

Evaluation of Sociodemographic and Behavioral Characteristics of Men Who Have Sex with Men in Puerto Rico among National HIV Behavioral Surveillance Cycles

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Introduction

- Puerto Rico (PR) has the eighth highest incidence of HIV¹ and the third highest mortality rate² when compared to the United States mainland.
- 20,196 people were living with HIV/AIDS in PR by September 2015 and 25% (n=11,656) of all cases were Men who have Sex with Men (MSM)³.
- MSM is the only key group in which HIV incidence has been increasing, becoming the principal mode of transmission for newly diagnosed cases in PR⁴.
- Due to the availability of behavioral surveillance systems, such as NHBS, opportunities for evaluating behavioral/sociodemographic changes are important in order to target prevention efforts for this community.

Study Objective

This study aims to examine changes in sociodemographic and behavioral factors of Puerto Rican MSM among the 2008 and 2011 cycles.

National HIV Behavioral Surveillance System (NHBS)

- CDC funded cyclical surveillance system conducted in 20 jurisdictions including Puerto Rico⁵.

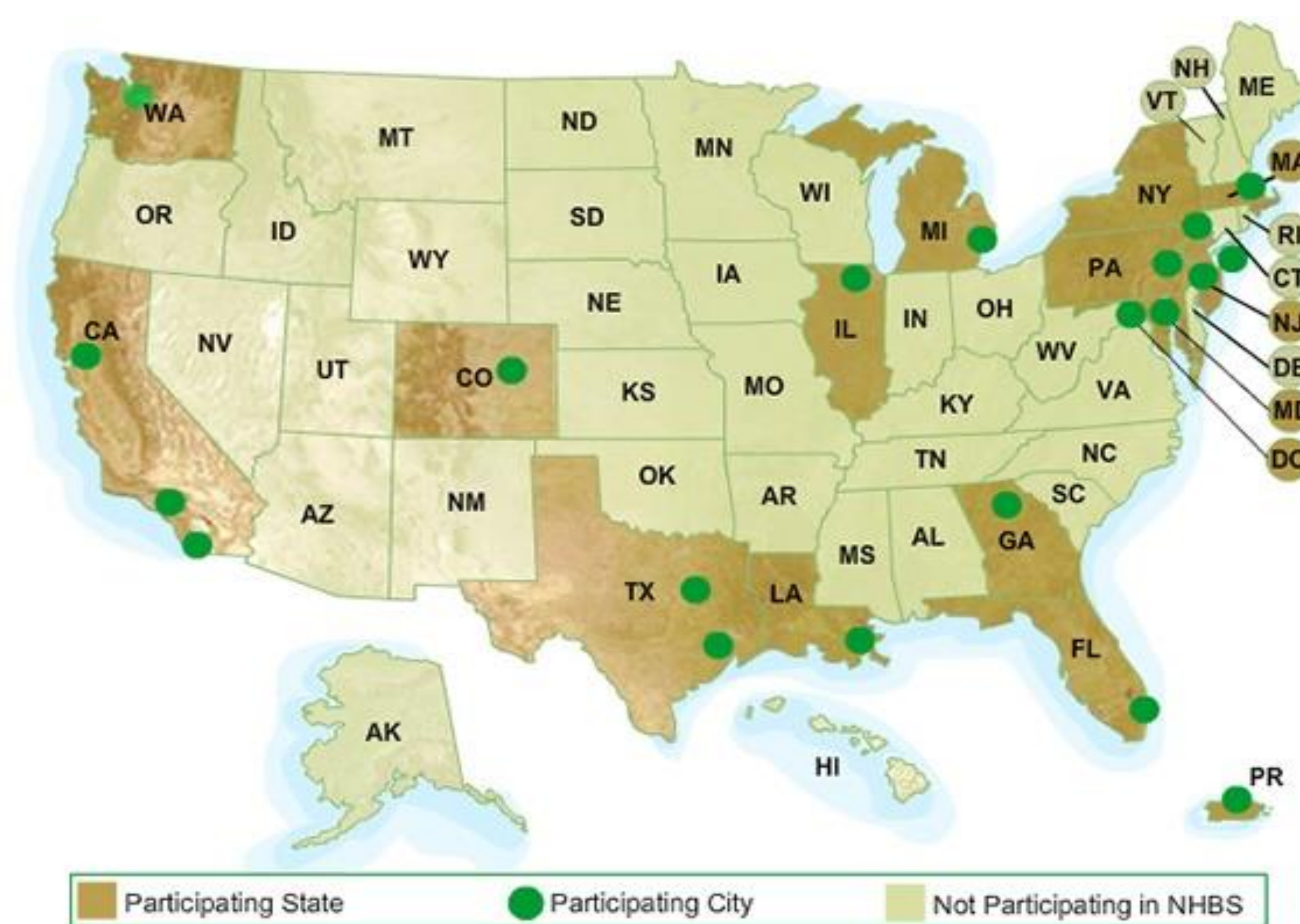


Image: <http://www.cdc.gov/hiv/statistics/systems/nhbs/contacts.html>

- NHBS comprises 3 different populations at high risk for HIV: Men who have sex with men (MSM), Injected Drug Users (IDU), and Heterosexuals at high risk (HET)
- Venue-based, time-space sampling is used for MSM recruitment.
- Participants complete an anonymous standardized questionnaire that collects information on HIV-related risk behaviors, HIV testing, and access and use of HIV prevention services. HIV testing is also offered to all participants.

Methods & Statistical Analysis

- Data from the 2008 and 2011 PR National HIV Behavioral Surveillance MSM was used.
- Frequencies for sociodemographical and behavioral factors were calculated using Chi-square or Fisher exact test.

