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HIV/AIDS among Men Who Have Sex with Men

In the United States, HIV infection and AIDS have had a tremendous effect on men who have sex with men (MSM). MSM accounted for 70% of all estimated HIV infections among male adults and adolescents in 2004 (based on data from 35 areas with long-term, confidential name-based HIV reporting*), even though only about 5% to 7% of male adults and adolescents in the United States identify themselves as MSM [1,2]. The number of HIV diagnoses for MSM decreased during the 1980s and 1990s, but recent surveillance data show an increase in HIV diagnoses for this group [3, 4]. This increase points to a continued need for culturally appropriate prevention and education services.

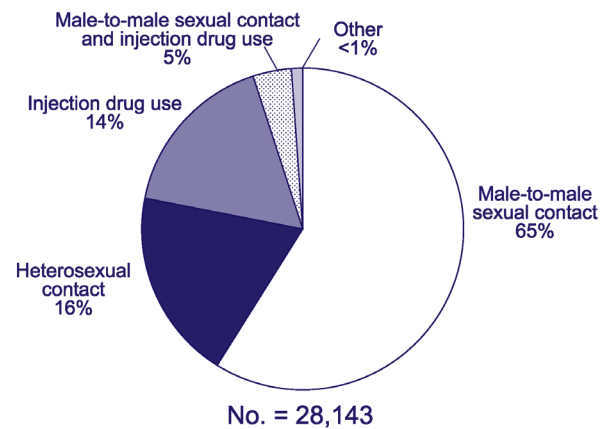
STATISTICS

HIV/AIDS in 2004

- In the 35 areas with long-term, confidential name-based HIV reporting, an estimated 19,575 MSM (18,203 MSM and 1,372 MSM who inject drugs) received a diagnosis of HIV/AIDS, accounting for 70% of all male adults and adolescents and 51% of all people receiving an HIV/AIDS diagnosis that year [1].
- The number of HIV/AIDS diagnoses among MSM increased 8% from 2003 through 2004. It is not known whether this increase is due to an increase in the testing of persons with risk factors or due to an increase in cases of HIV infection.

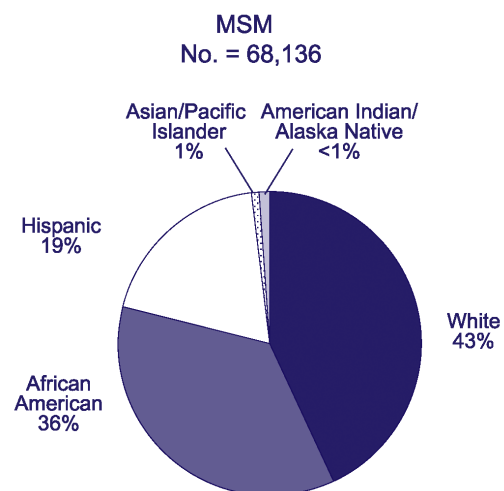
*See box before the References section for a list of the 35 areas.

Transmission categories of male adults and adolescents with HIV/AIDS diagnosed during 2004



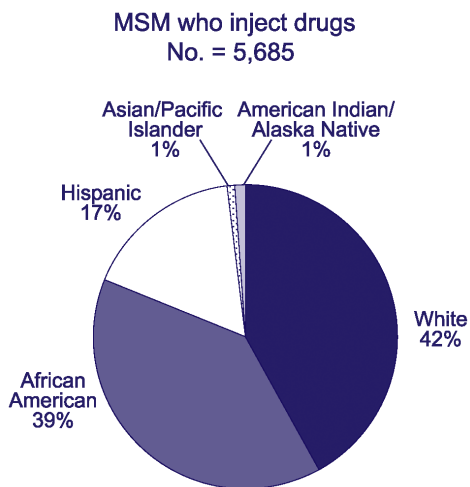
Note. Based on data from 35 areas with long-term, confidential name-based HIV reporting.

Race/ethnicity of MSM with HIV/AIDS diagnosed during 2001–2004



Note. Based on data from 33 states with long-term, confidential name-based HIV reporting.
 Source. CDC. Trends in HIV/AIDS diagnoses—33 states, 2001–2004. *MMWR* 2005;54:1149–1153.

Race/ethnicity of MSM with HIV/AIDS diagnosed during 2001–2004 (cont.)



Note. Based on data from 33 states with long-term, confidential name-based HIV reporting.
Source. CDC. Trends in HIV/AIDS diagnoses—33 states, 2001–2004. *MMWR* 2005;54:1149–1153.

