

Regional HIV/AIDS Epidemiologic Profile of Middlesex County, Massachusetts: 2012

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 who were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2012, this resulted in the removal of 2,924 HIV/AIDS cases, of which 808 have died and 2,116 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 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, 2011: Middlesex County, Massachusetts²

	N	%
People Living with HIV/AIDS	3,103	63%
People Reported with HIV or AIDS who are Deceased	1,793	37%
Total Number of People Reported with HIV Infection or AIDS	4,896	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 1/1/12

Table 2. Average annual rate of HIV infection diagnosis from 2008 to 2010 and HIV/AIDS prevalence rate on 12/31/11¹: Middlesex County, Massachusetts²

Average annual HIV diagnosis rate from 2008–2010	Average rate per 100,000	Average annual number of HIV diagnoses
Middlesex County, MA	8.7	131.3
Massachusetts Total	10.3	664.7

HIV/AIDS prevalence rate on 12/31/11	Rate per 100,000	Number of people living with HIV/AIDS
Middlesex County, MA	206.4	3,103
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 1/1/12

Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2001–2010, Middlesex County, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2001	1,991	63	179
2002	2,124	41	174
2003	2,260	44	180
2004	2,375	48	162
2005	2,505	37	166
2006	2,612	41	147
2007	2,726	28	142
2008	2,833	33	140
2009	2,924	38	129
2010	3,009	40	125

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 1/1/12

Table 4. People diagnosed with HIV infection from 2008–2010¹ and people living with HIV/AIDS on December 31, 2011 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	280	71%	2,129	69%
Female	114	29%	974	31%
Place of Birth:	N	%	N	%
US	190	48%	1,681	54%
Puerto Rico/US Dependency ³	18	5%	209	7%
Non-US	186	47%	1,213	39%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	133	34%	1,382	45%
Black (non-Hispanic)	146	37%	1,067	34%
Hispanic/Latino	82	21%	537	17%
Asian/Pacific Islander	33	8%	106	3%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	154	39%	1,112	36%
Injection Drug Use (IDU)	18	5%	412	13%
MSM/IDU	-- ⁷	-- ⁷	87	3%
Heterosexual Sex	38	10%	422	14%
Other	-- ⁷	-- ⁷	79	3%
Total Undetermined	164	42%	991	32%
• Presumed Heterosexual Sex ⁴	56	14%	380	12%
• Undetermined ⁵	108	27%	611	20%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2011	
Under 13	4	1%	10	<1%
13 to 19	2	1%	22	1%
20 to 24	29	7%	43	1%
25 to 29	48	12%	81	3%
30 to 34	64	16%	168	5%
35 to 39	65	16%	280	9%
40 to 44	57	14%	476	15%
45 to 49	64	16%	669	22%
50 to 54	30	8%	554	18%
55 to 59	15	4%	385	12%
60+	16	4%	415	13%
Total⁶	394	100%	3,103	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 2008–2010 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 1/1/12

Table 5. People living with HIV/AIDS on December 31, 2011 by gender and race/ethnicity: Middlesex County, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	1,135	53%	247	25%
Black (non-Hispanic)	508	24%	559	57%
Hispanic/Latino	397	19%	140	14%
Asian/Pacific Islander	80	4%	26	3%
Total²	2,129	100%	974	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 1/1/12

Table 6. People living with HIV/AIDS on December 31, 2011 by gender and exposure mode: Middlesex County, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	1,112	52%	N/A	N/A
Injection drug use (IDU)	249	12%	163	17%
MSM/IDU	87	4%	N/A	N/A
Heterosexual sex	126	6%	296	30%
Other	42	2%	37	4%
Total Undetermined	513	24%	478	49%
• Presumed heterosexual sex ²	N/A	N/A	380	39%
• Undetermined ³	513	24%	98	10%
Total	2,129	100%	974	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 1/1/12

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Middlesex County, Massachusetts¹, 2001–2010²

