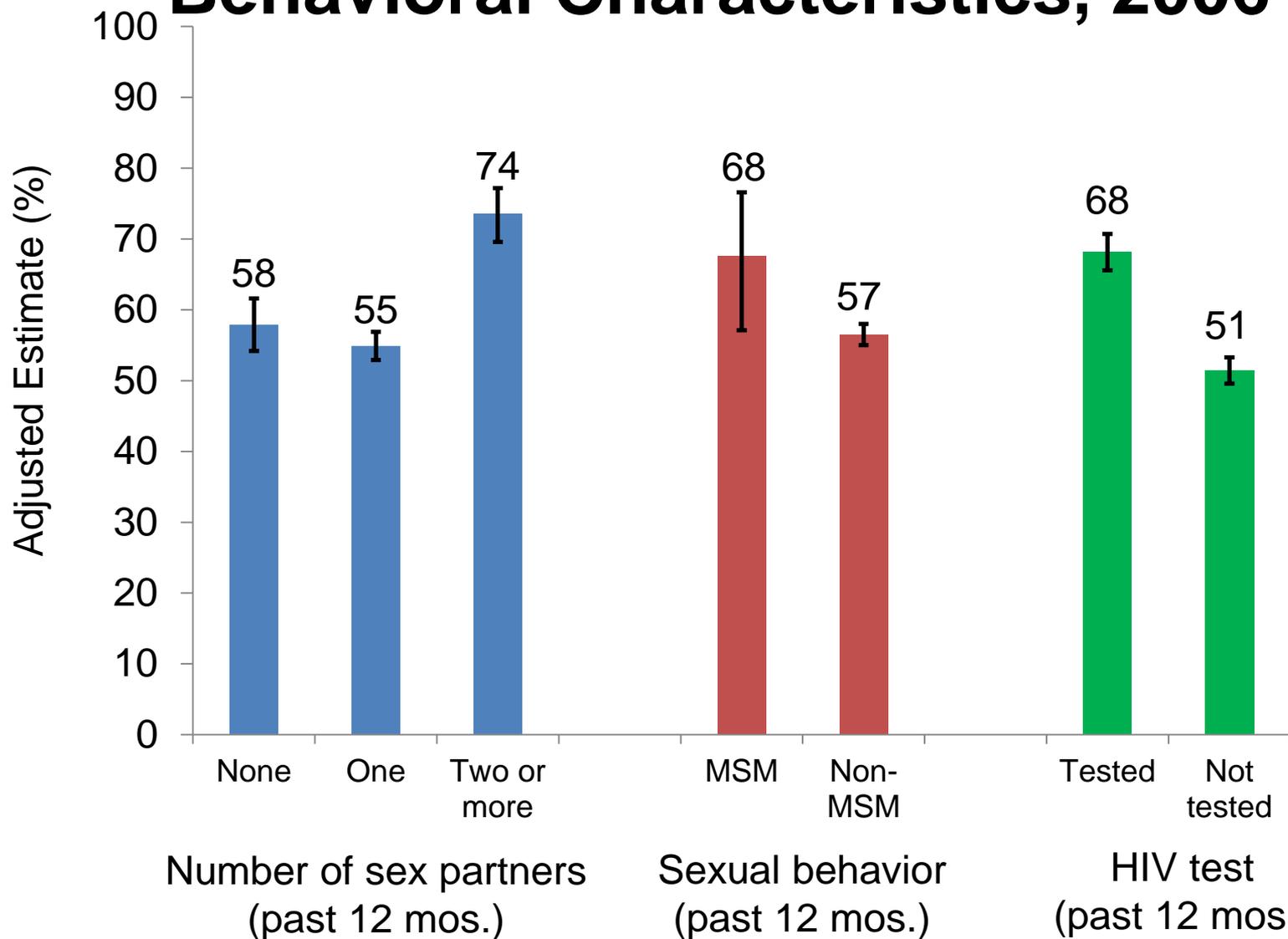


Acceptability of Home Rapid Test Kits for HIV Among NYC Adults (18-64 yrs.) by Demographic Characteristic, 2006





Acceptability of Home Rapid Test Kits for HIV Among NYC Adults (18-64 yrs.) by Behavioral Characteristics, 2006



Factors Associated with Acceptability of Use of Home Rapid HIV Test Kits[†]

Characteristic	Adjusted OR (95%CI)
Age group (years)	
18-24	2.08 (1.58, 2.74) ^{***}
25-44	1.47 (1.27, 1.70) ^{***}
45-64	Referent
Race/ethnicity	
White, non-Hispanic	Referent
Black, non-Hispanic	3.52 (2.92, 4.25) ^{***}
Hispanic	4.10 (3.42, 4.92) ^{***}
Other	1.31 (1.04, 1.64) [*]
Sexual partners in past 12 mos.	
None	Referent
One	0.99 (0.83, 1.19)
Two or more	2.29 (1.73, 3.05) ^{***}
HIV test in past 12 mos.	1.37 (1.16, 1.61) ^{**}

[†] Controlling for sex and MSM behavior.

*p<0.05, **p<0.001, ***p<0.0001



Financial Consideration?

- Among those who would use a rapid home test kit:
 - **41%** had a household income <200% of the federal poverty level
 - **25%** did not get needed medical care/fill a prescription due to cost in previous 12 mos.

52% might encounter financial barriers to kit purchase at retail prices



Summary

- Over half of NYC adults reported that they would use a rapid HIV test kit at home
- Interest high among subpopulations with:
 - Greatest burden of disease (e.g., young people, blacks, Hispanics)
 - Self-reported risk behavior (e.g., multiple sex partners)
 - Recent HIV testing
- Affordability might be an issue



Limitations

- 2006 survey data
 - Question preceded widespread use of rapid tests (and FDA approval)
 - Cell phone-only households not surveyed
- Key populations excluded (e.g., institutionalized persons)
- Information bias (e.g., social response)
- No information on ever-testing
- Survey question did not include information about the cost of the kit



Discussion

- An historic moment – first home ID test
- Test may facilitate:
 - Testing of persons unaware of their infection
 - More frequent testing of those at highest risk
 - Mutual testing of partners
- Difficult to determine uptake, impact, influence of price



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Analytic Population (n=6,639)

Characteristic	Sample n (%)
Overall	6,639 (100)
Sex	
Male	2,642 (47.6)
Female	3,997 (52.4)
Age group (years)	
18-24	547 (15.1)
25-44	2,973 (52.1)
45-64	3,119 (32.8)
Race/ethnicity	
White, non-Hispanic	2,347 (36.1)
Black, non-Hispanic	1,725 (23.1)
Hispanic	1,793 (26.2)
Asian/Pacific Islander	564 (11.3)
Other	210 (3.3)

Additional discussion:

- NYC DOHMH is:
 - Partnering with OraSure to ensure proper linkage to care
 - Continuing to assess acceptability and use among key populations
 - Exploring innovative ways to bring this new testing modality to those most at risk