

Never-Testing for HIV Among New York City (NYC) Adults Aged 18-64 Years, 2010

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Background

- HIV testing is central to HIV prevention in the U.S. and globally
- Efforts to routinize HIV testing in NYC continue toward the National HIV/AIDS Strategy¹ targets that by 2015:
 - 90% of HIV-infected persons will know their status
 - Overall transmission rate will be reduced by 30%
- There are varied estimates of the proportion with undiagnosed HIV (5-28%), with recent estimate of 14% from a serosurvey in a Bronx, NY ED²
- Clear understanding of the characteristics and geographic distribution of persons who have never tested for HIV is needed to guide ongoing prevention efforts

Methods

- Data source: a 2010 telephone survey of NYC adults ≥18 years (Community Health Survey)
- Outcome: HIV testing, never
- Measures: sociodemographic factors, behavioral risk factors, clinical interactions in past year
- Analysis :
 - Restricted to adults aged 18-64 years (n=8,665) to align with 2006 CDC HIV screening recommendations
 - Weighted data to be representative of the NYC adult population; age-adjusted estimates to the 2000 U.S. Standard Population
 - Estimated prevalence and 95% confidence intervals (95%CI) of never-tested
 - Developed multivariable logistic regression model to determine independent correlates of never-testing; entered variables into model based on age-adjusted bivariable analysis (p≤0.05) and deleted using same criteria; measures were entered as sets into multivariable model
 - Report adjusted odds ratios (aOR) with corresponding 95%CI

Results

- One-third of NYC adults aged 18-64 years (33.2%; 95%CI: 31.5, 35.0) had never tested for HIV with wide variation, from black females aged 25-44 years (4.3%; 95%CI: 2.6, 6.9) to other race/ethnicity males aged 18-24 years (78.7%; 95%CI: 54.9, 91.8)
- Groups with high never-tested proportions (>40%) were those aged 18-24 and 45-64 years, those of non-Black or Hispanic race/ethnicity, and Queens and Staten Island residents
- The most significant independent correlates of never-testing were not having a provider recommend an HIV test in the past year (aOR 6.7; 95%CI: 3.9, 11.5) and not being sexual active in the past year (aOR 4.1, 95%CI: 2.3, 7.1)
- Among the never-tested population, 57.9% (95%CI: 54.4, 61.4) received preventive care or treatment in the past year (cholesterol measurement, influenza vaccination, mental health treatment) suggesting engagement in primary care, yet only 2.3% (95%CI: 1.0, 5.4) received a provider recommendation to test

