STDs in Men Who Have Sex with Men

Public Health Impact

Data from several U.S. cities, including from syphilis outbreak investigations and the Gonococcal Isolate Surveillance Project (GISP), suggest that an increasing number of men who have sex with men (MSM) are acquiring STDs.[1-5] Increases in STDs among MSM are consistent with data suggesting that an increasing number of MSM are participating in sexual behaviors that place them at risk for STDs and HIV infection.[6] Several factors may be contributing to this change, including the availability of highly active antiretroviral therapy (HAART).[7] Because STDs and the behaviors associated with them increase the likelihood of acquiring and transmitting HIV infection,[8] the rise in STDs among MSM may be associated with an increase in HIV incidence among MSM.[9]

Observations

- National notifiable STD surveillance data reported to CDC do not include information regarding sexual behaviors; therefore, national trends in STDs among MSM in the United States are not available. Data from enhanced surveillance projects are presented in this section to provide information regarding STDs in MSM.

Monitoring Trends in Prevalence of STDs, Tuberculosis, and HIV Risk Behaviors among Men Who Have Sex with Men (MSM Prevalence Monitoring Project)

- From 1999 through 2003, nine U.S. cities participating in the MSM Prevalence Monitoring Project submitted syphilis, gonorrhea, chlamydia, and HIV test data to CDC from 67,588 MSM visits to STD clinics. Overall, 57,570 MSM visits were submitted from six public STD clinics (Denver, Long Beach, New York City, Philadelphia, San Francisco, and Seattle) and 10,018 MSM visits were submitted from three STD clinics in community-based, gay men's health clinics (Chicago, the District of Columbia, and Houston). In 2003, the nine participating sites submitted information from 18,783 MSM visits to STD clinics. In addition, in 2003, Fenway Community Health (Boston), a community-based, gay men's primary care clinic also participating in the MSM Prevalence Monitoring Project, submitted syphilis, gonorrhea, and chlamydia test data to CDC from 22,673 primary care visits by men. The MSM Prevalence Monitoring Project includes data from culture and non-culture tests collected during routine care and reflects testing practices at participating clinics. City-specific medians and ranges were calculated for the proportion of tests done and STD and HIV test positivity among MSM visits.

Syphilis, STD Clinics, 1999-2003

- In 1999, 69% (range: 49-93%) of MSM visiting participating STD clinics had a nontreponemal serologic test for syphilis (STS) performed compared with 79% (range: 37-89%) in 2003.
- Overall, median syphilis seroreactivity among MSM increased from 4.1% (range: 3.7-13.1%) in 1999 to 10.5% (range: 4.7-16.6%) in 2003 (Figure DD).

Gonorrhea, STD Clinics, 1999-2003

- Median gonorrhea positivity in MSM was 13.7% (range: 12.9-16.5%) in 1999 and 15.3% (range: 13.7-17.2%) in 2003 (Figure EE).
- In 2003, 76% (range: 46-90%) of MSM were tested for urethral gonorrhea, 34% (range: 2-59%) were tested for rectal gonorrhea, and 46% (range: 3-83%) were tested for pharyngeal gonorrhea.
- In 2003, median urethral gonorrhea positivity in MSM was 13.3% (range: 6.2-17.7%), median rectal gonorrhea positivity was 6.0% (range: 2.8-8.3%), and median pharyngeal gonorrhea positivity was 2.8% (range: 0.4-9.2%).
- In 2003, urethral gonorrhea positivity was 11.5% (range: 6.3-17.2%) in whites, 18.8% (range: 10.5-30.3%) in African-Americans, and 12.4% (range: 5.3-21.9%) in Hispanics. Rectal gonorrhea positivity was 6.1% (range: 3.0-14.3%) in whites, 5.6% (range: 2.9-10.1%) in African-Americans, and 4.3% (range: 2.5-6.7%) in Hispanics. Pharyngeal gonorrhea positivity was 4.3% (range: 0.2-9.4%) in whites, 5.3% (range: 1.4-10.7%) in African-Americans, and 5.9% (range: 1.3-8.7%) in Hispanics (Figure FF).
- In 2003, gonorrhea positivity was higher in HIV-positive MSM compared with MSM who were HIV-negative or of unknown HIV status. Urethral gonorrhea positivity was 17.8% (range: 10.3-25.8%) in HIV-positive MSM and 12.1% (range 5.4-16.9%) in MSM who were HIV-negative or of unknown HIV status; rectal gonorrhea positivity was 11.0% (range: 4.4-12.2%) in HIV-positive MSM and 6.1% (range: 2.5-11.1%) in MSM who were HIV-negative or of unknown HIV status; pharyngeal gonorrhea positivity was 5.8% (range: 3.2-9.2%) in HIV-positive MSM and 2.7% (range: 0.4-9.1%) in MSM who were HIV-negative or of unknown HIV status (Figure GG).

