HIV remains a critical health issue for men who have sex with men (MSM). In the United States, an estimated 365,000 to 535,000 MSM are living with HIV, and 42% of new HIV infections occur in this population. Recent data on sexually transmitted diseases and on sexual behavior indicate the potential for a resurgence in HIV infections among MSM. Outbreaks of gonorrhea and syphilis have been reported in a growing number of cities, and several studies have observed an increase in unprotected anal intercourse among MSM.

These increases in HIV risk behavior may be attributed to several factors that have affected the sexual practices of MSM, including changes in beliefs regarding the severity of HIV disease. These emerging data have implications for surveillance and intervention research and indicate a need to reevaluate, refocus, and reinvigorate HIV prevention efforts for MSM. Our recommendations for addressing the HIV prevention needs of MSM include the need to consider HIV-related issues within the broader context of the physical, mental, and sexual health of MSM.

**ABSTRACT**

In this commentary we review the evidence regarding the potential for an increase in HIV infections among MSM in the United States. We draw on HIV/AIDS and sexually transmitted disease (STD) surveillance data, HIV prevalence and incidence studies, and behavioral research. We also discuss the public health implications of these data within the broader context of gay and bisexual men's health.

**HIV and AIDS Among MSM**

The HIV epidemic continues to disproportionately affect MSM. An estimated 365,000 to 535,000 MSM in the United States are infected with HIV, representing more than half of all persons living with HIV and approximately 70% of HIV-infected men. Given that only 5% to 7% of American men have had sex with another man during adulthood, these figures are overwhelming. Although MSM no longer account for the majority of new HIV infections, they are estimated to account for 42% of all new infections—more than any other group (CDC, unpublished data, September 2000). Moreover, although rates of new HIV infections declined among MSM in the United States between the mid-1980s and the mid-1990s, data from San Francisco suggest that rates of new infections may be starting to increase.

The HIV prevalence rate for MSM is substantially higher than that for the general population. In a population-based study of MSM in 4 major metropolitan areas conducted from 1996 through 1998, 18% of participants, compared with less than 1% of the overall population, reported that they were HIV-seropositive. Compared with older MSM, younger MSM have lower HIV prevalence rates, but they are at substantial risk for infection over time. According to a 7-city study of MSM aged 15 to 22 years conducted from 1994 through 1998, 7% were infected with HIV. Although none of the 15-year-olds in this study were infected, the rates of infection rose steadily with increasing age, to nearly 10% among 22-year-olds.

African American and Latino MSM have been particularly hard hit by the HIV epidemic. African Americans and Latinos accounted for 53% of all MSM diagnosed with AIDS in 1999, and the AIDS incidence rates for African Americans and Latinos were markedly higher than those for MSM of other races and ethnicities (CDC, unpublished data, October 2000). In 1999, the AIDS incidence rate among African American MSM (55.5 cases/100,000 men) was more than 5 times that for White MSM (10.9), and the rate for Latino MSM (26.8) was almost 2.5 times the rate for White MSM. In contrast, the AIDS incidence rate for Native American MSM (10.9) was the same as that for Whites, and the rate for Asian and Pacific Islander MSM (5.5) was half the rate for Whites.

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Other STDs Among MSM

STDs are markers for high-risk sexual practices that can transmit HIV. In addition, the role of STDs in facilitating HIV transmission makes these infections especially portentous.26 Recent STD data suggest that risky sexual practices may be increasing among MSM in some parts of the United States.26,27

Increases in STDs among MSM have been reported in a number of American cities. The Gonococcal Isolate Surveillance Project, which monitors antimicrobial resistance among men attending STD clinics in 26 cities, reported that from 1992 through 1999, the proportion of gonococcal isolates from MSM increased significantly, from 5% to 13% of all samples.28,29 Increases in gonorrhea cases among MSM have also been detected in the District of Columbia; Portland, Ore; San Francisco, Calif; and Seattle, Wash, and in a 9-city study of persons living with HIV.28-33 In addition, outbreaks of syphilis among MSM have recently been reported in Chicago, Ill; Los Angeles, Calif; Seattle, Wash; and San Francisco, Calif.34-35 For example, after several years in which the number of cases declined, syphilis reemerged in Seattle–King County, Washington, in 1997, and cases among MSM began to increase.36,37 From 1987 through 1991, 15% (51/337) of men with syphilis were MSM, compared with 21% (12/57) from 1992 through 1996 and 84% (32/38) from 1997 through 1998.