Results

Table 1. Sociodemographics and Behavioral Characteristics by Year Among MSM

| | 2008 n=313 | | 2011 n=335 | | p-value | ↑↓ ^d |
|--|---------------|-------|---------------|-------|----------------------|-----------------|
| | No. | (%) | No. | (%) | | |
| Age (years) | | | | | | |
| Mean age ± Std. Deviation | 29.43±8.83 | | 31.51±10.65 | | | ↑ |
| 18-29 | 185 | 59.11 | 168 | 50.15 | 0.0222 ^c | |
| ≥30 | 128 | 40.89 | 167 | 49.85 | | |
| Education | | | | | | |
| High school or less | 67 | 21.40 | 88 | 26.30 | 0.1470 | ↑ |
| Some college or more | 246 | 78.60 | 247 | 73.70 | | |
| Employment status | | | | | | |
| Employed full/part time/student | 275 | 63.34 | 294 | 56.80 | 0.8741 | ↓ |
| Unemployed | 36 | 9.00 | 37 | 15.11 | | |
| Annual Household Income | | | | | | |
| \$0 to \$19,999 | 237 | 75.96 | 179 | 54.10 | <0.0001 ^c | ↓ |
| ≥ \$20,000 | 75 | 24.04 | 152 | 45.90 | | |
| Health Insurance | | | | | | |
| No | 65 | 20.77 | 77 | 22.99 | 0.4951 | ↑ |
| Yes | 248 | 79.23 | 258 | 77.01 | | |
| Sexual Identity | | | | | | |
| Heterosexual | 7 | 2.23 | 4 | 1.20 | 0.3701 ^b | ↓ |
| Homosexual or Bisexual | 305 | 97.77 | 330 | 98.80 | | |
| Outness | | | | | | |
| Yes | 288 | 94.43 | 302 | 91.52 | 0.1532 | ↓ |
| No | 17 | 5.57 | 28 | 8.48 | | |
| Venue Type | | | | | | |
| Bars/Clubs or Sex Venues | 224 | 80.87 | 264 | 95.65 | <0.0001 ^c | ↑ |
| Other Venues ^a | 53 | 19.13 | 12 | 4.35 | | |
| Number of venues | 20 | | 33 | | | |
| Age at sexual MSM debut | | | | | | |
| Mean:16.74 ± 5.26 | 17.0 ± 5.05 | | 16.6 ± 5.45 | | 0.8351 | ↓ |
| Age at sexual debut with female | | | | | | |
| <15 | 30 | 18.52 | 40 | 30.7 | 0.0148 ^c | ↑ |
| ≥15 | 132 | 81.48 | 90 | 69.3 | | |
| Mean: 16.8±4.28 | | | | | | |
| Number of male partners in the last 12 months | | | | | | |
| | 5.24 ± 8.01 | | 4.80 ± 13.1 | | 0.1156 | ↓ |
| Female partners in the last 12 months | | | | | | |
| No | 116 | 71.6 | 104 | 80.0 | 0.0981 | ↑ |
| Yes | 46 | 28.4 | 26 | 20.0 | | |
| Binge Drinking | | | | | | |
| Less than once a month | 219 | 77.94 | 228 | 79.72 | 0.6033 | ↑ |
| Once a month or more | 62 | 22.06 | 58 | 20.28 | | |

^aOther venues includes gym, restaurants, parks and beaches, street locations, social organizations, and other places where MSM congregate.

^bFisher's exact test was used.

^cSignificant p-value.

^dDenotes increase/decrease. Those in red indicate a significant increase/decrease.

Acknowledgements

This project was fully supported by **5U1BP5003245**. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Centers for Disease and Control. Sponsors of this study had no part in the design, data collection, analysis, or interpretation of the findings of this study and did not take part in the writing of or decision to publish this poster.

Results

- A significant decrease in income was observed in the 2011 cycle when compared to 2008.
- When compared to 2008, the 2011 NHBS reflected a significant increase in:
 - Recruitment at bars/clubs/sex venues
 - In those who initiated sexual onset with a women at age <15.
- A marginal significant decrease on participants reporting having sex with a woman in the last 12 months, was observed in 2011.
- Though no significance was achieved, an increase in earlier MSM sexual onset was observed in 2011.

Limitations

- Analysis between cycles was limited due to :
 - Inconsistencies in variable coding and question construction
 - Missing data
- 2008 and 2011 questionnaires do not assess issues pertinent to this community such as mental health, HIV/MSM stigma and tobacco use.
- Because NHBS is conducted in the San Juan Metropolitan Statistical area, in certain aspects, it is not representative of the general PR-MSM population as evidenced in a comparison with other population and clinical based studies.
- Do to its sampling method, NHBS-PR MSM fails in capturing younger and older PR-MSM.

Conclusions

- Monitoring changes in sociodemographic and behavioral factors is necessary in order to explain the HIV epidemic among the PR-MSM community.
- NHBS data can be used to develop educational and prevention efforts, public policy and to monitor progress towards national strategies and local efforts.
- To fully achieve this surveillance system's purpose it is recommended that:
 - Uniformity across cycles should be maintained.
 - Venue selection should allow access to younger and older MSM.
 - Broadening the geographical area outside the SJMSA may allow access to a more diverse population and prospectively identify new trends within the island's MSM community.
 - Future questionnaires or local modules should cover emerging topics such as: tobacco use, mental health, and HIV/MSM stigma in order to capture socio-cultural barriers currently not identified.
- It is expected that such changes will help in delineating HIV prevention opportunities and targeted strategies aiming to reduce HIV incidence and HIV-related health disparities in this vulnerable population.

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