

Regional HIV/AIDS Epidemiologic Profile of Middlesex County, Massachusetts: 2013

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, 2013, this resulted in the removal of 3,529 HIV/AIDS cases, of which 914 have died and 2,615 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 at 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 previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the 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 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2012: Middlesex County, Massachusetts²

	N	%
People Living with HIV/AIDS	3,143	63%
People Reported with HIV or AIDS who are Deceased	1,841	37%
Total Number of People Reported with HIV Infection or AIDS	4,984	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 1/1/13

Table 2. Average annual rate of HIV infection diagnosis from 2009 to 2011 and HIV/AIDS prevalence rate on 12/31/12¹: Middlesex County, Massachusetts²

Average annual HIV diagnosis rate from 2009–2011	Average rate per 100,000	Average annual number of HIV diagnoses
Middlesex County, MA	8.6	129.0
Massachusetts Total	10.3	664.7

HIV/AIDS prevalence rate on 12/31/12	Rate per 100,000	Number of people living with HIV/AIDS
Middlesex County, MA	209.1	3,143
Massachusetts Total	277.5	18,170

¹ The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, 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 1/1/13

Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2002–2011, Middlesex County, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2002	2,078	43	169
2003	2,214	45	181
2004	2,326	49	161
2005	2,454	37	165
2006	2,555	43	144
2007	2,670	28	143
2008	2,779	34	143
2009	2,874	39	134
2010	2,959	41	126
2011	3,053	33	127

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 ten-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 1/1/13

Table 4. People diagnosed with HIV infection from 2009–2011¹ and people living with HIV/AIDS on December 31, 2012 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Middlesex County, Massachusetts²

HIV Infection Diagnoses			PLWHA	
Gender:	N	%	N	%
Male	278	72%	2,152	68%
Female	109	28%	991	32%
Place of Birth:	N	%	N	%
US	199	51%	1,693	54%
Puerto Rico/US Dependency ³	9	2%	188	6%
Non-US	179	46%	1,262	40%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	152	39%	1,385	44%
Black (non-Hispanic)	135	35%	1,100	35%
Hispanic/Latino	72	19%	531	17%
Asian/Pacific Islander	27	7%	113	4%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	155	40%	1,138	36%
Injection Drug Use (IDU)	17	4%	386	12%
MSM/IDU	-- ⁷	-- ⁷	85	3%
Heterosexual Sex	42	11%	433	14%
Other	-- ⁷	-- ⁷	76	2%
Total Undetermined	156	40%	1,025	33%
• Presumed Heterosexual Sex ⁴	44	11%	395	13%
• Undetermined ⁵	112	29%	630	20%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2012	
Under 13	-- ⁷	-- ⁷	6	<1%
13 to 19	-- ⁷	-- ⁷	24	1%
20 to 24	28	7%	44	1%
25 to 29	39	10%	87	3%
30 to 34	56	14%	175	6%
35 to 39	63	16%	264	8%
40 to 44	58	15%	424	13%
45 to 49	69	18%	634	20%
50 to 54	30	8%	590	19%
55 to 59	12	3%	415	13%
60+	24	6%	480	15%
Total⁶	387	100%	3,143	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-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁵ 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.

⁶ Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁷ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

Table 5. People living with HIV/AIDS on December 31, 2012 by gender and race/ethnicity: Middlesex County, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	1,143	53%	242	24%
Black (non-Hispanic)	518	24%	582	59%
Hispanic/Latino	396	18%	135	14%
Asian/Pacific Islander	86	4%	27	3%
Total²	2,152	100%	991	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 Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

Table 6. People living with HIV/AIDS on December 31, 2012 by gender and exposure mode: Middlesex County, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	1,138	53%	N/A	N/A
Injection drug use (IDU)	231	11%	155	16%
MSM/IDU	85	4%	N/A	N/A
Heterosexual sex	129	6%	304	31%
Other	40	2%	36	4%
Total Undetermined	529	25%	496	50%
• Presumed heterosexual sex ²	N/A	N/A	395	40%
• Undetermined ³	529	25%	101	10%
Total	2,152	100%	991	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 1/1/13

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Middlesex County, Massachusetts¹, 2002–2011²

