

## **The Massachusetts HIV/AIDS Epidemic at a Glance – Detailed Data Tables and Technical Notes:**

### **Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data**

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 that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2011, this resulted in the removal of 2,297 HIV/AIDS cases, of which 739 have died and 1,558 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.

Also 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.

### **Estimated total number of people living with HIV/AIDS:**

The U.S. Centers for Disease Control and Prevention (CDC) estimates that 21% of HIV infected persons nationwide do not know they are infected<sup>1</sup> (previous editions of the

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<sup>1</sup> Centers for Disease Control and Prevention. HIV Prevalence Estimates — United States, 2006. MMWR 2008;57:1073-1076.

Epidemiologic Profile estimated that about one-third of HIV-infected persons either did not know they were infected or were not in care). Applying the national estimate to the number of people living with HIV/AIDS in Massachusetts reported to the HIV/AIDS Surveillance Program (N = 17,621 as of December 31, 2010), and adjusting for completeness of reporting, would yield an estimated 5,511 people who are infected with HIV and do not know it, and 3,110 who know their status but have not been reported. Therefore, the estimated total number of people currently living with HIV/AIDS in Massachusetts, including people known to the surveillance system as well as those yet to be identified, is in the range of 25,000–27,000 people.

### **Caveats of the data**

While trends in diagnosis of HIV infection are our best indicator for those who are most at risk of HIV infection, HIV surveillance reflects the incidence of diagnoses among people who are in care and not the actual incidence of new infections. Like AIDS diagnoses, HIV infection diagnoses are not a direct measure of incidence of infection itself. People may be living with HIV infection for many years prior to being tested and seeking care, at which point the case is considered a “diagnosis” and reported to the MDPH HIV/AIDS Surveillance Program. Furthermore, as with early data for AIDS cases, the data from the first few years of a new reporting system can be unstable, and caution should be used in interpretation. During the time a reporting system is in its infancy, there is a greater likelihood that fluctuations in data are attributable to reporting patterns and clinician education efforts rather than actual changes in disease incidence.

Additionally, one must consider the effects of reporting lag when reviewing the 2009 HIV infection diagnoses. As Massachusetts providers who report HIV diagnoses were still transitioning as of January 1, 2007 from code to name-based reporting requirements, the 2009 HIV diagnosis data are less complete than one would typically expect by December 31, 2011. Although Massachusetts regulations require providers to submit HIV case reports in a timely fashion, many 2009 HIV infection diagnoses will be reported to the surveillance program after the release of this Epidemiologic Profile. Thus, the 2009 HIV data presented in this report may represent an undercount. Therefore, although the data that follow report a substantial decline in the number of HIV infection diagnoses in the past year, it is possible that the true incidence of HIV infection has declined only slightly. Previous analyses of Massachusetts HIV/AIDS case data have suggested that the distribution of HIV infection diagnoses by race/ethnicity, gender and exposure mode for cases reported more than 6 months after diagnosis was not substantially different than the distribution of HIV cases reported within 6 months. However, implementation of the new reporting system in 2007 may have led to differential reporting within these categories as providers serving various populations reported at different rates at the beginning of the new reporting system.

**Table 1. People living with HIV/AIDS<sup>1</sup>, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year<sup>2</sup>: 2000–2009, Massachusetts<sup>3</sup>**

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2000	12,734	350	1,193
2001	13,320	412	998
2002	14,016	360	1,056
2003	14,578	381	943
2004	15,156	345	923
2005	15,704	317	865
2006	16,144	315	756
2007	16,501	279	636
2008	16,854	266	619
2009	17,208	213	567

<sup>1</sup> Number of people living with HIV/AIDS on 12/31 of each year

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</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.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

**Table 2. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2010: Massachusetts<sup>2</sup>**

	N	%
People Living with HIV/AIDS	17,621	59%
People Reported with HIV or AIDS Who Are Deceased	12,356	41%
<b>Total Number of People Reported with HIV Infection or AIDS</b>	<b>29,977</b>	<b>100%</b>

<sup>1</sup> Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

<sup>2</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.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

