



Published in final edited form as:

Sex Transm Dis. 2017 July ; 44(7): 401–402. doi:10.1097/OLQ.0000000000000606.

Portrait of an Epidemic: Extremely High HIV Prevalence and Incidence Among Young Black Men Having Sex With Men and Residing in a Southern City

Leandro Mena, MD¹ and Richard A. Crosby, PhD^{1,2}

¹University of Mississippi Medical Center

²College of Public Health at the University of Kentucky

Abstract

A 12-month prospective cohort study of 609 young Black MSM assessed HIV seroconversion. One-hundred-seventy men (27.9%) were either HIV-infected before enrollment or tested positive within 30 days afterwards. Thirty (4.9%) were classified as incident infections occurring in a twelve-month period. Subtracting the 170 from the denominator, incidence was 6.8%.

Keywords

Black MSM; HIV prevalence; HIV incidence; Southern United States

Representing an estimated 2% of the United States population, gay and bisexual males account for an estimated three-fourths of all new HIV infections.¹ Young Black men who have sex with men (YBMSM) bear the majority of this racial and sexual minority disparity.^{1–6} Estimates suggest that one of every four YBMSM will acquire HIV by age 25 years.⁷ A recent estimation study provided evidence suggesting that the city of Jackson, MS had the highest prevalence of MSM living with HIV by the end of 2012 (39.5 per 100 MSM) and the second highest incidence rate of HIV among MSM (4.05 per 100 MSM)⁸ Unfortunately, the denominator data from this estimation study was not specific to race thereby suggesting that the rates may be much greater for Black MSM.

To better illustrate the severity of the HIV epidemic experienced by YBMSM residing in the southern U.S., this study used the small metropolitan area of Jackson, MS as case study. The purpose of this study was to assess the prevalence and incidence of HIV infection among the population most at-risk in Jackson i.e., YBMSM, thereby suggesting an upper estimate on the range of the U.S. HIV/AIDS epidemic.

From September of 2012 through October of 2015, a clinic-based consecutive sample of 609 YBMSM was recruited for participation in an NIMH-funded randomized controlled trial

Correspondence: Richard A. Crosby, PhD, College of Public Health, 111 Washington Ave, Lexington, KY (USA), 40506-001; crosbyr3@gmail.com.

Conflicts of Interest and Source of Funding: This study was funded by a grant from the U.S. National Institute of Mental Health to the second author, R01MH092226. Neither author has any conflicts of interest to declare.

(RCT) of a safer sex intervention program designed specifically for this population.⁹ Approximately equal numbers of men were assigned to a standard of care intervention group or a one-hour clinic-based condom use promotion program provided at baseline. The RCT was designed and powered to reduce incident infections of bacterial STIs. Recruitment occurred in two clinics that receive public funding for the diagnosis and treatment of sexually transmitted infections. Inclusion criteria were: 1) assigned male at birth; 2) self-identification as Black/African American; 3) aged 15 to 29 years; 4) attending the clinic to be tested for HIV or other STIs, 5) having engaged in penile-anal sex with a male partner at least once in the past 6 months, and 6) the ability to speak and comprehend English.

Seven-hundred-eighty-nine men were screened. Of these, 623 were eligible. Fourteen declined enrollment, yielding an overall participation rate of 97.7%. All study procedures were approved by the Institutional Review Boards of the University of Mississippi Medical Center, the Mississippi State Department of Health, and the University of Kentucky.

All men who were not knowingly HIV-infected were tested for HIV at study enrollment. Men provided consent that allowed the research staff to abstract their medical records for HIV diagnoses for a period of 13 months after enrollment. Both clinics routinely encouraged HIV-uninfected MSM patients to return for quarterly HIV tests that were performed using the Clearview® Complete HIV 1/2 (Alere™) rapid test or the standard HIV test processed at the Mississippi State Department of Health Public Health Laboratory (MSDH PHL) in blood specimens. For each study participant, a chart review was conducted 13 months after enrollment.

Four time periods were used to organize categories of HIV infections dates: 1) established infections were those existing at least 90 days before study enrollment; 2) recently acquired infections were those diagnosed 15 to 90 days before enrollment; 3) newly aware infections were those diagnosed between 14 days before study enrollment to 30 days post-enrollment; and 4) incident infections were those diagnosed between 31 days and 13 months post-enrollment.

Mean age was 22.62 years, (SD) = 3.2. An average monthly income of less than \$1,000 was reported by 46.1%. The majority of participants (58.6%) reported they were currently employed. More than one-half of the sample (59.8%) reported having education beyond high school graduation and 47.3% reported current enrollment in a school or college.

One-hundred (16.4%) were classified as established infections. Twenty (3.3%) were classified as recently acquired infections. Fifty (8.2%) were classified as newly aware infections relative to the time of study enrollment. Thirty (4.9%) were classified as incident infections occurring in a twelve-month period. Collectively, the prevalence of infection 13-months post-enrollment was 200 men (32.8%).

To calculate the incidence rate, the 170 men with infections occurring prior to the second month of observation (i.e., on or before 30 days post-enrollment) were subtracted from the denominator to yield 439. Using the numerator of 30, the observed 12-month incidence was 6.8%.

In this sample of YBMSM 15 to 29 years old, the observed prevalence of approximately one of every three men strongly supports the past estimate of one of every four being infected by the age of 25 years. Because prevalence increases in correspondence with aging (particularly given the improvements in life expectancy conferred by anti-retroviral medications) the obtained prevalence for men yet to enter their fourth decade of life suggests that the recently reported MSM HIV prevalence estimate for Jackson of 39.5%⁸ is potentially higher for young Black MSM.