AIDS in 2004

- An estimated 19,611 MSM (17,691 MSM and 1,920 MSM who inject drugs) received a diagnosis of AIDS, accounting for 63% of all male adults and adolescents and 46% of all people who received a diagnosis of AIDS [1].
- An estimated 6,630 MSM (5,450 MSM and 1,180 MSM who inject drugs) with AIDS died, accounting for 57% of all men and 42% of all people with AIDS who died [1].
- Since the beginning of the epidemic, an estimated 506,213 MSM (441,380 MSM and 64,833 MSM who inject drugs) had received a diagnosis of AIDS, accounting for 67% of all male adults and adolescents and 54% of all people who received a diagnosis of AIDS [1].
- Since the beginning of the epidemic, an estimated 295,520 MSM (256,053 MSM and 39,467 MSM who inject drugs) with AIDS had died, accounting for 67% of all male adults and adolescents and 56% of all people with AIDS who died [1].

- At the end of 2004, an estimated 210,693 MSM (185,326 MSM and 25,367 MSM who inject drugs) were living with AIDS, representing 66% of all male adults and adolescents and 51% of all people living with AIDS [1].

RISK FACTORS AND BARRIERS TO PREVENTION

Sexual Risk Factors

Sexual risk factors account for most HIV infections in MSM. These factors include unprotected sex and sexually transmitted diseases (STDs).

- Not using a condom during anal sex with someone other than a main partner of known HIV serostatus continues to be a significant threat to the health of MSM [5]. Not all the reasons for an apparent increase in unprotected anal intercourse are known, but research points to the following factors: improved HIV treatment, substance use, complex sexual decision making, seeking sex partners on the Internet, and failure to practice safer sex [6].
- STDs, which increase the risk for HIV infection, remain an important health issue for MSM. According to the Gonococcal Isolate Surveillance Project, the proportion of positive test results for gonorrhea among MSM increased from 4% in 1988 to 19.6% in 2003 [7]. Rates of syphilis among MSM have increased in some urban areas, including San Francisco, Chicago, New York, and Seattle [8–10]. In the 9 US cities participating in the MSM Prevalence Monitoring Project, the rates of STDs and HIV positivity varied by race and ethnicity but tended to be highest among African American MSM [7]. In addition to increasing susceptibility to HIV, STDs are markers for high-risk sexual practices, which can transmit HIV [11].

Substance Use

The use of alcohol and illegal drugs continues to be prevalent among some MSM and is linked to risk factors for HIV infection and other STDs [12]. Substance use can increase the risk for HIV transmission through the tendency toward risky sexual behaviors while under the influence and through sharing needles or other injection equipment. Reports of increased use of the stimulant drug methamphetamine have raised public health concerns because methamphetamine use has been associated both with risky sexual behaviors for HIV infection and other STDs and with the sharing of injection equipment when the drug is injected [13]. Methamphetamine and other “party” drugs (such as ecstasy, ketamine, and GHP [gamma hydroxybutyrate]) may be used to decrease social inhibitions and enhance sexual experiences [14]. These drugs, along with alcohol and nitrate inhalants (“poppers”), have been associated with risky sexual practices among MSM [15].

Complacency about Risk

Almost 25 years into the HIV epidemic, there is evidence of an underestimation of risk, of difficulty in maintaining safer sex practices, and of a need to sustain prevention efforts for each new generation of young gay and bisexual men.

- The success of highly active antiretroviral therapy (HAART) may have had the unintended consequence of increasing some MSM’s risk behaviors.
 - Some research suggests that the negative aspects of HIV infection have been minimized since the introduction of HAART, which has led to a false understanding of what living with HIV means and thus can lead to an increase in risky sexual behaviors [16, 17]. For example, some MSM may mistakenly believe that they or their partners are not infectious when they take medication or when they have low or undetectable viral loads [18].

- Even though surveys suggest that optimism about HIV treatments is associated with a greater willingness to have unprotected anal intercourse [19, 20], a recent review found that the prevalence of unprotected sexual intercourse was not significantly higher among HIV-positive persons who were receiving HAART or who had an undetectable viral load. However, this review did find that unprotected sex was associated with beliefs about HAART and viral load [21].

