

BIANNUAL HIV SURVEILLANCE REPORT

CITY OF DETROIT

January 2013

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HIV/STD/VH/TB Epidemiology Section
Division of Communicable Disease
Bureau of Disease Control, Prevention and Epidemiology
Michigan Department of Community Health

Lansing - HIV Surveillance Office
201 Townsend St., 5th Floor
Lansing, MI 48913
517-335-8165

MDCH - South Oakland Health Center
27725 Greenfield Rd, Office 57A
Southfield, MI 48076
248-424-7910

****WEBSITE****

<http://www.michigan.gov/hivstd>

****WEBSITE****



General HIV

AIDS (Acquired Immune Deficiency Syndrome)

Now referred to as stage 3 HIV infection (see "HIV Infection Stages" below).

HIV (Human Immunodeficiency Virus)

Diagnosis with HIV requires both a positive HIV screening and positive supplemental antibody test or detectable quantity on a virologic test. A standard case definition for HIV infection is used by all states for surveillance. Specific information is required in order to count a case of HIV infection, including a method to uniquely identify an individual. Each case is classified in a HIV infection stage (see below). Once a case reaches stage 3 (AIDS), the case is always considered stage 3 for surveillance purposes, even if his/her health improves (MMWR; December 5, 2008 / Vol. 57 / No. RR--10 / Pg. 1 - 12).

HIV Infection Stages

Stage 1: A case does not have any of the conditions associated with severe HIV infection (called an AIDS-defining condition) and has ≥ 500 CD4 cells/ μ l.

Stage 2: A case has no AIDS-defining condition, but the level of CD4 cells has fallen to 200-499 cells/ μ l.

Stage 3: Diagnosis with any one of 26 AIDS-defining conditions which are indicative of a severe immune deficiency, or a laboratory test demonstrating severe immune deficiency: CD4 count <200 cells/ μ l or CD4 percent $<14\%$. **Previously referred to as AIDS.**

Stage unknown: A case of HIV without information available on CD4 levels or AIDS-defining conditions.

Prevalence Estimate Calculations

HIV prevalence estimates include all persons living in DETROIT at diagnosis of HIV Infection (any stage) and incorporates an approximation of those not reported or not yet diagnosed. All estimates are rounded to the nearest ten, and the minimum estimate given is 10. Prevalence estimates were most recently revised in January 2013, so the estimates in this report may vary in comparison to reports published before the revision.

Risk Transmission Categories - Definitions

Blood Recipients

Hemophiliacs, blood transfusion recipients, and organ recipients who received blood products prior to 1985 & persons documented to have ever received an infected organ or unit of blood.

Heterosexual Contact (HC):

Heterosexual Contact w/ Female Risk (HCFR): Males whose female sexual partners are known to be HIV-infected or at high risk for HIV. These partners meet one of the following criteria: IDU, hemophiliac, HIV infected transfusion recipient, or other HIV infected person of unknown risk.

Heterosexual Contact w/ Male (HCM): Females who have had sex with a male regardless of what is known about the male's HIV status or behaviors.

Please note:

-Males whose only documented risk is sex with a female, and their female partner's risk and HIV status is unknown fall into the undetermined risk category.

-Exposure categories are only calculated at the state level due to small numbers at the county and city level. For more information regarding exposure categories, and how they differ from transmission categories, please refer to the statewide statistics.

Injection Drug Users (IDU)

Persons who have a history of injection drug use.

Men who have sex with men (MSM)

Males who have a history of sexual contact with other men.

MSM/IDU

MSM who also have a history of injection drug use.

Perinatal

HIV transmission from mother to child during birth or through breastfeeding.

Undetermined

Males and females with no identified risk.

