



Women at Risk of HIV Infection

Introduction

The proportion of HIV/AIDS cases among women in Massachusetts has increased over time. Currently, 27% (N=541) of people recently diagnosed and reported with HIV infection within the years 2008 to 2010 and 29% (5,253) of people known to be living with HIV/AIDS in Massachusetts as of December 31, 2011 are female. The number of females diagnosed with HIV infection increased by 14% from 2001 (N=299) to 2002 (N=342), decreased by 52% from 2002 to 2009 (N=164), and then increased by 16% to 191 diagnoses in 2010.

Regional Distribution:

- Among Health Service Regions (HSRs),ⁱⁱ the Central region has the largest proportion of women among those diagnosed with HIV infection within the three-year period 2008 to 2010, at 40%. Among people living with HIV/AIDS, the Central and Western regions have the largest proportions of women, at 38% and 37%, respectively.

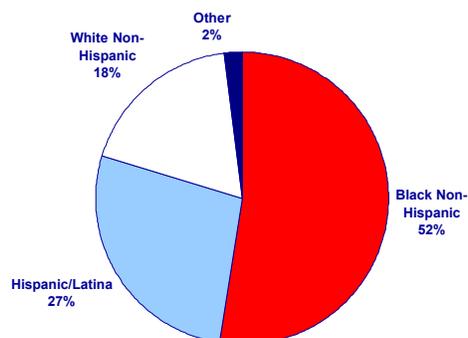
Among cities with over 20 people diagnosed with HIV infection within the three-year period 2008 to 2010, the following have the highest proportions of women (*NOTE: N indicates number of women reported as diagnosed with HIV infection*):

• Brockton	49.2%	(N=31)
• Worcester	44.3%	(N=43)
• Lawrence	43.1%	(N=22)
• Malden	38.2%	(N=13)
• Waltham	37.8%	(N=14)
• Lowell	35.6%	(N=21)
• Holyoke	35.5%	(N=11)
• New Bedford	32.4%	(N=11)
• Lynn	31.0%	(N=13)
• Springfield	30.9%	(N=30)

Race and Ethnicity:

- Among recent HIV infection diagnoses, 52% of women are black (non-Hispanic), compared to 26% of men; and 27% are Hispanic/Latina, compared to 24% of men.
- Similarly, among people living with HIV/AIDS, 44% of women are black (non-Hispanic), compared to 24% of men; and 28% are Hispanic/Latina, compared to 23% of men.

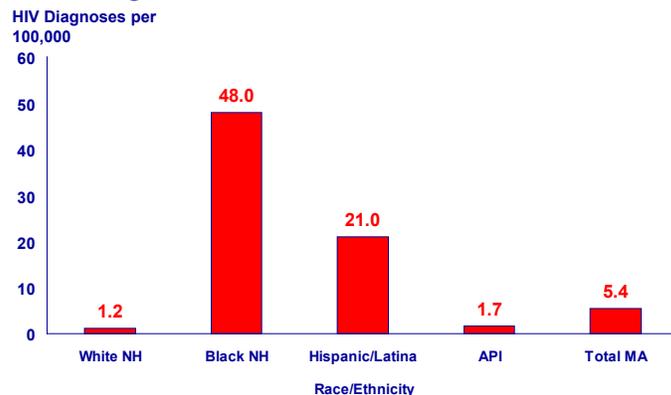
Figure 1. Females Diagnosed with HIV infection from 2008–2010 by Race/Ethnicity: Massachusetts



Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Disparate Impact: The age-adjusted average annual rate of HIV diagnosis from 2008 to 2010 among black (non-Hispanic) women (48.0 per 100,000) is 47 times greater, and among Hispanic/Latina women (21.0 per 100,000) is 18 times greater than for white (non-Hispanic) women (1.2 per 100,000).

Figure 2. Age-Adjusted Rate of HIV Infection Diagnosis per 100,000¹ Population Among Females by Race/Ethnicity: Average Annual Rate 2008–2010, Massachusetts



¹ Population sizes are from the Massachusetts Department of Public Health Modified Age, Race/Ethnicity, & Sex Estimates 2005; all rates are age-adjusted using the 2000 US standard population; NH= Non-Hispanic, API = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

- Similarly, the age-adjusted prevalence of HIV/AIDS (living with HIV/AIDS) among black (non-Hispanic) women (1,226.1 per 100,000) is 26 times greater and among Hispanic/Latina women (718.9 per 100,000) is 15 times greater than for white (non-Hispanic) women (46.9 per 100,000).





Women at Risk of HIV Infection

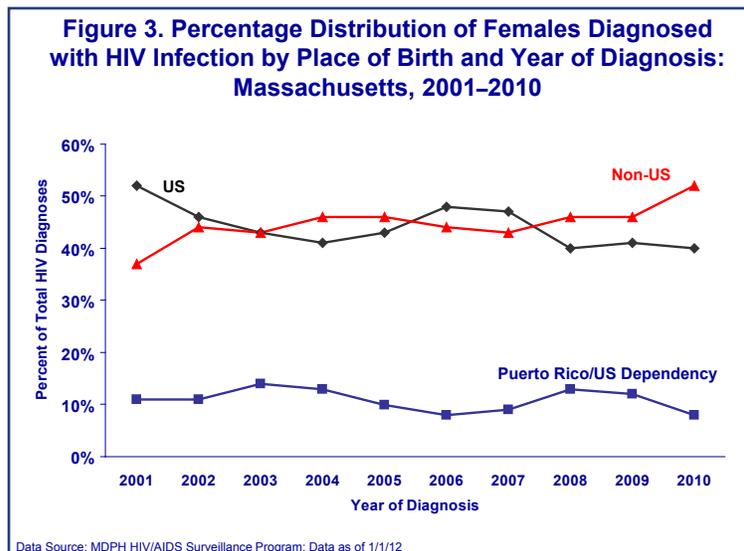
Place of Birth:

