



National HIV Prevention Conference

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[TITLE:] ESTIMATED HIV PREVALENCE IN THE UNITED STATES AT THE END OF 2003

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BACKGROUND: Routine surveillance data do not directly provide total HIV prevalence for the United States (U.S.), but can be used to estimate of the number of persons living with HIV/AIDS, both diagnosed and undiagnosed. Previous estimates stated 850,000-950,000 persons were living with HIV at the end of 2000, approximately 25% of whom did not know they were infected. These estimates, based on a variety of data sources, used projections that assumed a constant number of new HIV infections and AIDS deaths annually since 1998. Newer back-calculation methods take advantage of increasing availability of information on HIV detection before progression to AIDS. We present here the estimated number of persons living with HIV infection in the U.S. at the end of 2003, and the proportion which were undiagnosed, using two estimation methods.

METHODS: We estimated total HIV prevalence at the end of 2003 for the 50 States and the District of Columbia using two methods. Assuming stable HIV incidence and AIDS deaths, method A updated existing estimates of HIV prevalence at the end of 2000 with estimated annual new HIV infections, less estimated annual deaths. From the total HIV prevalence, we calculated the number undiagnosed cases by subtracting reported living diagnosed AIDS cases, and estimated diagnosed, living HIV (not AIDS) cases. We estimated diagnosed, living HIV (not AIDS) cases using a Poisson regression, generated with a dependent variable of the number of diagnosed HIV (not AIDS) cases in states with established HIV infection reporting to CDC, and with the independent variables of cumulative AIDS cases and deaths, case demographic and geographic characteristics, HIV exposure category, and the first year a state reported 30 cases of AIDS. In Method B, cumulative HIV incidence was estimated using a back-calculation model incorporating a standardized HIV infection to AIDS incubation period, time to first detection of HIV infection, and whether a case was detected as HIV and AIDS concurrently. The model

estimated both overall HIV prevalence and the proportion undiagnosed. Both methods used HIV/AIDS surveillance data reported to CDC through June 2004.

RESULTS: From method A, there were an estimated 925,000-1,025,000 persons living with HIV/AIDS at the end of 2003 in the U.S. Of these, 366,000 were persons diagnosed and living with HIV (not AIDS), 395,000 were persons living with AIDS, and 164,000-264,000 (18-26%) were unaware of their HIV infection. In method B, overall HIV estimated prevalence was 1,039,000-1,185,000. Of these, 417,000 persons were living with HIV (not AIDS), 415,000 were living with AIDS, and 252,000-312,000 (24-27%) were undiagnosed.

CONCLUSIONS: Using either estimation method, there were approximately one million persons living with HIV/AIDS in the U.S. at the end of 2003. Of these, approximately one quarter remain unaware of their HIV infection. Efforts must be continued to ensure that persons at risk for HIV find out their serostatus and are appropriately linked to care and prevention services. These results show that HIV/AIDS surveillance data, representing persons diagnosed with HIV infection, can be used to provide robust estimates of the overall HIV prevalence in the U.S.



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