

Regional HIV/AIDS Epidemiologic Profile of Boston, Massachusetts: 2011

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 while residing 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 currently reside and receive care in the Commonwealth. The total number of persons living in Massachusetts 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 HIV diagnoses among females 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.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2010: Boston, Massachusetts²

	N	%
People Living with HIV/AIDS	5,211	57%
People Reported with HIV or AIDS who are Deceased	3,975	43%
Total Number of People Reported with HIV Infection or AIDS	9,186	100%

¹ 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

² 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. Average annual rate of HIV infection diagnosis from 2007 to 2009 and HIV/AIDS prevalence rate on 12/31/10¹: Boston, Massachusetts²

Average annual HIV diagnosis rate from 2007–2009	Average rate per 100,000	Average annual number of HIV diagnoses
Boston, MA	30.5	170.3
Massachusetts Total	9.4	607.3

HIV/AIDS prevalence rate on 12/31/10	Rate per 100,000	Number of people living with HIV/AIDS
Boston, MA	933.1	5,211
Massachusetts Total	273.7	17,621

¹ The denominators for prevalence calculations are based on year 2005 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation.

² 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 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2000–2009, Boston, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2000	3,710	86	361
2001	3,894	108	292
2002	4,098	107	311
2003	4,281	92	275
2004	4,448	81	248
2005	4,633	73	258
2006	4,759	82	208
2007	4,864	70	175
2008	4,975	66	177
2009	5,091	43	159

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

² 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.

³ 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 4. People diagnosed with HIV infection from 2007–2009¹ and people living with HIV/AIDS on December 31, 2010 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Boston, Massachusetts²

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	408	80%	3,979	76%
Female	103	20%	1,232	24%
Place of Birth:	N	%	N	%
US	352	69%	3,649	70%
Puerto Rico/US Dependency ³	25	5%	320	6%
Non-US	134	26%	1,242	24%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	202	40%	2,116	41%
Black (non-Hispanic)	207	41%	2,090	40%
Hispanic/Latino	91	18%	923	18%
Other/Undetermined ⁴	11	2%	82	2%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	255	50%	2,467	47%
Injection Drug Use (IDU)	39	8%	761	15%
MSM/IDU	19	4%	176	3%
Heterosexual Sex	49	10%	634	12%
Other	4	1%	99	2%
Total Undetermined	145	28%	1,074	21%
• Presumed Heterosexual Sex ⁵	39	8%	404	8%
• Undetermined ⁶	106	21%	670	13%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2010	
Under 13	3	1%	13	<1%
13 to 19	8	2%	40	1%
20 to 24	52	10%	102	2%
25 to 29	71	14%	179	3%
30 to 34	63	12%	277	5%
35 to 39	69	14%	483	9%
40 to 44	75	15%	874	17%
45 to 49	71	14%	1,148	22%
50 to 54	50	10%	976	19%
55 to 59	24	5%	626	12%
60+	25	5%	493	9%
Total	511	100%	5,211	100%

¹ 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.

² 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.

³ 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.

⁴ Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity

⁵ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁶ 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

Table 5. People living with HIV/AIDS on December 31, 2010 by gender and race/ethnicity: Boston, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	1,958	49%	158	13%
Black (non-Hispanic)	1,249	31%	841	68%
Hispanic/Latino	706	18%	217	18%
Other/Undetermined ²	66	2%	16	1%
Total	3,979	100%	1,232	100%

¹ 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.

² Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity.

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

Table 6. People living with HIV/AIDS on December 31, 2010 by gender and exposure mode: Boston, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	2,467	62%	N/A	N/A
Injection drug use (IDU)	506	13%	255	21%
MSM/IDU	176	4%	N/A	N/A
Heterosexual sex	206	5%	428	35%
Other	50	1%	49	4%
Total Undetermined	574	14%	500	41%
• Presumed heterosexual sex ²	N/A	N/A	404	33%
• Undetermined ³	574	14%	96	8%
Total	3,979	100%	1,232	100%

¹ 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.

² Includes female sex with male of unknown HIV status or risk. This category is limited to females.

³ 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.