## Who is currently living with HIV/AIDS in Massachusetts?

<b>Table 3. People living with HIV/AIDS on December 31, 2010 by gender, race/ethnicity, place of birth and health service region: Massachusetts<sup>1</sup></b>		
<b>People Living with HIV/AIDS on 12/31/10</b>		
<b>Gender:</b>	<b>N</b>	<b>%</b>
Male	12,549	71%
Female	5,072	29%
<b>Race/Ethnicity:</b>	<b>N</b>	<b>%</b>
White, non-Hispanic	7,810	44%
Black, non-Hispanic	5,141	29%
Hispanic/Latino	4,341	25%
Asian/Pacific Islander	248	1%
Other/Unknown	81	<1%
<b>Place of Birth:</b>	<b>N</b>	<b>%</b>
US	11,768	67%
Puerto Rico/US Dependency <sup>2</sup>	1,991	11%
Non-US	3,862	22%
<b>Health Service Region (HSR)<sup>3</sup>:</b>	<b>N</b>	<b>%</b>
Boston HSR	5,625	32%
Central HSR	1,535	9%
Metro West HSR	2,455	14%
Northeast HSR	2,671	15%
Southeast HSR	2,412	14%
Western HSR	1,978	11%
Prison <sup>4</sup>	941	5%
<b>Total<sup>5</sup></b>	<b>17,621</b>	<b>100%</b>

<sup>1</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>2</sup> Ninety-six percent of people living with HIV/AIDS who were born in a US Dependency were born in Puerto Rico, <1% were born in the US Virgin Islands, and 3% were born in an unknown dependency

<sup>3</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. The prisons category represents persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>5</sup> Total includes 10 people living with HIV/AIDS with unknown HSR; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 4. People living with HIV/AIDS on December 31, 2010 by exposure mode: Massachusetts<sup>1</sup>**

<b>People Living with HIV/AIDS on 12/31/10</b>		
<b>Exposure Mode:</b>	<b>N</b>	<b>%</b>
Male-to-male sex (MSM)	6,252	35%
Injection drug use (IDU)	3,920	22%
MSM/IDU	575	3%
Receipt of blood/blood products/other	87	<1%
Pediatric	325	2%
Total heterosexual sex (HTSX)	2,477	14%
• HTSX w/ an injection drug user	900	5%
• HTSX w/ bisexual male (females only)	43	<1%
• HTSX w/ a person w/ HIV or AIDS	31	<1%
• Other HTSX <sup>2</sup>	1,503	9%
Total undetermined/other	3,985	23%
• Presumed heterosexual sex <sup>3</sup>	1,490	8%
• Undetermined/other <sup>4</sup>	2,495	14%
<b>Total</b>	<b>17,621</b>	<b>100%</b>

<sup>1</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>2</sup> Includes heterosexual sex with a person who received blood/blood products.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

*Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign females who are reported with an exposure of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these female cases from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in males. The rationale for the application of the presumed heterosexual exposure mode category to females only has been addressed in the MDPH OHA report “Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts.” (2010) [http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting\\_risks.pdf](http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf). Nationally, the Centers for Disease Control and Prevention categorize “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 was for females in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.*

**Table 5. People living with HIV/AIDS on December 31, 2010 by gender and race/ethnicity: Massachusetts<sup>1</sup>**

Race/Ethnicity:	Male		Female	
	N	%	N	%
White, non-Hispanic	6,448	51%	1,362	27%
Black, non-Hispanic	2,935	23%	2,206	43%
Hispanic/Latino	2,921	23%	1,420	28%
Asian/Pacific Islander	192	2%	56	1%
Other/Unknown	53	<1%	28	1%
<b>Total</b>	<b>12,549</b>	<b>100%</b>	<b>5,072</b>	<b>100%</b>

<sup>1</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.  
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

## Who is experiencing differential impact from HIV/AIDS?

### Explanation of age adjusted rates

A “rate” of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2010 who are Hispanic/Latino, is 4,341 whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 7,810. Although the *number* of people living with HIV/AIDS who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic/Latino heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 8% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 81% of the population<sup>2</sup>. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be over 10 times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100,000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a “crude rate” and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

<sup>2</sup> The denominators for prevalence calculations are based on year 2005 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation

**Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (149.7 per 100,000)**

$$\begin{aligned} \text{Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals} &= (\text{number of white (non-Hispanic) individuals living with HIV/AIDS} \div \text{population size of white (non-Hispanic) individuals}) \times 100,000 \\ &= (7,810/5,215,472) \times 100,000 \\ &= (.0014974675) \times 100,000 \\ &= \mathbf{149.7} \end{aligned}$$

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to “age-adjust” the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

**Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (136.1 per 100,000)**

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>Age group (in years)</i>	<i># of prevalent HIV/AIDS cases</i>	<i>Population (2005)</i>	<i>2000 US standard population weight</i>	<i>Age-adjusted rate ((B÷CxD)×100,000)</i>
<1	0	57,670	0.013818	0.00
1-4	0	230,681	0.055317	0.00
5-14	10	614,485	0.145565	0.24
15-24	124	646,026	0.138646	2.66
25-34	549	636,970	0.135573	11.68
35-44	1927	823,238	0.162613	38.06
45-54	3494	818,844	0.134834	57.53
55-64	1400	601,053	0.087247	20.32
65-74	268	352,672	0.066037	5.02
75-84	37	299,510	0.044842	0.55
85+ years	1	134,323	0.015508	0.01
<b>Total</b>	<b>7,810</b>	<b>5,215,472</b>	<b>1.000000</b>	<b>136.1</b>

To see the effect of age-distribution on prevalence rates see Table 6 below for a comparison of crude and age-adjusted rates by race/ethnicity.

<b>Table 6. Crude and age-adjusted HIV/AIDS prevalence per 100,000 population<sup>1</sup> on December 31, 2010 by race/ethnicity and gender: Massachusetts<sup>2</sup></b>		
<b>State Total:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	149.7	136.1
Black, non-Hispanic	1,322.6	1,424.3
Hispanic/Latino	857.7	1,089.5
Asian/Pacific Islander	79.5	82.2
American Indian/Alaskan Native	163.0	149.6
<b>Total prevalence</b>	<b>273.7</b>	<b>259.4</b>
<b>Males:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic males	256.0	229.9
Black, non-Hispanic males	1,556.6	1,747.2
Hispanic/Latino males	1,155.2	1,560.8
Asian/Pacific Islander males	125.2	130.2
American Indian/Alaskan Native males	193.3	174.5
<b>Total prevalence among males</b>	<b>402.1</b>	<b>378.0</b>
<b>Females:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic females	50.5	47.4
Black, non-Hispanic females	1,102.1	1,150.1
Hispanic/Latina females	560.7	670.5
Asian/Pacific Islander females	35.3	36.1
American Indian/Alaskan Native females	133.6	125.2
<b>Total prevalence among females</b>	<b>152.9</b>	<b>147.8</b>
<sup>1</sup> The denominators for prevalence calculations are based on year 2005 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation. <sup>2</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. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/11		

## Who is most at risk of HIV infection and how has this changed over time?

**Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	Male		Female		Total
	N	%	N	%	
2000	833	70%	360	30%	1,193
2001	699	70%	299	30%	998
2002	715	68%	341	32%	1,056
2003	641	68%	302	32%	943
2004	651	71%	272	29%	923
2005	632	73%	233	27%	865
2006	545	72%	211	28%	756
2007	457	72%	179	28%	636
2008	458	74%	161	26%	619
2009	427	75%	140	25%	567

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	White NH		Black NH		Hispanic/ Latino		API		Other/Und.		Total N
	N	%	N	%	N	%	N	%	N	%	
2000	462	39%	420	35%	280	23%	26	2%	5	<1%	1,193
2001	412	41%	326	33%	233	23%	24	2%	3	<1%	998
2002	405	38%	371	35%	251	24%	23	2%	6	1%	1,056
2003	380	40%	318	34%	226	24%	12	1%	7	1%	943
2004	363	39%	304	33%	239	26%	13	1%	4	<1%	923
2005	345	40%	290	34%	213	25%	17	2%	0	0%	865
2006	324	43%	227	30%	187	25%	14	2%	4	1%	756
2007	261	41%	203	32%	159	25%	12	2%	1	<1%	636
2008	254	41%	205	33%	135	22%	20	3%	5	1%	619
2009	228	40%	187	33%	139	25%	12	2%	1	<1%	567

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

NH = Non-Hispanic, API = Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 9. Males diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	White NH		Black NH		Hispanic/ Latino		API		Other/Und.		Total N
	N	%	N	%	N	%	N	%	N	%	
2000	383	46%	235	28%	187	22%	24	3%	4	<1%	<b>833</b>
2001	336	48%	178	25%	163	23%	19	3%	3	<1%	<b>699</b>
2002	333	47%	196	27%	166	23%	17	2%	3	<1%	<b>715</b>
2003	319	50%	166	26%	143	22%	8	1%	5	1%	<b>641</b>
2004	316	49%	166	25%	156	24%	10	2%	3	<1%	<b>651</b>
2005	306	48%	164	26%	148	23%	14	2%	0	0%	<b>632</b>
2006	280	51%	117	21%	134	25%	11	2%	3	1%	<b>545</b>
2007	219	48%	118	26%	111	24%	8	2%	1	<1%	<b>457</b>
2008	225	49%	119	26%	93	20%	17	4%	4	1%	<b>458</b>
2009	199	47%	117	27%	100	23%	11	3%	0	0%	<b>427</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