Michigan Department
of Community Health



Rick Snyder, Governor
James K. Haveman, Director

TABLE 1. Demographic Information on Prevalent HIV Infection Cases Living in DETROIT at Diagnosis

	REPORTED PREVALENCE[†]								CENSUS 2011 ESTIMATES	
	EST PREV*	HIV Infection Non-Stage 3		HIV Infection Stage 3 (AIDS)		Total		Rate per 100,000[§]	Num	Percent
	Num	Num	Percent	Num	Percent	Num	Percent			
RACE/ ETHNICITY[‡]										
White	460	169	7%	180	6%	349	6%	612	57,010	8%
Black	6,570	2,286	88%	2,657	89%	4,943	88%	859	575,321	81%
Hispanic	220	73	3%	91	3%	164	3%	318	51,502	7%
Asian/PI	10	<5	**	7	<1%	11	<1%	139	7,937	1%
Am Indian/AN	10	6	<1%	<5	**	7	<1%	---	1,643	<1%
Multi/Other/Unk	160	51	2%	66	2%	117	2%	N/A	13,227	2%
SEX & RACE										
Male	5,400	1,868	72%	2,195	73%	4,063	73%	1,206	336,931	48%
White Male	370	129	5%	152	5%	281	5%	--	N/A	N/A
Black Male	4,730	1,638	63%	1,922	64%	3,560	64%	--	N/A	N/A
Hispanic Male	160	53	2%	68	2%	121	2%	--	N/A	N/A
Other Male	130	48	2%	53	2%	101	2%	--	N/A	N/A
Female	2,030	721	28%	807	27%	1,528	27%	413	369,709	52%
White Female	90	40	2%	28	1%	68	1%	--	N/A	N/A
Black Female	1,840	648	25%	735	24%	1,383	25%	--	N/A	N/A
Hispanic Female	60	20	1%	23	1%	43	1%	--	N/A	N/A
Other Female	50	13	1%	21	1%	34	1%	--	N/A	N/A
RISK*										
Male-Male Sex (MSM)	3,300	1,117	43%	1,367	46%	2,484	44%	--	--	--
Injection Drug Use (IDU)	830	226	9%	395	13%	621	11%	--	--	--
MSM/IDU	230	64	2%	106	4%	170	3%	--	--	--
Blood Products	10	0	0%	11	<1%	11	<1%	--	--	--
Heterosexual Contact (HC)	1,500	513	20%	619	21%	1,132	20%	--	--	--
HCFR (Males)	280	91	4%	117	4%	208	4%	--	--	--
HCM (Females)	1,230	422	16%	502	17%	924	17%	--	--	--
Perinatal	110	51	2%	29	1%	80	1%	--	--	--
Undetermined	1,450	618	24%	475	16%	1,093	20%	--	--	--
AGE AT HIV DIAGNOSIS										
0 - 12 years	110	53	2%	29	1%	82	1%	--	--	--
13 - 19 years	490	224	9%	147	5%	371	7%	--	--	--
20 - 24 years	1,170	509	20%	371	12%	880	16%	--	--	--
25 - 29 years	1,160	442	17%	433	14%	875	16%	--	--	--
30 - 39 years	2,330	697	27%	1,058	35%	1,755	31%	--	--	--
40 - 49 years	1,490	429	17%	693	23%	1,122	20%	--	--	--
50 - 59 years	540	191	7%	214	7%	405	7%	--	--	--
60 years and over	130	44	2%	57	2%	101	2%	--	--	--
Unspecified	0	0	0%	0	0%	0	0%	--	--	--
TOTAL	7,430	2,589	100%	3,002	100%	5,591	100%	791	706,640	100%

*See front matter page i for descriptions of prevalence estimate calculations and risk category groupings. Risk categories used in Michigan are redefined as of January 2012. NOTE: Heterosexual contact for males includes only males whose sexual partners are known to be HIV infected or at high risk for HIV (HCFR). Heterosexual contact for females includes all females who have had sex with a male regardless of what is known about the male's HIV status or behaviors (HCM).

[†] Includes reports that contain patient name or are otherwise unduplicated. <5 and "*" = 1, 2, 3, or 4 cases.