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

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Boston, Massachusetts¹, 2000–2009²

	Male		Female		Total
	N	%	N	%	
2000	260	72%	101	28%	361
2001	219	75%	73	25%	292
2002	229	74%	82	26%	311
2003	191	69%	84	31%	275
2004	190	77%	58	23%	248
2005	203	79%	55	21%	258
2006	165	79%	43	21%	208
2007	136	78%	39	22%	175
2008	146	82%	31	18%	177
2009	126	79%	33	21%	159

¹ 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.

² 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: Boston, Massachusetts¹, 2000–2009²

	White NH		Black NH		Hispanic/Latino		Other/ Undetermined ³		Total
	N	%	N	%	N	%	N	%	
2000	109	30%	177	49%	63	17%	12	3%	361
2001	109	37%	129	44%	47	16%	7	2%	292
2002	104	33%	151	49%	50	16%	6	2%	311
2003	95	35%	117	43%	60	22%	3	1%	275
2004	89	36%	111	45%	45	18%	3	1%	248
2005	96	37%	101	39%	59	23%	2	1%	258
2006	85	41%	83	40%	38	18%	2	1%	208
2007	70	40%	68	39%	31	18%	6	3%	175
2008	71	40%	71	40%	31	18%	4	2%	177
2009	61	38%	68	43%	29	18%	1	1%	159

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² 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.

³ Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity. NH = Non-Hispanic

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. People diagnosed with HIV infection by place of birth and year of diagnosis: Boston, Massachusetts¹, 2000–2009²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	
2000	232	64%	27	7%	102	28%	361
2001	194	66%	12	4%	86	29%	292
2002	200	64%	13	4%	98	32%	311
2003	172	63%	19	7%	84	31%	275
2004	171	69%	9	4%	68	27%	248
2005	167	65%	16	6%	75	29%	258
2006	135	65%	11	5%	62	30%	208
2007	122	70%	7	4%	46	26%	175
2008	119	67%	8	5%	50	28%	177
2009	111	70%	10	6%	38	24%	159

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² 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.

³ 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 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Boston, Massachusetts¹, 2000–2009²

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ³		Undeter- mined ⁴		Total N
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
2000	127	35%	61	17%	10	3%	54	15%	-- ⁵	-- ⁵	37	10%	68	19%	361
2001	125	43%	36	12%	7	2%	41	14%	-- ⁵	-- ⁵	30	10%	51	17%	292
2002	129	41%	41	13%	10	3%	54	17%	-- ⁵	-- ⁵	21	7%	55	18%	311
2003	109	40%	27	10%	10	4%	39	14%	-- ⁵	-- ⁵	37	13%	52	19%	275
2004	114	46%	23	9%	8	3%	20	8%	-- ⁵	-- ⁵	34	14%	48	19%	248
2005	139	54%	20	8%	6	2%	28	11%	-- ⁵	-- ⁵	21	8%	40	16%	258
2006	110	53%	14	7%	7	3%	26	13%	-- ⁵	-- ⁵	19	9%	31	15%	208
2007	82	47%	20	11%	8	5%	15	9%	-- ⁵	-- ⁵	13	7%	34	19%	175
2008	94	53%	10	6%	9	5%	18	10%	-- ⁵	-- ⁵	13	7%	32	18%	177
2009	79	50%	9	6%	-- ⁵	1%	16	10%	-- ⁵	-- ⁵	13	8%	40	25%	159

¹ 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.

² 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.

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

⁴ 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.

⁵ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality.

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 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Boston, Massachusetts¹, 2000–2009²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2000	120	361	33%
2001	88	292	30%
2002	94	311	30%
2003	88	275	32%
2004	72	248	29%
2005	76	258	29%
2006	65	208	31%
2007	51	175	29%
2008	42	177	24%
2009	40	159	25%

¹ 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.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.
Data Source: MDPH HIV/AIDS Surveillance Program, data as of 1/1/11

Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Boston, Massachusetts,¹ 2007–2009²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male	108	408	26%
Female	25	103	24%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	41	202	20%
Black (non-Hispanic)	64	207	31%
Hispanic/Latino	24	91	26%
Other/Undetermined ³	4	11	36%
Place of Birth:	N	N	%
US	85	352	24%
Puerto Rico/US Dependencies ⁴	4	25	16%
Non-US	44	134	33%
Total	133	511	26%

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² 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.

³ Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity.

⁴ 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