HIV Infection, STD Clinics, 2003

- In 2003, a median of 52% (range: 44-60%) of MSM visiting participating STD clinics and not previously known to be HIV-positive were tested for HIV; median HIV positivity was 3.9% (range: 2.1-6.4%). HIV positivity varied by race and ethnicity, but tended to be highest in African-American MSM. HIV positivity was 3.5% (range: 1.7-4.1%) in whites, 8.6% (range 3.6-9.5%) in African-Americans, and 4.4% (range: 1.7-14.3%) in Hispanics (Figure FF).
- In 2003, median HIV prevalence among MSM, including persons previously known to be HIV-positive and persons testing HIV-positive at their current visit, was 11.0% (range 2.8-19.0%). HIV prevalence was 9.0% (range: 2.5-14.0%) in

whites, 18.5% (range: 2.7-25.5%) in African-Americans, and 9.5% (range: 2.3-35.7%) in Hispanics.

Chlamydia, STD Clinics, 2003

- In 2003, a median of 81% (range: 47-93%) of MSM visiting participating STD clinics were tested for urethral chlamydia; median urethral chlamydia positivity was 8.9% (range: 3.9-10.5%) (Figure FF). Median positivity was 7.9% (range: 3.8-17.0%) in HIV-positive MSM and 6.7% (range: 3.9-10.0%) in MSM who were HIV-negative or of unknown HIV status (Figure GG).

STD Testing and Positivity, Community-based, Gay Men's Primary Care Clinic, 2003

- Among men with a nontreponemal serologic test for syphilis, 5.8% had a reactive syphilis test result; 34.7% of men with reactive syphilis serologies were identified as new syphilis cases. Among men tested for gonorrhea, urethral positivity was 14.6%, rectal positivity was 10.1%, and pharyngeal positivity was 1.9%. Among men tested for urethral chlamydia, positivity was 5.4%.

Nationally Reported Syphilis Surveillance Data

- Primary and secondary (P&S) syphilis increased in the United States during 2002-2003. Between 2002 and 2003, there was a 13% increase in the number of P&S syphilis cases among men and a 24% decrease in the number of cases among women (Tables 27 and 28). Trends in the syphilis male-to-female rate ratio, which are assumed to reflect syphilis trends among MSM, have been increasing in the United States during recent years (Figure 31). In 2003, the rate of reported P&S syphilis among men (4.2 cases per 100,000 males) was 5.2 times greater than the rate among women (0.8 cases per 100,000 females). The overall male-to-female syphilis rate ratio has risen steadily since 1996 when it was 1.2 (Figure 31). The increase in the male-to-female rate ratio occurred among all racial and ethnic groups between 2002 and 2003. Additional information on syphilis can be found in the **Syphilis** section.