- Forty-eight percent of females diagnosed with HIV infection within the three-year period 2008 to 2010 were born outside the US, compared to 24% of males. Similarly, 33% of females living with HIV/AIDS were born outside the US, compared to 19% of males.
- From 2001 to 2010, the proportion of females born outside the U.S. among females diagnosed with HIV infection increased from 37% to 52%.

- For women living with HIV/AIDS on December 31, 2011, HIV exposure was reported in the following proportions:
 - 35% (N=1,844) heterosexual sex
 - 29% (N=1,520) presumed heterosexual sex
 - 25% (N=1,301) injection drug use
 - 4% (N=189) other modes (including blood or blood products and pediatric)
 - 8% (N=399) no identified risk

Exposure Mode and Race/Ethnicity:

- Among black (non-Hispanic) females, presumed heterosexual sex (female having sex with a male of unknown risk and/or HIV status) was the predominant exposure mode, accounting for 50% of females recently diagnosed with HIV infection and 42% of females living with HIV/AIDS.
- Among Hispanic/Latina females, heterosexual exposure (with partners with known risk and/or HIV status) and presumed heterosexual exposure (heterosexual sex with males of unknown risk or HIV status) account for 38% and 34%, respectively, of recently diagnosed HIV exposures. Among Hispanic/Latina females living with HIV/AIDS, heterosexual exposure (with partners with known risk and/or HIV status) is the predominant exposure mode, accounting for 43% of exposures.
- Among white (non-Hispanic) females, injection drug use and heterosexual exposure (heterosexual sex with partners with known risk and/or HIV status) account for 32% and 31%, respectively, of recently diagnosed HIV exposures. Among white (non-Hispanic) females living with HIV/AIDS, injection drug use is the predominant exposure mode, accounting for 45% of exposures.



Exposure Mode:

- For women diagnosed with HIV infection within the three-year period 2008 to 2010, HIV exposure was reported in the following proportions:
 - 32% (N=174) heterosexual sex (with partners with known risk and/or HIV status)
 - 40% (N=219) presumed heterosexual sex
 - 12% (N=65) injection drug use
 - 1% (N=7) other modes (including blood or blood products and pediatric)
 - 14% (N=76) no identified risk

Age at HIV Diagnosis:

- The majority (56%) of females diagnosed with HIV infection within the three-year period 2008 to 2010 were between the ages of 30 and 49 years old.

Women at Risk of HIV Infection:

Behavioral Risk Factors: According to behavioral surveys, females in Massachusetts are engaged in behaviors that place them at risk for HIV infection.





Massachusetts HIV/AIDS Data Fact Sheet

Women at Risk of HIV Infection

- Among 1,329 sexually active female respondents (age 18–64) to the 2010 Massachusetts Behavioral Risk Factor Surveillance Survey (BRFSS), 83% reported that a condom was not used at their last sexual encounter. Of these women, the main reason reported for not using a condom was being in a monogamous relationship (58%), followed by using another form of birth control (22%).
- Among school-aged female respondents to the 2011 Massachusetts Youth Risk Behavior Survey (YRBS), 39% reported ever having sexual intercourse, 2% reported having sexual intercourse before age 13, and 10% reported having four or more lifetime sexual partners. Among females who reported sexual intercourse in the three months before the survey, 51% reported condom use at last intercourse and 17% reported substance use at last intercourse.
- Between 1993 and 2011, the proportion of school-aged females reporting that they had ever had sex has ranged from 39% to 46%.
- The proportion of school-aged female respondents to the YRBS that reported condom use at last intercourse increased from 47% in 1993 to 59% in 2007, then decreased to 51% in 2011.

HIV-Related Morbidity and Mortality among Women:

AIDS Diagnoses: An AIDS diagnosis signifies disease progression and may be an indicator of treatment failure, limited access to medical care or delayed entry to medical care.

- From 2001 to 2010, the proportion of females among those diagnosed with AIDS fluctuated between 28% and 34%.

Mortality with AIDS:

- The proportion of female deaths among people diagnosed with AIDS fluctuated between 26% and 34% in the ten years from 2001 to 2010.

Data Sources:

HIV/AIDS Case Data: MDPH HIV/AIDS Surveillance Program; data as of January 1, 2012

BRFSS Data: Massachusetts Department of Public Health, Bureau of Center for Health Information, Statistics, Research and Evaluation, Behavioral Risk Factor Surveillance System

YRBS Data: Massachusetts Department of Elementary and Secondary Education, 2011 Youth Risk Behavior Survey Results

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.

ⁱⁱ HSRs are regions defined geographically to facilitate targeted health service planning. See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions. Reflects the health service region of a person's residence at the time of report (not necessarily current residence).

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-seven percent of females living with HIV/AIDS and 40% 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.



For detailed data tables and technical notes see Appendix
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