

The year 2006 marks the 25th anniversary of the first reported cases of HIV/AIDS. Initially diagnosed in the United States among men who have sex with men (MSM),¹ HIV's impact on MSM in the U.S. and other developed countries led to swift grass-roots responses from the gay community and eventually to targeted interventions from the public health sector to address high-risk behaviors such as unprotected anal intercourse and substance use. These interventions, implemented in the 1980s and 1990s, resulted in significant reductions in sexual risk and the prevention of new HIV infections in MSM.

Over time, these achievements have leveled off, and recent evidence indicates that HIV infection is re-emerging in new cohorts of MSM in developed countries² and is an emerging epidemic in MSM in developing countries.^{3,4} This situation calls for an assessment of current trends in HIV infection in MSM and of the status of effective and promising interventions for these populations.

Who Are MSM?

The category of men who have sex with men (MSM) encompasses a range of sexual and gender identities and behaviors among people in various socio-cultural and sexual contexts.^{4,6} It includes men who identify as gay or bisexual, as well as some who identify as heterosexual or transgendered (such as the Katoey in Thailand or the Hijras in India). In relation to HIV among MSM, high-risk sexual activities are what transmit the virus, but these take place in social and cultural contexts in which identity also matters. Thus, it is important to understand the interaction of identity and behaviors when devising and implementing interventions to prevent sexual transmission of HIV in MSM.^{5,7}

issue brief

HIV Prevention for Men Who Have Sex With Men

Trends in HIV/AIDS Among MSM

Despite significant success in reducing HIV/AIDS rates among MSM in the United States during the late 1980s and early 1990s, recent data indicate that HIV infection may be resurging among this group.^{8,9}

From 2001 to 2003, of the 157,252 persons diagnosed with HIV/AIDS, nearly 71% were men; for 61% of these men, the primary route of infection was male-to-male sexual contact.¹⁰ Although white men still comprise the bulk of new infections in MSM, the epidemic is growing fast among Blacks and Hispanics.¹⁰

Male-to-male sex still comprises the major route of HIV transmission in other parts of the developed world.¹¹ Slight to significant increases in the number of HIV diagnoses in MSM have been observed in European countries such as Belgium,

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Denmark, Italy, Portugal, Switzerland, and Germany.^{11,12} In the developing world, most available data on MSM come from Latin America and South Asia. There are very little HIV incidence or prevalence data on MSM in Sub-Saharan Africa and the Middle East. From the global data that are available, estimates indicate that HIV prevalence in MSM varies widely by country and region—from 0% in the Middle East to 36.5% in Latin America.^{3,13,14}

What Puts MSM at Risk?

The rising rates of infection in MSM in developed and developing countries can be attributed to a complex set of biological, behavioral, and socio-cultural factors that may place MSM at increased risk for acquiring and transmitting HIV.

Biological Factors

While there is no evidence that MSM are biologically more susceptible to HIV infection than others, there are biological factors associated with male-to-male sexual behavior—in particular, anal intercourse—that do increase individuals' risk.

- Both vaginal and anal intercourse have been shown to be efficient routes for HIV transmission, as the epithelium of both tracts has receptors that easily bind to HIV. However, compared to the vagina, rectal tissue is much more vulnerable to tearing during intercourse and the larger surface area of the rectum/colon provides more opportunity for viral penetration and infection.

For these reasons, unprotected receptive anal intercourse is believed to be at least 10 times more risky than unprotected receptive vaginal intercourse for acquiring HIV.¹⁵⁻¹⁷

- The presence of genital ulcer disease (GUD)—most notably herpes simplex virus-2 (HSV-2), primary syphilis, and chancroid—also facilitates HIV acquisition. While MSM populations are not biologically predisposed to sexually transmitted infections (STI), many men—and the providers to whom they go for care—do not think to screen for STIs that present rectally, resulting in infections that go undiagnosed and untreated. For these reasons, some STIs are quite prevalent in MSM populations, thereby contributing to increased risk of HIV acquisition.¹⁸⁻²¹

Behavioral Factors

Several behavioral risk factors can also increase the vulnerability of MSM to HIV infection.

- Specific sexual acts in the repertoire of MSM confer risk of HIV infection. In descending order of risk, these include unprotected receptive anal intercourse, unprotected insertive anal intercourse, and oral sex.²²⁻²⁵
- Multiple sex partners, inconsistent condom use, lack of knowledge about HIV risk, and negative or complacent attitudes toward safer sex have also been shown to be factors associated with increased risk of HIV infection.²⁶⁻³²

- The prevalence of alcohol and drug use in MSM is also quite high, which in turn can increase the risk for acquiring HIV.³³ Several studies link alcohol and drug use (particularly methamphetamine) to higher rates of unprotected anal intercourse, higher numbers of sex partners, and inconsistent condom use.^{38,2}
- Depression in MSM has been linked to increases in risky behaviors such as unprotected anal intercourse, drug and alcohol use, inconsistent condom use, and multiple sexual partnerships.^{26,43,44}
- Some studies have found that MSM, particularly young MSM, who have a history of childhood sexual abuse are more likely to engage in high-risk behaviors, such as unprotected anal intercourse, substance abuse, and exchanging sex for money or drugs. These studies also found that MSM with a history of childhood sexual abuse are more likely to report being HIV positive and to have experienced relationship violence.⁴⁵⁻⁴⁷
- For many MSM, the Internet (e.g., through MSM personal ads and chat rooms) offers a wider pool of men available for sexual liaisons, often on short notice. But these expeditious partnerships may also bring increased risk of HIV infection.⁴⁸

Some studies have found that MSM who use the Internet to find sex partners are more likely than other men to report an STI and are more likely to engage in risky sexual behavior.⁴⁹⁻⁵²

Socio-Cultural Factors

Socio-cultural factors, such as perceptions and experiences of stigma and discrimination, homophobia, racism, and internalized oppression, may also lead to increased risk of HIV infection in MSM.

