

BIANNUAL HIV SURVEILLANCE REPORT, INGHAM COUNTY 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 INGHAM 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.

-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 INGHAM CO. at Diagnosis

	REPORTED PREVALENCE[†]								CENSUS 2010	
	EST PREV*	HIV Infection Non-Stage 3		HIV Infection Stage 3 (AIDS)		Total		Rate per 100,000^{‡§}	Num	Percent
	Num	Num	Percent	Num	Percent	Num	Percent			
RACE/ ETHNICITY[¶]										
White	320	128	52%	110	53%	238	53%	117.0	203,459	72%
Black	210	92	38%	68	33%	160	35%	501.1	31,931	11%
Hispanic	40	11	4%	18	9%	29	6%	141.3	20,526	7%
Asian/PI	10	5	2%	<5	**	9	2%	---	14,592	5%
Am Indian/AN	10	<5	**	<5	**	5	1%	---	1,239	<1%
Multi/Other/Unk	10	5	2%	5	2%	10	2%	---	9,148	3%
SEX & RACE										
Male	470	181	74%	175	85%	356	79%	260.6	136,594	49%
White Male	290	114	47%	101	49%	215	48%	218.2	98,532	35%
Black Male	130	46	19%	51	25%	97	22%	623.1	15,568	6%
Hispanic Male	30	8	3%	16	8%	24	5%	234.0	10,258	4%
Other Male	30	13	5%	7	3%	20	4%	163.5	12,236	4%
Female	130	64	26%	31	15%	95	21%	65.8	144,301	51%
White Female	30	14	6%	9	4%	23	5%	21.9	104,927	37%
Black Female	80	46	19%	17	8%	63	14%	385.0	16,363	6%
Hispanic Female	10	<5	**	<5	**	5	1%	---	10,268	4%
Other Female	10	<5	**	<5	**	<5	**	**	12,743	5%
RISK*										
Male-Male Sex (MSM)	320	133	54%	110	53%	243	54%	--	--	--
Injection Drug Use (IDU)	40	16	7%	14	7%	30	7%	--	--	--
MSM/IDU	30	11	4%	12	6%	23	5%	--	--	--
Blood Products	10	<5	**	5	2%	6	1%	--	--	--
Heterosexual Contact (HC)	120	56	23%	31	15%	87	19%	--	--	--
HCFR (Males)	20	7	3%	6	3%	13	3%	--	--	--
HCM (Females)	100	49	20%	25	12%	74	16%	--	--	--
Perinatal	10	<5	**	<5	**	5	1%	--	--	--
Undetermined	80	26	11%	31	15%	57	13%	--	--	--
AGE AT HIV DIAGNOSIS										
0 - 12 years	10	<5	**	<5	**	6	1%	--	--	--
13 - 19 years	30	15	6%	10	5%	25	6%	--	--	--
20 - 24 years	80	38	16%	20	10%	58	13%	--	--	--
25 - 29 years	110	47	19%	39	19%	86	19%	--	--	--
30 - 39 years	210	77	31%	81	39%	158	35%	--	--	--
40 - 49 years	110	50	20%	35	17%	85	19%	--	--	--
50 - 59 years	30	11	4%	15	7%	26	6%	--	--	--
60 years and over	10	<5	**	<5	**	7	2%	--	--	--
Unspecified	0	0	0%	0	0%	0	0%	--	--	--
TOTAL	600	245	100%	206	100%	451	100%	161	280,895	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: 203,459 / 238 = 855. Thus, 1 out of every 855 non-Hispanic white persons in INGHAM 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 "---".

[§] 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 INGHAM CO. at Diagnosis

MALE	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	175	81%	45	46%	14	58%	9	45%	243	68%
Injection Drug Use	5	2%	7	7%	5	21%	<5	**	19	5%
MSM/IDU	18	8%	<5	**	<5	**	<5	**	23	6%
Blood Products	<5	**	<5	**	0	0%	0	0%	6	2%
Heterosexual Contact (HCFR)	<5	**	10	10%	0	0%	<5	**	13	4%
Perinatal	<5	**	<5	**	0	0%	0	0%	<5	**
Undetermined	10	5%	28	29%	<5	**	7	35%	49	14%
Male Subtotal	215	60%	97	27%	24	7%	20	6%	356	100%
FEMALE										
	White		Black		Hispanic		Other or Unknown		All Female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection Drug Use	<5	**	6	10%	<5	**	0	0%	11	12%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual Contact (HCM)	19	83%	48	76%	<5	**	<5	**	74	78%
Perinatal	<5	**	<5	**	0	0%	0	0%	<5	**
Undetermined	0	0%	8	13%	0	0%	0	0%	8	8%
Female Subtotal	23	24%	63	66%	5	5%	<5	**	95	100%
ALL										
	White		Black		Hispanic		Other or Unknown		Risk All	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	175	74%	45	28%	14	48%	9	38%	243	54%
Injection Drug Use	8	3%	13	8%	7	24%	<5	**	30	7%
MSM/IDU	18	8%	<5	**	<5	**	<5	**	23	5%
Blood Products	<5	**	<5	**	0	0%	0	0%	6	1%
Heterosexual Contact (HC)	21	9%	58	36%	<5	**	5	21%	87	19%
<i>HCFR (Males)</i>	<5	**	10	6%	0	0%	<5	**	13	3%
<i>HCM (Females)</i>	19	8%	48	30%	<5	**	<5	**	74	16%
Perinatal	<5	**	<5	**	0	0%	0	0%	5	1%
Undetermined	10	4%	36	23%	<5	**	7	29%	57	13%
RACE ALL	238	53%	160	35%	29	6%	24	5%	451	100%