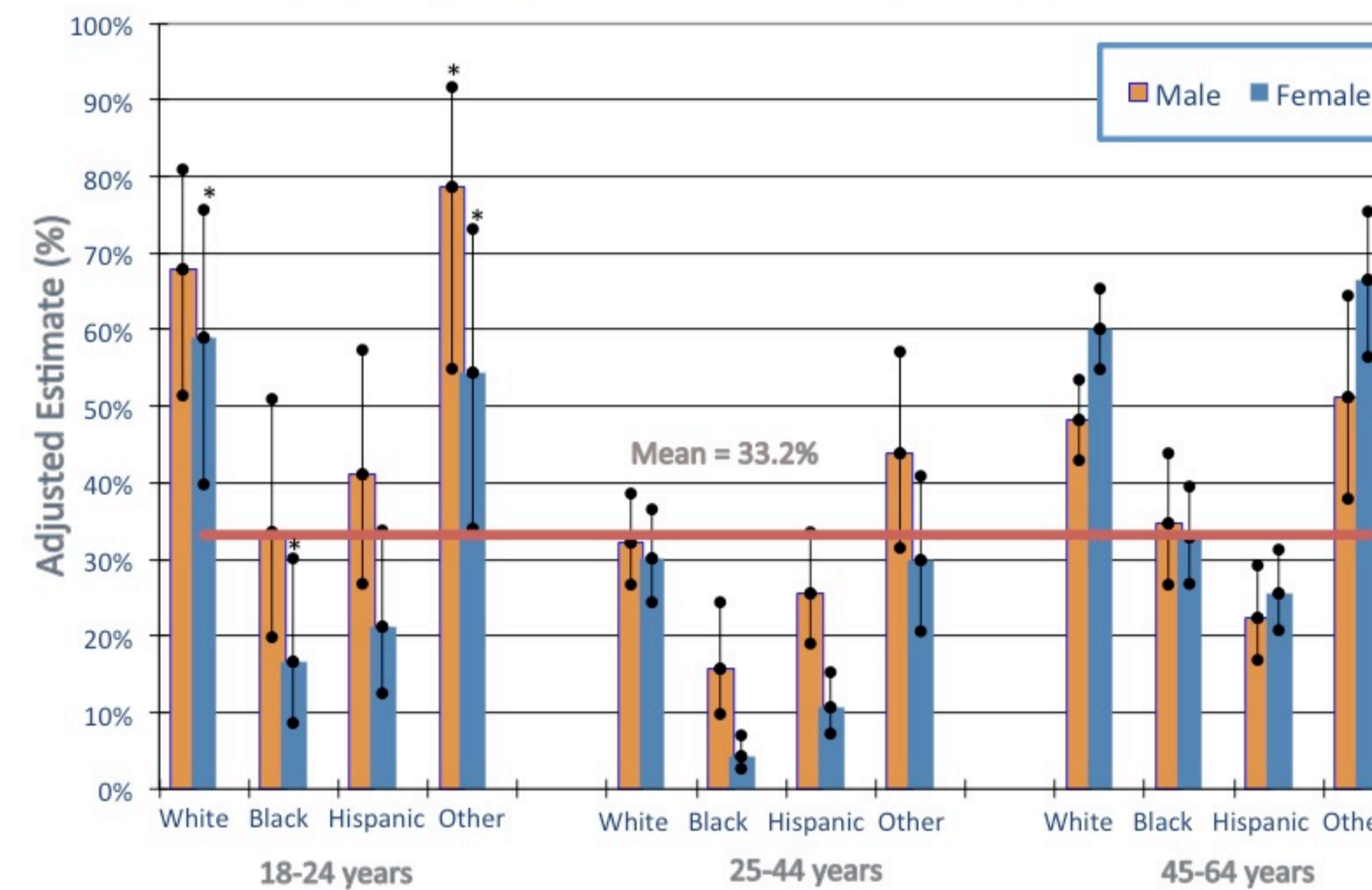
References

- National HIV/AIDS Strategy Report. 2010. Available at <http://aids.gov/federal-resources/national-hiv-aids-strategy/nhas.pdf>.
- J.Eavey, et al. Undiagnosed HIV infection in an urban emergency department: a blinded, cross-sectional serosurvey [Abstract TUPE282]. 19th International AIDS Conference.

Table 1: Percentage of NYC adults who had never tested for HIV, by selected characteristics.

	Estimate (%)	95%CI
Age group		
18-24	42.2	36.2, 48.4
25-44	23.2	20.9, 25.6
45-64	42.8	40.3, 45.3
Gender		
Male	36.3	33.7, 39.1
Female	30.2	28.0, 32.4
Race/ethnicity		
White, non-Hispanic	44.5	41.5, 47.6
Black, non-Hispanic	20.5	17.7, 23.6
Hispanic	22.0	19.3, 25.1
Other, non-Hispanic	49.2	43.5, 54.9
Borough of residence		
Bronx	20.1	17.5, 23.1
Brooklyn	31.6	28.7, 34.5
Manhattan	29.0	25, 33.4
Queens	41.5	37.9, 45.2
Staten Island	51.9	45.3, 58.5
Sexual risk, past 12 mos.		
Highest risk (>1 partner, no condom)	17.9	12.3, 25.2
Lower risk (≥1 partner, condom)	30.0	28, 32.1
Lowest risk (not sexually active)	43.7	40.0, 47.5
Provider recommended HIV, past 12 mos.		
Yes	7.1	4.7, 10.5
No	36.8	34.9, 38.7
Preventive care or treatment, past 12 mos.		
Yes	31.0	28.7, 33.4
No	35.8	32.8, 38.8

Figure 1: Never-testing prevalence estimates among NYC adults, by age group, race/ethnicity and gender.



*Estimate should be interpreted with caution.

Discussion

- Efforts to ensure NYC residents know their HIV status have largely been successful, as the majority have tested at least once
- Missed opportunities for HIV testing during clinical encounters still occur, underscoring the importance of implementation of the recent New York State law (Chapter 308, Laws of 2010) that mandates provider offer of an HIV test in most health care settings
- Future plans include a parallel analysis of NYC surveillance data to compare recent testing patterns with HIV diagnostic rates by population subgroup and neighborhood

Table 2: Factors associated with never-testing for HIV among NYC adults (multivariable analysis).*

	aOR	95%CI	p-value
Age group			
18-24	3.09	2.29, 4.17	<0.001
25-44	Referent	-	-
45-64	2.51	2.06, 3.05	<0.001
Gender			
Male	1.38	1.15, 1.66	<0.001
Race/ethnicity			
White, non-Hispanic	2.92	2.27, 3.76	<0.001
Black, non-Hispanic	Referent	-	-
Hispanic	1.26	0.95, 1.68	<0.11
Other, non-Hispanic	3.24	2.30, 4.58	<0.001
Borough of residence			
Bronx	Referent	-	-
Brooklyn	1.37	1.05, 1.79	<0.02
Manhattan	1.03	0.74, 1.43	<0.88
Queens	1.91	1.44, 2.53	<0.001
Staten Island	2.55	1.76, 3.68	<0.001
Sexual risk			
Highest risk (>1 partner, no condom)	Referent	-	-
Lower risk (≥1 partner, condom)	2.17	1.27, 3.71	<0.001
Lowest risk (not sexually active)	4.06	4.06, 7.1	<0.001
Clinical interactions			
No provider recommended HIV test	6.68	3.89, 11.49	<0.001
No preventive care	1.31	1.08, 1.59	<0.01

*Income and insurance status measures were not significant in bivariable analysis; education, anal sex, chronic disease diagnosis by provider, and neighborhood level poverty measures were not significant in multivariable model.

Table 3: Recent clinical interactions among NYC adults who had never tested for HIV (n=2,065).*

Clinical Interaction	Never-tested population (% 95%CI)	Weighted Population (n)	Estimated missed tests (n) ^a	Estimated undiagnosed (n) ^b
Provider recommend HIV test, past 12 mos.	2.6 (1.6,4.3)	38,000	30,000	200
Flu vaccination, past 12 mos.	30.8 (27.6,34.2)	514,000	412,000	2,500
Cholesterol check, past 12 mos.	69.3 (65.0,73.2)	852,000	682,000	4,100
Mental health treatment, past 12 mos.	7.7 (6.0,9.9)	122,000	98,000	600
Pap Smear (women), past 3 yrs.	67.4 (62.4,72.0)	524,000	419,000	2,500
Had preventive care, past 12 mos.	57.9 (54.4,61.4)	948,000	758,000	4,500

* Weighted Population of NYC adults who had never tested for HIV= 1,628,000.

^a Assuming 80% of those offered an HIV test in any setting will accept it.

^b Assuming 2011 NYC DOH testing contract seropositivity of 0.6%.