

# BIANNUAL HIV SURVEILLANCE REPORT, MACOMB CO. January 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 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.

### 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.

### 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.

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

	<b>REPORTED PREVALENCE<sup>†</sup></b>									
	<b>EST PREV*</b>	<b>HIV Infection Non-Stage 3</b>		<b>HIV Infection Stage 3 (AIDS)</b>		<b>Total</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>Rate per 100,000<sup>§</sup></b>	<b>Num</b>	<b>Percent</b>
<b>RACE/ ETHNICITY<sup>‡</sup></b>										
White	550	190	58%	224	66%	414	62%	59	705,693	84%
Black	270	113	35%	91	27%	204	31%	283	72,053	9%
Hispanic	30	15	5%	8	2%	23	3%	120	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	2%	14	4%	19	3%	N/A	16,710	2%
<b>SEX &amp; RACE</b>										
Male	740	267	82%	287	85%	554	84%	136	408,712	49%
White Male	490	165	51%	203	60%	368	56%	107	344,478	41%
Black Male	200	85	26%	63	19%	148	22%	446	33,167	4%
Hispanic Male	30	12	4%	7	2%	19	3%	196	9,697	1%
Other Male	30	5	2%	14	4%	19	3%	89	21,370	3%
Female	140	58	18%	51	15%	109	16%	25	432,266	51%
White Female	60	25	8%	21	6%	46	7%	13	361,215	43%
Black Female	70	28	9%	28	8%	56	8%	144	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)	520	193	59%	201	59%	394	59%	--	--	--
Injection Drug Use (IDU)	50	17	5%	23	7%	40	6%	--	--	--
MSM/IDU	20	9	3%	6	2%	15	2%	--	--	--
Blood Products	10	<5	**	6	2%	9	1%	--	--	--
Heterosexual Contact (HC)	100	34	10%	39	12%	73	11%	--	--	--
HCFR (Males)	20	5	2%	7	2%	12	2%	--	--	--
HCM (Females)	80	29	9%	32	9%	61	9%	--	--	--
Perinatal	10	<5	**	<5	**	7	1%	--	--	--
Undetermined	170	65	20%	60	18%	125	19%	--	--	--
<b>AGE AT HIV DIAGNOSIS</b>										
0 - 12 years	10	<5	**	5	1%	9	1%	--	--	--
13 - 19 years	40	25	8%	7	2%	32	5%	--	--	--
20 - 24 years	120	58	18%	36	11%	94	14%	--	--	--
25 - 29 years	150	61	19%	54	16%	115	17%	--	--	--
30 - 39 years	300	109	34%	115	34%	224	34%	--	--	--
40 - 49 years	180	50	15%	85	25%	135	20%	--	--	--
50 - 59 years	50	14	4%	25	7%	39	6%	--	--	--
60 years and over	20	<5	**	11	3%	15	2%	--	--	--
Unspecified	0	0	0%	0	0%	0	0%	--	--	--
<b>TOTAL</b>	<b>880</b>	<b>325</b>	<b>100%</b>	<b>338</b>	<b>100%</b>	<b>663</b>	<b>100%</b>	<b>79</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 / 414 = 1,705. Thus, 1 out of every 1,705 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 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 3. Prevalent HIV Infection Cases in MACOMB CO. by City of Residence at Diagnosis**

CITY OF RESIDENCE AT DIAGNOSIS	EST PREV*	REPORTED PREVALENCE †			
		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	<5	<5	7	1%
CLINTON TOWNSHIP	120	45	42	87	13%
EASTPOINTE	60	23	22	45	7%
FRASER	10	5	<5	8	1%
GROSSE POINTE	10	<5	<5	5	1%
HARRISON TOWNSHIP	30	6	13	19	3%
LENOX TOWNSHIP	10	0	<5	<5	**
MACOMB TOWNSHIP	20	6	7	13	2%
MOUNT CLEMENS	80	35	28	63	10%
NEW BALTIMORE	20	10	8	18	3%
NEW HAVEN	10	<5	<5	<5	**
RICHMOND	10	<5	<5	<5	**
ROCHESTER	10	0	<5	<5	**
ROMEO	10	<5	<5	6	1%
ROSEVILLE	60	25	20	45	7%
SHELBY TOWNSHIP	10	<5	5	6	1%
ST. CLAIR SHORES	60	20	28	48	7%
STERLING	10	<5	0	<5	**
STERLING HEIGHTS	120	42	47	89	13%
UTICA	30	9	15	24	4%
WARREN	210	79	79	158	24%
WASHINGTON	10	<5	<5	6	1%
<b>UNKNOWN</b>	10	<5	0	<5	**
<b>TOTAL</b>	<b>880</b>	<b>325</b>	<b>338</b>	<b>663</b>	<b>#</b>

