Despite almost two decades of progress in lowering the rates of HIV seroconversion among gay men, HIV continues to be an important issue for men who have sex with men, including openly gay men. In the United States, men who have sex with men still account for the largest percentage of people with HIV, and it is estimated that there are approximately 40,000 new HIV infections per year among this group if injection drug using men who have sex with men are included. While this may not seem like a lot compared to the estimated four million new HIV infections in sub-Saharan Africa, it still comprises 38 percent of all new 1999 infections in those U.S. states with HIV surveillance programs.

Among men who have sex with men, both HIV seroprevalence and new infections are unequally spread across racial, ethnic, and sexual identity subgroups. For example, in 1997, the estimated rate of HIV prevalence among men who have sex with men in four urban communities (Chicago, San Francisco, Los Angeles and New York) was 17 percent overall, but was 29 percent for African Americans and 40 percent for those MSM who are also injection drug users.

Between 1983 and 1990, epidemiologists recorded exponential decreases in unprotected anal sex among predominantly White gay men across the United States. This was followed by sharp decreases in HIV seroconversion rates and a plateau in AIDS diagnoses within this same population. Men of color did not seem to benefit as much from the prevention interventions and sociocultural changes that led to these decreases, and by 1998, rates for new HIV and AIDS cases among men of color surpassed those of White gay men.

### Increasing Incidence

Beginning in 1997, with the widespread use of combination HIV antiviral regimens, there has been a reversal in many trends associated with HIV prevention, including increases in rates of unprotected anal intercourse, sexually transmitted diseases (STDs), and HIV incidence, that is, the number of new HIV infections that occur over the course of a year. According to several longitudinal cohorts, from 1991 to 1996, HIV infection rates for White gay men fluctuated between 0.5 and 2.5 new infections per 100 person-years of observation. These reports of increased HIV incidence have come from many sources throughout the United States and involve White gay men, men of color who have sex with men, young men who have sex with men, homeless men, incarcerated men, drug-using men who have sex with men, transgender individuals, and men who exchange sex for money, drugs, or housing. If these trends are as widespread as they appear to be, they foretell the evolution of new epidemics of STDs and HIV that could reverse the public health successes of the last 15 years.

At the end of October 2000, the Centers for Disease Control and Prevention (CDC) convened a conference to review data from seven cities: San Francisco, Seattle, Los Angeles, Boston, Chicago, Miami, and New York. These data indicate increases in unsafe sexual behavior and in HIV and STD infection rates. (See the table, “Behavioral, STD, and HIV Trends,” on page 3.)

At the CDC conference, John Peterson and Alex Carballo-Diéguez spoke about upward trends in unsafe sex among men of color in Atlanta and New York, particu-
Editorial: Surveying HIV
Robert Marks, Editor

Surveillance is crucial to accurately describe the HIV epidemic, thereby helping to identify needs and target responses. For that reason alone, it has been a source of controversy: determining who is most affected by the epidemic determines to which subpopulations resources are allocated.

Epidemiologists use two main tools to survey disease: incidence and prevalence. Incidence is the number of new cases during a given period of time (usually a year); prevalence is the overall rate of occurrence of a disease in a population. Prevalence provides an estimate of how many people are infected within a population, and by extension, the number of people who are likely to need care and support as well as the number who are able to further transmit HIV. In this sense, prevalence describes the likelihood that an at-risk person in the population may come into contact with the disease and the extent of current treatment needs. Incidence, quantifying only the number of new infections, tells more about current behaviors and future needs, and is crucial for planning both prevention and care responses.

Because HIV testing may occur long after HIV exposure, it is far easier to determine prevalence than incidence. In this issue of *FOCUS*, David Ostrow reviews the epidemic among men who have sex with men, using a variety of indirect indicators—including rates of sexually transmitted diseases (STDs) and HIV-related risk behaviors—to characterize the growth of HIV prevalence in this community. Janet Blair uses AIDS case data and some HIV incidence data to define the extent and character of the epidemic among women.

The easiest way to determine HIV incidence is to require the reporting of the names of people when they test HIV-positive. Currently, the Centers for Disease Control and Prevention requires “names” reporting of all people with AIDS-defining conditions, most states require names reporting for STDs, and many states require names reporting for HIV cases. But HIV case names reporting has its drawbacks: HIV remains a broadly stigmatized disease, and there are reasonable fears that reporting the names of people with HIV to local and state governments could compromise confidentiality and lead to discrimination and the loss of health care, employment, or housing.

