

ANNUAL HIV SURVEILLANCE REPORT

CITY OF DETROIT

January 2014

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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 2014, 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 2012 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	440	165	6%	176	6%	341	6%	581	58,662	8%	
Black	6,490	2,297	88%	2,754	89%	5,051	89%	852	592,761	79%	
Hispanic	210	71	3%	89	3%	160	3%	323	49,490	7%	
Asian/PI	10	<5	**	7	<1%	11	<1%	125	8,783	1%	
Am Indian/AN	10	6	<1%	<5	**	7	<1%	---	2,430	<1%	
Multi/Other/Unk	170	58	2%	72	2%	130	2%	382	34,021	5%	
SEX & RACE											
Male	5,360	1,901	73%	2,276	73%	4,177	73%	1,183	353,019	47%	
White Male	350	128	5%	148	5%	276	5%	913	30,218	4%	
Black Male	4,720	1,667	64%	2,005	65%	3,672	64%	1,337	274,706	37%	
Hispanic Male	150	52	2%	66	2%	118	2%	463	25,503	3%	
Other Male	140	54	2%	57	2%	111	2%	491	22,592	3%	
Female	1,960	700	27%	823	27%	1,523	27%	387	393,128	53%	
White Female	80	37	1%	28	1%	65	1%	229	28,444	4%	
Black Female	1,770	630	24%	749	24%	1,379	24%	434	318,055	43%	
Hispanic Female	50	19	1%	23	1%	42	1%	175	23,987	3%	
Other Female	50	14	1%	23	1%	37	1%	163	22,642	3%	
RISK*											
Male-Male Sex (MSM)	3,370	1,192	46%	1,434	46%	2,626	46%	--	--	--	
Injection Drug Use (IDU)	780	212	8%	397	13%	609	11%	--	--	--	
MSM/IDU	210	59	2%	102	3%	161	3%	--	--	--	
Blood Products	10	0	0%	10	<1%	10	<1%	--	--	--	
Heterosexual Contact (HC)	1,490	508	20%	656	21%	1,164	20%	--	--	--	
HCFR (Males)	290	92	4%	130	4%	222	4%	--	--	--	
HCM (Females)	1,210	416	16%	526	17%	942	17%	--	--	--	
Perinatal	100	51	2%	29	1%	80	1%	--	--	--	
Undetermined	1,350	579	22%	471	15%	1,050	18%	--	--	--	
AGE AT HIV DIAGNOSIS											
0 - 12 years	110	53	2%	29	1%	82	1%	--	--	--	
13 - 19 years	510	234	9%	163	5%	397	7%	--	--	--	
20 - 24 years	1,200	530	20%	406	13%	936	16%	--	--	--	
25 - 29 years	1,150	446	17%	452	15%	898	16%	--	--	--	
30 - 39 years	2,230	683	26%	1,051	34%	1,734	30%	--	--	--	
40 - 49 years	1,450	424	16%	706	23%	1,130	20%	--	--	--	
50 - 59 years	540	190	7%	232	7%	422	7%	--	--	--	
60 years and over	130	41	2%	60	2%	101	2%	--	--	--	
Unspecified	0	0	0%	0	0%	0	0%	--	--	--	
TOTAL	7,320	2,601	100%	3,099	100%	5,700	100%	764	746,147	100%	

