Since 2006, NHBS has monitored HIV prevalence among MSM. While the prevalence of early linkage to care among MSM did not increase significantly between 2008 and 2011, the prevalence of ART use increased significantly from 68% in 2008 to 77% in 2011. Over half of HIV infections in the United States occur among men who have sex with men (MSM). MSM with and without health insurance, and blacks who identified as bisexual or heterosexual, were 1.24 times as likely to be on ART compared to whites in 2008 and 2011. Risk heterosexuals and those retained in care (MD visit for HIV in the 6 months prior to interview), 82% of MSM were currently receiving ART in 2011. Whites were 1.2 times as likely to be on ART compared to blacks in 2008 and 2011.

**METHODS**

- **Study design:** NHBS is a cross-sectional survey design focusing on the sexual and reproductive health of MSM. 
- **Participants:** MSM who identified as gay vs. bisexual or other sex identity, or age 18+ at the time of recruitment, and high risk heterosexuals.
- **Data collection:** Data were collected using both in-person and telephone interviews in 2008 and 2011.
- **Sample size:** The sample size was determined using data from 2002 NHBS cycles for this analysis. 2008 and 2011
- **Response rate:** Response rate was defined as a contact visit for care within 3 months of diagnosis and current ART use was defined as reporting use at NHBS interview.
- **Statistical analysis:** Multivariable logistic regression models were fit using data and might be subject to social desirability bias. Among those retained in care (MD visit for HIV care within 6 months prior to interview), 82% of MSM were currently receiving ART in 2011. *White MSM who identified as bisexual or heterosexual were 1.24 times as likely to be on ART compared to whites in 2008 and 2011.

**RESULTS**

### Table 1. Prevalence of early linkage to care among MSM – NHBS, 2008 and 2011

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. in sample</th>
<th>n (%)</th>
<th>Prevalence Adj. OR (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>335</td>
<td>132</td>
<td>131.1 (127.4 - 134.9)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Black</td>
<td>197</td>
<td>77.4</td>
<td>60.6 (54.0 - 67.8)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Hispanic</td>
<td>181</td>
<td>70.6</td>
<td>72.3 (65.3 - 79.3)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>White</td>
<td>216</td>
<td>79.4</td>
<td>60.1 (54.1 - 66.3)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Other</td>
<td>216</td>
<td>79.4</td>
<td>60.6 (54.6 - 67.1)</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

- **Prevalence of early linkage to care did not change overall (75% in 2008 and 76% in 2011).**
- **The largest increase in prevalence of early linkage to care was among Hispanics, from 76% in 2008 to 66% in 2011.**
- **In 2011, the proportion linked to care was higher, among those with higher education and income, MSM who identified as bisexual or heterosexual, and those who were older (60+ years of age) in 2011.**
- **Early linkage to care did not increase significantly overall or among most specific subgroups.**

### Table 2. Prevalence of current ART use among MSM – NHBS, 2008 and 2011

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. in sample</th>
<th>n (%)</th>
<th>Prevalence Adj. OR (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>295</td>
<td>237</td>
<td>80.8 (76.7 - 84.9)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Black</td>
<td>197</td>
<td>75.1</td>
<td>70.6 (65.0 - 76.3)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Hispanic</td>
<td>181</td>
<td>70.6</td>
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<td>216</td>
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<td>Other</td>
<td>216</td>
<td>79.4</td>
<td>80.6 (76.6 - 84.8)</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

- **Prevalence of current ART use increased overall from 68% in 2008 to 77% in 2011.**
- **ART use also increased among most race/ethnicity groups (except those in the ‘other’ group), younger age groups (18-24), MSM with and without health insurance, and whites who identified as bisexual or heterosexual, vs. gay.**
- **In the fourth year, higher ART use was observed among whites, older age groups, MSM with insurance, and those who identified as gay.**
- **Among reasons retained in care (MD visit for HIV care within 6 months prior to interview), 82% of MSM were currently receiving ART in 2011.**
- **Whites were 1.2 times as likely to be on ART compared to blacks in 2008 and 2011.**

**LIMITATIONS**

- **NHBS is a not a nationally representative sample, so results may not be generalizable to all MSM or to MSM in participating cities.**
- **Our measures of early linkage to care and ART use are based on self-reported data and may not be subject to social desirability bias.**
- **The analysis is limited to two points in time and cannot be interpreted as a trend.**
- **Our analysis does not include data on ART adherence or viral load suppression, so we cannot say whether ART adherence or viral load suppression are contributing to this analysis.**

**DISCUSSION**

- **While the prevalence of early linkage to care among MSM did not increase significantly between 2008 and 2011, the prevalence of ART use increased significantly among most demographic groups.**
- **Suggests that those who have linked to care are increasingly initiating ART, in accordance with the more inclusive guidelines introduced in 2009.**
- **There is a large disparity between black and white MSM with respect to current ART use despite similar increases in early linkage to care in 2011.**
- **Estimates of early linkage to care among NHBS-MEM in 2011 are similar to those among MSM reported by 2011, with increases of ART use among lower than NHBS-MEM compared to Hall et al.**
- **Early linkage to care: NHBS-MEM 78% vs. Hall et al. 60%**
- **ART use among those retained in care: NHBS-MEM 89% vs. Hall et al. 90%**
- **While the measurable increase in antiretroviral therapy are encouraging, prevention programs continue to target and retain people in care, particularly the younger age groups and those with health insurance, to prevent and improved treatment guidelines released in 2012.**

**CONTACT INFO/REFERENCES**

- **Brooke E. Hoots, PhD, MSPH**
  - Email: bhoots@cdc.gov
  - Work phone: (404) 639-8334

- **Kaiser Family Foundation**
  - Video: https://www.kff.org/hivaids/issue-brief/early-linkage-to-care-

- **CDC. HIV/AIDS Surveillance Report 2011.**


- **Figure 2. Prevalence of current ART use by race/ethnicity among MSM – NHBS, 2008 and 2011**

- **Prevalence rates (PR) based on combined 2008, 2011 data**

- **National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention**
  - Division of HIV/AIDS Prevention
  - Behavioral and Clinical Surveillance Branch, Division of HIV/AIDS Prevention, Centers for Disease Control and Prevention, Atlanta, GA