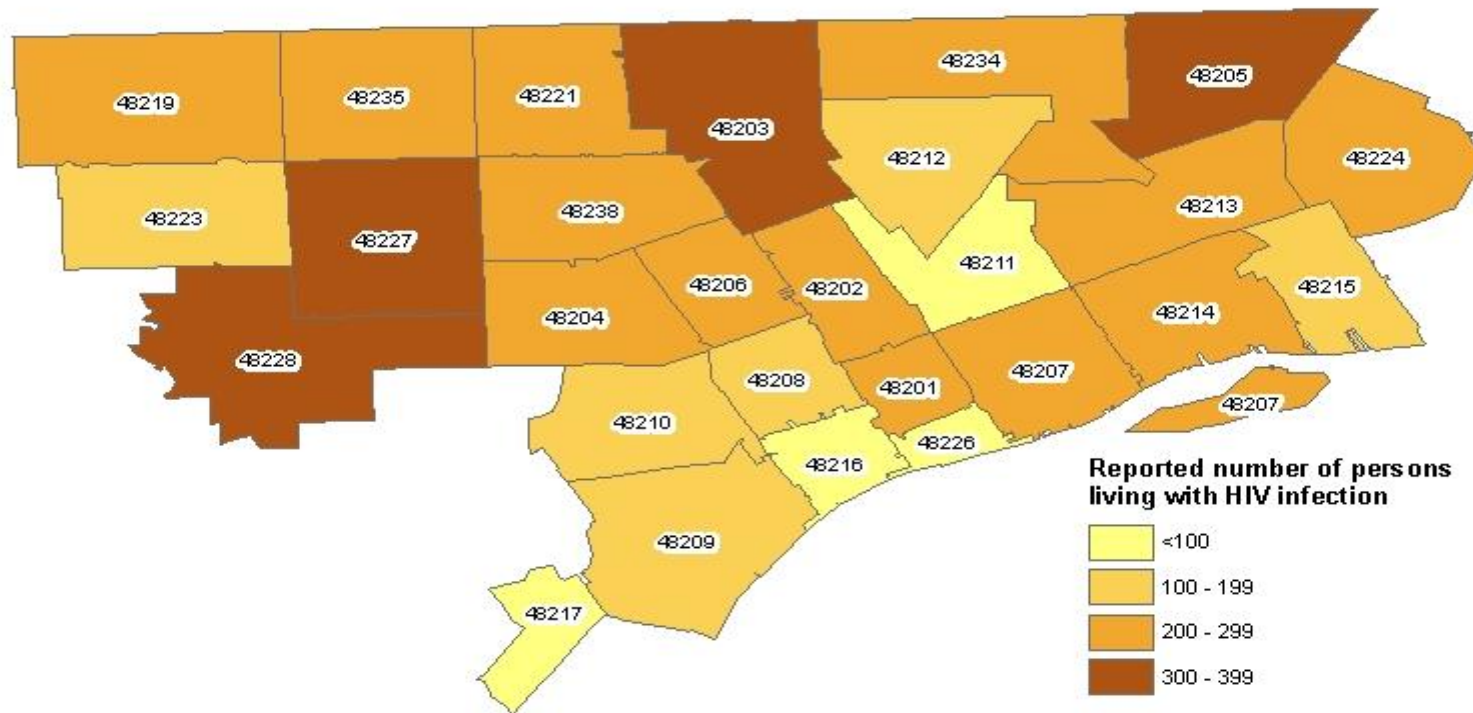
[‡] To calculate "1 out of x" statements, divide the census number by total reported prevalence. For example, for non-Hispanic whites: 57,010 / 349 = 163. Thus, 1 out of every 163 non-Hispanic white persons in DETROIT are living with HIV. Rates and "1 out of x" statements are not reliable for <10 cases. Thus, rates for <10 cases are shown as "----".

[§] Rates are not reported for risk categories and age at diagnosis because no reliable denominator data exist for these groups.

[¶] In this report, persons described as white, black, Asian/Pacific Islander (PI), or American Indian/Alaska Native (AN) are all non-Hispanic; persons described as Hispanic might be of any race.

TABLE 2. Sex, Race, and Risk Among Prevalent HIV Infection Cases Living in DETROIT at Diagnosis

