

# BIANNUAL HIV SURVEILLANCE REPORT, MACOMB 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 MACOMB CO. 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 2012, 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.

**TABLE 1. Demographic Information on Prevalent HIV Infection Cases Living in MACOMB 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	540	192	57%	221	65%	413	61%	58.5	705,693	84%
Black	280	122	36%	95	28%	217	32%	301.2	72,053	9%
Hispanic	30	15	4%	8	2%	23	3%	120.5	19,095	2%
Asian/PI	10	<5	**	0	0%	<5	**	**	25,076	3%
Am Indian/AN	10	<5	**	<5	**	<5	**	**	2,351	<1%
Multi/Other/Unk	30	5	1%	17	5%	22	3%	N/A	16,710	2%
<b>SEX &amp; RACE</b>										
Male	740	279	83%	288	84%	567	84%	138.7	408,712	49%
White Male	480	168	50%	202	59%	370	55%	107.4	344,478	41%
Black Male	200	93	28%	64	19%	157	23%	473.4	33,167	4%
Hispanic Male	20	12	4%	7	2%	19	3%	195.9	9,697	1%
Other Male	30	6	2%	15	4%	21	3%	98.3	21,370	3%
Female	140	57	17%	54	16%	111	16%	25.7	432,266	51%
White Female	60	24	7%	19	6%	43	6%	11.9	361,215	43%
Black Female	80	29	9%	31	9%	60	9%	154.3	38,886	5%
Hispanic Female	10	<5	**	<5	**	<5	**	**	9,398	1%
Other Female	10	<5	**	<5	**	<5	**	**	22,767	3%
<b>RISK*</b>										
Male-Male Sex (MSM)	510	192	57%	203	59%	395	58%	--	--	--
Injection Drug Use (IDU)	50	17	5%	25	7%	42	6%	--	--	--
MSM/IDU	20	9	3%	6	2%	15	2%	--	--	--
Blood Products	10	<5	**	6	2%	9	1%	--	--	--
Heterosexual Contact (HC)	100	34	10%	40	12%	74	11%	--	--	--
HCFR (Males)	20	6	2%	7	2%	13	2%	--	--	--
HCM (Females)	80	28	8%	33	10%	61	9%	--	--	--
Perinatal	10	<5	**	<5	**	7	1%	--	--	--
Undetermined	180	77	23%	59	17%	136	20%	--	--	--
<b>AGE AT HIV DIAGNOSIS</b>										
0 - 12 years	10	<5	**	5	1%	9	1%	--	--	--
13 - 19 years	40	25	7%	7	2%	32	5%	--	--	--
20 - 24 years	130	60	18%	39	11%	99	15%	--	--	--
25 - 29 years	150	63	19%	54	16%	117	17%	--	--	--
30 - 39 years	290	106	32%	116	34%	222	33%	--	--	--
40 - 49 years	180	58	17%	83	24%	141	21%	--	--	--
50 - 59 years	50	15	4%	27	8%	42	6%	--	--	--
60 years and over	20	5	1%	11	3%	16	2%	--	--	--
Unspecified	0	0	0%	0	0%	0	0%	--	--	--
<b>TOTAL</b>	<b>880</b>	<b>336</b>	<b>100%</b>	<b>342</b>	<b>100%</b>	<b>678</b>	<b>100%</b>	<b>81</b>	<b>840,978</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: 705,693 / 413 = 1,709. Thus, 1 out of every 1,709 non-Hispanic white persons in MACOMB CO. are living with HIV. Rates and "1 out of x" statements are not reliable for <10 cases. Thus, rates for <10 case 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 MACOMB 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	263	71%	103	66%	15	79%	14	67%	395	70%
Injection Drug Use	15	4%	6	4%	<5	**	<5	**	24	4%
MSM/IDU	14	4%	<5	**	0	0%	0	0%	15	3%
Blood Products	8	2%	0	0%	0	0%	<5	**	9	2%
Heterosexual Contact (HCFR)	10	3%	<5	**	0	0%	0	0%	13	2%
Perinatal	<5	**	<5	**	0	0%	0	0%	5	1%
Undetermined	59	16%	40	25%	<5	**	<5	**	106	19%
<b>Male Subtotal</b>	<b>370</b>	<b>65%</b>	<b>157</b>	<b>28%</b>	<b>19</b>	<b>3%</b>	<b>21</b>	<b>4%</b>	<b>567</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	8	19%	8	13%	<5	**	<5	**	18	16%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual Contact (HCM)	26	60%	31	52%	<5	**	<5	**	61	55%
Perinatal	<5	**	<5	**	0	0%	0	0%	<5	**
Undetermined	8	19%	20	33%	0	0%	<5	**	30	27%
<b>Female Subtotal</b>	<b>43</b>	<b>39%</b>	<b>60</b>	<b>54%</b>	<b>&lt;5</b>	<b>**</b>	<b>&lt;5</b>	<b>**</b>	<b>111</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	263	64%	103	47%	15	65%	14	56%	395	58%
Injection Drug Use	23	6%	14	6%	<5	**	<5	**	42	6%
MSM/IDU	14	3%	<5	**	0	0%	0	0%	15	2%
Blood Products	8	2%	0	0%	0	0%	<5	**	9	1%
Heterosexual Contact (HC)	36	9%	34	16%	<5	**	<5	**	74	11%
HCFR (Males)	10	2%	<5	**	0	0%	0	0%	13	2%
HCM (Females)	26	6%	31	14%	<5	**	<5	**	61	9%
Perinatal	<5	**	5	2%	0	0%	0	0%	7	1%
Undetermined	67	16%	60	28%	<5	**	6	24%	136	20%
<b>RACE ALL</b>	<b>413</b>	<b>61%</b>	<b>217</b>	<b>32%</b>	<b>23</b>	<b>3%</b>	<b>25</b>	<b>4%</b>	<b>678</b>	<b>100%</b>

