

# BIANNUAL HIV SURVEILLANCE REPORT, GENESEE COUNTY January 2012

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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

Detroit - HIV Surveillance Office  
1151 Taylor St., Room 211B  
Detroit, MI 48202  
313-876-0353

**\*\*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  $\geq 500$  CD4 cells/ $\mu$ l.

*Stage 2:* A case has no AIDS-defining condition, but the level of CD4 cells has fallen to 200-499 cells/ $\mu$ 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/ $\mu$ 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 Genesee County 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 2011, 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.

### 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.

**TABLE 1. Demographic Information on Prevalent HIV Infection Cases Living in GENESEE CO. at Diagnosis**

	REPORTED PREVALENCE <sup>†</sup>								CENSUS 2010	
	EST PREV*	HIV Infection Non-Stage 3		HIV Infection Stage 3 (AIDS)		Total		Rate per 100,000 <sup>§</sup>	Num	Percent
	Num	Num	Percent	Num	Percent	Num	Percent			
<b>RACE/ ETHNICITY<sup>‡</sup></b>										
White	300	110	43%	116	45%	226	44%	73.0	309,683	73%
Black	330	133	53%	116	45%	249	49%	285.1	87,352	21%
Hispanic	20	6	2%	11	4%	17	3%	130.9	12,983	3%
Asian/PI	10	0	0%	<5	**	<5	**	**	3,908	1%
Am Indian/AN	0	0	0%	0	0%	0	0%	**	1,961	<1%
Multi/Other/Unk	20	<5	**	12	5%	16	3%	---	9,903	2%
<b>SEX &amp; RACE</b>										
Male	530	184	73%	213	83%	397	78%	193.4	205,271	48%
White Male	250	87	34%	103	40%	190	37%	126.2	150,612	35%
Black Male	240	91	36%	91	36%	182	36%	448.2	40,610	10%
Hispanic Male	20	<5	**	8	3%	12	2%	185.5	6,469	2%
Other Male	20	<5	**	11	4%	13	3%	171.5	7,580	2%
Female	150	69	27%	43	17%	112	22%	50.8	220,519	52%
White Female	50	23	9%	13	5%	36	7%	22.6	159,071	37%
Black Female	90	42	17%	25	10%	67	13%	143.3	46,742	11%
Hispanic Female	10	<5	**	<5	**	5	1%	---	6,514	2%
Other Female	10	<5	**	<5	**	<5	**	**	8,192	2%
<b>RISK*</b>										
Male-Male Sex (MSM)	330	108	43%	136	53%	244	48%	--	--	--
Injection Drug Use (IDU)	30	15	6%	11	4%	26	5%	--	--	--
MSM/IDU	30	8	3%	11	4%	19	4%	--	--	--
Blood Products	10	<5	**	<5	**	<5	**	--	--	--
Heterosexual Contact (HC)	120	48	19%	39	15%	87	17%	--	--	--
HCFR (Males)	20	6	2%	8	3%	14	3%	--	--	--
HCM (Females)	100	42	17%	31	12%	73	14%	--	--	--
Perinatal	10	<5	**	0	0%	<5	**	--	--	--
Undetermined	170	70	28%	58	23%	128	25%	--	--	--
<b>AGE AT HIV DIAGNOSIS</b>										
0 - 12 years	10	<5	**	0	0%	<5	**	--	--	--
13 - 19 years	40	22	9%	11	4%	33	6%	--	--	--
20 - 24 years	100	45	18%	29	11%	74	15%	--	--	--
25 - 29 years	120	41	16%	49	19%	90	18%	--	--	--
30 - 39 years	240	72	28%	104	41%	176	35%	--	--	--
40 - 49 years	120	50	20%	42	16%	92	18%	--	--	--
50 - 59 years	50	18	7%	16	6%	34	7%	--	--	--
60 years and over	10	<5	**	5	2%	7	1%	--	--	--
Unspecified	0	0	0%	0	0%	0	0%	--	--	--
<b>TOTAL</b>	<b>680</b>	<b>253</b>	<b>100%</b>	<b>256</b>	<b>100%</b>	<b>509</b>	<b>100%</b>	<b>120</b>	<b>425,790</b>	<b>100%</b>

\*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).