	Male		Female		Total
	N	%	N	%	
2001	118	66%	61	34%	179
2002	103	59%	71	41%	174
2003	126	70%	54	30%	180
2004	106	65%	56	35%	162
2005	115	69%	51	31%	166
2006	103	70%	44	30%	147
2007	92	65%	50	35%	142
2008	96	69%	44	31%	140
2009	95	74%	34	26%	129
2010	89	71%	36	29%	125

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 1/1/12

Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Middlesex County, Massachusetts¹, 2001–2010²

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Asian/Pacific Islander		Total ³
	N	%	N	%	N	%	%	N	
2001	68	38%	66	37%	36	20%	8	4%	179
2002	67	39%	76	44%	21	12%	9	5%	174
2003	69	38%	75	42%	29	16%	7	4%	180
2004	67	41%	64	40%	25	15%	6	4%	162
2005	65	39%	70	42%	26	16%	5	3%	166
2006	62	42%	47	32%	33	22%	5	3%	147
2007	55	39%	51	36%	30	21%	5	4%	142
2008	42	30%	55	39%	27	19%	16	11%	140
2009	48	37%	48	37%	23	18%	10	8%	129
2010	43	34%	43	34%	32	26%	7	6%	125

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 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 1/1/12

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Middlesex County, Massachusetts¹, 2001–2010²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
2001	83	46%	16	9%	80	45%	179
2002	72	41%	7	4%	95	55%	174
2003	80	44%	9	5%	91	51%	180
2004	78	48%	8	5%	76	47%	162
2005	69	42%	6	4%	91	55%	166
2006	77	52%	8	5%	62	42%	147
2007	72	51%	5	4%	65	46%	142
2008	60	43%	9	6%	71	51%	140
2009	61	47%	6	5%	62	48%	129
2010	69	55%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	125

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 1/1/12

Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Middlesex County, Massachusetts¹, 2001–2010²

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ³		Undeter- mined ⁴		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2001	52	29%	23	13%	-- ⁵	-- ⁵	36	20%	-- ⁵	-- ⁵	22	12%	38	21%	179
2002	49	28%	16	9%	-- ⁵	-- ⁵	37	21%	-- ⁵	-- ⁵	35	20%	35	20%	174
2003	63	35%	15	8%	-- ⁵	-- ⁵	25	14%	-- ⁵	-- ⁵	29	16%	43	24%	180
2004	46	28%	14	9%	-- ⁵	-- ⁵	32	20%	-- ⁵	-- ⁵	21	13%	43	27%	162
2005	56	34%	14	8%	5	3%	23	14%	0	0%	27	16%	41	25%	166
2006	59	40%	19	13%	-- ⁵	-- ⁵	15	10%	-- ⁵	-- ⁵	19	13%	29	20%	147
2007	53	37%	10	7%	-- ⁵	-- ⁵	13	9%	-- ⁵	-- ⁵	20	14%	43	30%	142
2008	53	38%	-- ⁵	-- ⁵	5	4%	13	9%	-- ⁵	-- ⁵	24	17%	41	29%	140
2009	55	43%	6	5%	-- ⁵	-- ⁵	16	12%	-- ⁵	-- ⁵	14	11%	31	24%	129
2010	46	37%	9	7%	-- ⁵	-- ⁵	9	7%	-- ⁵	-- ⁵	18	14%	36	29%	125

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 1/1/12

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, 2001–2010²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2001	70	179	39%
2002	63	174	36%
2003	57	180	32%
2004	62	162	38%
2005	73	166	44%
2006	55	147	37%
2007	55	142	39%
2008	40	140	29%
2009	36	129	28%
2010	39	125	31%

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 1/1/12

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 2008–2010²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male	85	280	30%
Female	30	114	26%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	41	133	31%
Black (non-Hispanic)	40	146	27%
Hispanic/Latino	23	82	28%
Asian/Pacific Islander	11	33	33%
Other/Undetermined ³	0	0	N/A
Place of Birth:	N	N	%
US	-- ⁵	-- ⁵	-- ⁵
Puerto Rico/US Dependencies ⁴	-- ⁵	-- ⁵	-- ⁵
Non-US	60	186	32%
Total	115	394	29%

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 2008–2010 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 1/1/12