

BIANNUAL HIV SURVEILLANCE REPORT, SOUTHEAST MICHIGAN 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 ≥ 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 SOUTHEAST MICHIGAN 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 SOUTHEAST MICHIGAN at Diagnosis

	REPORTED PREVALENCE[†]								CENSUS 2010	
	EST PREV* Num	HIV Infection Non- Stage 3		HIV Infection Stage 3 (AIDS)		Total		Rate per 100,000^{‡§}	Num	Percent
RACE/ ETHNICITY[¶]										
White	3,350	1150	26%	1371	27%	2521	27%	87	2,884,240	68%
Black	8,540	2966	68%	3469	68%	6435	68%	660	975,057	23%
Hispanic	400	144	3%	159	3%	303	3%	179	169,272	4%
Asian/PI	60	19	<1%	26	1%	45	<1%	32	140,727	3%
Am Indian/AN	20	9	<1%	<5	**	12	<1%	98	12,250	<1%
Multi/Other/Unk	250	74	2%	111	2%	185	2%	N/A	85,758	2%
SEX & RACE										
Male	9,650	3293	75%	3979	77%	7272	77%	352	2,066,529	48%
White Male	2,960	988	23%	1243	24%	2231	23%	158	1,415,046	33%
Black Male	6,130	2114	48%	2504	49%	4618	49%	1027	449,599	11%
Hispanic Male	320	117	3%	121	2%	238	3%	278	85,575	2%
Other Male	250	74	2%	111	2%	185	2%	159	116,309	3%
Female	2,960	1069	25%	1160	23%	2229	23%	101	2,200,775	52%
White Female	380	162	4%	128	2%	290	3%	20	1,469,194	34%
Black Female	2,410	852	20%	965	19%	1817	19%	346	525,458	12%
Hispanic Female	90	27	1%	38	1%	65	1%	78	83,697	2%
Other Female	80	28	1%	29	1%	57	1%	47	122,426	3%
RISK*										
Male-Male Sex (MSM)	6,280	2135	49%	2600	51%	4735	50%	--	--	--
Injection Drug Use (IDU)	1,230	352	8%	571	11%	923	10%	--	--	--
MSM/IDU	440	128	3%	202	4%	330	3%	--	--	--
Blood Products	60	15	<1%	30	1%	45	<1%	--	--	--
Heterosexual Contact (HC)	2,200	768	18%	892	17%	1660	17%	--	--	--
HCFR (Males)	390	126	3%	169	3%	295	3%	--	--	--
HCM (Females)	1,810	642	15%	723	14%	1365	14%	--	--	--
Perinatal	150	68	2%	45	1%	113	1%	--	--	--
Undetermined	2,250	896	21%	799	16%	1695	18%	--	--	--
AGE AT HIV DIAGNOSIS										
0 - 12 years	160	73	2%	50	1%	123	1%	--	--	--
13 - 19 years	680	319	7%	195	4%	514	5%	--	--	--
20 - 24 years	1,740	774	18%	538	10%	1312	14%	--	--	--
25 - 29 years	2,020	756	17%	763	15%	1519	16%	--	--	--
30 - 39 years	4,210	1295	30%	1880	37%	3175	33%	--	--	--
40 - 49 years	2,650	774	18%	1224	24%	1998	21%	--	--	--
50 - 59 years	930	304	7%	396	8%	700	7%	--	--	--
60 years and over	210	64	1%	93	2%	157	2%	--	--	--
Unspecified	10	<5	**	0	0%	<5	**	--	--	--
TOTAL	12,610	4,362	100%	5,139	100%	9,501	100%	223	4,267,304	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: 2,884,240 / 2521 = 1,144. Thus, 1 out of every 1,144 non-Hispanic white persons in Southeast Michigan 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.