Gonococcal Isolate Surveillance Project (GISP)

- The Gonococcal Isolate Surveillance Project (GISP), a collaborative project among selected STD clinics, was established in 1986 to monitor trends in antimicrobial susceptibilities of strains of *Neisseria gonorrhoeae* in the United States.
- GISP also reports the percentage of *Neisseria gonorrhoeae* isolates obtained from MSM.[10] Overall, the proportion of isolates coming from MSM in GISP clinics increased from 4% in 1988 to 19.6% in 2003, with most of the increase occurring after 1993 (Figure HH). Additional information on GISP may be found in the **Gonorrhea** section.

- The proportion of isolates coming from MSM varies geographically with the largest percentage on the west coast (Figure II).
- Due to increases in the proportion of isolates from MSM that are fluoroquinolone-resistant (Figure 22), in 2004 CDC recommended that fluoroquinolones no longer be used to treat gonorrhea among MSM.[11]

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[1] Centers for Disease Control and Prevention. Resurgent bacterial sexually transmitted disease among men who have sex with men – King County, Washington, 1997-1999. *MMWR* 1999;48:773-7.

[2] Centers for Disease Control and Prevention. Outbreak of syphilis among men who have sex with men – Southern California, 2000. *MMWR* 2001;50:117-20.

[3] Centers for Disease Control and Prevention. Gonorrhea among men who have sex with men – selected sexually transmitted disease clinics, 1993-1996. M*MWR* 1997;46:889-92.

[4] Fox KK, del Rio C, Holmes K, et. al. Gonorrhea in the HIV era: A reversal in trends among men who have sex with men. *Am J Public Health* 2001;91:959-964.

[5] Centers for Disease Control and Prevention. Primary and secondary syphilis among men who have sex with men – New York City, 2001. *MMWR* 2002;51:853-6.

[6] Stall R, Hays R, Waldo C, Ekstrand M, McFarland W. The gay '90s: a review of research in the 1990s on sexual behavior and HIV risk among men who have sex with men. *AIDS* 2000;14:S1-S14.

[7] Scheer S, Chu PL, Klausner JD, Katz MH, Schwarcz SK. Effect of highly active antiretroviral therapy on diagnoses of sexually transmitted diseases in people with AIDS. *Lancet* 2001;357:432-5.

[8] Fleming DT, Wasserheit JN. From epidemiologic synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. *Sex Transm Infect* 1999;75:3-17.

[9] Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report* 2002;14.

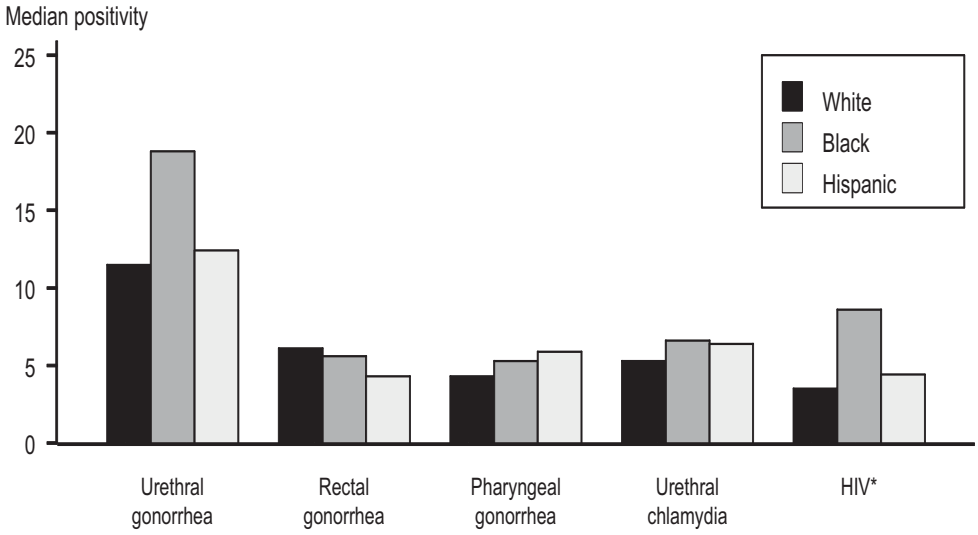
[10] Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2003 Supplement: Gonococcal Isolate Surveillance Project (GISP) Annual Report* 2003. Atlanta, GA: U.S. Department of Health and Human Services (in press).