	Male		Female		Total
	N	%	N	%	
2002	100	59%	69	41%	169
2003	127	70%	54	30%	181
2004	105	65%	56	35%	161
2005	112	68%	53	32%	165
2006	100	69%	44	31%	144
2007	94	66%	49	34%	143
2008	96	67%	47	33%	143
2009	98	73%	36	27%	134
2010	89	71%	37	29%	126
2011	91	72%	36	28%	127

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 (percentages may not add up to 100% due to rounding), Data as of 1/1/13

Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Middlesex County, Massachusetts¹, 2002–2011²

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total ³
	N	%	N	%	N	%	N
2002	65	38%	75	44%	19	11%	169
2003	69	38%	75	41%	30	17%	181
2004	63	39%	65	40%	26	16%	161
2005	63	38%	73	44%	24	15%	165
2006	59	41%	50	35%	30	21%	144
2007	56	39%	51	36%	30	21%	143
2008	42	29%	57	40%	28	20%	143
2009	50	37%	50	37%	24	18%	134
2010	48	38%	42	33%	29	23%	126
2011	54	43%	43	34%	19	15%	127

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.

³ Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals, and those of other or undetermined race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Middlesex County, Massachusetts¹, 2002–2011²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
2002	69	41%	5	3%	95	56%	169
2003	81	45%	8	4%	92	51%	181
2004	76	47%	8	5%	77	48%	161
2005	69	42%	5	3%	91	55%	165
2006	79	55%	5	3%	60	42%	144
2007	74	52%	5	3%	64	45%	143
2008	62	43%	9	6%	72	50%	143
2009	64	48%	6	4%	64	48%	134
2010	69	55%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	126
2011	66	52%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	127

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.

³ Ninety-eight 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 1% were born in an unknown dependency.

⁴ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Middlesex County, Massachusetts¹, 2002–2011²

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ³		Undeter- mined ⁴		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2002	48	28%	16	9%	-- ⁵	-- ⁵	35	21%	-- ⁵	-- ⁵	35	21%	34	20%	169
2003	65	36%	14	8%	-- ⁵	-- ⁵	27	15%	-- ⁵	-- ⁵	27	15%	41	23%	181
2004	45	28%	15	9%	-- ⁵	-- ⁵	32	20%	-- ⁵	-- ⁵	21	13%	42	26%	161
2005	52	32%	15	9%	5	3%	23	14%	0	0%	27	16%	43	26%	165
2006	56	39%	17	12%	-- ⁵	-- ⁵	16	11%	-- ⁵	-- ⁵	20	14%	29	20%	144
2007	52	36%	10	7%	-- ⁵	-- ⁵	14	10%	-- ⁵	-- ⁵	21	15%	43	30%	143
2008	53	37%	-- ⁵	-- ⁵	5	3%	13	9%	-- ⁵	-- ⁵	25	17%	43	30%	143
2009	57	43%	6	4%	-- ⁵	-- ⁵	17	13%	-- ⁵	-- ⁵	14	10%	33	25%	134
2010	52	41%	6	5%	-- ⁵	-- ⁵	10	8%	-- ⁵	-- ⁵	19	15%	32	25%	126
2011	46	36%	5	4%	-- ⁵	-- ⁵	15	12%	-- ⁵	-- ⁵	11	9%	47	37%	127

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.

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 Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

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 1/1/13

Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Middlesex County, Massachusetts¹, 2002–2011²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2002	62	169	37%
2003	56	181	31%
2004	63	161	39%
2005	75	165	45%
2006	55	144	38%
2007	57	143	40%
2008	40	143	28%
2009	36	134	27%
2010	42	126	33%
2011	48	127	38%

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 1/1/13

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: Middlesex County, Massachusetts,¹ 2009–2011²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male	96	278	35%
Female	30	109	28%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	55	152	36%
Black (non-Hispanic)	42	135	31%
Hispanic/Latino	20	72	28%
Asian/Pacific Islander	-- ⁵	-- ⁵	-- ⁵
Other/Undetermined ³	-- ⁵	-- ⁵	-- ⁵
Place of Birth:	N	N	%
US	-- ⁵	-- ⁵	-- ⁵
Puerto Rico/US Dependencies ⁴	-- ⁵	-- ⁵	-- ⁵
Non-US	62	179	35%
Total	126	387	33%

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 three-year period after the implementation of HIV infection reporting in 1999.

³ Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁴ Ninety-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13