TABLE 2. Sex, Race, and Risk Among Prevalent HIV Infection Cases Living in SOUTHEAST MICHIGAN at Diagnosis

MALE	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	1689	76%	2787	60%	143	60%	116	63%	4735	65%
Injection Drug Use	80	4%	390	8%	24	10%	11	6%	505	7%
MSM/IDU	110	5%	206	4%	<5	**	11	6%	330	5%
Blood Products	29	1%	5	<1%	<5	**	<5	**	37	1%
Heterosexual Contact (HCFR)	50	2%	231	5%	11	5%	<5	**	295	4%
Perinatal	8	<1%	51	1%	<5	**	<5	**	64	1%
Undetermined	265	12%	948	21%	55	23%	38	21%	1306	18%
Male Subtotal	2231	31%	4618	64%	238	3%	185	3%	7272	100%
FEMALE										
	White		Black		Hispanic		Other or Unknown		All Female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection Drug Use	61	21%	336	18%	12	18%	9	16%	418	19%
Blood Products	<5	**	<5	**	<5	**	0	0%	8	<1%
Heterosexual Contact (HCM)	177	61%	1109	61%	44	68%	35	61%	1365	61%
Perinatal	<5	**	40	2%	<5	**	<5	**	49	2%
Undetermined	44	15%	329	18%	6	9%	10	18%	389	17%
Female Subtotal	290	13%	1817	82%	65	3%	57	3%	2229	100%
ALL										
	White		Black		Hispanic		Other or Unknown		Risk All	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	1689	67%	2787	43%	143	47%	116	48%	4735	50%
Injection Drug Use	141	6%	726	11%	36	12%	20	8%	923	10%
MSM/IDU	110	4%	206	3%	<5	**	11	5%	330	3%
Blood Products	33	1%	8	<1%	<5	**	<5	**	45	<1%
Heterosexual Contact (HC)	227	9%	1340	21%	55	18%	38	16%	1660	17%
HCFR (Males)	50	2%	231	4%	11	4%	<5	**	295	3%
HCM (Females)	177	7%	1109	17%	44	15%	35	14%	1365	14%
Perinatal	12	<1%	91	1%	<5	**	7	3%	113	1%
Undetermined	309	12%	1277	20%	61	20%	48	20%	1695	18%
RACE ALL	2521	27%	6435	68%	303	3%	242	3%	9501	100%

TABLE 3. Prevalent HIV Infection Cases in SOUTHEAST MICHIGAN by Residence at Diagnosis

<i>RESIDENCE AT DIAGNOSIS</i>	<i>EST PREV*</i>	<i>REPORTED PREVALENCE[†]</i>			
		HIV Infection Non-Stage 3	HIV Infection Stage 3	Total	
				Number	Percent
Lapeer Co.	40	13	18	31	<1%
Macomb Co.	880	325	338	663	7%
Monroe Co.	90	30	37	67	1%
Oakland Co.	2,250	835	858	1,693	18%
St. Clair Co.	120	49	44	93	1%
Wayne Co.	9,230	3,110	3,844	6,954	73%
<i>Out-Wayne</i>	1,890	607	816	1,423	15%
<i>Detroit</i>	7,340	2,503	3,028	5,531	58%
TOTAL	12,610	4,362	5,139	9,501	100%

*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 SOUTHEAST MICHIGAN by Year