NH = Non-Hispanic, API = Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 10. Females diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	White NH		Black NH		Hispanic/ Latina		API		Other/Und.		Total N
	N	%	N	%	N	%	N	%	N	%	
2000	79	22%	185	51%	93	26%	2	1%	1	<1%	<b>360</b>
2001	76	25%	148	49%	70	23%	5	2%	0	0%	<b>299</b>
2002	72	21%	175	51%	85	25%	6	2%	3	1%	<b>341</b>
2003	61	20%	152	50%	83	27%	4	1%	2	1%	<b>302</b>
2004	47	17%	138	51%	83	31%	3	1%	1	<1%	<b>272</b>
2005	39	17%	126	54%	65	28%	3	1%	0	0%	<b>233</b>
2006	44	21%	110	52%	53	25%	3	1%	1	<1%	<b>211</b>
2007	42	23%	85	47%	48	27%	4	2%	0	0%	<b>179</b>
2008	29	18%	86	53%	42	26%	3	2%	1	1%	<b>161</b>
2009	29	21%	70	50%	39	28%	1	1%	1	1%	<b>140</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

NH = Non-Hispanic, API = Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 11. People diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>3</sup>		Undeter- mined <sup>4</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2000	352	30%	262	22%	30	3%	199	17%	21	2%	124	10%	205	17%	<b>1,193</b>
2001	308	31%	195	20%	29	3%	171	17%	15	2%	100	10%	180	18%	<b>998</b>
2002	325	31%	194	18%	26	2%	183	17%	7	1%	121	11%	200	19%	<b>1,056</b>
2003	314	33%	150	16%	26	3%	124	13%	13	1%	132	14%	184	20%	<b>943</b>
2004	302	33%	141	15%	23	2%	123	13%	12	1%	117	13%	205	22%	<b>923</b>
2005	336	39%	115	13%	22	3%	106	12%	5	1%	97	11%	184	21%	<b>865</b>
2006	316	42%	93	12%	15	2%	93	12%	5	1%	95	13%	139	18%	<b>756</b>
2007	244	38%	83	13%	19	3%	75	12%	4	1%	71	11%	140	22%	<b>636</b>
2008	259	42%	56	9%	25	4%	77	12%	4	1%	66	11%	132	21%	<b>619</b>
2009	241	43%	33	6%	14	2%	62	11%	2	<1%	61	11%	154	27%	<b>567</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 12. Males diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Undeter- mined <sup>3</sup>		Total N
	N	%	N	%	N	%	N	%	N	%	N	%	
2000	352	42%	184	22%	30	4%	65	8%	12	1%	190	23%	<b>833</b>
2001	308	44%	134	19%	29	4%	71	10%	6	1%	151	22%	<b>699</b>
2002	325	45%	136	19%	26	4%	57	8%	5	1%	166	23%	<b>715</b>
2003	314	49%	102	16%	26	4%	42	7%	10	2%	147	23%	<b>641</b>
2004	302	46%	95	15%	23	4%	48	7%	5	1%	178	27%	<b>651</b>
2005	336	53%	85	13%	22	3%	32	5%	0	0%	157	25%	<b>632</b>
2006	316	58%	50	9%	15	3%	41	8%	2	<1%	121	22%	<b>545</b>
2007	244	53%	54	12%	19	4%	25	5%	2	<1%	113	25%	<b>457</b>
2008	259	57%	34	7%	25	5%	24	5%	4	1%	112	24%	<b>458</b>
2009	241	56%	20	5%	14	3%	21	5%	1	<1%	130	30%	<b>427</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex  
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 13. Females diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	IDU		HTSX		Other		Pres. HTSX <sup>3</sup>		Undeter-mined <sup>4</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N
2000	78	22%	134	37%	9	3%	124	34%	15	4%	<b>360</b>
2001	61	20%	100	33%	9	3%	100	33%	29	10%	<b>299</b>
2002	58	17%	126	37%	2	1%	121	35%	34	10%	<b>341</b>
2003	48	16%	82	27%	3	1%	132	44%	37	12%	<b>302</b>
2004	46	17%	75	28%	7	3%	117	43%	27	10%	<b>272</b>
2005	30	13%	74	32%	5	2%	97	42%	27	12%	<b>233</b>
2006	43	20%	52	25%	3	1%	95	45%	18	9%	<b>211</b>
2007	29	16%	50	28%	2	1%	71	40%	27	15%	<b>179</b>
2008	22	14%	53	33%	0	0%	66	41%	20	12%	<b>161</b>
2009	13	9%	41	29%	1	1%	61	44%	24	17%	<b>140</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 14. People diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2000	749	63%	133	11%	311	26%	<b>1,193</b>
2001	615	62%	107	11%	276	28%	<b>998</b>
2002	616	58%	97	9%	343	32%	<b>1,056</b>
2003	573	61%	93	10%	277	29%	<b>943</b>
2004	566	61%	98	11%	259	28%	<b>923</b>
2005	517	60%	75	9%	273	32%	<b>865</b>
2006	471	62%	64	8%	221	29%	<b>756</b>
2007	381	60%	53	8%	202	32%	<b>636</b>
2008	384	62%	52	8%	183	30%	<b>619</b>
2009	349	62%	46	8%	172	30%	<b>567</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 15. Males diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2000	560	67%	94	11%	179	21%	<b>833</b>
2001	454	65%	77	11%	168	24%	<b>699</b>
2002	460	64%	63	9%	192	27%	<b>715</b>
2003	442	69%	52	8%	147	23%	<b>641</b>
2004	452	69%	61	9%	138	21%	<b>651</b>
2005	419	66%	51	8%	162	26%	<b>632</b>
2006	367	67%	47	9%	131	24%	<b>545</b>
2007	301	66%	36	8%	120	26%	<b>457</b>
2008	319	70%	32	7%	107	23%	<b>458</b>
2009	289	68%	31	7%	107	25%	<b>427</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 16. Females diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup>, 2000–2009<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2000	189	53%	39	11%	132	37%	<b>360</b>
2001	161	54%	30	10%	108	36%	<b>299</b>
2002	156	46%	34	10%	151	44%	<b>341</b>
2003	131	43%	41	14%	130	43%	<b>302</b>
2004	114	42%	37	14%	121	44%	<b>272</b>
2005	98	42%	24	10%	111	48%	<b>233</b>
2006	104	49%	17	8%	90	43%	<b>211</b>
2007	80	45%	17	9%	82	46%	<b>179</b>
2008	65	40%	20	12%	76	47%	<b>161</b>
2009	60	43%	15	11%	65	46%	<b>140</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 17. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2007–2009<sup>3</sup>**

