



## Women at Risk of HIV Infection

### Introduction

The proportion of HIV/AIDS cases among women has increased over time. Currently, 27% of people recently diagnosed and reported with HIV infection and 29% of people known to be living with HIV/AIDS in Massachusetts are women.

### General Statistics:

- Within the years 2006 to 2008, 537 women were diagnosed with HIV infection, accounting for 27% of all reported HIV diagnoses in Massachusetts.
- On December 31, 2009, there were 5,167 women living with HIV/AIDS, accounting for 29% of all people living with HIV/AIDS in Massachusetts.

### Regional Distribution:

- Among Health Service Regions (HSRs), the Central, Western and Northeast regions have the largest proportions of women among those diagnosed with HIV infection within the three-year period 2006 to 2008, at 40%, 36% and 31%, respectively. 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 2006 to 2008, the following report that women represent at least 40% among those with HIV infection (NOTE: N indicates number of women reported as diagnosed with HIV infection):

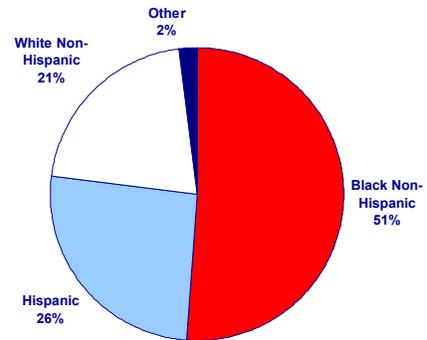
• Chicopee	55%	(N=11)
• Brockton	51%	(N=30)
• New Bedford	47%	(N=22)
• Worcester	46%	(N=49)
• Framingham	44%	(N=11)
• Holyoke	44%	(N=11)
• Lowell	41%	(N=19)
• Waltham	40%	(N=10)

### Race and Ethnicity:

- Among recent HIV infection diagnoses, 51% of women are black (non-Hispanic), compared to 23% of men; and 26% are Hispanic, compared to 25% of men.

Similarly, among people living with HIV/AIDS, 42% of women are black (non-Hispanic), compared to 23% of men; and 26% are Hispanic, compared to 24% of men.

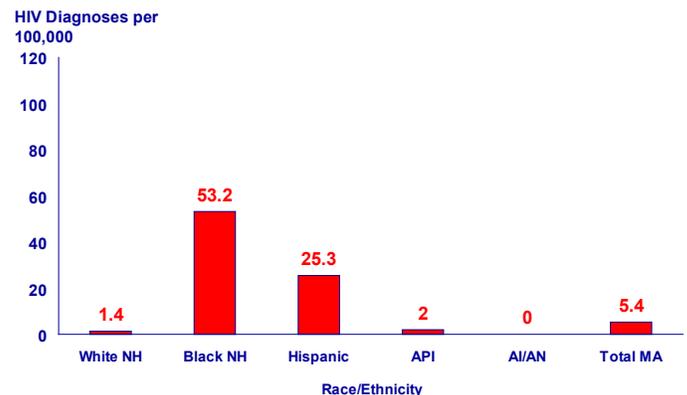
**Figure 1. Females Diagnosed with HIV infection from 2006–2008 by Race/Ethnicity: Massachusetts**



Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/10

- **Disparate Impact:** The age-adjusted average annual rate of HIV diagnosis from 2006 to 2008 among black (non-Hispanic) women (53.2 per 100,000) is 38 times greater, and among Hispanic women (25.3 per 100,000) is 18 times greater than for white (non-Hispanic) women (1.4 per 100,000).

**Figure 2. Age-Adjusted Rate of HIV Diagnosis per 100,000<sup>1</sup> Population Among Females by Race/Ethnicity: Average Annual Rate 2006–2008, Massachusetts**



<sup>1</sup> Population sizes for rate calculations are based on year 2000 population estimates from the MDPH Center for Health Information, Statistics, Research and Evaluation; NH= Non-Hispanic, API = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/10





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- Similarly, the age-adjusted prevalence of HIV/AIDS (living with HIV/AIDS) among black (non-Hispanic) women (1,337.7 per 100,000) is 27 times greater and among Hispanic women (901.7 per 100,000) is 18 times greater than for white (non-Hispanic) women (49.8 per 100,000).

### Place of Birth:

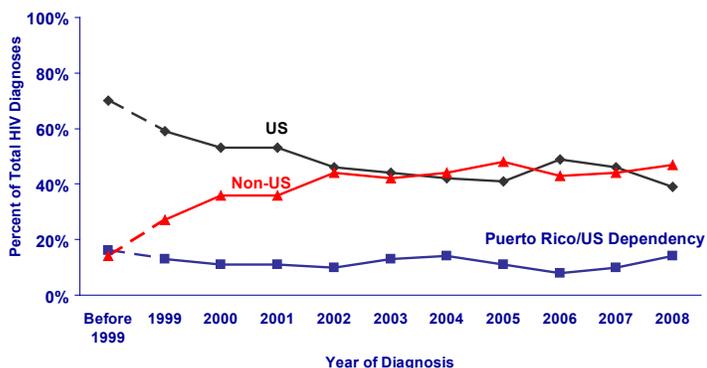
- Forty-four percent of females diagnosed with HIV infection within the three-year period 2006 to 2008 were born outside the US, compared to 24% of males. Similarly, 30% of females living with HIV/AIDS were born outside the US, compared to 17% of males.
- From 1999 to 2008, the proportion of females born outside the U.S. among females with HIV infection increased from 27% to 47%.