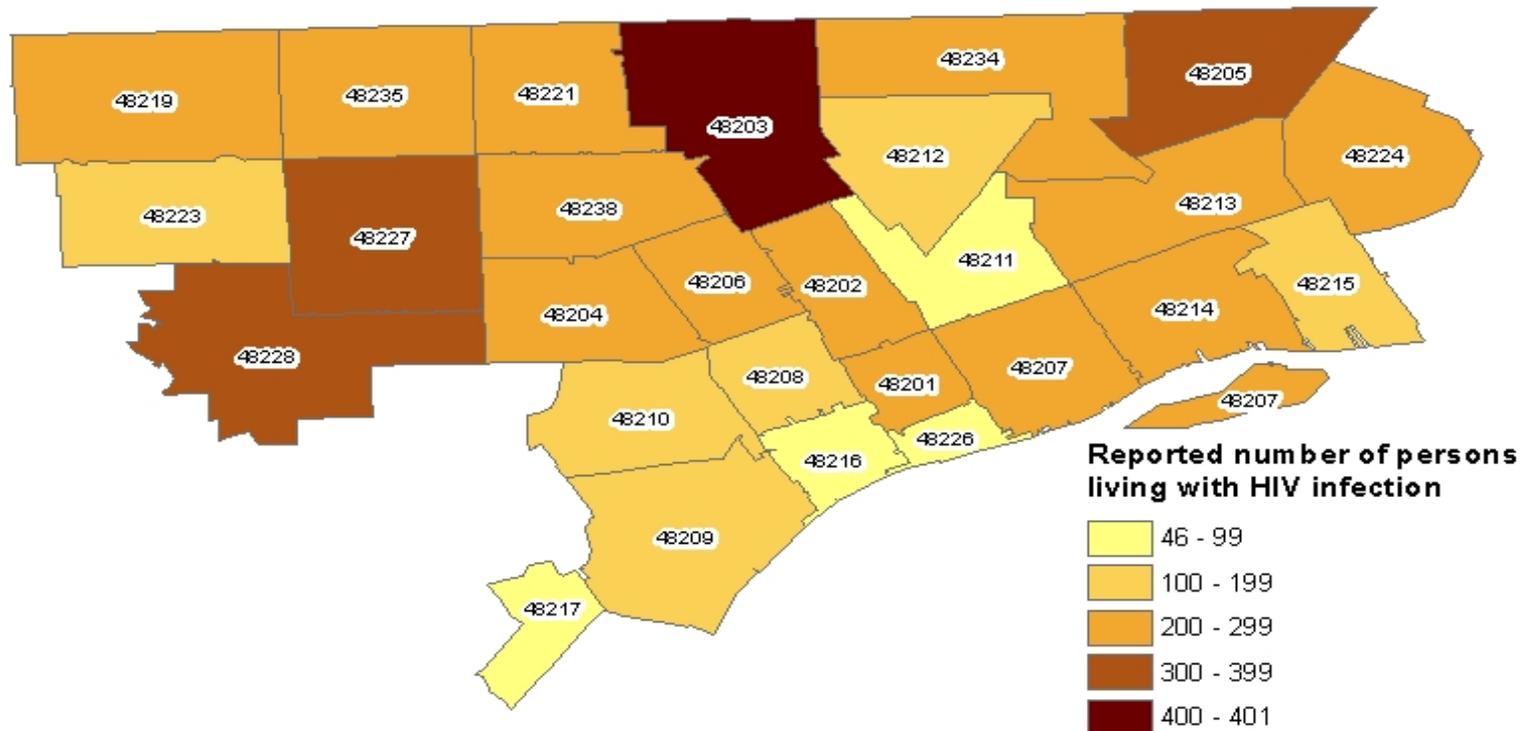
*See front matter page i for descriptions of prevalence estimate calculations and risk category groupings. Risk categories used in Michigan are redefined as of January 2012. NOTE: Heterosexual contact for males includes only males whose sexual partners are known to be HIV infected or at high risk for 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: 58,662 / 341 = 172. Thus, 1 out of every 172 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.