Race/Ethnicity:	US		Puerto Rico/ US Dependency <sup>4</sup>		Non-US		Total
	N	%	N	%	N	%	N
White NH	685	92%	1	<1%	57	8%	<b>743</b>
Black NH	274	46%	2	<1%	319	54%	<b>595</b>
Hispanic/Latino	139	32%	148	34%	146	34%	<b>433</b>
API	11	25%	0	0%	33	75%	<b>44</b>

<sup>1</sup> Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</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>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Ninety-nine percent of people diagnosed with HIV infection from 2007–2009 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and <1% were born in Guam.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 18. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts<sup>1</sup>, 2007–2009<sup>2</sup>**

Race/Ethnicity:	Male		Female		State Total	
	N	%	N	%	N	%
White NH	643	48%	100	21%	743	41%
Black NH	354	26%	241	50%	595	33%
Hispanic/Latino	304	23%	129	27%	433	24%
API	36	3%	8	2%	44	2%
Other/Unknown	5	<1%	2	<1%	7	<1%
<b>Total</b>	<b>1,342</b>	<b>100%</b>	<b>480</b>	<b>100%</b>	<b>1,822</b>	<b>100%</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding). Data as of 1/1/11

**Table 19. People diagnosed with HIV infection by gender and exposure mode: Massachusetts<sup>1</sup>, 2007–2009<sup>2</sup>**

Exposure Mode:	Male		Female		State Total	
	N	%	N	%	N	%
Male-to-male sex (MSM)	744	55%	N/A	N/A	744	41%
Injection drug use (IDU)	108	8%	64	13%	172	9%
MSM/IDU	58	4%	N/A	N/A	58	3%
Heterosexual sex	70	5%	144	30%	214	12%
Other	7	1%	3	1%	10	1%
Total undetermined/other	355	26%	269	56%	624	34%
- Pres. HTSX <sup>3</sup>	N/A	N/A	198	41%	198	11%
- Undetermined <sup>4</sup>	355	26%	71	15%	426	23%
<b>Total</b>	<b>1,342</b>	<b>100%</b>	<b>480</b>	<b>100%</b>	<b>1,822</b>	<b>100%</b>

<sup>1</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>2</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

Pres. HTSX = Presumed Heterosexual Sex; N/A = Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Who is infected with HIV but does not yet know?  
(Concurrent Diagnoses)**