Sexual Behavior Among MSM

Assessing recent trends in risk behavior among MSM is extremely difficult, because only limited longitudinal data have been collected on the sexual practices of this population. Findings from 2 San Francisco studies indicate a trend in the mid-1990s toward increased risk taking. In one study, the percentage of young MSM who reported engaging in unprotected anal intercourse increased from 37% in 1993–1994 to 50% in 1996–1997.38 In 1996–1997, 46% of MSM who reported having had unprotected anal intercourse had engaged in this behavior with a partner whose HIV serostatus was unknown or different from their own. A similar trend toward increased risk behavior was observed in community surveys that were conducted in San Francisco from 1994 through 1997.39 In contrast, a cross-sectional study of MSM in New York City reported relatively low levels of risk behaviors and an increase in condom use at first anal intercourse.40

Many studies have underscored the difficulty of maintaining safer sexual practices for an extended period, and investigators have pointed out the potential for a return to riskier sexual practices.41-45 Data from the Multi-center AIDS Cohort Study show that over a 2-year period, 47% of men returned to unprotected receptive anal intercourse and 44% returned to unprotected insertive anal intercourse.46 According to a recent report from the San Francisco Men’s Health Study, most of the men (68%) who were followed from 1993 through 1997 reported on one or more occasions that they had engaged in unprotected anal intercourse.39

Considerable research has focused on subgroups of MSM that may be at increased risk for HIV infection. For example, researchers in the United States have found that younger MSM are more likely than older MSM to engage in risky sexual practices.47 Studies of MSM who are current or recovering substance users, particularly those who inject drugs, have documented high levels of risk for HIV infection.48-51 Many researchers have documented high rates of risky sexual behavior among MSM of color.52-57 A recent study, however, found rates of unprotected anal intercourse among young African American, Hispanic, and Asian MSM that were comparable to, or in some instances less than, those of Whites.58

As the number of persons living with HIV has increased in recent years (CDC, unpublished data, September 2000), more attention has been paid to the sexual practices of HIV-seropositive MSM.59 Although many HIV-seropositive MSM believe they have a responsibility to protect their sex partners from HIV infection,60 a notable minority participate in behaviors that can transmit HIV to uninfected partners.61-63 Some HIV-seropositive MSM have unprotected sex only with other men who are also HIV-seropositive, but others report risky sexual practices with partners who are uninfected. For example, 22% of MSM in one study reported that they had engaged in unprotected insertive anal intercourse in the previous 3 months with a partner who was HIV-seronegative or whose serostatus was unknown.64

Emerging Factors That May Contribute to Increased Risk

In addition to the demographic, psychosocial, and situational factors that have repeatedly been associated with HIV risk,31-45,64-68 several newly emerging factors may partially account for recent trends toward increased sexual risk taking. Of these, the association between beliefs about HAART and increased sexual risk taking has received the most attention.69-76 Some researchers have speculated that pharmaceutical advertisements that minimize the negative aspects of HIV infection and HAART with unrealistically upbeat portrayals of HIV-seropositive persons may also lead to increased risk behavior.77 Although few data are available, other medical advances, such as the testing of vaccine candidates, the availability of postexposure therapy, and viral load monitoring, have the potential to affect the sexual practices of MSM by influencing their perceptions of the risk and consequences of HIV infection.78-82

Other emerging factors might also lead to increased risk behaviors among MSM. A 4-city study indicates that “AIDS burnout,” which results from years of exposure to prevention messages and long-term efforts to maintain safer sex practices, is an independent predictor of unprotected anal intercourse among HIV-seropositive MSM.73 As HIV prevention efforts have been expanded to meet the needs of other populations, decreased visibility and gaps in prevention services for MSM may have reduced the salience of HIV infection among gay men in some communities.82 Outdated or overly simplistic safer sex messages for MSM (a common criticism in recent years) have led to a backlash against existing prevention efforts.82-86 For example, men who seek partners for unprotected sex, “barebackers,” have been the focus of debate in the gay media, which has sometimes positively portrayed these men as rebels who are breaking away from a conformist pack.77,86 Although it is likely that men who self-identify as barebackers constitute a small minority of MSM, the visibility of this group has the potential to shift safer sex norms within the gay community.