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

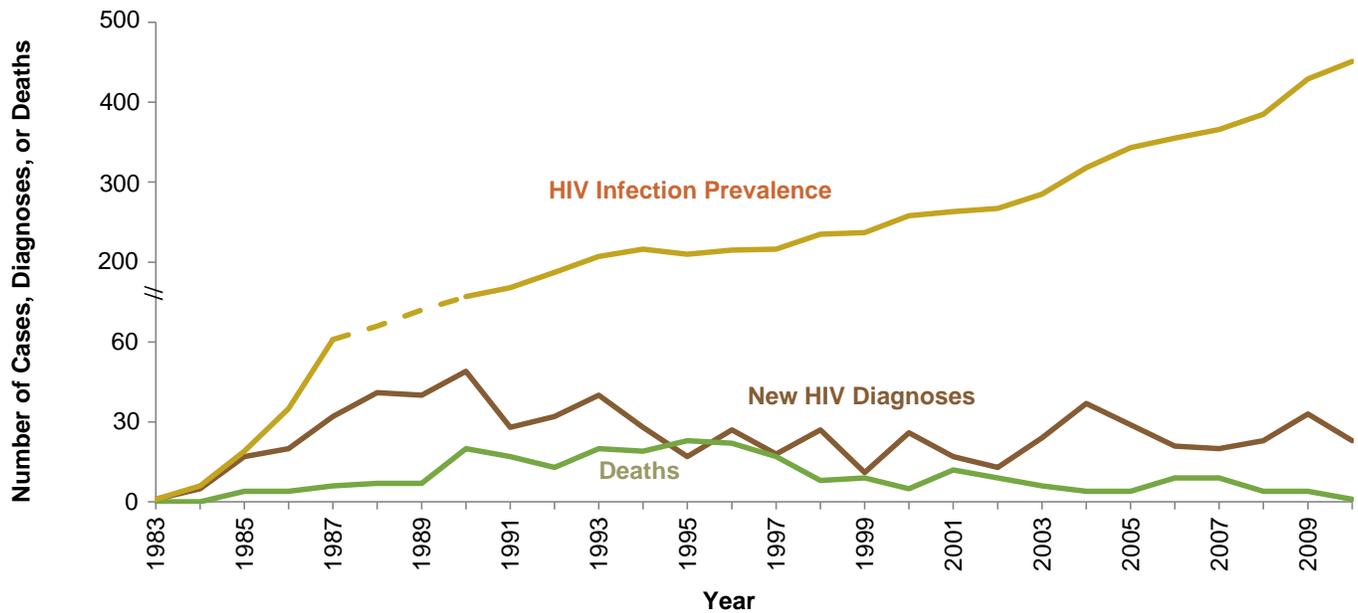
Year	<i>HIV Infection (all stages)</i>			<i>HIV Infection Stage 3 (AIDS)</i>		
	New HIV Diagnoses	Deaths	Prevalence	New Stage 3 Diagnoses	Deaths	Prevalence
1983	1	0	1	1	0	1
1984	5	0	6	2	0	3
1985	17	4	19	1	4	0
1986	20	4	35	8	4	4
1987	32	6	61	11	6	9
1988	41	7	95	14	7	16
1989	40	7	128	16	7	25
1990	49	20	157	24	17	32
1991	28	17	168	19	16	35
1992	32	13	187	27	12	50
1993	40	20	207	36	18	68
1994	28	19	216	25	17	76
1995	17	23	210	18	22	72
1996	27	22	215	30	19	83
1997	18	17	216	17	15	85
1998	27	8	235	20	8	97
1999	11	9	237	13	7	103
2000	26	5	258	19	5	117
2001	17	12	263	18	9	126
2002	13	9	267	5	6	125
2003	24	6	285	8	6	127
2004	37	4	318	14	4	137
2005	29	4	343	12	2	147
2006	21	9	355	15	3	159
2007	20	9	366	18	8	169
2008	23	4	385	12	4	177
2009	17	2	400	11	2	186
2010	33	4	429	15	3	198
2011	23	1	451	9	1	206
TOTAL	716	265		438	232	

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 INGHAM CO. is 451. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 206.

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 INGHAM CO., by Year**TABLE 4. Comparison of HIV Infection Prevalence in INGHAM CO. 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	
Ingham Co.	600	245	206	451	161	438
Michigan Total	19,300	6,860	7,855	14,715	149	17,669



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