

Regional HIV/AIDS Epidemiologic Profile of Worcester County, 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: Worcester County, Massachusetts²

	N	%
People Living with HIV/AIDS	1,517	60%
People Reported with HIV or AIDS who are Deceased	1,017	40%
Total Number of People Reported with HIV Infection or AIDS	2,534	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: Worcester County, Massachusetts²

Average annual HIV diagnosis rate from 2007–2009	Average rate per 100,000	Average annual number of HIV diagnoses
Worcester County, MA	6.4	50.3
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
Worcester County, MA	192.5	1,517
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, Worcester County, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2000	1,147	26	90
2001	1,177	37	67
2002	1,249	39	111
2003	1,301	35	87
2004	1,338	43	80
2005	1,368	39	69
2006	1,413	30	75
2007	1,437	28	52
2008	1,459	27	49
2009	1,492	17	50

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: Worcester County, Massachusetts²

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	94	62%	938	62%
Female	57	38%	579	38%
Place of Birth:	N	%	N	%
US	80	53%	922	61%
Puerto Rico/US Dependency ³	20	13%	301	20%
Non-US	51	34%	294	19%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	58	38%	646	43%
Black (non-Hispanic)	52	34%	353	23%
Hispanic/Latino	-- ⁷	-- ⁷	492	32%
Other/Undetermined ⁴	-- ⁷	-- ⁷	26	2%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	47	31%	339	22%
Injection Drug Use (IDU)	21	14%	473	31%
MSM/IDU	-- ⁷	-- ⁷	47	3%
Heterosexual Sex	23	15%	275	18%
Other	-- ⁷	-- ⁷	48	3%
Total Undetermined	53	35%	335	22%
• Presumed Heterosexual Sex ⁵	21	14%	154	10%
• Undetermined ⁶	32	21%	181	12%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2010	
Under 13	3	2%	4	<1%
13 to 19	3	2%	17	1%
20 to 24	15	10%	36	2%
25 to 29	16	11%	46	3%
30 to 34	22	15%	80	5%
35 to 39	23	15%	166	11%
40 to 44	23	15%	241	16%
45 to 49	20	13%	352	23%
50 to 54	14	9%	281	19%
55 to 59	6	4%	164	11%
60+	6	4%	130	9%
Total	151	100%	1,517	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.

⁷ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality.

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: Worcester County, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	462	49%	184	32%
Black (non-Hispanic)	172	18%	181	31%
Hispanic/Latino	284	30%	208	36%
Other/Undetermined ²	20	2%	6	1%
Total	938	100%	579	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: Worcester County, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	339	36%	N/A	N/A
Injection drug use (IDU)	290	31%	183	32%
MSM/IDU	47	5%	N/A	N/A
Heterosexual sex	75	8%	200	35%
Other	28	3%	20	3%
Total Undetermined	159	17%	176	30%
• Presumed heterosexual sex ²	N/A	N/A	154	27%
• Undetermined ³	159	17%	22	4%
Total	938	100%	579	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: Worcester County, Massachusetts¹, 2000–2009²

	Male		Female		Total
	N	%	N	%	
2000	60	67%	30	33%	90
2001	47	70%	20	30%	67
2002	65	59%	46	41%	111
2003	46	53%	41	47%	87
2004	45	56%	35	44%	80
2005	49	71%	20	29%	69
2006	46	61%	29	39%	75
2007	33	63%	19	37%	52
2008	26	53%	23	47%	49
2009	35	70%	15	30%	50

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: Worcester County, Massachusetts¹, 2000–2009²

	White NH		Black NH		Hispanic/Latino		Other/ Undetermined ³		Total
	N	%	N	%	N	%	N	%	
2000	36	40%	24	27%	30	33%	0	0%	90
2001	28	42%	14	21%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	67
2002	39	35%	37	33%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	111
2003	35	40%	30	34%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	87
2004	33	41%	24	30%	23	29%	0	0%	80
2005	29	42%	21	30%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	69
2006	22	29%	28	37%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	75
2007	21	40%	19	37%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	52
2008	21	43%	15	31%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	49
2009	16	32%	18	36%	-- ⁴	-- ⁴	-- ⁴	-- ⁴	50

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

⁴ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality.

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: Worcester County, Massachusetts¹, 2000–2009²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	
2000	49	54%	22	24%	19	21%	90
2001	34	51%	13	19%	20	30%	67
2002	59	53%	15	14%	37	33%	111
2003	49	56%	11	13%	27	31%	87
2004	40	50%	15	19%	25	31%	80
2005	34	49%	12	17%	23	33%	69
2006	35	47%	14	19%	26	35%	75
2007	25	48%	5	10%	22	42%	52
2008	26	53%	9	18%	14	29%	49
2009	29	58%	6	12%	15	30%	50

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 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: Worcester County, 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	22	24%	18	20%	-- ⁵	-- ⁵	21	23%	-- ⁵	-- ⁵	12	13%	12	13%	90
2001	15	22%	18	27%	-- ⁵	-- ⁵	18	27%	-- ⁵	-- ⁵	7	10%	8	12%	67
2002	19	17%	27	24%	-- ⁵	-- ⁵	16	14%	-- ⁵	-- ⁵	18	16%	26	23%	111
2003	20	23%	15	17%	-- ⁵	-- ⁵	11	13%	-- ⁵	-- ⁵	19	22%	16	18%	87
2004	15	19%	19	24%	-- ⁵	-- ⁵	17	21%	-- ⁵	-- ⁵	17	21%	10	13%	80
2005	22	32%	16	23%	0	0%	6	9%	0	0%	12	17%	13	19%	69
2006	20	27%	11	15%	-- ⁵	-- ⁵	11	15%	-- ⁵	-- ⁵	17	23%	15	20%	75
2007	20	38%	6	12%	-- ⁵	-- ⁵	7	13%	-- ⁵	-- ⁵	11	21%	7	13%	52
2008	10	20%	11	22%	-- ⁵	-- ⁵	10	20%	-- ⁵	-- ⁵	5	10%	11	22%	49
2009	17	34%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	6	12%	-- ⁵	-- ⁵	5	10%	14	28%	50

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: Worcester County, 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	26	90	29%
2001	26	67	39%
2002	37	111	33%
2003	29	87	33%
2004	29	80	36%
2005	31	69	45%
2006	27	75	36%
2007	21	52	40%
2008	26	49	53%
2009	18	50	36%

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: Worcester County, 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	44	94	47%
Female	21	57	37%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	23	58	40%
Black (non-Hispanic)	26	52	50%
Hispanic/Latino	-- ⁵	-- ⁵	-- ⁵
Other/Undetermined ³	-- ⁵	-- ⁵	-- ⁵
Place of Birth:	N	N	%
US	33	80	41%
Puerto Rico/US Dependencies ⁴	8	20	40%
Non-US	24	51	47%
Total	65	151	43%

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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.

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

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