- For women living with HIV/AIDS on December 31, 2009, HIV exposure was reported in the following proportions:
  - 34% (N=1,737) heterosexual sex
  - 27% (N=1,381) injection drug use
  - 4% (N=189) other modes (including blood or blood products and pediatric)
  - 29% (N=1,493) presumed heterosexual sex
  - 7% (N=357) no identified risk

### Exposure Mode and Race/Ethnicity:

- Among **white (non-Hispanic) females**, injection drug use was the predominant exposure mode, attributed with HIV exposure in 38% of females recently diagnosed with HIV infection and 46% of females living with HIV/AIDS.
- Among **black (non-Hispanic) females**, presumed exposure through heterosexual sex with partners with unknown risk or HIV status (presumed heterosexual sex) was the predominant exposure mode, accounting for 60% of females recently diagnosed with HIV infection and 44% of females living with HIV/AIDS.
- Among **Hispanic females**, presumed exposure through heterosexual sex with partners with unknown risk or HIV status (presumed heterosexual sex) and heterosexual sex (with partners with known risk and/or HIV status) account for 33% and 32% of exposures among females recently diagnosed with HIV infection, respectively. Among Hispanic females living with HIV/AIDS, heterosexual sex (with partners with known risk and/or HIV status) is the predominant exposure mode, accounting for 43% of exposures.

**Figure 3. Percentage Distribution of Females Diagnosed with HIV Infection by Place of Birth and Year of Diagnosis: Massachusetts, Before 1999, 1999–2008**



Note: a dashed line is used to distinguish between pre-1999 data (which is an aggregate of multiple years) and annual data for subsequent years. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/10

### Exposure Mode:

- For women diagnosed with HIV infection within the three-year period 2006 to 2008, HIV exposure was reported in the following proportions:
  - 23% (N=123) heterosexual sex (with partners with known risk and/or HIV status)
  - 16% (N=87) injection drug use
  - 1% (N=5) other modes (including blood or blood products and pediatric)
  - 47% (N=250) presumed heterosexual sex<sup>i</sup>
  - 13% (N=72) no identified risk

### Age at HIV Diagnosis:

- A slightly larger proportion of females than males are diagnosed with HIV infection at younger ages.
- Eleven percent of females diagnosed with HIV infection within the three-year period 2006 to 2008 were diagnosed during adolescence (13–24 years), as compared to 9% of males.





# Massachusetts HIV/AIDS Data Fact Sheet

## Women at Risk of HIV Infection

### Women at Risk of HIV Infection:

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

- Among 1,944 sexually active female respondents (age 18–64) to the 2008 Massachusetts Behavioral Risk Factor Surveillance Survey (BRFSS), 83% (N=1,604) 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 (68%), followed by using another form of birth control (20%).
- Among school-aged female respondents to the 2007 Massachusetts Youth Risk Behavior Survey (MYRBS), 44% reported ever having sexual intercourse, 4% reported having sexual intercourse before age 13, and 11% reported having 4 or more lifetime sexual partners. Among females who reported sexual intercourse in the three months before the survey (N=1,493), 59% reported condom use at last intercourse and 22% reported substance use at last intercourse.
- The proportion of school-aged female respondents to the MYRBS that reported condom use at last intercourse increased from 47% in 1993 to 59% in 2007.
- Between 1993 and 2007, the proportion of school-aged females reporting that they ever had sex has ranged from 41% to 46%.

### 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 1999 to 2008, the proportion of females among those diagnosed with AIDS fluctuated between 27% and 33%.

### Mortality with AIDS:

- The proportion of female deaths among people diagnosed with AIDS fluctuated between 23% and 31% in the ten years from 1999 to 2008.

### Data Sources:

HIV/AIDS Case Data: MDPH HIV/AIDS Surveillance Program; data as of January 1, 2010

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, 2007 Youth Risk Behavior Survey Results

### Additional References of Interest:

Gentry QM, Elifson K, Sterk C. Aiming for more relevant HIV risk reduction: A black feminist perspective for enhancing HIV intervention for low-income African American women. *AIDS Educ Prev.* 2005;17(3):238–52.

Hader S, Smith DK, Moore JS, Holmberg SD. HIV infection in women in the United States: Status at the millennium. *JAMA* 2001;285:1186–92.

Ickovics JR, Beren SE, Grigorenko EL, Morrill AC, Druley JA, Rodin J. Pathways of risk: Race, social class, stress, and coping as factors predicting heterosexual risk behaviors for HIV among women. *AIDS and Behavior.* 2002;6:339–350.

McClelland GM, Teplin LA, Abram KM, Jacobs N. HIV and AIDS risk behaviors among female jail detainees: Implications for public health policy. *Am J Public Health.* 2002;92(5):818–25.

Pulerwitz J, Amaro H, De Jong W, Gortmaker SL, Rudd R. Relationship power, condom use and HIV risk among women in the USA. *AIDS Care.* 2002;14:789–800.

<sup>i</sup> **Note for interpretation of presumed heterosexual sex category:** The category of “presumed heterosexual” is used in Massachusetts to re-assign people who are reported with no identified risk but who are known to have not reported any other risks except heterosexual sex with a partner of unknown HIV status or risk. Massachusetts uses this category to distinguish these cases from other undetermined cases about which we know less. Nationally, the Centers for Disease Control and Prevention categorizes “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk is for people in this category. Although a person may not report other risk behaviors such as injection drug use or male-to-male sex to his/her health care provider, it does not necessarily mean that he/she has not engaged in them. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.



For detailed data tables and technical notes see Appendix  
Massachusetts Department of Public Health Office of HIV/AIDS  
250 Washington St. 3rd Floor Boston, MA 02108  
617-624-5300 FAX 617-624-5399 [www.mass.gov/dph/aids](http://www.mass.gov/dph/aids)

