HIV/AIDS Trends from 2000 to 2010

Every year the number of people living with HIV/AIDS has increased annually as new HIV infection diagnoses continue to exceed the number of deaths among people reported with HIV/AIDS. Since 2000, there are more people living with HIV/AIDS in Massachusetts and fewer people being diagnosed with HIV infection. From 2000 to 2010, the number of people living with HIV/AIDS increased by 42%. During the same time period the number of HIV infection diagnoses decreased by 45% and the number of deaths among people reported with HIV/AIDS decreased by 34%.

General Statistics

- As of December 31, 2011, a cumulative total of 30,790 individuals were diagnosed with HIV infection and reported in Massachusetts, with or without an AIDS diagnosis.
  - 41% (N=12,620) have died and 59% (N=18,170) are living with HIV/AIDS
  - As of December 31, 2011, there were 18,170 people living with HIV/AIDS who were diagnosed in Massachusetts. An additional 2,116 people living with HIV/AIDS in Massachusetts were first diagnosed in another state.
- Including estimates of Massachusetts residents infected with HIV who do not yet know their status, who have not been reported, or who were first reported in another state, there are 26,000 – 28,000 individuals currently living with HIV/AIDS in the Commonwealth.
  - An estimated 21% of people with HIV infection do not know their status

Who is currently living with HIV/AIDS?

- Forty-four percent of people living with HIV/AIDS in Massachusetts are white (non-Hispanic), 30% are black (non-Hispanic), 25% are Hispanic/Latino, 2% are Asian/Pacific Islander, and less than 1% are of other/undetermined race/ethnicity. To illustrate racial and ethnic disparities, black (non-Hispanic) individuals make up 6% and Hispanic/Latino individuals 8% of the total Massachusetts population.
- Male-to-male sex and injection drug use are the leading reported exposure risks for HIV infection among all people living with HIV/AIDS, accounting for 36% and 21% of all exposures, respectively.
  - Among males living with HIV/AIDS, 51% are white (non-Hispanic), 24% are black (non-Hispanic) and 23% are Hispanic/Latino.
  - Among females living with HIV/AIDS, 26% are white (non-Hispanic), 44% are black (non-Hispanic) and 28% are Hispanic/Latina.
Who is experiencing differential impact from HIV/AIDS?

- With age-adjusted prevalence rates of 1,512 and 1,162 cases per 100,000, black (non-Hispanic) and Hispanic/Latino populations are affected by HIV/AIDS at levels 11 and eight times that of white (non-Hispanic) individuals (137 per 100,000).

- With age-adjusted prevalence rates of 1,853 and 1,665 cases per 100,000, black (non-Hispanic) and Hispanic/Latino males are each affected by HIV/AIDS at levels eight and seven times that of white (non-Hispanic) males (233 per 100,000).

- With age-adjusted prevalence rates of 1,226 and 719 cases per 100,000 population, black (non-Hispanic) and Hispanic/Latina females are affected by HIV/AIDS at levels 26 and 15 times that of white (non-Hispanic) females (47 per 100,000).

Who is most at risk of HIV infection?

Trends in the distribution of HIV infection diagnoses from 2001 to 2010 are used to highlight populations at elevated risk of HIV infection. These trends, as well as the distribution of 1,994 people who were recently diagnosed with HIV infection within the three-year period 2008 to 2010, provide useful information for planning HIV prevention programs.

- The number of HIV diagnoses reported decreased annually from 985 in 2001 to 653 in 2009.

- As of January 1, 2012, 648 HIV diagnoses were reported for 2010.

- From 2001 to 2010, the distribution of people diagnosed with HIV infection by gender ranged from 68% to 75% male and 25% to 32% female.

- From 2001 to 2010, 38% to 43% of HIV diagnoses were reported in white (non-Hispanic) individuals; from 30% to 35% in black (non-Hispanic) individuals; and from 23% to 27% in Hispanic/Latino individuals.

- From 2001 to 2010, the proportion of HIV diagnoses where injection drug use was the mode of exposure decreased from 20% to 11%.

- Among individuals recently diagnosed with HIV infection (within the three-year period 2008 to 2010), male-to-male sex was the leading reported exposure mode, accounting for 40% of diagnoses, followed by people of undetermined risk (24%).

- Among males diagnosed with HIV infection, the proportion of HIV diagnoses with male-to-male sex as the primary reported exposure mode increased from 44% in 2001 to 51% in 2010.

- From 2001 to 2010, the proportion of HIV diagnoses among females exposed to HIV through reported sex with males of unknown risk and HIV status (presumed heterosexual sex) increased from 32% to 43%.