There is no obvious solution. It may be that the experience of names reporting in the states that require it will eventually prove these fears to be overstated. It may also be that the use of a “unique identifier”—comprised of letters and numbers—an alternative currently being developed in California, will prove to be an effective surrogate for a person’s name and make names reporting unnecessary. In any case, while some type of HIV reporting would answer the incidence question more clearly, there are other ways, as suggested by Ostrow and Blair, to portray the epidemic.

References

Edited by Ostrow and Blair, to portray the epidemic.
Among men who have sex with men, syphilis incidence also increased...


Among men who have sex with men, syphilis incidence also increased... (such as the 10-year cycles of STDs).

Several investigators have postulated that HIV antiviral treatment-related attitudes may promote increased unsafe sex among gay men who no longer fear the consequences of transmitting or becoming infected with HIV. In the largest study to date, data from the four-city Multicenter AIDS Cohort Study (MACS) found that decreased levels of concern about HIV transmission was associated with unprotected anal sex among both HIV-positive and HIV-negative men. The study found that safer sex burn-out was also a factor among HIV-positive men. In Australia, researchers continue to find that unprotected anal sex and optimism about HIV antiviral treatment are increasing in parallel among gay men in Sydney and Melbourne. Dutch investigators found similar patterns in Amsterdam.

If these behavioral and STD trends continue, there is no doubt that new localized HIV epidemics will emerge. This will be true particularly among the most vulnerable subpopulations of men who have sex with men—younger men, homeless men, men who exchange sex for drugs or money, and men of color—and could extend to the broader population of men who have sex with men. Even more troubling is the real possibility that these new epidemics will transmit multidrug resistant strains of HIV, severely limiting the treatment options for anyone who encounters such a strain. It would be ironic that a set of circumstances brought about, in part, by the enormous advances in antiviral treatment would contribute to the loss of efficacy of these very drugs. What these and many more studies with similar findings also illustrate is the...
failure of "negotiated safety"—agreements between primary partners to have unprotected sex only within the primary relationship—to prevent STD or HIV transmission in the era of HIV combination treatment.9

**Lessons for Intervening**

There is a window of opportunity to respond to these emerging epidemics of treatment-resistant HIV before they become widespread. Today, unlike the situation in the early years of the epidemic, we have many more effective intervention tools. But, the task of respecting and supporting sexuality and ensuring its safety remains a challenge. Sexuality is still an intimate set of behaviors and identities; the constraints of HIV-related safety still make many men feel under siege. Educators should continue to seek to understand and support gay sexuality in all its forms and to define the least intrusive forms of intervention. At the October CDC conference, it was clear that understanding the "contexts" within which sexual behavior takes place was key to fielding more effective interventions.

Another lesson is the need for vigilance in surveillance and intervention efforts, even among White gay men who have widely been viewed as being no longer at risk for HIV or STD infections. At the same time, it is crucial to target intervention efforts towards the most vulnerable subgroups of men who have sex with men. As was demonstrated at the CDC conference, individual characteristics such as youth, ethnicity, drug use, and poverty interact with age, geography, and social context to produce widely ranging levels of HIV infection risk. These multidimensional strata of vulnerable individuals require finely tuned, culturally tailored interventions. There is a further argument to develop interventions that tailor themselves directly to individuals, since sexual behavior is mediated by individual psychology. Finally, despite the necessary focus on vulnerabilities to sexual risk taking, it would help to better understand the factors that enhance resiliency, factors that enable the majority of men who have sex with men to practice safer sex despite environmental and institutional barriers.

**Conclusion**

The argument can be made that any level of HIV infection is too high. However, such an argument ignores the basic nature of sexuality and the important role that "bareback" sex still plays in the self-identities of many gay men. By better understanding these self-identities and drives as well as the contexts in which they lead to HIV transmission, educators can design better and more acceptable interventions. To what degree such interventions can counter increases in HIV and STD incidence remains to be seen, but the alternative of the failure of public health is unacceptable.

At the start of the HIV epidemic, many predicted that repressive social measures, such as quarantine and occupational restrictions, would inevitably result. Fortunately, this has not been the case, but already we hear from both within and outside the gay community a different attitude voiced toward gay men "who should know better," a suggestion that newly infected men are not entitled to the benefits afforded people who became infected before we knew how to avoid HIV transmission. It is all too easy for the "vulnerable" subgroups of men who have sex with men to become scapegoats in the drive to assign blame in a health emergency. This is just another reason why it is so important to acknowledge the significance of current behavioral, STD, and HIV incidence trends as early indicators of a resurgent epidemic that can yet be stopped.

