A Major HIV Risk Factor for Young Men Who Have Sex With Men Is Sex With Older Partners

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More than 50% of new HIV infections in the United States occur in men who have sex with men (MSM). Recent data from the Centers for Disease Control and Prevention has shown a resurgence of the HIV epidemic particularly in young MSM.1 The factors driving this recent rise in HIV infections have not yet been identified. In this issue, Hurt et al2 present striking data indicating that many young MSM in North Carolina are becoming infected with HIV because they have sex with older MSM. In their study, they found the MSM participants with recent HIV infection reported having sex with older partners. After stratifying on the age of the older partner Hurt et al2 found the risk for HIV infection was doubled when the partner was 5 years older [odds ratio (OR): 2.2, 95% confidence interval (CI): 1.2 to 3.3] and quadrupled when the partner was 10 years older (OR: 4.1, 95% CI: 1.5 to 11); the risk was calculated in comparison to the risk of HIV infection when the partner was the same (approximate) age as the participant.

The study by Hurt et al2 is particularly significant as it highlights the need to address the overlooked issue that age-mixing patterns can be very important in driving HIV epidemics. The potential effect of age mixing on HIV epidemiology was first suggested by Morris et al3–5 who analyzed data collected in the late 1980s from MSM who participated in the Longitudinal AIDS Project in New York City. Morris et al3 found that only 45% of sexual partnerships were with men in the same age class. They used the age-mixing network they identified to model the transmission of HIV, and they found that young MSM who had sex with older MSM were the leading edge of the epidemic in New York City. A few years later, a series of studies on HIV epidemics and age mixing was carried out by Blower et al.6,7 They used data which had been collected in the early 1990s for the San Francisco Men’s Health Study, and they analyzed age-based sexual mixing patterns for young MSM under 30 years of age. Their analysis showed the risk of infection doubled if the participant had sex with men who were older than 30 years and with men who were (approximately) their same age (OR: 2.3, 95% CI: 0.9 to 6.2).8 Furthermore, they found the risk of infection was more than 5 times greater if all of the participants partners were older than 30 years (OR: 5.4, 95% CI: 1.8 to 15.8). Taken together, the studies by Morris et al.3–7 Blower et al.6,7 and Hurt et al2 indicate that age mixing has been, and continues to be, a significant factor in driving HIV epidemics in MSM communities throughout the United States.

Selecting older sex partners is an important risk factor for HIV infection for young MSM because HIV prevalence is very age stratified. Figure 1 shows the prevalence data for MSM communities in Baltimore, Los Angeles, Miami, New York City, and San Francisco collected for the National HIV Behavioral Surveillance surveys in 2004–2005 by the Centers for Disease Control.9 Prevalence increases significantly with age; prevalence in older men (>30 years old) is almost twice as high as in younger MSM (<30 years old) (Fig. 1). Young MSM may seek older partners for a variety of reasons. However, it is important to note that age-mixing patterns are not simply a function of partner selection preferences but also reflect the age distribution of the MSM community. Even if age preferences do not exist, young MSMs are more likely to have sex with older men simply because a high proportion of MSM are older than 30 years. For example, Service and Blower10 calculated that young MSM in San Francisco in the mid-1990s were approximately 4 times more likely to choose an older partner than a partner their own age simply based on the age distribution of MSM.

The number of new infections is greatest in minorities; in their study, Hurt et al2 found although 40% of the participants in their study were nonwhite, 60% of the recent infections they found occurred in this group. Identification of age mixing as a significant risk factor for HIV infection in young MSMs has significant implications for public health and prevention strategies. Education and prevention programs should move beyond discussing traditional risk factors and concentrating only on safer sex messages. Programs should be tailored to different age classes and focus on both negatives and positives. Public health officials need to make MSM aware that age mixing is a risk factor for HIV infection. Furthermore, young MSM need to be told the magnitude of the risk of HIV infection due to age mixing in comparison with the magnitude of risk due to other traditional risk factors. It should be noted that in San Francisco in the mid-1990s young MSM who had only a few partners (but older partners) were more likely to be infected with HIV than young MSM who had multiple partners.8 All MSM,
particularly older men, should be encouraged to know their serostatus and receive regular testing; currently, a high proportion of older men are unaware of their serostatus (Fig. 1). Age mixing has been known to be a significant risk factor for HIV infection for young MSM for 15 years. However, public health officials have not yet acknowledged that age mixing can be a significant driver in HIV epidemics. Hopefully, the study by Hurt et al2 will cause this unacknowledged risk factor to receive the attention that it deserves. To develop more effective prevention strategies, it is essential to determine whether the recent rise in HIV infections in young MSM is due to specific age-mixing patterns or an increase in risky behavior.

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