

HIV Prevention among Men Who Have Sex with Men: HIV Risk Factors among MSM

(from a CDC Satellite Broadcast on May 17, 2007)

[Announcer] *This podcast is presented by the Centers for Disease Control and Prevention, CDC, safer, healthier people.*

[Announcer] After the airing of this Satellite Broadcast in May 2007, CDC issued a revised 2005 HIV/AIDS Surveillance Report (June 2007). Some of the data cited in this broadcast have been updated. The revised report can be found at www.cdc.gov/HIV/datarevision.htm.

[Moderator/Dr. Rob Janssen] First, we'll hear from CDC Epidemiologists, Dr. Patrick Sullivan and Duncan MacKeller and Dr. Beryl Koblin from Infectious Disease Prevention at the New York Blood Center. They'll discuss rates of HIV among MSM and how the profile of the epidemic has changed over time, as well as major predictors of HIV infection and the impact of not knowing one's HIV status.

[Dr Patrick Sullivan / CDC] The rate of HIV/AIDS is higher among MSM than among other groups in the United States. From those first case reports of AIDS in the early 1980s through the most recent surveillance data, MSM were and has always been the most heavily impacted group in the U.S. Over 300,000 MSM have died with AIDS since the beginning of the epidemic and that represents over half of all the AIDS deaths in the United States. In 2005, over 21,000 MSM were diagnosed with AIDS – ABOUT two-thirds of all the AIDS diagnosis among men in that year. And keep in mind that MSM are probably less than 10% of all the men in the United States. Because we don't know exactly how many MSM there are in the United States, it's hard to say exactly what the differential risk of HIV infections is for MSM, but the best estimate is that MSM are 100 times as likely to become infected with HIV as the general U.S. population. HIV demographics among MSM have definitely changed over time. Those early case reports of AIDS from the 1980s were mostly among white MSM, but now we see a different picture. Black MSM are disproportionately impacted by the AIDS epidemic and that's a disproportionately impacted group among the most infected risk group in the U.S. population. During 2004 to 2005 MSM were offered HIV testing in five cities as part of the National HIV Behavioral Surveillance Project, and what we found, I think illustrates this point. Overall, 25% of all the MSM were infected with HIV, which is a staggering number. But among Black MSM, the HIV prevalence was even higher, 46%. That prevalence rate was more than twice the rate we found among the White MSM or the Hispanic MSM that were tested in the same study. And these disparities have multiple levels, not only were the black MSM in the five cities, as part of a HBS, more likely to be infected with HIV, but they were less likely to know that they were infected. Nearly two out of three black MSM who were infected with HIV did not know they were infected. From 2001 to 2005, the annual number of new HIV diagnoses among MSM in those states with confidential HIV infection reporting was increasing and that increase was over 2% per year. That level of increase is of great concern for public health and for the MSM community. Now, whenever we see increasing diagnoses we want to ask ourselves, does this really represent more diseases or has something else changed?

For example, are more MSM seeking testing for HIV? So far, the data indicate that increased testing among MSM does not account for the increased diagnoses that we're seeing.

[Dr Beryl Koblin / NY Blood Center] The sexual practice of MSM comprises a wide area. There are a number of health issues that are of concern. One is Herpes Simplex Virus II which is associated with an increase of HIV acquisition and transmission and Human Papilloma Virus (HPV) which is associated with anal cancer among MSM. But related to HIV infection, we've seen a large change in HIV risk behaviors over time. At the beginning of the epidemic, men changed their behaviors very dramatically and the risk behaviors decreased. But over the years we've seen it slowly creeping up. In the early '90s we saw about a third of men reporting unprotected anal intercourse and now, in more recent surveys, it's up to about half the men or 50%. This is of concern and we've seen this reflected in HIV prevalence rates and increases in HIV incidence rates. Some men are changing behaviors in terms of doing sero-sorting – where HIV positive men have sex with other HIV positive men and the same for negative, or strategic positioning, in which the HIV positive partners are the receptive partner and the HIV negative partners are the insertive partners and this is a mechanism to try to reduce risks, but we've seen through a number of studies that that will not eliminate risk by any means. Much of the information that we have about predictors of HIV infection come from studies that were done over the years of following large cohorts of MSM. One of the largest one that's been done is the explore study which enrolled over 4,200 men in the United States and followed them for up to four years and these were all men who were initially HIV negative and they participated in a behavioral intervention trial. Because HIV infection was tracked in the study, we were able to look at the predictors of that sero-conversion. One of the most important factors that came out was: Men who have multiple partners or more than four partners were between 1/2 to 2 times more likely to become infected but, more importantly, when we looked at how did that contribute to the number of HIV infections, it accounted for about a third of the HIV infections that happened in the explore cohort. The second most important factor that came out of there was the use of alcohol and drugs with sex. It increased the risk of HIV infection about one and a half times and it accounted for almost 30% of the infections. Another factor that was very important was unprotected receptive anal intercourse with partners that the participants presumed were HIV negative. It increased the risk of seroconversion almost two times and it accounted for a little over 20% of the infections. This is particularly important because I think it raises the issue of unrecognized HIV infections and, also, the potential of lack of communication about serostatus between men and the issues of disclosure of HIV status. Not surprisingly having unprotected receptive anal sex with positive partners had the highest risk of seroconversion, over three times. But it only accounted for about 18% of the infections in the explore cohort. The other factors that were independent risk factors for HIV seroconversions so that means taking into account risk behaviors and sexual risk behaviors, was use of methamphetamines and heavy alcohol use. And both of those increase the risk of HIV infection about two times.