<sup>†</sup> Includes reports that contain patient name or are otherwise unduplicated. <5 and \*\* = 1, 2, 3, or 4 cases.

<sup>‡</sup> To calculate "1 out of x" statements, divide the census number by total reported prevalence. For example, for non-Hispanic whites: 309,683 / 226 = 1,370. Thus, 1 out of every 1,370 non-Hispanic white persons in GENESEE CO. 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 "----".

<sup>§</sup> Rates are not reported for risk categories and age at diagnosis because no reliable denominator data exist for these groups.

<sup>¶</sup> 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 GENESEE CO. at Diagnosis**

<b>MALE</b>	<b>White</b>		<b>Black</b>		<b>Hispanic</b>		<b>Other or Unknown</b>		<b>All Male</b>	
	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>
Male-Male sex	122	64%	105	58%	10	83%	7	54%	244	61%
Injection Drug Use	8	4%	<5	**	0	0%	0	0%	12	3%
MSM/IDU	10	5%	8	4%	0	0%	<5	**	19	5%
Blood Products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual Contact (HCFR)	<5	**	9	5%	<5	**	0	0%	14	4%
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	44	23%	54	30%	<5	**	5	38%	104	26%
<b>Male Subtotal</b>	<b>190</b>	<b>48%</b>	<b>182</b>	<b>46%</b>	<b>12</b>	<b>3%</b>	<b>13</b>	<b>3%</b>	<b>397</b>	<b>100%</b>
<b>FEMALE</b>										
	<b>White</b>		<b>Black</b>		<b>Hispanic</b>		<b>Other or Unknown</b>		<b>All Female</b>	
	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>
Injection Drug Use	<5	**	11	16%	0	0%	0	0%	14	13%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual Contact (HCM)	25	69%	39	58%	5	100%	<5	**	73	65%
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	8	22%	16	24%	0	0%	0	0%	24	21%
<b>Female Subtotal</b>	<b>36</b>	<b>32%</b>	<b>67</b>	<b>60%</b>	<b>5</b>	<b>4%</b>	<b>&lt;5</b>	<b>**</b>	<b>112</b>	<b>100%</b>
<b>ALL</b>										
	<b>White</b>		<b>Black</b>		<b>Hispanic</b>		<b>Other or Unknown</b>		<b>Risk All</b>	
	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>	<b>Num</b>	<b>Percent</b>
Male-Male sex	122	54%	105	42%	10	59%	7	41%	244	48%
Injection Drug Use	11	5%	15	6%	0	0%	0	0%	26	5%
MSM/IDU	10	4%	8	3%	0	0%	<5	**	19	4%
Blood Products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual Contact (HC)	29	13%	48	19%	6	35%	<5	**	87	17%
HCFR (Males)	<5	**	9	4%	<5	**	0	0%	14	3%
HCM (Females)	25	11%	39	16%	5	29%	<5	**	73	14%
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	52	23%	70	28%	<5	**	5	29%	128	25%
<b>RACE ALL</b>	<b>226</b>	<b>44%</b>	<b>249</b>	<b>49%</b>	<b>17</b>	<b>3%</b>	<b>17</b>	<b>3%</b>	<b>509</b>	<b>100%</b>

**TABLE 3. New Diagnoses, Deaths, and Prevalence of HIV Infection in GENESEE CO., by Year**

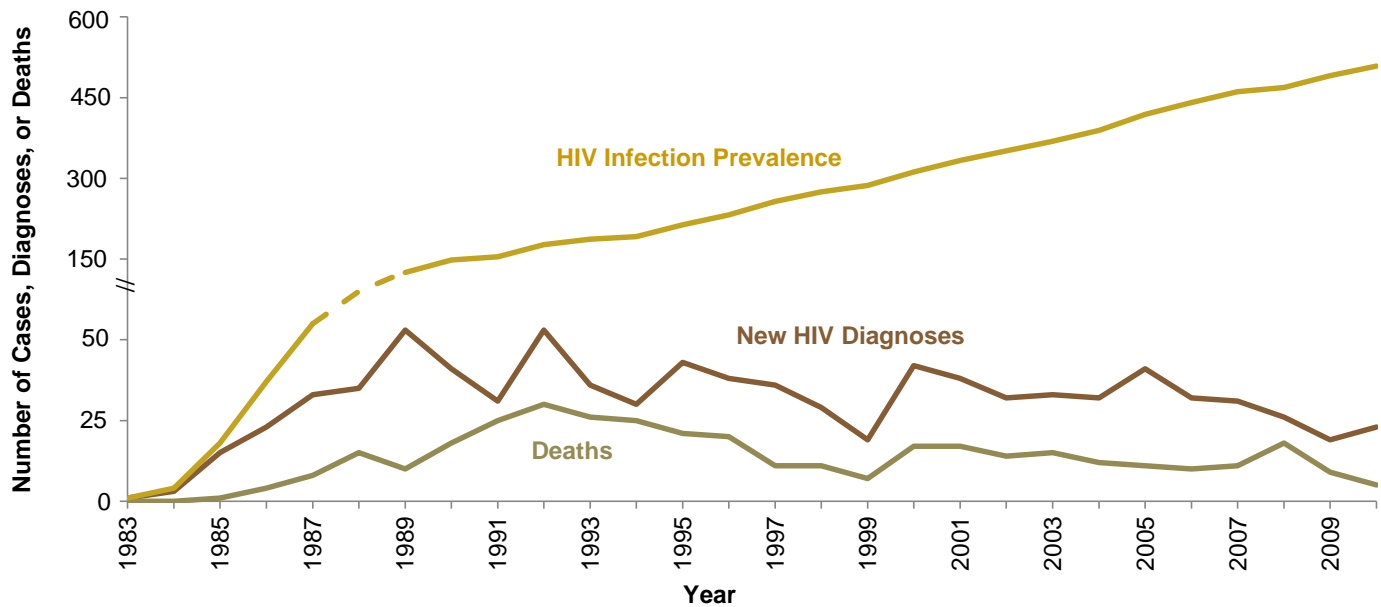
Year	<i>HIV Infection (all stages)</i>			<i>HIV Infection Stage 3 (AIDS)</i>		
	New HIV Diagnoses	Deaths	Prevalence	New Stage 3 Diagnoses	Deaths	Prevalence
1983	1	0	1	1	0	1
1984	3	0	4	1	0	2
1985	15	1	18	2	1	3
1986	23	4	37	5	4	4
1987	33	8	62	19	7	16
1988	35	15	82	20	13	23
1989	53	10	125	30	10	43
1990	41	18	148	29	18	54
1991	31	25	154	23	25	52
1992	53	30	177	31	28	55
1993	36	26	187	24	22	57
1994	30	25	192	27	19	65
1995	43	21	214	29	15	79
1996	38	20	232	28	16	91
1997	36	11	257	26	10	107
1998	29	11	275	25	11	121
1999	19	7	287	19	5	135
2000	42	17	312	20	15	140
2001	38	17	333	13	11	142
2002	32	14	351	25	9	158
2003	33	15	369	16	9	165
2004	32	12	389	11	5	171
2005	41	11	419	30	7	194
2006	32	10	441	27	6	215
2007	31	11	461	31	7	239
2008	26	18	469	15	14	240
2009	22	10	481	13	9	244
2010	19	9	491	9	8	245
2011	23	5	<b>509</b>	16	5	<b>256</b>
<b>TOTAL</b>	<b>890</b>	<b>381</b>		<b>565</b>	<b>309</b>	

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 4, 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 GENESEE CO. is 509. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 256.

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 1. New Diagnoses, Deaths, and Prevalence of HIV Infection in GENESEE CO., by Year****TABLE 4. Comparison of HIV Infection Prevalence in GENESEE CO. to State**

<i>Residence at Diagnosis</i>	<i>Estimated Prevalence</i>	<i>Reported Prevalence</i>				<i>Cumulative Stage 3</i>
		<b>HIV Infection Non-Stage 3</b>	<b>HIV Infection Stage 3 (AIDS)</b>	<b>Total</b>	<b>Rate</b>	
<b>Genesee Co.</b>	680	253	256	509	120	565
<b>Michigan Total</b>	19,300	6,860	7,855	14,715	149	17,669