- Long-term efforts to practice safer sex present a significant challenge. A 4-city study indicates that years of exposure to prevention messages and long-term efforts to practice safer sex may play a role in the decision of HIV-positive MSM to engage in unprotected anal intercourse [17, 22].
- The rates of risky behaviors are higher among young MSM than among older MSM [22, 23]. Not having seen firsthand the toll of AIDS, young MSM may be less motivated to practice safer sex.

Unknown HIV Sero-status

Approximately 25% of people in the United States who are infected with HIV do not know they are infected [24].

- In a recent study of young MSM, 77% of those who tested HIV-positive mistakenly believed that they were not infected [25]. Young African American MSM in this study were especially likely to be unaware of their infection—approximately 9 of 10 young African American MSM compared with 6 of 10 young white MSM. Of the men who tested positive, most (74%) had previously tested negative for HIV infection, and 59% believed that they were at low or very low risk.
- Through its National HIV Behavioral Surveillance system, CDC found that 25% of the MSM surveyed were infected with HIV and 48% of those infected were unaware of their infections [26].

Research has shown that many people who know they are infected with HIV alter their behaviors to reduce their risk of transmitting the virus [27, 28]. Therefore, increasing the proportion of people who know their HIV status can help decrease HIV transmission.

MSM Who Are HIV-positive

HAART has enabled HIV-infected MSM to live longer. However, HAART's success means there are more MSM living with HIV who can potentially transmit the virus to their sex partners. This emphasizes the importance of focusing prevention efforts on those who are living with HIV.

Although many MSM reduce risk behaviors after learning that they have HIV, most remain sexually active [28]. Most HIV-infected MSM believe that they have a personal responsibility to protect others from HIV, but some engage in risky sexual behaviors that may result in others' contracting HIV [29–31]. Some interventions for persons living with HIV have proven effective.

The Internet

During the past decade, the Internet has created new opportunities for MSM to meet sex partners [32]. Internet users can anonymously find partners with similar sexual interests without having to leave their residence or having to risk face-to-face rejection if the behaviors they seek are not consistent with safer sex [33]. The Internet may also normalize certain risky behaviors by making others aware of these behaviors and creating new connections between those who engage in them. At the same time, however, the Internet is a potentially powerful tool for use with HIV prevention interventions.

Social Discrimination and Cultural Issues

MSM are members of all communities, all races and ethnicities, and all strata of society. To reduce the rate of HIV infection, prevention efforts must

be designed with respect for the many differences among MSM and with recognition of the discrimination against MSM and persons infected with HIV in many parts of the country.

- Social and economic factors, including racism, homophobia, poverty, and lack of access to health care, are barriers to receiving HIV prevention services, particularly for MSM of minority races or ethnicities. African American and Hispanic men are more likely than white men to be given a diagnosis of HIV infection in the late stages of infection, often when they already have AIDS, suggesting that they are not accessing testing or health care services through which HIV infection could be diagnosed at an earlier stage [34].
- The stigma associated with homosexuality may inhibit some men from identifying themselves as gay or bisexual, even though they have sex with other men [35, 36]. An example of this is the “down low” phenomenon in the African American community, in which men who have sex with men and with women don't identify themselves as gay or bisexual. However, identifying oneself as heterosexual and having sex with men is not unique to African American men. According to one review, 18% to 35% of heterosexual Latino men and 18% to 46.5% of heterosexual white men reported having had anal or oral sex with a man [37]. These men may miss prevention and health messages directed to openly gay men.
- African American and Hispanic MSM are less likely than white MSM to live in gay-identified neighborhoods [38]. Therefore, prevention programs directed to gay-identified neighborhoods may not reach these MSM.
- For Hispanic MSM, unique cultural factors may discourage openness about homosexuality: *machismo*, the high value placed on masculinity; *simpatia*, the importance of smooth, nonconfrontational relationships; and *familismo*, the importance of a close relationship with one's family [39, 40].

- Although Asians/Pacific Islanders and American Indians/Alaska Natives accounted for less than 2% of the AIDS cases in MSM reported nationally between 1989 and 1998, these groups accounted for noteworthy proportions of cases in certain metropolitan areas [35]. Also, HIV infection among American Indians and Alaska Natives may be underestimated because not all surveillance systems recognize American Indian or Alaska Native as a race/ethnicity[41].

Lack of Communication and Risk Assessment

Open and honest communication about sexual issues is vital to avoiding false assumptions about a partner's HIV serostatus. With regard to MSM, a man infected with HIV may assume that his partner must be infected or he would insist on using a condom; a man who is not infected may assume that his partner also is not infected or he would use a condom [42]. Additionally, because many young MSM with HIV are unaware of their infection, relying on partners to disclose HIV-positive status is often insufficient [25].