**Table 20. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by place of birth: Massachusetts<sup>1</sup>, 2007–2009<sup>2</sup>**

	HIV and AIDS Diagnosed within 2 Months	All HIV Infection Diagnoses	% Diagnosed with HIV and AIDS within 2 Months
Place of Birth:	N	N	%
United States	334	1114	30%
Puerto Rico/US Dependency <sup>3</sup>	50	151	33%
Non-US	208	557	37%
<b>Total</b>	<b>592</b>	<b>1,822</b>	<b>32%</b>

<sup>1</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>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-nine percent of people diagnosed with HIV infection from 2007–2009 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and <1% were born in Guam.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

## How have patterns of AIDS diagnoses changed over time?

**Table 21. Reported AIDS cases, by race/ethnicity and year of diagnosis: Massachusetts, selected years, 1985–2009<sup>1</sup>**

	White NH		Black NH		Hispanic/ Latino		API		Other/Und.		Total
	N	%	N	%	N	%	N	%	N	%	N
1985	151	67%	51	23%	22	10%	1	<1%	0	0%	<b>225</b>
1990	635	60%	232	22%	176	17%	4	<1%	3	<1%	<b>1,050</b>
1995	703	53%	307	23%	303	23%	5	<1%	6	<1%	<b>1,324</b>
2000	293	39%	247	33%	196	26%	17	2%	1	<1%	<b>754</b>
2001	293	43%	221	32%	161	23%	10	1%	1	<1%	<b>686</b>
2002	255	38%	222	33%	177	26%	15	2%	1	<1%	<b>670</b>
2003	233	41%	194	34%	142	25%	5	1%	1	<1%	<b>575</b>
2004	277	43%	192	30%	166	26%	5	1%	1	<1%	<b>641</b>
2005	238	37%	220	35%	163	26%	15	2%	0	0%	<b>636</b>
2006	243	41%	184	31%	152	26%	11	2%	2	<1%	<b>592</b>
2007	187	39%	156	32%	132	27%	7	1%	2	<1%	<b>484</b>
2008	135	35%	134	35%	95	25%	12	3%	5	1%	<b>381</b>
2009	133	39%	110	32%	91	27%	5	1%	1	<1%	<b>340</b>

<sup>1</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.

NH = Non-Hispanic, API = Asian/Pacific Islander, Other/Und/ = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 22. Reported AIDS cases by exposure mode and year of diagnosis: Massachusetts, selected years, 1985–2009<sup>1</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
1985	140	62%	33	15%	11	5%	8	4%	10	4%	7	3%	16	7%	<b>225</b>
1990	459	44%	339	32%	43	4%	72	7%	55	5%	17	2%	65	6%	<b>1,050</b>
1995	410	31%	540	41%	62	5%	157	12%	31	2%	31	2%	93	7%	<b>1,324</b>
2000	169	22%	254	34%	19	3%	126	17%	10	1%	57	8%	119	16%	<b>754</b>
2001	167	24%	198	29%	28	4%	110	16%	12	2%	65	9%	106	15%	<b>686</b>
2002	163	24%	186	28%	21	3%	112	17%	10	1%	57	9%	121	18%	<b>670</b>
2003	141	25%	170	30%	19	3%	81	14%	7	1%	62	11%	95	17%	<b>575</b>
2004	164	26%	157	24%	20	3%	87	14%	11	2%	64	10%	138	22%	<b>641</b>
2005	180	28%	168	26%	18	3%	90	14%	4	1%	51	8%	125	20%	<b>636</b>
2006	200	34%	110	19%	15	3%	92	16%	6	1%	71	12%	98	17%	<b>592</b>
2007	151	31%	104	21%	13	3%	74	15%	9	2%	49	10%	84	17%	<b>484</b>
2008	125	33%	68	18%	15	4%	45	12%	2	1%	39	10%	87	23%	<b>381</b>
2009	122	36%	56	16%	7	2%	41	12%	1	0%	35	10%	78	23%	<b>340</b>

<sup>1</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>2</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

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

The death data presented in this analysis includes all deaths among people reported with HIV infection and those with AIDS in Massachusetts to present a full description of trends in mortality among this population. This includes a small number of deaths from non-HIV/AIDS related causes such as drug overdoses, suicides, motor vehicle accidents and other causes. Therefore, the total number of annual deaths reported here will vary from the number of HIV/AIDS-related deaths reported in *Massachusetts Deaths* by the Massachusetts Department of Public Health, Registry of Vital Records and Statistics, Bureau of Health Information, Statistics, Research and Evaluation.