[Dr Duncan Maceller/CDC] The lack of awareness of HIV serostatus has considerable impact among MSM. Several studies suggest that the ongoing HIV epidemic among MSM, is largely attributed to MSM who are unaware of their infection and who unknowingly transmit HIV to their sex and needle-sharing partners. Although most MSM report testing at least once in their lifetime, many younger minority MSM test less frequently. In fact, one study of 5,600 young MSM, over half reported they only tested twice in their lifetime. As a consequence, many HIV infected MSM are unaware of their infection. In one study of 1,700 MSM, 18 years of age and older, 25% tested positive. Among those who tested positive, 48% or nearly half were unaware of their infection. This is particularly a problem among minority and younger MSM. For example, in the same study, 79% of the HIV infected MSM who are between the ages of 18 and 24 were unaware of their infection. 67% of the infected black MSM were unaware of their infection. In 48% of the HIV infected, Hispanic MSM were unaware of their infection. To avoid infection, many MSM who believe them selves to be uninfected, engage in HIV negative serosorting. By that, I mean they choose partners who them selves are thought to be uninfected or they choose to engage in unprotected sex with only those partners who are thought to be uninfected. Several recent studies however suggest that MSM who engage in HIV negative serosorting as their only means of prevention may be at high-risk for infection. For example, one study evaluated 1,700 MSM who reported testing HIV negative at their last test. 63% of these men disclosed to their new sex partners that they were HIV negative and many of these men also reported that they engage in unprotected sex because they perceive themselves or their partners to be uninfected or at low risk for infection. However, of the 1,000 MSM who disclosed being HIV negative, 7% actually were infected with HIV and were unaware of their infection and this varied considerably by race. 24% of the black MSM who disclosed being HIV negative to the new sex partners were HIV infected and unaware of it. Among those who were HIV infected and unaware, 41% disclosed a test result that was based on a test that was conducted over a year ago. So, clearly, MSM who engage in unprotected sex with men who disclose being HIV negative, may be at high risk for HIV because of the high prevalence of undiagnosed infection among MSM who have previously tested HIV negative and because some MSM who engage in HIV negative serosorting may rely on an old test result. So, MSM should be cautious to avoid infection from a new sex partner and not rely on the fact that some new sex partners disclose that they are HIV negative and they should use condoms consistently with all partners unless they're in a mutual monogamous relationship in which both partners tested HIV negative three months since their last HIV exposure.

The high prevalence of undiagnosed infection among MSM really underscores CDC's recommendation that all at risk MSM test for HIV at least annually. However, many MSM, including those who are younger, black and Hispanic, may benefit from testing more frequently and, in fact, many state and local HIV prevention programs recommend that MSM at very high-risk for infection test on a six-month basis.

[Moderator/Dr. Rob Janssen] We just heard about risk factors for HIV among MSM. We know for example, that infection with Syphilis can raise the risk of HIV infection or transmission by an estimated two to five times. In fact, in the United States, the Syphilis rate rose for five consecutive years through 2005, the most recent year for which CDC has national data. In the year 2001, MSM accounted for 7% of Syphilis cases, but in 2005, which is only four years later, MSM accounted for more than 60% of Syphilis cases. This increase in Syphilis among MSM could place them at higher risk for HIV/AIDS because Syphilis and HIV can be closely linked. The increases in new HIV cases that Patrick Sullivan talked about are also a major concern. Between 2003 and 2005, new HIV diagnoses increased 13% among MSM in the 33 states with confidential name-based HIV reporting. At this time, CDC is working to determine how much of this increase is due to increases in HIV testing or possibly in new infections. CDC will issue a report in the MMWR describing these data. And we have formed an internal work group to evaluate our public health response.

[Announcer] *To access the most accurate and relevant health information, that affects you, your family and your community, please visit www.cdc.gov.*