MALE	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	220	78%	2,141	60%	60	50%	63	62%	2,484	61%
Injection Drug Use	10	4%	289	8%	16	13%	5	5%	320	8%
MSM/IDU	13	5%	150	4%	<5	**	6	6%	170	4%
Blood Products	<5	**	5	<1%	0	0%	0	0%	8	<1%
Heterosexual Contact (HCFR)	8	3%	190	5%	8	7%	<5	**	208	5%
Perinatal	<5	**	39	1%	<5	**	<5	**	45	1%
Undetermined	26	9%	746	21%	34	28%	22	22%	828	20%
Male Subtotal	281	7%	3,560	88%	121	3%	101	2%	4,063	100%
FEMALE	White		Black		Hispanic		Other or Unknown		All Female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection Drug Use	24	35%	259	19%	7	16%	11	32%	301	20%
Blood Products	0	0%	<5	**	0	0%	0	0%	<5	**
Heterosexual Contact (HCM)	34	50%	842	61%	28	65%	20	59%	924	60%
Perinatal	<5	**	32	2%	<5	**	<5	**	35	2%
Undetermined	9	13%	247	18%	7	16%	<5	**	265	17%
Female Subtotal	68	4%	1,383	91%	43	3%	34	2%	1,528	100%
ALL	White		Black		Hispanic		Other or Unknown		Risk All	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	220	63%	2,141	43%	60	37%	63	47%	2,484	44%
Injection Drug Use	34	10%	548	11%	23	14%	16	12%	621	11%
MSM/IDU	13	4%	150	3%	<5	**	6	4%	170	3%
Blood Products	<5	**	8	<1%	0	0%	0	0%	11	<1%
Heterosexual Contact (HC)	42	12%	1,032	21%	36	22%	22	16%	1,132	20%
HCFR (Males)	8	2%	190	4%	8	5%	<5	**	208	4%
HCM (Females)	34	10%	842	17%	28	17%	20	15%	924	17%
Perinatal	<5	**	71	1%	<5	**	<5	**	80	1%
Undetermined	35	10%	993	20%	41	25%	24	18%	1,093	20%
RACE ALL	349	6%	4,943	88%	164	3%	135	2%	5,591	100%

FIGURE 1. Prevalent HIV Infection Cases According to Zip Code of Residence at Diagnosis

The above map includes 5,750 reported persons living with HIV by residence at diagnosis: 5,591 were residents of the City of Detroit and 214 were residents of Highland Park or Hamtramck at time of diagnosis (the map excludes 55 cases with an unknown or unmappable zip code). Highland Park and Hamtramck are included in this map for completeness, because these cities share zip codes with the City of Detroit. This map should not be compared with Detroit maps that exclude Highland Park and Hamtramck.

The darker shading indicates a higher number of cases residing in the zip code at HIV diagnosis. Since raw numbers of cases do not adjust for the size of the general population living in each zip code, a high number of cases does not directly translate to a high rate (concentration) of disease but instead may reflect a larger number of people living in that zip code. Large changes in the Detroit population have occurred over the past decade and these changes vary by zip code; thus, there is no reliable count of the general population with which to calculate the percent of persons in each zip code living with HIV infection. We are currently working on a method to calculate percentages that adjust for this population change.

TABLE 3. New Diagnoses, Deaths, and Prevalence of HIV Infection in DETROIT by Year