**TABLE 3. Prevalent HIV Infection Cases in MACOMB CO. According to City of Residence at Diagnosis**

CITY OF RESIDENCE AT DIAGNOSIS	EST PREV*	REPORTED PREVALENCE <sup>†</sup>			
		HIV Infection Non-Stage 3	HIV Infection Stage 3	Total	
				Number	Percent
Armada	10	0	<5	<5	**
Center Line	10	<5	<5	5	(1%)
Chesterfield	10	6	<5	10	(1%)
Clinton Township	110	45	43	88	(13%)
Eastpointe	60	22	22	44	(7%)
Fraser	10	6	<5	9	(1%)
Grosse Pointe	10	<5	<5	5	(1%)
Harrison Township	20	6	13	19	(3%)
Lenox Township	10	0	<5	<5	**
Macomb Township	20	7	7	14	(2%)
Mount Clemens	80	34	28	62	(9%)
New Baltimore	20	10	8	18	(3%)
New Haven	10	<5	<5	<5	**
Richmond	10	<5	<5	<5	**
Romeo	10	<5	<5	6	(1%)
Roseville	60	26	19	45	(7%)
Shelby Township	10	<5	5	6	(1%)
St. Clair Shores	60	20	28	48	(7%)
Sterling Heights	120	44	47	91	(13%)
Utica	40	11	17	28	(4%)
Warren	210	83	80	163	(24%)
Washington	10	<5	<5	6	(1%)
<b>TOTAL</b>	<b>880</b>	<b>335</b>	<b>340</b>	<b>675</b>	<b>(100%)</b>

\*See front matter page i for descriptions of prevalence estimate calculations.