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**References**


The AIDS Epidemic among Women in the United States
Janet M. Blair, PhD, MPH

While the rate of reported AIDS cases in the United States in 1999 was 9.3 per 100,000 for women—compared to 32.4 per 100,000 for men—women have accounted for an increasing proportion of AIDS cases over the past 10 years. In 1989, 42,728 AIDS cases diagnosed in adults and adolescents 13 years of age or older, 11 percent were women. By 1999, this proportion had more than doubled to 24 percent of the 42,698 AIDS cases diagnosed in that year. These AIDS case trends reflect the fact that women have accounted for an increasing proportion of new HIV infections each year. The Centers for Disease Control and Prevention (CDC) estimates that there are currently between 120,000 and 160,000 adult and adolescent females living with HIV infection. Black and Hispanic women have been disproportionately affected by the HIV epidemic: while they represent less than 25 percent of all women in the United States, in 1999, they accounted for 81 percent of AIDS cases among women. This article briefly describes the epidemiology of HIV infection and AIDS among women and explores the implications for the planning, implementation, and design of HIV prevention programs. Epidemiological data are particularly useful for identifying unmet needs for HIV prevention and access to health care among women. First, it is important to distinguish between AIDS case data and HIV infection data. Directly measuring HIV incidence, that is, the number of new HIV infections in the population in a year, requires that people who have recently acquired HIV infection be tested for HIV within a few months of their infection and that this information be consistently collected. However, most people do not receive HIV testing until later in the course of their disease, and there is currently no national surveillance system that directly measures HIV incidence. While HIV incidence does offer the clearest sense of how the epidemic is progressing, it must be inferred from other types of data, for example, AIDS case data or HIV prevalence data; and current HIV case reports represent a mixture of people who were infected recently and those infected at some time in the past.

AIDS Case Data

In 1999, in the United States, 10,309 women were diagnosed with AIDS: 6,539 (63 percent) were Black; 1,826 (18 percent) Hispanic; 1,796 (17 percent) White; 74 (less than 1 percent) Asian/Pacific Islander; 52 (less than 1 percent) American Indian/Alaska Native; and 22 women for whom race or ethnicity was unreported. Although the number of cases among White and Hispanic women was almost equal, the 1999 AIDS rate for Hispanic women, 16.0 per 100,000, was eight times higher than that of White women, 2.1 per 100,000. In 1999, the AIDS rate for Black women was 47.5 per 100,000 women, almost three times higher than that of Hispanic women, and 23 times higher than that of White women. Heterosexual transmission accounted for 62 percent of AIDS cases diagnosed among women in 1999. The second most common exposure category was injecting drug use, which accounted for 35 percent of cases. Of heterosexual transmission cases in women, 28 percent of women reported heterosexual contact with an injecting drug user, 5 percent reported sexual contact with men of

References

See also references cited in articles in this issue.
other risks such as men who have sex with men, and 67 percent reported heterosexual contact with an HIV-infected person of unspecified risk.

There were also geographic variations, with AIDS cases concentrated primarily in the Southern and Northeastern regions of the United States; these areas accounted for 81 percent of AIDS cases diagnosed among women in 1999. HIV transmission risk varied by region as well, with almost half (46 percent) of the women reporting injection drug use residing in the Northeast. In the South, North Central, and Western regions, more women reported heterosexual contact than injection drug use.

Although AIDS cases have declined in recent years due to the advent of effective HIV antiviral treatment, HIV disease continues to be a major cause of morbidity and mortality. In 1998, HIV infection fell to the fifth leading cause of death among women between the ages of 25 and 44 years, but was the third and fourth leading cause of death respectively among Black and Hispanic women in this age group. For all other racial and ethnic categories in this age group, HIV disease was no higher than the eighth leading cause of death.2

HIV Infection Data

While AIDS cases represent people for whom treatment has failed, those who did not seek or receive treatment, and those who were diagnosed late, HIV cases include people on treatment and also reflect more recent trends in the epidemic. Together with AIDS data, HIV case surveillance provides a minimum estimate of HIV prevalence. Estimates of HIV prevalence from serologic surveys and studies of incidence in at-risk populations also provide information about the relative impact of the epidemic and an indicator of the magnitude of medical and social service resources that are needed to respond. To supplement AIDS surveillance data and meet the need for data on HIV-infected persons, the CDC has recommended that all states conduct HIV case surveillance.

