

Review of the HIV/AIDS Epidemic in Michigan, 2001

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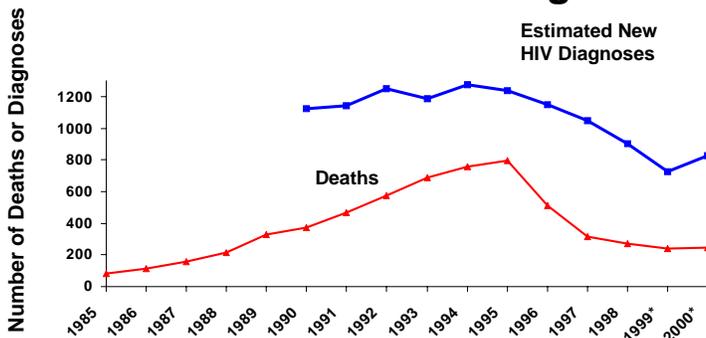
Global and National Overview

An estimated 5.3 million new HIV infections and 3.0 million HIV deaths occurred during 2000, bringing the worldwide total persons infected with HIV to 36 million. There have been a cumulative total of 22 million deaths since the beginning of the epidemic. About three-quarters of new cases and deaths were in south and central Africa, where transmission is predominately heterosexual (1).

In the United States the number of new infections remains at about 40,000 each year, while the number of deaths declined to about 15,500 in 2000. More than 450,000 persons have died from this epidemic since 1980. The number of deaths has declined because of new treatments that prolong life. As a result the total number of persons living in the U.S. with HIV infection has increased to more than 850,000 (2,3).

Michigan Deaths Continue to Decline, But New HIV Diagnoses Remain High

New Diagnoses of HIV Infection and HIV Deaths In Michigan

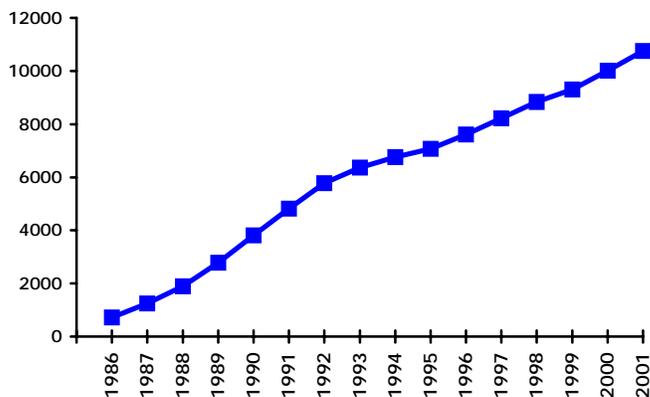


*Death data based on ICD-10 coding. Provisional comparability difference from ICD-9 codes is 6 percent.

The number of HIV-related deaths declined by two-thirds between 1995 and 2000 in Michigan and nationwide. The decline was marked among all groups, but was significantly greater among white males (78 percent) compared with black males (67 percent), and females (52 percent). The number of HIV related deaths declined significantly in 1996 and 1997, but decreased very little from 1998-2000. The decline in deaths is attributed to effective treatments that prolong life but do not eliminate HIV infection.

The number of persons newly diagnosed with HIV infection was roughly level between 1990 and 1997, but has decreased since that time (the slight increase from 1999 to 2000 has shown no significant trend). Some of this decrease may be related to reporting artifacts that can have a greater impact on trends in the more recent years. These new diagnoses include persons who learn of their HIV infection status after developing symptoms of AIDS. Each year, there are more new diagnoses of HIV infection than deaths. Therefore, the reported number of persons living with HIV/AIDS in Michigan is increasing (see graph below). MDCH now estimates that 15,500 residents are living with HIV infection in Michigan.

Reported Number of Michigan Residents Living with HIV or AIDS, 01/01/02



Trends in Diagnoses in Michigan, 1996-2000

New AIDS

In addition to reducing the number of deaths, medical treatments also delay the development of immune system changes and disease that constitute meeting the AIDS surveillance case definition. The number of new AIDS cases declined from about 900 cases in 1996 to 650 cases in 2000. This decline followed a similar pattern as the decline in deaths, with a sharp 36 percent drop in 1996 and 1997, and a smaller drop of 10 percent from 1998-2000. About one-quarter of persons with AIDS currently are diagnosed with HIV at the same time as their AIDS symptoms appeared. In order to further decrease the number of new AIDS cases, we need to continue efforts to get infected persons tested and into care early. In addition, treatments will need to become more effective and work for longer periods of time.