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

† 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>		
	<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	2	1	2	2	1	2
1985	22	3	21	2	3	1
1986	22	2	41	7	2	6
1987	22	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	47	29	230	46	29	107
1994	42	29	243	36	29	114
1995	40	41	242	51	39	126
1996	39	21	260	29	21	134
1997	34	13	281	24	11	147
1998	30	14	297	23	13	157
1999	24	14	307	18	14	161
2000	34	5	336	13	3	171
2001	36	11	361	22	8	185
2002	34	19	376	18	16	187
2003	33	10	399	21	9	199
2004	35	12	422	19	8	210
2005	34	7	449	23	7	226
2006	45	7	487	36	7	255
2007	40	16	511	26	13	268
2008	47	9	549	30	7	291
2009	53	10	592	17	8	300
2010	47	9	630	30	9	321
2011	40	7	<b>663</b>	24	7	<b>338</b>
<b>TOTAL</b>	<b>1,052</b>	<b>389</b>		<b>702</b>	<b>364</b>	

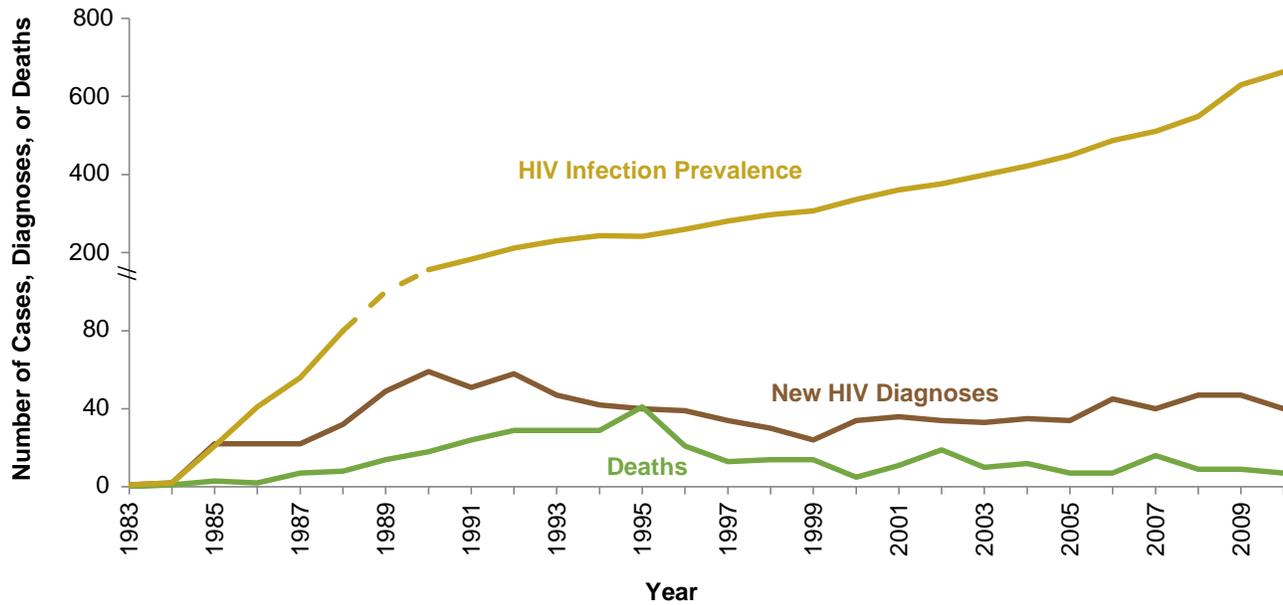
The prevalence of HIV in Michigan has steadily increased, since persons with HIV are living longer. This is largely due to improved anti-retroviral therapy.

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 663. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 338.

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>	
<b>Macomb Co.</b>	880	325	338	663	79	702
<b>Michigan Total</b>	19,300	6,860	7,855	14,715	149	17,669



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