Implications for Public Health

The emerging STD and behavioral data underscore the potential for a resurgence of HIV infections among MSM. Data from multiple sources suggest a trend toward increased risk taking among MSM in San Francisco, and reports of increased STD rates among MSM in other cities reflect similar trends. Given these findings, it is imperative that public health officials review and strengthen surveillance, intervention research, and prevention.

Because of the importance of surveillance data in planning prevention efforts, there is an urgent need to address gaps in our ability to monitor changes in HIV, STDs, and sexual practices among MSM. Foremost, there is a tremendous need to improve HIV and behavioral surveillance, so that new cases of HIV infection and changes in risk
behavior can be detected early. This is particularly important now, given that the population-level effects of HAART on HIV transmission among MSM are not known. Improved HIV treatments have the potential to decrease HIV infection rates by lowering viral load among persons taking these medications, but they also have the potential to increase HIV infection rates by increasing risk behavior. The use of the sensitive/less sensitive enzyme immunoassay ("detuned" EIA) is one strategy that may improve the ability of public health officials to monitor trends in recent HIV infections, to detect HIV outbreaks quickly, and to limit their spread. Identifying opportunities to collect information about MSM as part of general population surveys that address health-related issues represents an important strategy for improving behavioral surveillance. In addition, population-based surveys that focus exclusively on MSM are not only feasible but essential for providing in-depth information about the sexual and other health-related practices of MSM. Finally, there is a need for improved STD screening and surveillance, which will require additional provider training, changes in STD reporting, and improved clinical services for MSM.

There is also a pressing need for additional research to develop interventions for MSM. Relatively few studies have examined the effects of behavioral interventions for MSM—only 10 of 99 scientifically rigorous intervention studies included in a recent comprehensive review focused on MSM. The underrepresentation of MSM, especially MSM of color, in intervention research stands in great contrast to the overrepresentation of MSM among persons living with HIV. Because of well-documented barriers to condom use, research is also needed to develop and test the effectiveness of alternatives to latex condoms (e.g., negotiated safety, rectal microbicides, rectal use of female condoms).

Most important, there is an urgent need for health departments, community-based organizations, and prevention advocates to conduct critical assessments of local prevention activities for MSM and, if needed, to reinvigorate and strengthen these programs. Comprehensive programs for MSM are essential and should include ongoing broad-based awareness campaigns to keep HIV salient in the minds of MSM and to reinforce community norms that support risk-reducing practices. In addition, more intensive interventions designed for subgroups of MSM at increased risk are needed. Special attention should be paid to the needs of African American and Latino MSM, those who abuse alcohol and other substances, HIV-seropositive MSM, and young MSM who are developing and exploring new social and sexual identities.

In addition to the need to strengthen current prevention efforts, there is a critical need to facilitate the transfer of effective interventions for MSM and to move beyond strategies that promote behavior change at the individual level. Resource limitations and other barriers make it difficult for many community-based organizations to adopt approaches to HIV prevention that are not primarily informational. Addressing these barriers will require sustained technology transfer efforts and a long-term commitment on the part of government, universities, and private foundations to building the capacity of community-based organizations.

It is essential that prevention programs recognize that HIV risk occurs within a broader context of physical and mental health problems, including psychologic distress, substance use, violence and sexual assault, and STDs other than HIV. These factors, which are often interrelated, may have a common basis in the considerable prejudice, homophobia, and stigmatization that MSM in the United States continue to experience. Stigmatization and homophobia not only affect the perceptions and practices of individual MSM, they also hamper the provision of interventions that are effective, affirming, and tailored to meet the needs of this population. Addressing the effects of stigmatization and homophobia will require an ecologic approach to HIV prevention that includes efforts to intervene at the community, structural, and policy levels.

As Stall warned years ago, the best way to lose the fight against HIV among MSM is to declare victory and leave the field. Despite remarkable successes in the prevention and treatment of HIV, the epidemic remains an undeniable and pervasive threat to the health and well-being of MSM. To respond to the continued threat of HIV, a sustained and coordinated effort on the part of the gay community, prevention providers, and public health officials at the local, state, and federal levels is required. The emerging data presented here suggest that we may be headed toward a resurgence in HIV infections among MSM, unless we act decisively to reevaluate, refocus, and reinvigorate our prevention efforts.

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