**Table 23. Deaths among persons reported with HIV infection (non-AIDS) and AIDS by year of death: Massachusetts, selected years, 1985–2009<sup>1</sup>**

	HIV	AIDS	Total HIV + AIDS
Year of death	N	N	
1985	-- <sup>2</sup>	118	118
1990	-- <sup>2</sup>	617	617
1995	-- <sup>2</sup>	1,133	1,133
2000	38	312	350
2001	56	356	412
2002	50	310	360
2003	63	318	381
2004	48	297	345
2005	48	269	317
2006	42	273	315
2007	45	234	279
2008	59	207	266
2009	38	175	213

<sup>1</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>2</sup> HIV infection reporting was implemented in 1999; therefore there are no data for deaths among people with HIV that did not progress to AIDS during this time period.

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 24. Deaths among persons reported with HIV/AIDS by gender and year of death: Massachusetts<sup>1</sup>, 2000–2009**

Year of death	Male		Female		Total
	N	%	N	%	N
2000	256	73%	94	27%	350
2001	290	70%	122	30%	412
2002	257	71%	103	29%	360
2003	249	65%	132	35%	381
2004	258	75%	87	25%	345
2005	220	69%	97	31%	317
2006	227	72%	88	28%	315
2007	196	70%	83	30%	279
2008	193	73%	73	27%	266
2009	145	68%	68	32%	213

<sup>1</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.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 25. Deaths among persons reported with HIV/AIDS by race/ethnicity and year of death: Massachusetts<sup>1</sup>, 2000–2009**

Year of Death	White NH		Black NH		Hispanic/Latino		API		Other/Und.		Total
	N	%	N	%	N	%	N	%	N	%	N
2000	180	51%	84	24%	83	24%	2	1%	1	<1%	350
2001	218	53%	114	28%	79	19%	0	0%	1	<1%	412
2002	174	48%	101	28%	81	23%	3	1%	1	<1%	360
2003	186	49%	107	28%	86	23%	1	<1%	1	<1%	381
2004	176	51%	83	24%	83	24%	3	1%	0	0%	345
2005	152	48%	83	26%	79	25%	3	1%	0	0%	317
2006	169	54%	76	24%	68	22%	2	1%	0	0%	315
2007	141	51%	78	28%	59	21%	1	<1%	0	0%	279
2008	134	50%	70	26%	57	21%	4	2%	1	<1%	266
2009	104	49%	50	23%	53	25%	5	2%	1	<1%	213

<sup>1</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.

NH=Non-Hispanic, API=Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 26. Deaths among *males* reported with HIV/AIDS by race/ethnicity and year of death: Massachusetts<sup>1</sup>, 2000–2009**

Year of Death	White NH		Black NH		Hispanic/Latino		API		Other/Und.		Total
	N	%	N	%	N	%	N	%	N	%	N
2000	142	55%	52	20%	59	23%	2	1%	1	<1%	<b>256</b>
2001	160	55%	73	25%	56	19%	0	0%	1	<1%	<b>290</b>
2002	134	52%	65	25%	54	21%	3	1%	1	<1%	<b>257</b>
2003	122	49%	64	26%	62	25%	1	<1%	0	0%	<b>249</b>
2004	141	55%	56	22%	58	22%	3	1%	0	0%	<b>258</b>
2005	110	50%	53	24%	54	25%	3	1%	0	0%	<b>220</b>
2006	131	58%	46	20%	48	21%	2	1%	0	0%	<b>227</b>
2007	112	57%	39	20%	44	22%	1	1%	0	0%	<b>196</b>
2008	103	53%	50	26%	35	18%	4	2%	1	1%	<b>193</b>
2009	70	48%	36	25%	33	23%	5	3%	1	1%	<b>145</b>

<sup>1</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.

NH=Non-Hispanic, API=Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 27. Deaths among *females* reported with HIV/AIDS by race/ethnicity and year of death: Massachusetts<sup>1</sup>, 2000–2009**

Year of Death	White NH		Black NH		Hispanic/Latina		API		Other/Und.		Total
	N	%	N	%	N	%	N	%	N	%	N
2000	38	40%	32	34%	24	26%	0	0%	0	0%	<b>94</b>
2001	58	48%	41	34%	23	19%	0	0%	0	0%	<b>122</b>
2002	40	39%	36	35%	27	26%	0	0%	0	0%	<b>103</b>
2003	64	48%	43	33%	24	18%	0	0%	1	1%	<b>132</b>
2004	35	40%	27	31%	25	29%	0	0%	0	0%	<b>87</b>
2005	42	43%	30	31%	25	26%	0	0%	0	0%	<b>97</b>
2006	38	43%	30	34%	20	23%	0	0%	0	0%	<b>88</b>
2007	29	35%	39	47%	15	18%	0	0%	0	0%	<b>83</b>
2008	31	42%	20	27%	22	30%	0	0%	0	0%	<b>73</b>
2009	34	50%	14	21%	20	29%	0	0%	0	0%	<b>68</b>

<sup>1</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.

