POLICY FORUM: HEALTH CARE POLICY

U.S. Priorities–HIV Prevention

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A challenge in addressing the AIDS epidemic is how best to allocate prevention resources. Men who have sex with men (MSM) accounted for 46% of U.S. AIDS cases in 1999 and received 28% of HIV risk-reduction spending, whereas heterosexual transmission accounted for 17% of AIDS cases, and heterosexuals received 31% of risk reduction funding (*1*). The allocations would make more sense if one believes that the HIV epidemic is declining among MSM, and increasing among heterosexuals (*2*, *3*). We examine data that indicate that this is not the case, and a reconsideration of U.S. prevention priorities may be in order.

Multiple probability-based surveys conducted with MSM in San Francisco indicate that prevalence levels fell significantly after 1986 [Z test (1986 vs. 1997) = 5.52, $P < 0.005$) (Fig. 1). Mathematical modeling suggests that HIV prevalence fell in parallel fashion for MSM in other large urban centers (*4*, *5*). HIV incidence also declined in the 1980s but has remained constant over the past 10 years (Fig. 1), suggesting prevalence may have also been stable.

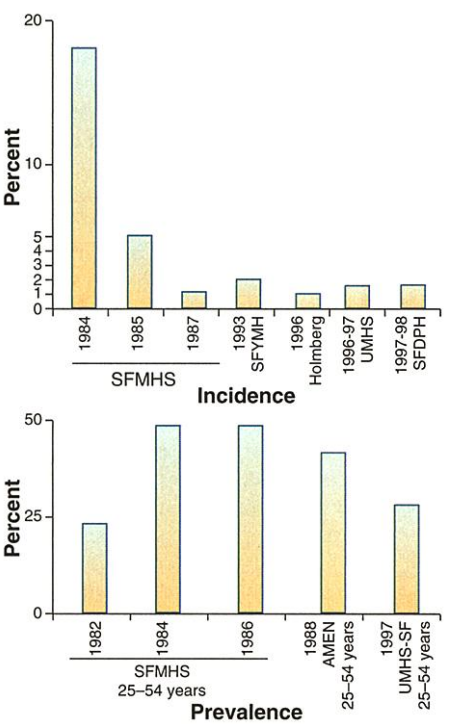

Fig. 1. MSM HIV prevalence and incidence. SFMHS, San Francisco Men's Health Study; SFYMH, San Francisco Young Men's Health Study; UMHS, Urban Men's Health Study; SFPDH, San Francisco Public Health Department; AMEN, AIDS in Multi-Ethnic Neighborhoods survey; UMHS-SF, San Francisco cohort of the UMHS (*5*, *17*).

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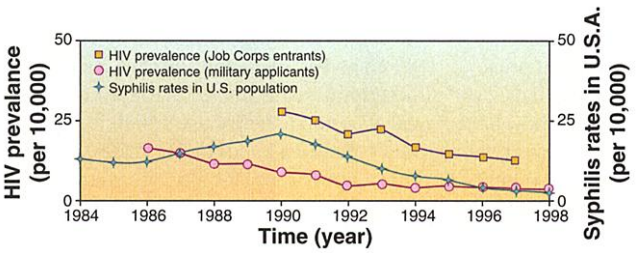

Fig. 2. Male HIV prevalence and general population syphilis rates. CDC data with authors' computations (*5*).

The two best surveys useful for estimating HIV prevalence among heterosexuals, particularly ethnic minorities, are the Job Corps and military applicants studies (*5*). HIV prevalence decreased significantly among males over the past decade (Fig. 2; all $P \leq 0.002$ for Cochran-Armitage trends test). Because men are more likely to transmit HIV to women than the reverse, declining male HIV rates should foreshadow declines in HIV among women. Indeed, there were significant declines in HIV prevalence in both surveys for women over the last decade ($P < 0.002$) (*5*).

Heterosexual transmission of HIV in the United States is linked to the HIV epidemic among injection drug users (IDUs), and to epidemics of other sexually transmitted diseases (*6*). Trends in HIV seroprevalence for heterosexuals are consistent with reported behavior change, such as increased condom use (*5*, *7*). They are also consistent, given a 5- to 6-year lag, with trends in incident AIDS cases (*2*, *8*) (Fig. 2). Although declines in incident AIDS cases may reflect treatment success (*9*), they began to occur in 1992, well in advance of the recommendation in 1997 to prescribe more highly successful antiretroviral regimens (*5*). A downward trend in HIV among heterosexuals is also consistent with observed declines in syphilis in the general population and HIV rates among IDUs (*10*, *11*) (Fig. 2).

HIV prevalence and incidence declined during the 1980s for urban MSM. However, HIV incidence reached a plateau for MSM over the past decade, and incidence and prevalence generally remain at very high levels. In contrast, heterosexual prevalence levels, which have always been very low (<1%), have declined over the past decade, suggesting that incidence has decreased during this time period. That these observations are discordant with current prevention allocations should cause us to reexamine resource allocation priorities.

Local communities face a major difficulty in knowing how to allocate prevention resources optimally, in that they typically lack high-quality HIV prevalence and incidence data as a guide (*12*).

Financial costs of collecting data present barriers to many local communities. However, oral HIV testing and "detuned" assays are methodological developments that reduce costs (*13*, *14*), and other cost reductions are possible (*15*, *16*). The United States has yet, however, to finance long-term HIV surveillance systems of high-risk populations that are based on current advances in scientific sampling. Unfortunately, greater emphasis is placed on HIV case-based reporting than on surveillance. The former is a window on the past; the latter is the much-needed window on the future.

References and Notes

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