[11] Centers for Disease Control and Prevention. Increases in fluoroquinolone-resistant *Neisseria gonorrhoeae* among men who have sex with men – United States, 2003, and revised recommendations for gonorrhea treatment, 2004. *MMWR* 2004;53:335-338.

Figure DD. MSM Prevalence Monitoring Project — Syphilis serologic reactivity among men who have sex with men, STD clinics, 1999-2003

Figure EE. MSM Prevalence Monitoring Project — Gonorrhea positivity among men who have sex with men, STD clinics, 1999-2003

Figure FF. MSM Prevalence Monitoring Project — Test positivity for gonorrhea, chlamydia, and HIV among men who have sex with men, by race/ethnicity, STD clinics, 2003



*Excludes persons previously known to be HIV-positive.

Figure GG. MSM Prevalence Monitoring Project — Test positivity for gonorrhea and chlamydia among men who have sex with men, by HIV status, STD clinics, 2003

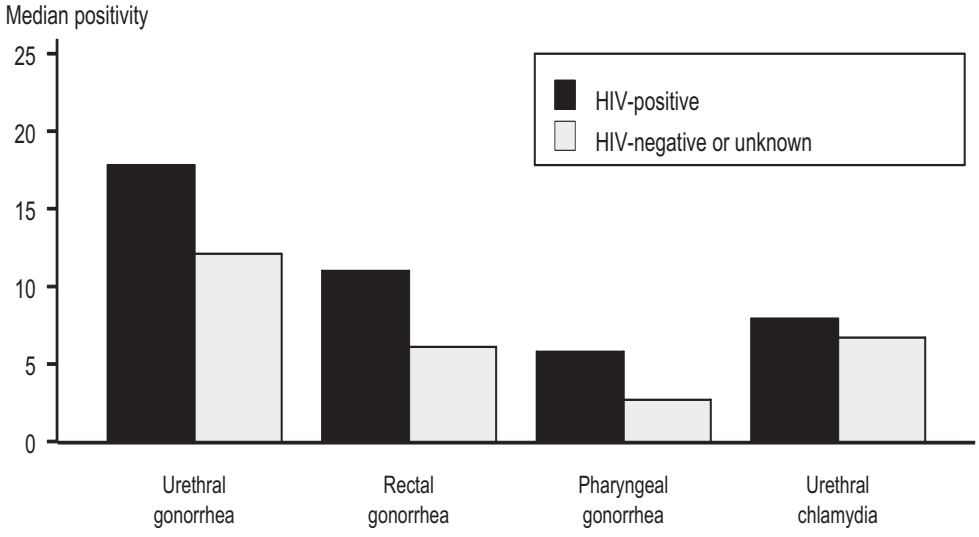


Figure HH. Gonococcal Isolate Surveillance Project (GISP) — Percent of gonorrhea cases that occurred among MSM, 1988-2003