NH=Non-Hispanic, API=Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 28. Deaths among persons reported with HIV/AIDS by exposure mode and year of death: Massachusetts<sup>1</sup>, 2000–2009**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		Total N
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
2000	72	21%	185	53%	13	4%	21	6%	12	3%	12	3%	35	10%	<b>350</b>
2001	85	21%	211	51%	19	5%	28	7%	5	1%	17	4%	47	11%	<b>412</b>
2002	74	21%	194	54%	15	4%	33	9%	9	3%	10	3%	25	7%	<b>360</b>
2003	66	17%	191	50%	17	4%	45	12%	8	2%	10	3%	44	12%	<b>381</b>
2004	69	20%	170	49%	18	5%	30	9%	7	2%	11	3%	40	12%	<b>345</b>
2005	57	18%	164	52%	15	5%	33	10%	2	1%	19	6%	27	9%	<b>317</b>
2006	66	21%	157	50%	16	5%	30	10%	3	1%	16	5%	27	9%	<b>315</b>
2007	62	22%	121	43%	25	9%	28	10%	5	2%	12	4%	26	9%	<b>279</b>
2008	51	19%	124	47%	14	5%	26	10%	4	2%	11	4%	36	14%	<b>266</b>
2009	33	15%	110	52%	6	3%	23	11%	1	<1%	11	5%	29	14%	<b>213</b>

<sup>1</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>2</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 29. Deaths among males reported with HIV/AIDS by exposure mode and year of death: Massachusetts<sup>1</sup>, 2000–2009**

	MSM		IDU		MSM/ IDU		HTSX		Other		Undeter- mined <sup>2</sup>		Total N
	N	%	N	%	N	%	N	%	N	%	N	%	
2000	72	28%	125	49%	13	5%	4	2%	9	4%	33	13%	<b>256</b>
2001	85	29%	130	45%	19	7%	11	4%	1	<1%	44	15%	<b>290</b>
2002	74	29%	129	50%	15	6%	9	4%	6	2%	24	9%	<b>257</b>
2003	66	27%	116	47%	17	7%	18	7%	4	2%	28	11%	<b>249</b>
2004	69	27%	115	45%	18	7%	16	6%	6	2%	34	13%	<b>258</b>
2005	57	26%	110	50%	15	7%	11	5%	2	1%	25	11%	<b>220</b>
2006	66	29%	105	46%	16	7%	11	5%	3	1%	26	11%	<b>227</b>
2007	62	32%	75	38%	25	13%	9	5%	2	1%	23	12%	<b>196</b>
2008	51	26%	81	42%	14	7%	13	7%	4	2%	30	16%	<b>193</b>
2009	33	23%	72	50%	6	4%	8	6%	1	1%	25	17%	<b>145</b>

<sup>1</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>2</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

**Table 30. Deaths among females reported with HIV/AIDS by exposure mode and year of death: Massachusetts<sup>1</sup>, 2000–2009**

	IDU		HTSX		Other		Pres. HTSX <sup>2</sup>		Undeter- mined <sup>3</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N
2000	60	64%	17	18%	3	3%	12	13%	2	2%	<b>94</b>
2001	81	66%	17	14%	4	3%	17	14%	3	2%	<b>122</b>
2002	65	63%	24	23%	3	3%	10	10%	1	1%	<b>103</b>
2003	75	57%	27	20%	4	3%	10	8%	16	12%	<b>132</b>
2004	55	63%	14	16%	1	1%	11	13%	6	7%	<b>87</b>
2005	54	56%	22	23%	0	0%	19	20%	2	2%	<b>97</b>
2006	52	59%	19	22%	0	0%	16	18%	1	1%	<b>88</b>
2007	46	55%	19	23%	3	4%	12	14%	3	4%	<b>83</b>
2008	43	59%	13	18%	0	0%	11	15%	6	8%	<b>73</b>
2009	38	56%	15	22%	0	0%	11	16%	4	6%	<b>68</b>

<sup>1</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>2</sup> Includes female sex with male of unknown HIV status and risk. This category is limited to females.

<sup>3</sup> Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11