- From 2001 to 2010, the proportion of people born outside the US among those diagnosed with HIV infection remained between 29% and 33%.

- During the same time period the proportion of individuals born outside the US among females increased from 37% to 52%.

- Ninety-two percent of white (non-Hispanic) individuals diagnosed with HIV infection within the three-year period 2008 to 2010 were born in the US, compared to 48% of black (non-Hispanic) individuals and 32% of Hispanic/Latino individuals.
During the same time period, 51% of black (non-Hispanic) individuals diagnosed with HIV infection within the three-year period 2008 to 2010 were born outside the US, compared to 35% of Hispanic/Latino individuals and 8% of white (non-Hispanic) individuals. An additional 33% percent of Hispanic/Latino individuals diagnosed with HIV infection during this time period were born in Puerto Rico or another US Dependency, compared to less than one percent of both black (non-Hispanic) and white (non-Hispanic) individuals.

For the first time in recent years, the proportion of people concurrently diagnosed is similar for all regions of birth: 33% in people born outside the US, 31% in those born in the US and 28% in those born in Puerto Rico/US Dependency. In prior years, the proportion of concurrent diagnoses was much higher among those born outside the U.S. compared to those born in the U.S. or its dependencies.

How have patterns of AIDS diagnoses changed over time?

- After reaching a plateau of incidence approaching 900 new AIDS diagnoses each year from 1997 to 1999, reported AIDS incidence declined from 2000 to 2010, when 394 cases of AIDS were reported.
- From 2001 to 2010, the proportion of newly diagnosed AIDS cases among white (non-Hispanic) individuals ranged from 36% to 43%. The proportion of AIDS cases among Hispanic/Latino individuals from 2001 to 2010 ranged from 23% to 27%. The proportion among black (non-Hispanic) individuals ranged from 30% to 36% from 2001 to 2010.
- For 12 years, from 1992 through 2003, the number of new AIDS diagnoses with injection drug use as the reported exposure mode surpassed the number of AIDS diagnoses with male-to-male sex as the reported exposure mode (625 MSM vs. 668 IDU in 1992 and 145 MSM vs. 176 IDU in 2003). From 2004 through 2010, the trend reversed with the number of new AIDS diagnoses with male-to-male sex exceeding the number of those with injection drug use (178 MSM vs. 164 IDU in 2004 and 109 MSM vs. 79 IDU in 2010).

Who is dying with HIV/AIDS and how has this changed over time?

- After reaching a peak of 1,156 in 1994 (data not shown), deaths among people reported with AIDS declined each year until 1998, when there were 320 deaths. (Deaths in people reported with HIV infection [non-AIDS]iv are not available prior to 1999 because HIV infection was not a reportable condition before that time.)
- In 2010, the annual number of deaths of people reported with HIV (non-AIDS)iv and AIDS declined to a low of 232.
From 2001 to 2010, the proportion of deaths among males reported with HIV/AIDS ranged from 66% to 74% and among females from 26% to 34%.

From 2001 to 2010, the proportions of deaths among people reported with HIV/AIDS by race/ethnicity remained fairly stable with roughly half of deaths each year among white (non-Hispanic) individuals and roughly one quarter each among black (non-Hispanic) and Hispanic/Latino individuals.

From 2001 to 2010, the distribution of deaths among people reported with HIV/AIDS by exposure mode remained fairly stable, with roughly half of deaths each year in people with a primary reported risk of injection drug use and 15% to 23% in people with a risk of male-to-male sex.

From 2001 to 2010, the proportion of deaths among people reported with HIV/AIDS with a primary reported risk of heterosexual sex (with partners of known risk and/or HIV status) ranged from 6% to 12%; presumed heterosexual sex (female reporting sex with male of unknown risk and HIV status) from 2% to 6%; male-to-male sex and injection drug use (MSM/IDU) from 3% to 9%; other risks <1% to 2%; and undetermined exposures 7% to 14%.

Data Source

All HIV/AIDS Case Data: Massachusetts Department of Public Health (MDPH) HIV/AIDS Surveillance Program, Data as of 1/1/12

\[^{i}\] Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases who were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2012, this resulted in the removal of 2,924 HIV/AIDS cases, of which 808 have died and 2,116 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS surveillance system. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.


\[^{iii}\] Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH) HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 41% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

\[^{iv}\] People with HIV infection (non-AIDS) refers to those who were reported with an HIV infection diagnosis and did not progress to AIDS before death.