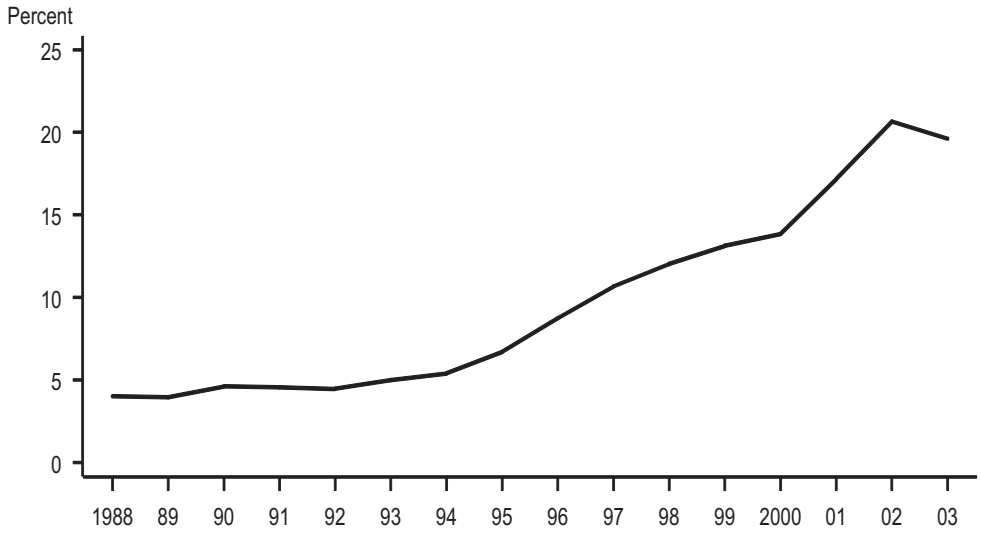
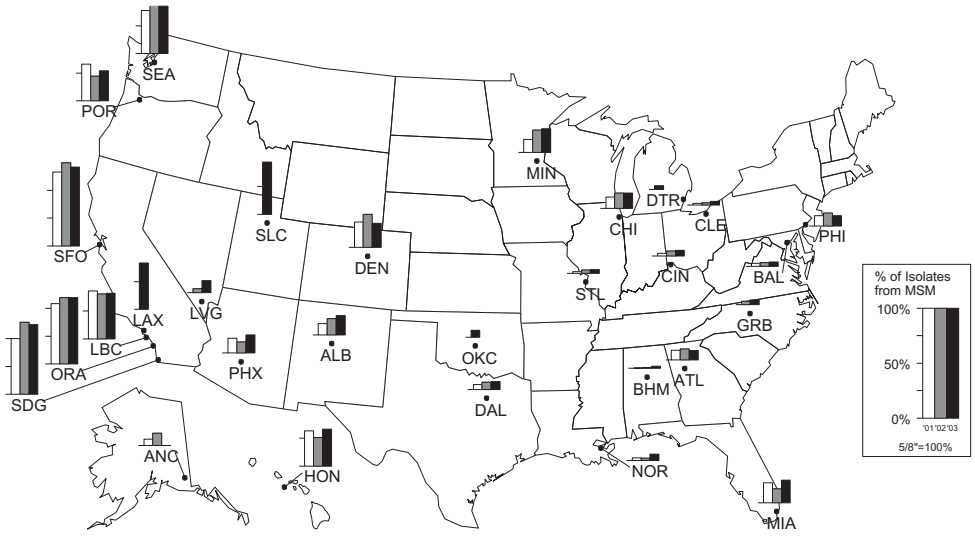


Figure II. Gonococcal Isolate Surveillance Project (GISP) — Percent of *Neisseria gonorrhoeae* isolates obtained from MSM attending STD clinics, 2001-2003



Note: Not all clinics participated in GISP for the last 3 years. Clinics include: ALB=Albuquerque, NM; ANC=Anchorage, AK; ATL=Atlanta, GA; BAL=Baltimore, MD; BHM=Birmingham, AL; CHI=Chicago, IL; CIN=Cincinnati, OH; CLE=Cleveland, OH; DAL=Dallas, TX; DEN=Denver, CO; DTR=Detroit, MI; HON=Honolulu, HI; LAX=Los Angeles, CA; LBC=Long Beach, CA; LVG=Las Vegas, NV; MIA=Miami, FL; MIN=Minneapolis, MN; GRB=Greensboro, NC; NOR=New Orleans, LA; OKC=Oklahoma City, OK; ORA=Orange County, CA; PHI=Philadelphia, PA; PHX=Phoenix, AZ; POR=Portland, OR; SLC=Salt Lake City, UT; STL=St Louis, MO; SDG=San Diego, CA; SEA=Seattle, WA; and SFO=San Francisco, CA. TRP=Tripler Army Medical Center, HI (does not provide sexual risk behavior data).