The obtained 12-month incidence rate of 6.8% is 68% greater than the recently reported incidence estimate for MSM in Jackson. This strongly illustrates the magnitude of disparities experienced by YBMSM in Jackson. In an era when universal viral suppression of HIV-infected persons is theoretically possible, the 6.8% incidence rate provides a very clear portrait of an epidemic. This epidemic is one that grows quickly and may be fueled by sexual networks with high seroprevalence rates of HIV, with HIV-infected network members not consistently receiving HIV care and not taking advantage of anti-retrovirals. The cascade of missed opportunities to achieve viral suppression among MSM varies between White and Black MSM, with those being Black dropping out of the care continuum more so than those who are White.¹⁰⁻¹²

To place the observed incidence of 6.8% into perspective, it is noteworthy that this value is greater than the 2013 incidence of HIV in Sub-Saharan Africa (5.0%).¹³ Moreover, the value of 6.8% is far greater than the overall incidence rate of 1.8% in the nation experiencing the worst epidemic in the world (Swaziland).¹⁴

The study was based on a convenience sample of sexually active YBMSM who presented for screening at a publicly funded clinic, thus the sample may not represent all YBMSM who resided in that city. Further, it is possible that some men may have seroconverted during the 12-month observation period but were not tested; thus the 6.8% incidence rate may be artificially low. Finally, we note here that the sample was enrolled in an RCT and that 60% of the incident infections (n = 18) occurred in the control group; thus in the absence of the intervention incidence may actually have been greater than 6.8%.

The HIV incidence and prevalence found in this cohort of YBMSM provides further evidence of the unacceptably high risk of HIV infection affecting Black MSM in the South. We must acknowledge that so far we are failing in providing effective access to HIV prevention and care service to those who bear the highest disease burden in our society. These findings demand urgent action for a comprehensive response that will require leadership, resources, and the engagement of all stakeholders.

Acknowledgments

Dr. Crosby secured funding for this study, drafted the manuscript, and engaged with Dr. Mena in the oversight and quality assurance of the data collection procedures. The study was funded by a grant from the U.S. National Institute of Mental Health to the second author (Crosby), R01MH092226.

References

1. Centers of Disease Control and Prevention. HIV among gay and bisexual men. Available at: <http://www.cdc.gov/hiv/topics/msm/index.htm>
2. Centers of Disease Control and Prevention. DHAP annual report 2011: Accelerating progress, investing for impact. Available at: http://www.cdc.gov/hiv/strategy/pdf/DHAP_AnnualReport.pdf
3. Office of National AIDS Policy. [Accessed July 20, 2012] National HIV/AIDS strategy for the United States. 2010. Available at: <http://www.whitehouse.gov/administration/eop/onap/nhas>
4. Centers for Disease Control and Prevention. HIV/AIDS Surveillance, 2012 (year end edition). US Department of Health and Human Services; Atlanta, GA: Available at: http://www.cdc.gov/hiv/surveillance/resources/reports/2010report/pdf/2010_HIV_Surveillance_Report_vol_22.pdf#Page=66
5. Office of National AIDS Policy. [Accessed July 31, 2015] National HIV/AIDS strategy for the United States: Updated to 2020. Available at: <https://www.aids.gov/federal-resources/national-hiv-aids-strategy/nhas-update.pdf>
6. Centers for Disease Control and Prevention. HIV/AIDS among African Americans. Fact Sheet. Available on-line at <http://www.cdc.gov/hiv/pubs/facts/afam.htm>
7. Black AIDS Institute. Back of the line: The state of AIDS among Black gay men in America. 2012. Available at: http://www.Blackaids.org/index.php?option=com_content&view=article&id=1284&Itemid=198
8. Rosenberg ES, Grey JA, Sanchez TH, Sullivan PS. Rates of prevalent HIV infection prevalent diagnoses, and new diagnoses among men having sex with men in US states, metropolitan statistical areas, and counties, 2012–2013. *JMIR Public Health Surveillance*. 2016; 2:e22. [PubMed: 27244769]
9. National Institutes of Health. Research portfolio online reporting tools. Available at: https://projectreporter.nih.gov/project_info_description.cfm?aid=8848121&icde=31278236&ddparam=&ddvalue=&ddsub=&cr=4&csb=default&cs=ASC
10. Mugavero MJ, Amico KR, Horn T, Thompson MA. The state of engagement in HIV care in the United States: From cascade to continuum to control. *Clin Infect Dis*. 2013; 57:1164–1171. [PubMed: 23797289]
11. Millett GA, Peterson JL, Flores SA, Hart TA, Jeffries WLt, Wilson PA, et al. Comparisons of disparities and risks of HIV infection in black and other men who have sex with men in Canada, UK, and USA: a meta-analysis. *Lancet*. 2012; 380:341–348. [PubMed: 22819656]
12. Mannheimer S, Wang L, Wilton C, et al. Infrequent HIV testing and late HIV diagnosis are common among a cohort of Black men who have sex with men (BMSM) in six U.S. cities. *JAIDS*. 2014; 67:438–445. [PubMed: 25197830]
13. UNAIDS. The GAP Report. Available at: http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Gap_report_en.pdf
14. AVERT. Global HIV and AIDS Statistics. Available at: <http://www.avert.org/global-hiv-and-aids-statistics>

Summary

A study of 609 young Black MSM observed a twelve-month incidence rate of newly acquired HIV infection of 6.8%. Jackson, MS may have the highest incidence rate for this population.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript