

# BIANNUAL HIV SURVEILLANCE REPORT, GENESEE COUNTY July 2012

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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  $\geq 500$  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>**

	<b>EST PREV*</b>	<b>HIV Infection Non-Stage 3</b>		<b>HIV Infection Stage 3 (AIDS)</b>		<b>Total</b>		<b>Rate per 100,000<sup>‡§</sup></b>	<b>CENSUS 2010</b>	
	<b>Num</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>RACE/ ETHNICITY<sup>‡</sup></b>										
White	300	112	43%	118	45%	230	44%	74.3	309,683	73%
Black	340	139	53%	121	46%	260	50%	297.6	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	**	13	5%	17	3%	N/A	9,903	2%
<b>SEX &amp; RACE</b>										
Male	530	191	73%	221	84%	412	78%	200.7	205,271	48%
White Male	250	88	34%	105	40%	193	37%	128.1	150,612	35%
Black Male	250	97	37%	96	36%	193	37%	475.3	40,610	10%
Hispanic Male	20	<5	**	8	3%	12	2%	185.5	6,469	2%
Other Male	20	<5	**	12	5%	14	3%	184.7	7,580	2%
Female	150	70	27%	43	16%	113	22%	51.2	220,519	52%
White Female	50	24	9%	13	5%	37	7%	23.3	159,071	37%
Black Female	90	42	16%	25	9%	67	13%	143.3	46,742	11%
Hispanic Female	10	<5	**	3	**	5	1%	---	6,514	2%
Other Female	10	<5	**	2	**	<5	**	**	8,192	2%
<b>RISK*</b>										
Male-Male Sex (MSM)	330	115	44%	141	53%	256	49%	--	--	--
Injection Drug Use (IDU)	30	15	6%	11	4%	26	5%	--	--	--
MSM/IDU	30	8	3%	12	5%	20	4%	--	--	--
Blood Products	10	<5	**	<5	**	<5	**	--	--	--
Heterosexual Contact (HC)	110	48	18%	38	14%	86	16%	--	--	--
HCFR (Males)	20	6	2%	8	3%	14	3%	--	--	--
HCM (Females)	90	42	16%	30	11%	72	14%	--	--	--
Perinatal	10	<5	**	0	0%	<5	**	--	--	--
Undetermined	170	70	27%	61	23%	131	25%	--	--	--
<b>AGE AT HIV DIAGNOSIS</b>										
0 - 12 years	10	<5	**	0	0%	<5	**	--	--	--
13 - 19 years	40	21	8%	13	5%	34	6%	--	--	--
20 - 24 years	110	53	20%	31	12%	84	16%	--	--	--
25 - 29 years	120	41	16%	48	18%	89	17%	--	--	--
30 - 39 years	230	71	27%	104	39%	175	33%	--	--	--
40 - 49 years	120	49	19%	46	17%	95	18%	--	--	--
50 - 59 years	50	20	8%	17	6%	37	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>261</b>	<b>100%</b>	<b>264</b>	<b>100%</b>	<b>525</b>	<b>100%</b>	<b>123</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 / 230 = 1,346. Thus, 1 out of every 1,346 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**

	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
<b>MALE</b>										
Male-Male sex	123	64%	116	60%	10	83%	7	50%	256	62%
Injection Drug Use	7	4%	4	**	0	0%	1	**	12	3%
MSM/IDU	11	6%	8	4%	0	0%	1	**	20	5%
Blood Products	<5	**	0	0%	0	0%	0	0%	2	**
Heterosexual Contact (HCFR)	<5	**	9	5%	1	**	0	0%	14	3%
Perinatal	0	0%	2	**	0	0%	0	0%	2	**
Undetermined	46	24%	54	28%	1	**	5	36%	106	26%
<b>Male Subtotal</b>	<b>193</b>	<b>47%</b>	<b>193</b>	<b>47%</b>	<b>12</b>	<b>3%</b>	<b>14</b>	<b>3%</b>	<b>412</b>	<b>100%</b>
<b>FEMALE</b>										
Injection Drug Use	<5	**	11	16%	0	0%	0	0%	14	12%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual Contact (HCM)	25	68%	38	57%	5	100%	4	**	72	64%
Perinatal	0	0%	2	**	0	0%	0	0%	2	**
Undetermined	9	24%	16	24%	0	0%	0	0%	25	22%
<b>Female Subtotal</b>	<b>37</b>	<b>33%</b>	<b>67</b>	<b>59%</b>	<b>5</b>	<b>4%</b>	<b>&lt;5</b>	<b>**</b>	<b>113</b>	<b>100%</b>
<b>ALL</b>										
Male-Male sex	123	53%	116	45%	10	59%	7	39%	256	49%
Injection Drug Use	10	4%	15	6%	0	0%	<5	**	26	5%
MSM/IDU	11	5%	8	3%	0	0%	<5	**	20	4%
Blood Products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual Contact (HC)	29	13%	47	18%	6	35%	<5	**	86	16%
HCFR (Males)	<5	**	9	3%	<5	**	0	0%	14	3%
HCM (Females)	25	11%	38	15%	5	29%	<5	**	72	14%
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	55	24%	70	27%	<5	**	5	28%	131	25%
<b>RACE ALL</b>	<b>230</b>	<b>44%</b>	<b>260</b>	<b>50%</b>	<b>17</b>	<b>3%</b>	<b>18</b>	<b>3%</b>	<b>525</b>	<b>100%</b>

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

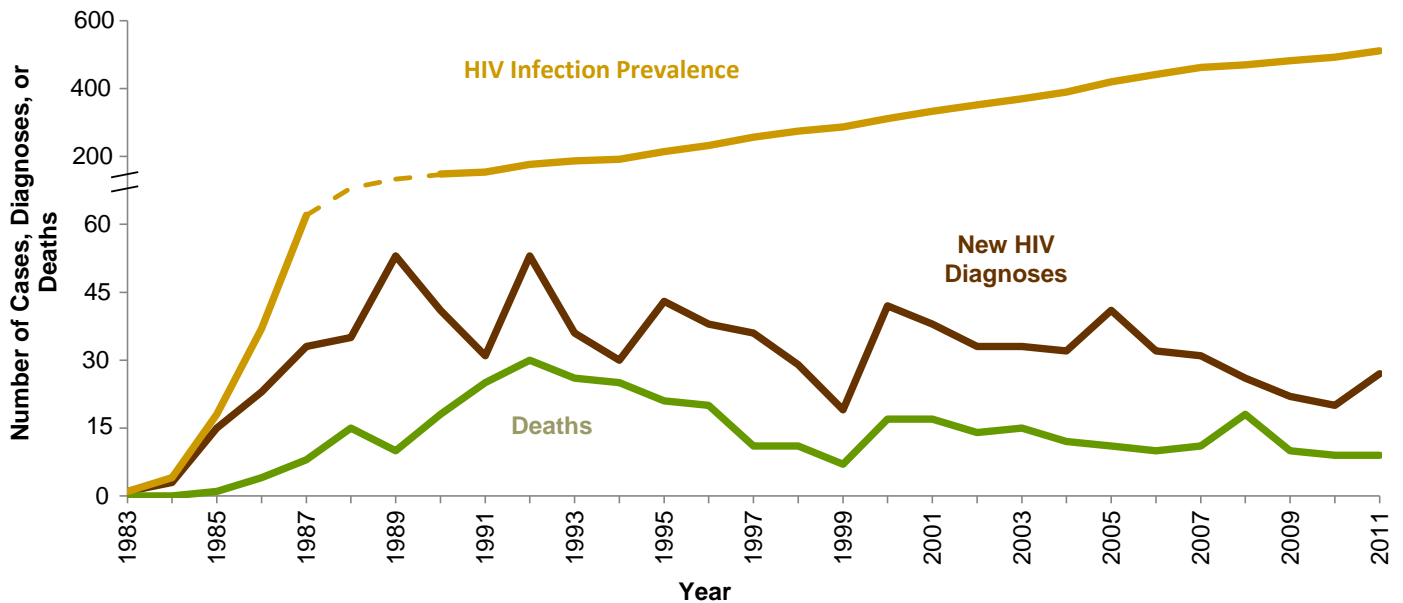
Year	<i>HIV Infection (all stages)</i>			<i>HIV Infection Stage 3 (AIDS)</i>		
	<b>New HIV Diagnoses</b>	<b>Deaths</b>	<b>Prevalence</b>	<b>New Stage 3 Diagnoses</b>	<b>Deaths</b>	<b>Prevalence</b>
1983	1	0	1	1	0	1
1984	3	0	4	1	0	2
1985	15	1	18	2	1	3
1986	23	4	37	5	4	4
1987	33	8	62	19	7	16
1988	35	15	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	33	14	352	25	9	158
2003	33	15	370	16	9	165
2004	32	12	390	11	5	171
2005	41	11	420	30	7	194
2006	32	10	442	27	6	215
2007	31	11	462	31	7	239
2008	26	18	470	15	14	240
2009	22	10	482	13	9	244
2010	20	9	493	9	8	245
2011	27	9	511	20	9	256
2012	14	0	<b>525</b>	8	0	<b>264</b>
<b>TOTAL</b>	<b>896</b>	<b>385</b>		<b>569</b>	<b>313</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 525. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 264.

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>
		<i>HIV Infection Non-Stage 3</i>	<i>HIV Infection Stage 3 (AIDS)</i>	<i>Total</i>	<i>Rate</i>	
<b>Genesee Co.</b>	680	261	264	525	123	569
<b>Michigan Total</b>	19,300	7,057	7,966	15,023	152	17,891