Concurrent Psychosocial Problems

Depression, childhood sexual abuse, substance use, and partner violence have been shown to increase the practice of risky sexual behaviors. Further research has shown that the combined effects of these problems may be greater than their individual effects [43]. Therefore, MSM with more than 1 of these problems may have additional risk factors for HIV infection. The expansion and wider awareness of this type of research, which shows the additive effect of various psychosocial problems, will result in more precise prevention efforts for MSM and other populations.

PREVENTION

In the United States, the annual number of new HIV infections has declined from a peak of more than 150,000 during the mid-1980s and has

stabilized since the late 1990s at approximately 40,000. Persons of minority races/ethnicities are disproportionately affected by the HIV epidemic. To reduce further the incidence of HIV, CDC announced a new initiative, Advancing HIV Prevention (http://www.cdc.gov/hiv/topics/prev_prog/AHP), in 2003. This initiative comprises 4 strategies: making HIV testing a routine part of medical care, implementing new models for diagnosing HIV infections outside medical settings, preventing new infections by working with HIV-infected persons and their partners, and further decreasing perinatal HIV transmission.

MSM as a group continue to be most affected by HIV infection and AIDS. Research shows that HIV prevention efforts can reduce sexual risk factors: one review found that among men who received an HIV prevention intervention, the proportion who engaged in unprotected sex decreased, on average, 26% [44].

CDC offers effective interventions for MSM. These interventions can be tailored to various audiences, such as African American or Hispanic MSM. For example,

- Many Men, Many Voices, which is a group STD/HIV prevention intervention for gay men of color and men who have sex with other men but do not identify themselves as gay or bisexual
- Mpowerment, which comprises HIV prevention, safer sex, and risk-reduction messages in a community-building format for young MSM
- Popular Opinion Leader, which involves identifying, enlisting, and training key opinion leaders to encourage safer sex as the norm in the social networks of MSM
- Healthy Relationships, which helps develop the skills and self-efficacy of people living with HIV/AIDS
- Peers Reaching Out and Modeling Intervention

Strategies (PROMISE), which uses peer advocates (including men who do not identify themselves as gay) to help people adopt practices to reduce or eliminate risk factors for HIV infection

Additionally, in 2005, CDC provided 23 awards to community-based organizations that focus primarily on MSM. CDC also provides funding through state, territorial, and local health departments. Of these 23 awards, 55% focus on African Americans, 36% on Hispanics, 1% on Asians and Pacific Islanders, and 8% on whites. For example,

- An organization in Orange County, California, that provides a range of services, including outreach, counseling, testing, mental health services, transportation assistance, and nutritional services to MSM living with HIV/AIDS
- An organization in southern California that provides comprehensive health and human services to multiethnic and Latino MSM in medically underserved communities
- An organization in Chicago that assists persons with disabilities and their families (including those affected by HIV/AIDS) by assessing their needs and designing a plan to best meet those needs
- An organization in New York City serving African American MSM that offers an array of programs and services to promote the health and wellness of all people affected by HIV/AIDS

Understanding HIV and AIDS Data

AIDS surveillance: Through a uniform system, CDC receives reports of AIDS cases from all US states and territories. Since the beginning of the epidemic, these data have been used to monitor trends because they are representative of all areas. The data are statistically adjusted for reporting delays and for the redistribution of cases initially reported without risk factors. As treatment has become more available, trends in new AIDS diagnoses no longer accurately represent trends in new HIV infections; these data now represent persons who are tested late in the course of HIV infection, who have limited access to care, or in whom treatment has failed.

HIV surveillance: Monitoring trends in the HIV epidemic today requires collecting information on HIV cases that have not progressed to AIDS. Areas with confidential name-based HIV infection reporting requirements use the same uniform system for data collection on HIV cases as for AIDS cases. A total of 35 areas—the US Virgin Islands, Guam, and 33 states (Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New York, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming)—have collected these data for at least 5 years, providing sufficient data to monitor HIV trends and to estimate risk behaviors for HIV infection. Recently, 9 additional areas have begun confidential name-based HIV surveillance, and data from these areas will be included in coming years.

HIV/AIDS: This term includes persons with a diagnosis of HIV infection (not AIDS), a diagnosis of HIV infection and a later diagnosis of AIDS, or concurrent diagnoses of HIV infection and AIDS.

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