- Several studies indicate that these factors may play a significant role in increasing the risk of drug use before or during sexual encounters, unprotected insertive/receptive anal sex, multiple sexual partnerships, and inconsistent condom use.⁵³⁻⁵⁵
- Stigma associated with acknowledging homosexual or bisexual activity may inhibit many MSM from identifying as such,⁵⁶ potentially leading to denial of their own risk and alienation from prevention programs that target self-identified gay/bisexual populations.
- While race/ethnicity itself is not a risk factor for HIV infection, social and economic factors—such as higher rates of poverty, unemployment, and lack of health care access—that are often more prevalent in communities of color may be associated with risk behaviors that facilitate HIV infection and with reduced access to testing, prevention, and treatment services.^{57,58} This is supported by a recent review that indicates black MSM are more likely than other MSM to contract STIs that facilitate the acquisition and transmission of HIV and are also less likely than other MSM to be tested for HIV or to know their HIV status.⁵⁹
- Optimism about the availability and efficacy of new HIV therapies has been associated with sexual risk behavior in young MSM. This optimism may either reduce individuals' concerns about becoming infected (thereby facilitating risk behavior)⁶⁰ or may be a post hoc rationalization after risky sex has occurred.⁶¹

HIV Prevention Interventions For MSM

Since the beginning of the HIV/AIDS epidemic, individual-level, small group, and community-level behavioral prevention interventions targeting at-risk MSM have been effective in changing risk behaviors that facilitate HIV transmission and acquisition.⁶²⁻⁶⁹

- A recent review of 54 behavioral interventions for MSM in the United States found that 38 of these interventions resulted in a 27% reduction in the number of unprotected sex acts, and the remaining 16 interventions reduced unprotected sex by 17%.⁶⁹
- Another review of 33 behavioral interventions for MSM conducted globally showed that HIV prevention efforts were successful in reducing the number of sex partners, reducing unprotected anal intercourse by 23%, and increasing condom use by 61%. Successful interventions incorporated interpersonal skills-building, utilized several delivery methods, and were delivered over multiple sessions.⁶²
- Because individual-level interventions often cannot address the social factors that contribute to HIV risk-taking, community-level interventions have been advocated as an important strategy for HIV prevention.⁷⁰ Two effective models that have been widely replicated involve mobilizing young gay/bisexual men to shape a healthy community for themselves and to encourage their friends to have safer sex, and using popular opinion leaders in gay/bisexual communities to change norms around sexual behaviors. In communities where these interventions have been implemented, rates of unprotected anal sex decreased, condom use increased, and overall numbers of sex partners decreased.^{65,71} These HIV prevention interventions also have been shown to be cost-effective.^{72,73}

In addition to behavioral interventions, a few promising biomedical approaches are being tested for prevention of sexual transmission of HIV in MSM. Two such approaches are the treatment of HSV-2 infection among HIV-negative MSM to reduce risk of HIV acquisition, and the use of pre-exposure prophylaxis (PrEP), which tests the safety and efficacy of antiretroviral drugs to prevent the establishment of HIV infection if a person is exposed through sexual contact. Clinical trials of these two biomedical interventions are currently under way, with

results expected by 2007. Additionally, there are continued efforts to develop safe and effective topical microbicides (that could be used rectally)^{16,74} and vaccines that may be helpful in preventing HIV infection in this population.

Barriers to Reaching MSM

Despite accomplishments in modifying risky behavior and reducing HIV infections in some MSM populations, many intervention efforts may be undermined by specific policies that contribute to stigma and discrimination against this group.

For example, U.S. government programs that promote abstinence-only-until-marriage as an HIV prevention strategy implicitly and explicitly condemn or deny the existence and sexual rights of gay, bisexual, and transgendered people.⁷⁵ Moreover, educational curricula supported through these programs in many cases convey medically inaccurate information about STIs and HIV infection. In fact, they are prohibited by law from providing information about the significant effectiveness of male condoms for HIV prevention, and instead must emphasize their failure rates.⁷⁶ This may have the deleterious effect of discouraging condom use, which in turn could increase the risk of HIV infection in MSM.

Conclusion

There is a great deal of scientific evidence supporting the effectiveness of HIV prevention interventions for MSM. Despite this body of research, recent increases in HIV diagnoses in MSM, both domestically and internationally, indicate that prevention efforts have not been scaled up and intensified sufficiently to curb the spread of HIV infection in this population.

Difficulties in collecting accurate data on HIV infection in MSM, particularly in developing countries, confusion about the definition of MSM, and ongoing stigma and discrimination against gay, bisexual, and transgendered people remain significant barriers to implementing effective interventions on a global level.

In order to mitigate the HIV epidemic in MSM, both domestically and globally, adequate resources must be dedicated to improving accurate data collection, addressing the socio-cultural factors that contribute to MSM risk behavior, and implementing evidence-based behavioral, biomedical, and social interventions that address growing rates of HIV infection in multiple settings.

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Public Policy Office

1150 17th Street NW
Suite 406
Washington, DC 20036-4622
Tel: 202-331-8600
Fax: 202-331-8600

Judith Auerbach, Ph.D.
Vice President, Public Policy
and Program Development

Monica S. Ruiz, Ph.D., M.P.H.
Deputy Director, Public Policy

Emily P. Byram, M.P.H.
Legislative Analyst

Sonia M. Kandathil, M.P.H.
Research and Program Analyst

New York Office

120 Wall Street, 13th Floor
New York, NY 10005-3908
Tel: 212-806-1600
Fax: 212-806-1601