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

**TABLE 4. New Diagnoses, Deaths, and Prevalence of HIV Infection in MACOMB 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	2	1	2	2	1	2
1985	22	3	21	2	3	1
1986	21	2	40	7	2	6
1987	23	7	56	10	7	9
1988	32	8	80	18	8	19
1989	49	14	115	30	14	35
1990	59	18	156	35	18	52
1991	51	24	183	43	24	71
1992	58	29	212	48	29	90
1993	48	29	231	46	29	107
1994	43	29	245	35	28	114
1995	40	42	243	51	40	125
1996	40	21	262	29	21	133
1997	32	13	281	24	11	146
1998	30	14	297	23	13	156
1999	25	14	308	18	14	160
2000	34	5	337	13	3	170
2001	36	11	362	22	8	184
2002	33	19	376	18	16	186
2003	33	10	399	21	9	198
2004	36	13	422	19	8	209
2005	34	7	449	23	7	225
2006	44	9	484	36	8	253
2007	38	17	505	26	13	266
2008	48	9	544	31	7	290
2009	53	10	587	17	8	299
2010	49	9	627	32	9	322
2011	48	10	665	26	10	338
2012	14	1	678	5	1	342
<b>TOTAL</b>	<b>1,062</b>	<b>397</b>		<b>706</b>	<b>368</b>	

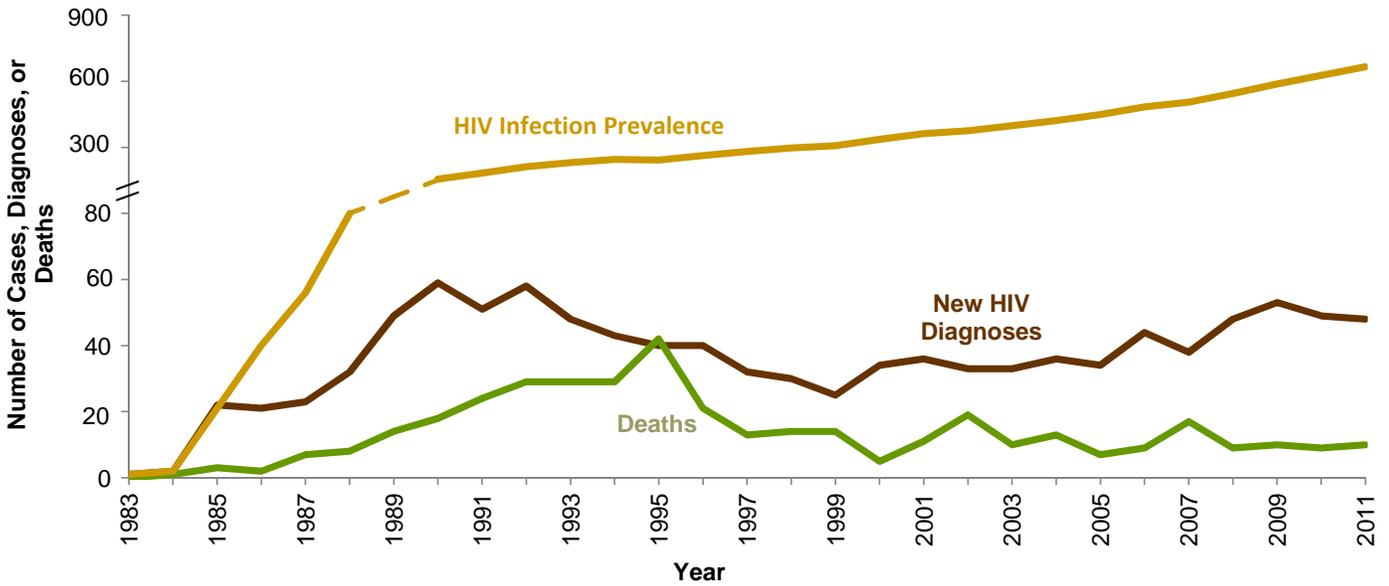
The prevalence of HIV in Michigan has steadily increased, since persons with HIV are living longer. This is largely due to improved anti-retroviral therapy.

The increase in HIV prevalence is also reflected in Figure 1 on page 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 MACOMB CO is 678. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 342.

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 MACOMB CO., by Year**



**TABLE 5. Comparison of HIV Infection Prevalence in MACOMB 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>	
Macomb Co.	880	336	342	678	81	706
Michigan Total	19,300	7,057	7,966	15,023	152	17,891



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