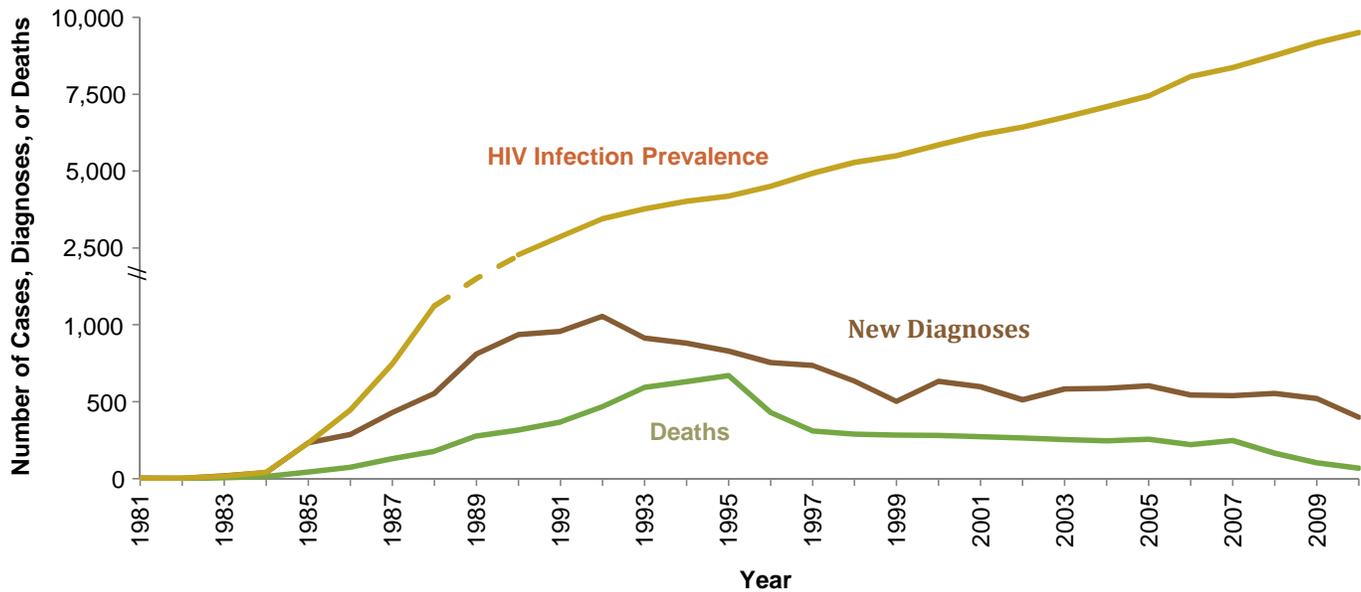
Year	<i>HIV Infection (all stages)</i>			<i>HIV Infection Stage 3 (AIDS)</i>		
	New HIV Diagnoses	Deaths	Prevalence	New Stage 3 Diagnoses	Deaths	Prevalence
1981	3	2	1	3	2	1
1982	2	0	3	2	0	3
1983	19	5	17	16	5	14
1984	38	14	41	35	14	35
1985	233	42	232	68	42	61
1986	288	73	447	113	70	104
1987	430	130	747	223	124	203
1988	554	177	1,124	333	173	363
1989	811	277	1,658	475	269	569
1990	937	317	2,278	543	304	808
1991	957	368	2,867	659	352	1,115
1992	1054	468	3,453	868	446	1,537
1993	914	594	3,773	779	561	1,755
1994	881	630	4,024	725	592	1,888
1995	829	669	4,184	736	619	2,005
1996	754	430	4,508	571	401	2,175
1997	736	310	4,934	494	272	2,397
1998	634	289	5,279	455	254	2,598
1999	503	282	5,500	409	248	2,759
2000	632	280	5,852	462	242	2,979
2001	597	273	6,176	389	228	3,140
2002	513	264	6,425	391	227	3,304
2003	582	255	6,752	421	212	3,513
2004	588	246	7,094	399	201	3,711
2005	603	256	7,441	494	214	3,991
2006	548	241	7,748	407	206	4,192
2007	544	220	8,072	374	195	4,371
2008	539	248	8,363	365	200	4,536
2009	554	165	8,752	323	142	4,717
2010	521	104	9,169	338	96	4,959
2011	399	67	9,501	239	59	5,139
TOTAL	17,197	7,696		12,109	6,970	

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 SOUTHEAST MICHIGAN is 9,501. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 5,139.

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 SOUTHEAST MICHIGAN, by Year**TABLE 5. Comparison of HIV Infection Prevalence in SOUTHEAST MICHIGAN to State**

<i>Residence at Diagnosis</i>	<i>Estimated Prevalence</i>	<i>Reported Prevalence</i>				<i>Cumulative Stage 3</i>
		HIV Infection Non-Stage 3	HIV Infection Stage 3 (AIDS)	Total	Rate	
Southeast Michigan	12,610	4,362	5,139	9,501	223	323
Michigan Total	19,300	6,860	7,855	14,715	149	17,669