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HIV: the millennium bug

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And the nominees are...

By the end of 1999 hundreds of “millennial” appellations were being sprouted. Should the field of microbiology have been included? Throughout the second millennium epidemics claimed vast numbers of lives — the bubonic plague killed 50 million people in the Middle Ages, and the influenza epidemic took 20–40 million lives in the years immediately following World War I.¹ But as modern medicine has produced ever-greater life expectancy in almost all areas of the world, few imagined a modern-day epidemic that would so significantly reverse this trend. Such has been the impact of HIV/AIDS around the world, particularly in sub-Saharan Africa.

In this issue (page 21) Steffanie A. Strathdee and colleagues² present data on HIV infection and associated high-risk behaviours among young gay and bisexual men in Vancouver. Their data serve to remind us that the monumental task of combatting this scourge is far from finished. Indeed, any complacency engendered by decreasing rates of HIV seroconversion, new AIDS cases and AIDS-related deaths must be challenged. Not only is the seroconversion rate unacceptably high in the authors’ bailiwick of the relatively well-educated gay male community in a rich industrialized country, but the greater tragedy has yet to unfold completely among the poor and uneducated people in Africa

and South Asia. Just as the effects of HIV/AIDS are greater in the poorer nations, the same issues of poverty and lack of education emerge as risk factors in the study by Strathdee and colleagues.

Since its identification by Western scientists in 1981, AIDS has claimed over 13 million lives.³ At least twice as many people are currently HIV-positive, most of them in impoverished countries with little hope of sharing in the pharmacological advances that are so readily available in Europe and North America. These grim numbers warrant HIV’s nomination as the “millennium bug.”

Remarkable advances in both our knowledge of HIV infection and effective therapies have produced dramatic reductions in the rates of AIDS and AIDS-related deaths. Yet, as is speculated by Strathdee and colleagues, these same successes may serve to increase the spread of HIV in their cohort. In the wealthier nations, they may also lull society into viewing HIV infection as a manageable chronic illness, with a reduced sense of urgency to continue funding research, patient support programs, and education and preventive strategies. As noted by the authors, this would be an unwise philosophy to espouse when evidence exists of increasing rates of seroconversion. In addition, therapies for HIV infection have high failure rates, whether because the drugs have failed or because individual patients have not adhered to the complex regimens.

In 1996 the world focused on Vancouver as the Xth International Conference on HIV/AIDS reported some of the best news heard yet, with the advent of highly active therapies and enthusiastic discussions of eradicating HIV. Later emerged horrendous reports of an epidemic rampant among injection drug users in that city. And now, Strathdee and colleagues warn that, even in Vancouver's young gay and bisexual male population, a group actively targeted over the last dozen years for risk reduction, both high-risk behaviours and new cases of HIV infection are occurring at an alarming rate.

The spectre of hospitals overflowing with HIV-positive patients afflicted by life-threatening opportunistic infections and diseases is indeed real. As the epidemic matures in the community of injection drug users, these individuals will probably need hospital care. Yet, adherence to complex regimens is less likely among poor people and injection drug users than among the highly motivated subjects in clinical trials, and the outcome will be less effective viral suppression. This may indeed overlap the resurgence of illness among other HIV-positive patients in whom therapies have failed.

So, as we begin the new year, let us not forget the nominees for millennium bug: bubonic plague, influenza, Y2K and HIV. One in particular seems destined to confront us well into the future.

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