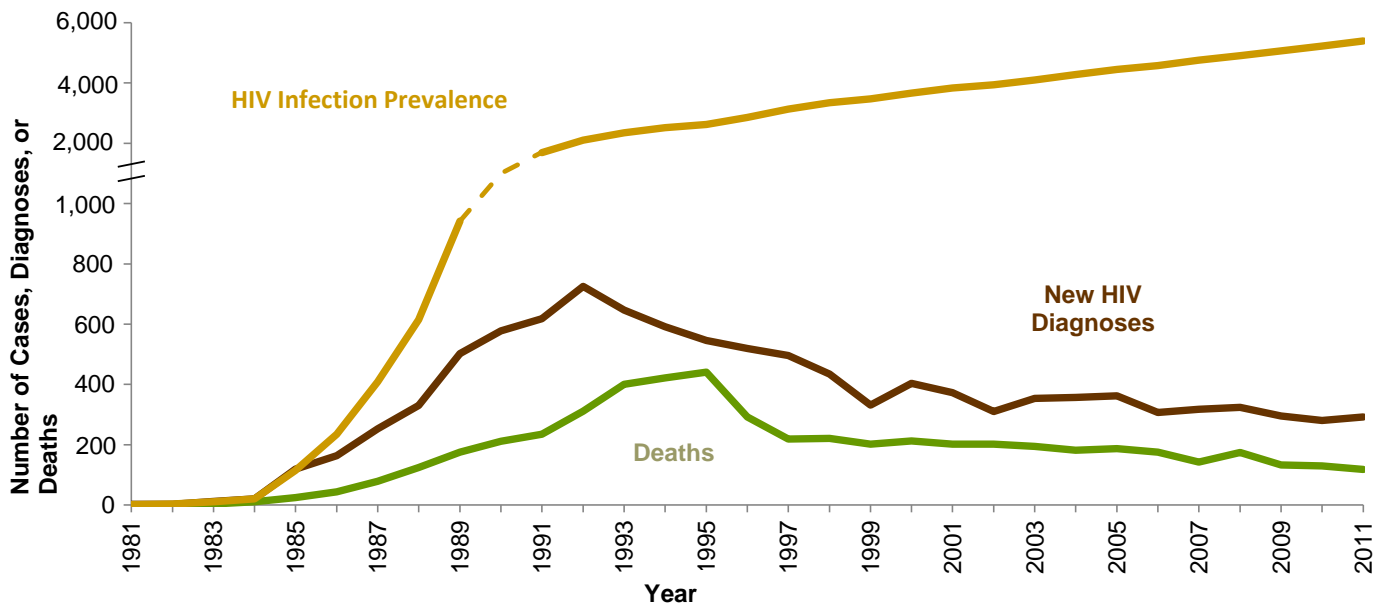
Year	<i>HIV Infection (all stages)</i>			<i>HIV Infection Stage 3 (AIDS)</i>		
	New HIV Diagnoses	Deaths	Prevalence	New Stage 3 Diagnoses	Deaths	Prevalence
1981	2	1	1	2	1	1
1982	2	0	3	2	0	3
1983	12	4	11	10	4	9
1984	21	11	21	21	11	19
1985	119	25	115	40	25	34
1986	164	44	235	74	41	67
1987	253	79	409	140	74	133
1988	330	124	615	213	122	224
1989	502	175	942	302	167	359
1990	578	212	1,308	345	203	501
1991	618	235	1,691	416	222	695
1992	725	311	2,105	584	294	985
1993	647	401	2,351	514	377	1,122
1994	592	422	2,521	482	392	1,212
1995	546	441	2,626	470	404	1,278
1996	519	292	2,853	378	273	1,383
1997	496	219	3,130	333	194	1,522
1998	434	221	3,343	312	193	1,641
1999	331	202	3,472	293	177	1,757
2000	404	213	3,663	323	182	1,898
2001	373	202	3,834	248	171	1,975
2002	310	202	3,942	256	175	2,056
2003	354	195	4,101	268	160	2,164
2004	357	182	4,276	260	153	2,271
2005	362	187	4,451	301	153	2,419
2006	307	175	4,583	219	143	2,495
2007	318	143	4,758	217	126	2,586
2008	324	174	4,908	220	137	2,669
2009	295	133	5,070	191	106	2,754
2010	281	130	5,221	200	115	2,839
2011	292	118	5,395	189	95	2,933
2012	244	48	5,591	108	39	3,002
TOTAL	11,112	5,521		7,931	4,929	

The prevalence of HIV in Michigan has steadily increased, since persons with HIV are living longer. This is largely due to improved anti-retroviral therapy.

The increase in HIV prevalence is also reflected in Figure 1 on page 5, which shows that the number of persons diagnosed, while stable for the last several years, is greater than the number of deaths each year. This directly contributes to the increase in prevalence. The current reported prevalence of HIV infection in DETROIT is 5,591. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 3,002.

As implied, the HIV infection section displays data on all persons with HIV, including those with Stage 3 infection, as well as those who have not progressed to Stage 3. Thus, persons represented in the Stage 3 section are also represented in the HIV infection section. The number of reported deaths includes deaths directly attributable to presence of HIV infection as well as deaths due to other causes.

NOTE: Reporting for recent years may not be complete. Data are not adjusted to account for reporting delays.

FIGURE 2. New Diagnoses, Deaths, and Prevalence of HIV Infection in DETROIT, by Year**TABLE 4. Comparison of HIV Infection Prevalence in DETROIT to State**

<i>Residence at Diagnosis</i>	<i>Estimated Prevalence</i>	<i>Reported Prevalence</i>				<i>Cumulative Stage 3</i>
		HIV Infection Non-Stage 3	HIV Infection Stage 3 (AIDS)	Total	Rate	
Detroit	7,430	2,589	3,002	5,591	791	7,931
Michigan Total	19,800	7,169	7,912	15,081	153	18,130