Trends in New Diagnoses of HIV Infection in Michigan, 1996-2000

Methods: In order to evaluate trends over time, we use the number of newly reported HIV-infected persons to estimate the number of persons diagnosed with HIV infection each year. We then determine if there was a statistically significant change between 1996 and 2000. The date of new HIV *diagnosis* does not tell us when a person was first *infected*, because their HIV diagnosis may take place months or years after infection. However, this is the best current measure of how fast the epidemic is spreading among different populations, and new incidence studies in the coming year will provide further information. The Centers for Disease Control and Prevention estimate that 70 percent of persons in the U.S. are currently aware of their HIV infection status; a concerted effort is underway to increase that proportion to 95 percent or higher (4).

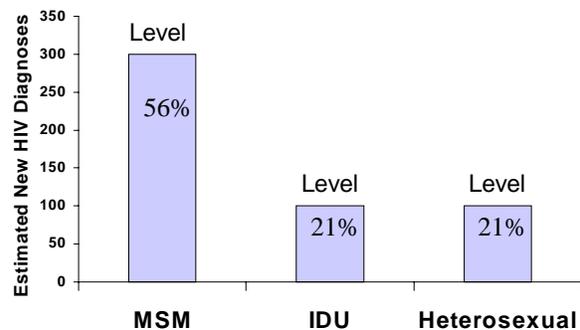
Overall: The total number of persons diagnosed with HIV infection was about 1,200 persons annually 1990 through 1996, and then declined to about 825 persons diagnosed in 2000. The profile of persons with newly diagnosed HIV-infection has not changed significantly between

1996 and 2000. The proportion remained stable among the different race and sex groups as well as by mode of transmission.

Risk Behavior for HIV Infection, 1996-2000:

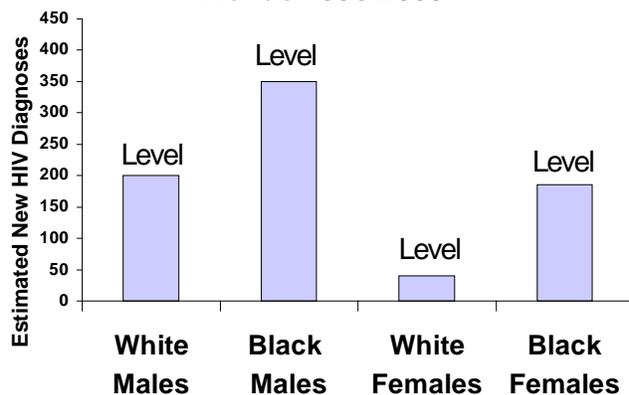
Among persons with a known risk for HIV transmission, the proportion infected heterosexually remained at 21 percent. New diagnoses also remained level in the IDU risk category at 21 percent. Finally, the proportion of new diagnoses among men who have sex with men remained at 56 percent of the total. New diagnoses are level among MSM who also inject drugs, however they are not shown in this graph. In addition, fewer than 1 percent of new diagnoses were among persons who first acquired infection from blood products received either before 1985 in the U.S. or in other countries.

Number of New HIV Diagnoses in 2000, and Trends 1996-2000



Race and Sex 1996-2000:

Number of New HIV Diagnoses in 2000, and Trends 1996-2000



The proportion of persons diagnosed with HIV infection remained unchanged by race and sex between 1996 and 2000. The proportion who are black males remained stable at 43 percent, white males remained at 24 percent, black females remained at 23 percent, and white females were unchanged at 5 percent of the total. The disproportionate impact of this epidemic among blacks is evident from these numbers. **Black females and black males combined make up 14 percent of the general population of Michigan but make up 66 percent of persons living with HIV infection.**

Residence 1996-2000:

The number of new HIV diagnoses is unchanged across different geographic areas of Michigan. About two-thirds of new diagnoses each year are among residents of southeast Michigan (Wayne, Oakland, and Macomb counties). One third are diagnosed among residents of the rest of the state.

Conclusions

HIV mortality has dropped markedly over the past six years. However, the total number of persons living with HIV infection is increasing annually because there are more new diagnoses than deaths. Recently, the number of new diagnoses of HIV infection has declined. This may be in part because prevention efforts have reduced the number of people who are infected but more study is needed to determine this.

References:

1. Joint United Nations Programme on HIV/AIDS. *AIDS epidemic update: December 2000*. For a complete copy of the report including graphics, visit: http://www.unaids.org/epidemic_update/report_dec00/index_dec.html
2. Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report*, Volume 12 (1), June 30, 2001. Available at <http://www.cdc.gov/hiv/stats/hasrlinc.htm>
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