Data on HIV diagnoses from the 25 states that have conducted confidential HIV and AIDS case surveillance since 19944 indicate that young Black women remain at high risk for HIV infection, and suggest that women may be infected at younger ages than men. Younger women may also be at an increased risk of HIV transmission because they tend to have male sex partners who are older and among whom HIV prevalence is higher than in the young male peer age group,3 which also may affect their ability to negotiate condom use.4 In fact, young women with older first sexual partners are less likely to report condom use at first intercourse compared to adolescents with same-age partners.5

The HIV epidemic among children mirrors that of women, with Black and Hispanic children representing the majority (greater than 80 percent) of cumulatively diagnosed pediatric AIDS cases. However, due to universal counseling and voluntary HIV testing of pregnant women and increased use of zidovudine (ZDV; AZT) during pregnancy, there has been a large decrease in perinatally acquired HIV cases in the United States. Efforts to ultimately eliminate perinatal HIV infection will require increasing access to prenatal care and making voluntary HIV counseling and testing the standard of care for all prenatal health care providers.6

Conclusion

Although these data illustrate the disproportionate impact of HIV on Black and Hispanic women, race and ethnicity, in and of themselves, are not risk factors for HIV infection. There are economic, social, and cultural factors that are associated with higher HIV prevalence in communities of color. These include unemployment, poverty, illiteracy, sexually transmitted disease, and injection and non-injection drug use.7 Collectively, these factors not only contribute to risk, but also play an important role in limiting access to and delivery of health care services and should affect the design of HIV prevention messages. Integrated prevention programs must take into account all of these issues in order to prevent and control the epidemic among women.

Comments and Submissions

We invite readers to send letters responding to articles published in FOCUS or dealing with current AIDS research and counseling issues. We also encourage readers to submit article proposals, including a summary of the idea and a detailed outline of the article. Send correspondence to:

Editor, FOCUS
UCSF AIDS Health Project, Box 0884
San Francisco, CA 94143-0884
The AIDS incidence rate is eight times higher among Blacks than among Whites and three times higher among Hispanics than among Whites. Men who have sex with men have the highest HIV infection rates.

For example, in a study of HIV-infected mothers, those at highest risk of transmitting HIV perinatally were less likely to have tested before pregnancy or to have received prenatal care while being more likely to have used drugs during pregnancy.

To meet the changing needs of the HIV epidemic, the CDC proposes a comprehensive restructuring of its surveillance systems. First, all states should require reporting of HIV infection. Second, areas with large numbers of infections or high incidence rates need to collect more comprehensive surveillance data to target interventions efficiently and to assess how well they reduce HIV risks and improve access to testing and care. Interview of at-risk and infected clients can improve socioeconomic data and provide other data, including reasons for testing, barriers to obtaining services, unmet needs such as substance abuse treatment, and comorbid conditions such as sexually transmitted diseases, tuberculosis, and mental illness.

Third, areas with the highest incidence rates should conduct seroincidence surveys and respond rapidly with intensive prevention interventions if clusters of HIV infection are identified. Finally, public health experts must assume a leading role in defining appropriate uses of surveillance data and ensuring that public health data is collected and maintained under strict safeguards and assurances of privacy and confidentiality.

Antibody Testing of Recent Infection

Between 1996 and 1998, the estimated HIV incidence in San Francisco was 1.1 percent per year overall and 1.9 percent per year among men who have sex with men, according to a study that applied a new antibody testing strategy that identified people who had been infected within six months of the test.

The "sensitive/less-sensitive" enzyme immunoassay (EIA) is one of the few ways to test HIV incidence outside of intensive longitudinal studies and also helps to identify correlates of recent seroconversion. The study surveyed 21,292 clients seeking anonymous HIV testing services in San Francisco. Blood samples testing positive on a "sensitive" EIA (the usual HIV antibody test) but negative on a "less-sensitive" EIA (an experimental antibody test that reads positive only if the infection
A seven-city study of young men who have sex with men found high HIV infection rates, which increased with age from 0 percent among 15-year-olds to 9.7 percent among 22-year-olds. The overall infection rate of 7.2 percent ranged from 2.2 percent to 12.0 percent, depending on location.

Has HIV disease become a chronic illness? In the February issue of FOCUS, José Catalan, MSc(Oxon), FRCPsych, Lucinda Green, MSc, MRCPsych, and Flick Thorley, all from the University of London, suggest that HIV has always been a chronic illness. They distinguish between the time frame of a disease—its chronicity or acuity—and the severity of that disease. For people for whom antiviral treatment has worked, HIV is a less severe disease, but diminished severity has not diminished the complexity of living with HIV over time. Catalan, Green, and Thorley discuss these psychosocial challenges and HIV's relationship to other chronic illnesses.

Also in the February issue, Richard Goldman, a person with HIV who volunteers as a group facilitator with the UCSF AIDS Health Project, describes his experience as someone living with an improved prognosis but with significant challenges.
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