HIV Risk and Prevalence among NYC Men who Have Sex with Men

Results from the 2011 National HIV Behavioral Surveillance Study
Background

- NYC has the largest population of men who have sex with men (MSM) of any U.S. city
- MSM are the largest risk group of people living with HIV/AIDS and new infections
- Nationally, HIV incidence has increased among young, black MSM (Prejean, 2011)
- The risk factors for this disparity are not well understood
  - Factors such as unprotected sex, drug use, STDs, risk networks, testing behaviors may drive HIV among black MSM
National HIV Behavioral Surveillance (NHBS)

- 20 metropolitan statistical areas throughout the United States and Puerto Rico
- Funded by CDC, designed collaboratively
- Ongoing, cyclical study of three risk groups: MSM, IDU, and high-risk heterosexuals
- Third cycle of NHBS-MSM data collection in 2011
- Cross-sectional study design
**NHBS Objectives**

- Determine frequency and correlates of HIV risk behaviors
- Assess HIV testing history and patterns
- Assess exposure to and use of HIV prevention services
- Estimate the prevalence of HIV infection
- Understand trends in risk and prevalence
Eligibility Criteria

• Born male, currently identifies as male
• At least 18 years old
• NYC Resident
• Ever had oral or anal sex with another man
• Speaks English or Spanish
Venue-Based Sampling

- Universe of MSM-oriented venues constructed
  - Bars, clubs, parks, restaurants, gyms, public strolls
- Venues randomly selected, placed on monthly calendar
  - Special events or venues also added non-randomly
- Field team sequentially samples men at venue
  - Men must cross an imaginary line; venue volume measured
    - 2597 counted
    - 1503 (58%) approached
    - 557 (37%) screened
    - 536 (96%) eligible and interviewed
    - 510 (95%) active NYC MSM
    - 448 (88%) self-reported HIV-/Unknown
    - 418 (93%) HIV tested
Statistical Analysis

- Basic descriptive frequencies of demographics, risks, and use of HIV testing and prevention services among NYC MSM active in past 12 months (n=510)
- Chi-Square tests to compare differences in HIV risks and use of HIV testing and prevention services
  - Most slides focus only on MSM who did not self-report as HIV+ (n=448), since awareness of HIV infection influences risk
- Overall prevalence of HIV infection determined by confirmed western blot test among those who tested (n=475)
  - Awareness of HIV status, among those who tested HIV+ (n=91)
## Demographics

**NYC NHBS-MSM, 2011, n=510**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>23%</th>
<th>Age</th>
<th>52%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>23%</td>
<td>18-29</td>
<td>52%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>39%</td>
<td>30-39</td>
<td>22%</td>
</tr>
<tr>
<td>White</td>
<td>29%</td>
<td>40-49</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>9%</td>
<td>50+</td>
<td>8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual orientation</th>
<th>78%</th>
<th>Birthplace</th>
<th>78%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gay</td>
<td>78%</td>
<td>United States</td>
<td>78%</td>
</tr>
<tr>
<td>Bisexual</td>
<td>19%</td>
<td>Puerto Rico</td>
<td>3%</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>2%</td>
<td>Foreign</td>
<td>19%</td>
</tr>
<tr>
<td>Unknown</td>
<td>&lt;1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Demographics

*NYC NHBS-MSM, 2011, n=510*

<table>
<thead>
<tr>
<th>Income</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10k</td>
<td>19%</td>
</tr>
<tr>
<td>10k-30k</td>
<td>33%</td>
</tr>
<tr>
<td>30k-50k</td>
<td>20%</td>
</tr>
<tr>
<td>&gt;50k</td>
<td>27%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;High School</td>
<td>9%</td>
</tr>
<tr>
<td>H.S. - Some College</td>
<td>65%</td>
</tr>
<tr>
<td>≥College Grad</td>
<td>26%</td>
</tr>
</tbody>
</table>
UAI in Past Year and Last Sex by Race/Ethnicity

NYC NHBS-MSM, 2011, n=448 (HIV-/Unk.)

