



## Women at Risk of HIV Infection

### Introduction

The proportion of HIV/AIDS cases in Massachusetts in women has increased over time. Currently, 27% (N=532) of people diagnosed and reported with HIV infection within the years 2009 to 2011 and 29% (5,315) of people known to be living with HIV/AIDS in Massachusetts as of December 31, 2012 are female.<sup>1</sup> The annual number of females diagnosed with HIV infection decreased by 45% from 337 in 2002 to 184 in 2011.

### Regional Distribution:

- Among Health Service Regions (HSRs),<sup>ii</sup> the Central region has the largest proportion of women among those diagnosed with HIV infection within the three-year period 2009 to 2011, at 36% and among people living with HIV/AIDS at 38%.

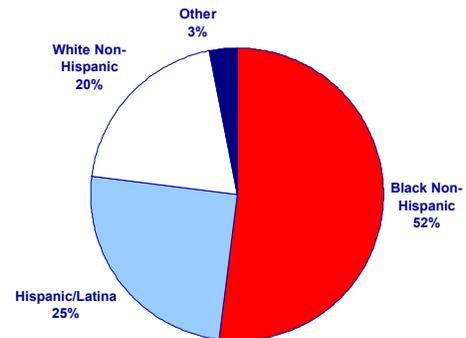
Among cities with over 20 people diagnosed with HIV infection within the three-year period 2009 to 2011, the following have the highest proportions of women (*NOTE: N indicates number of women reported as diagnosed with HIV infection*):

• Brockton	55%	(N=34)
• Lawrence	46%	(N=25)
• Malden	44%	(N=11)
• Lowell	42%	(N=22)
• Framingham	38%	(N=9)
• Worcester	36%	(N=31)
• Holyoke	34%	(N=11)
• Springfield	32%	(N=31)
• Waltham	31%	(N=11)
• Chelsea	30%	(N=7)

### Race and Ethnicity:

- Among recent HIV infection diagnoses in females, 52% are black (non-Hispanic), compared to 27% of men. Twenty-five percent of both men and women are Hispanic/Latino/a.
- Similarly, among people living with HIV/AIDS, 45% of women are black (non-Hispanic), compared to 24% of men; and 27% are Hispanic/Latina, compared to 23% of men.

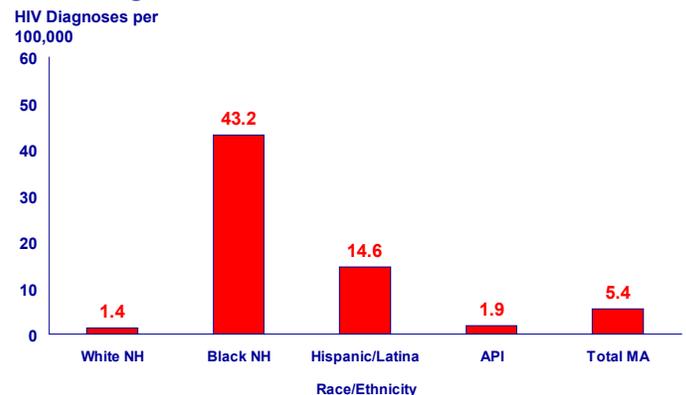
**Figure 1. Females Diagnosed with HIV infection from 2009–2011 by Race/Ethnicity: Massachusetts**



Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/13

**Disparate Impact:** The age-adjusted average annual rate of HIV diagnosis from 2009 to 2011 among black (non-Hispanic) women (43.2 per 100,000) is 31 times greater, and among Hispanic/Latina women (14.6 per 100,000) is 10 times greater than for white (non-Hispanic) women (1.4 per 100,000).

**Figure 2. Age-Adjusted Rate of HIV Infection Diagnosis per 100,000<sup>1</sup> Population Among Females by Race/Ethnicity: Average Annual Rate 2009–2011, Massachusetts**



<sup>1</sup> Population sizes are from the Massachusetts Department of Public Health Modified Age, Race/Ethnicity, & Sex Estimates 2010; 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 1/1/13

- Similarly, with age-adjusted prevalence rates of 1,124.2 and 557.1 cases per 100,000, black (non-Hispanic) and Hispanic/Latina females are affected by HIV/AIDS at levels 25 and 12 times that of white (non-Hispanic) females (45.8 per 100,000).