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

The above map includes 5,911 reported persons living with HIV by residence at diagnosis: 5,700 were residents of the City of Detroit and 211 were residents of Highland Park or Hamtramck at time of diagnosis (the map excludes 65 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	254	79	410	140	74	133
1988	330	124	616	213	122	224
1989	502	175	943	302	167	359
1990	576	212	1,307	345	203	501
1991	619	236	1,690	416	223	694
1992	724	312	2,102	583	295	982
1993	644	403	2,343	514	378	1,118
1994	591	423	2,511	482	393	1,207
1995	548	442	2,617	470	405	1,272
1996	516	292	2,841	378	273	1,377
1997	497	220	3,118	333	195	1,515
1998	433	222	3,329	311	193	1,633
1999	329	203	3,455	292	178	1,747
2000	404	216	3,643	323	183	1,887
2001	374	204	3,813	248	172	1,963
2002	311	203	3,921	256	176	2,043
2003	353	196	4,078	268	160	2,151
2004	356	183	4,251	260	153	2,258
2005	364	188	4,427	301	155	2,404
2006	304	175	4,556	219	143	2,480
2007	317	144	4,729	217	126	2,571
2008	323	174	4,878	221	136	2,656
2009	295	133	5,040	192	106	2,742
2010	281	132	5,189	200	116	2,826
2011	289	138	5,340	192	108	2,910
2012	272	127	5,485	148	102	2,956
2013	241	26	5,700	165	22	3,099
TOTAL	11,367	5,667		8,138	5,039	

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 5,700. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 3,099.

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

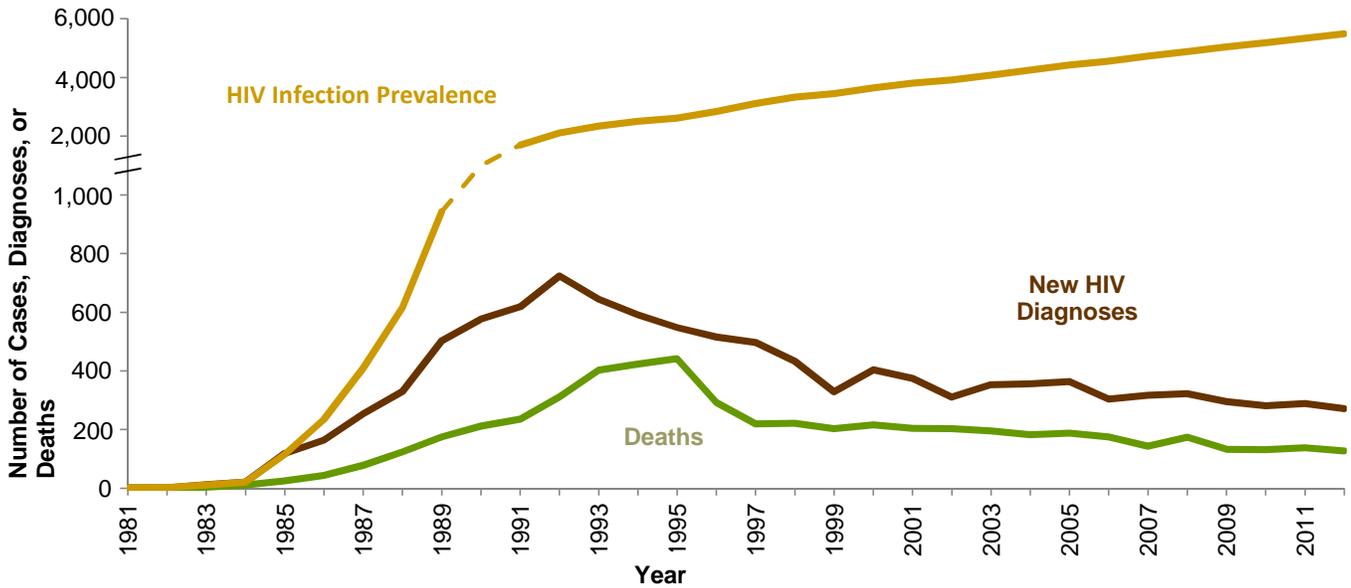


TABLE 4. Comparison of HIV Infection Prevalence in DETROIT to State

<i>Residence at Diagnosis</i>	<i>Estimated Prevalence</i>	<i>Reported Prevalence</i>				<i>Cumulative Stage 3</i>
		<i>HIV Infection Non-Stage 3</i>	<i>HIV Infection Stage 3 (AIDS)</i>	<i>Total</i>	<i>Rate</i>	
Detroit	7,320	2,601	3,099	5,700	764	8,138
Michigan Total	19,800	7,370	8,207	15,577	158	18,648



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