Past Year

- Black: 45%
- Hispanic: 58%
- White: 51%
- Other: 51%

Last Sex

- Black: 23%
- Hispanic: 37%
- White: 32%
- Other: 31%

*p=0.06 for Past Year, p=0.08 for Last Sex*
Binge Alcohol Use in Past Year by Race/Ethnicity

NYC NHBS-MSM, 2011, n=510

Any Binge
- Black: 47%
- Hispanic: 55%
- White: 61%
- Other: 48%

At Least Weekly Binge
- Black: 23%
- Hispanic: 25%
- White: 30%
- Other: 17%

Binge: 5 or more drinks in “one sitting”

$p=0.17$

$p=0.32$
Non-Injection Drug Use in Past Year

NYC NHBS-MSM, 2011, n=510

- Any Drug: 53% (White) vs. 54% (Non-White)  
  - p-value = 0.81
- Marijuana: 45% (White) vs. 46% (Non-White)  
  - p-value = 0.71
- Cocaine: 25% (White) vs. 19% (Non-White)  
  - p-value = 0.10
- Poppers: 20% (White) vs. 14% (Non-White)  
  - p-value = 0.10
- Methamphetamine: 4% (White) vs. 4% (Non-White)  
  - p-value = 0.85
Alcohol & Drug Use at Last Sex

NYC NHBS-MSM, 2011, n=448 (HIV-/Unk.)

- Any Drug or Alcohol: 47% (White), 43% (Non-White)  
  - p=0.41
- Alcohol: 41% (White), 34% (Non-White)  
  - p=0.18
- Marijuana: 9% (White), 14% (Non-White)  
  - p=0.18
- Cocaine: 5% (White), 5% (Non-White)  
  - p=0.72
HIV Testing

NYC NHBS-MSM, 2011, n=448 (HIV-/Unk.)

<table>
<thead>
<tr>
<th>Race</th>
<th>Ever Tested</th>
<th>Past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>94%</td>
<td>70%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>92%</td>
<td>77%</td>
</tr>
<tr>
<td>White</td>
<td>96%</td>
<td>77%</td>
</tr>
<tr>
<td>Other</td>
<td>95%</td>
<td>72%</td>
</tr>
</tbody>
</table>

p=0.50

p=0.23
### HIV Prevalence & Awareness

**NYC NHBS-MSM, 2011, n=475 (Tested in Study)**

<table>
<thead>
<tr>
<th></th>
<th>HIV-Positive</th>
<th>95% CI</th>
<th>% Unaware*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>19.2%</td>
<td>15.6 – 22.7%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>By Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>41.9%</td>
<td>32.5% – 51.3%</td>
<td>45%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15.0%</td>
<td>9.9% – 20.1%</td>
<td>46%</td>
</tr>
<tr>
<td>White</td>
<td>10.6%</td>
<td>5.6% – 15.7%</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>10.0%</td>
<td>0.7 – 19.3%</td>
<td>50%</td>
</tr>
</tbody>
</table>

* Among MSM who tested HIV positive (n=91)

†Fisher’s Exact Test

\[ p = 0.004 \quad p = 0.02^† \]
## HIV Prevalence by Age

*NYC NHBS-MSM, 2011, n=475 (Tested in Study)*

<table>
<thead>
<tr>
<th>Age</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>Other</th>
<th>Overall</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>32.1%</td>
<td>9.0%</td>
<td>10.0%</td>
<td>7.1%</td>
<td>13.8%</td>
<td>0.05</td>
</tr>
<tr>
<td>30-39</td>
<td>38.9%</td>
<td>25.0%</td>
<td>8.3%</td>
<td>11.1%</td>
<td>20.0%</td>
<td>0.04*</td>
</tr>
<tr>
<td>40-49</td>
<td>64.7%</td>
<td>17.6%</td>
<td>10.7%</td>
<td>33.3%</td>
<td>25.6%</td>
<td>0.0004*</td>
</tr>
<tr>
<td>≥50</td>
<td>52.9%</td>
<td>50.0%</td>
<td>17.6%</td>
<td>0.0%</td>
<td>37.5%</td>
<td>0.11*</td>
</tr>
</tbody>
</table>

* Fisher’s Exact Test
NYC National HIV Behavioral Surveillance Team

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