## Women at Risk of HIV Infection

### Place of Birth:

- Fifty percent of females diagnosed with HIV infection within the three-year period 2009 to 2011 were born outside the US, compared to 25% of males. Similarly, 34% of females living with HIV/AIDS were born outside the US, compared to 20% of males.
- From 2002 to 2011, the proportion of females born outside the U.S. among females diagnosed with HIV infection ranged from a low of 42% (in 2007) to a high of 54% (in 2010).

- For women living with HIV/AIDS on December 31, 2012, HIV exposure was reported in the following proportions:
  - 35% (N=1,865) heterosexual sex
  - 30% (N=1,600) presumed heterosexual sex
  - 24% (N=1,274) injection drug use
  - 3% (N=186) other modes (including blood or blood products and pediatric)
  - 7% (N=390) 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 49% of females recently diagnosed with HIV infection and 43% of females living with HIV/AIDS.
- Among Hispanic/Latina females, heterosexual exposure (with partners with known risk and/or HIV status) was the predominant exposure mode, accounting for 43% of both females recently diagnosed with HIV infection and living with HIV/AIDS.
- Among white (non-Hispanic) females, injection drug use was the predominant exposure mode, accounting for 35% of females recently diagnosed with HIV infection and 44% of females living with HIV/AIDS.

### Age at HIV Diagnosis:

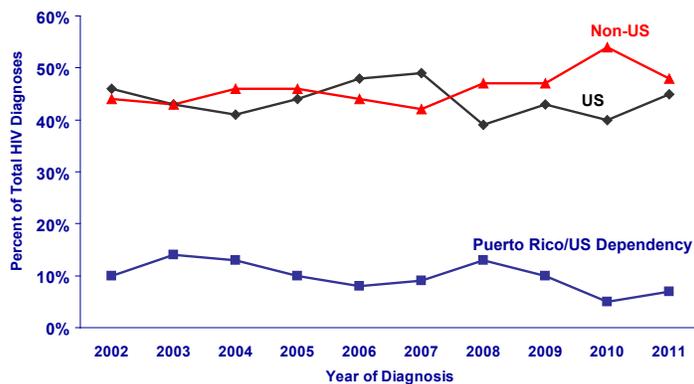
- The majority (57%) of females diagnosed with HIV infection within the three-year period 2009 to 2011 were between the ages of 30 and 49 years of age.

### 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.

- Among 1,555 sexually active female respondents (age 18–64) to the 2011 Massachusetts Behavioral Risk Factor Surveillance Survey (BRFSS), 76% 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 (73%), followed by using another form of birth control (18%).

**Figure 3. Percentage Distribution of Females Diagnosed with HIV Infection by Place of Birth and Year of Diagnosis: Massachusetts, 2002–2011**



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/13

### Exposure Mode:

- For women diagnosed with HIV infection within the three-year period 2009 to 2011, HIV exposure was reported in the following proportions:
  - 40% (N=215) presumed heterosexual sex<sup>iii</sup>
  - 33% (N=176) heterosexual sex (with partners with known risk and/or HIV status)
  - 11% (N=56) injection drug use
  - 2% (N=8) other modes (including blood or blood products and pediatric)
  - 14% (N=77) no identified risk





# Massachusetts HIV/AIDS Data Fact Sheet

## Women at Risk of HIV Infection

- 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 2002 to 2011, the proportion of females among those diagnosed with AIDS fluctuated between 29% and 34%.

### Mortality with AIDS

- The proportion of female deaths among people diagnosed with AIDS fluctuated between 27% and 34% in the ten years from 2002 to 2011.

### Data Sources

HIV/AIDS Case Data: Massachusetts Department of Public Health, HIV/AIDS Surveillance Program, all data as of 1/1/13

Counseling and Testing Data: Massachusetts Department of Public Health, Office of HIV/AIDS, Office of Research and Evaluation

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

<sup>i</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>ii</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). 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/eohhs/docs/dph/aids/2006-profiles/app-hrs-maps.pdf> for configuration of health service regions.

<sup>iii</sup> The category of presumed heterosexual is used exclusively for females, to define HIV exposure mode in cases when sex with males is the only reported risk factor for HIV infection.



For detailed data tables and technical notes see Appendix  
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