

BIANNUAL HIV SURVEILLANCE REPORT, INGHAM 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 ≥ 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[†]**

	EST PREV*	HIV Infection Non-Stage 3		HIV Infection Stage 3 (AIDS)		Total		Rate per 100,000[§]	CENSUS 2010	
	Num	Num	Percent	Num	Percent	Num	Percent		Num	Percent
RACE/ ETHNICITY[‡]										
White	310	127	51%	109	52%	236	51%	116.0	203,459	72%
Black	210	93	37%	66	32%	159	35%	497.9	31,931	11%
Hispanic	40	11	4%	17	8%	28	6%	136.4	20,526	7%
Asian/PI	10	6	2%	5	2%	11	2%	75.4	14,592	5%
Am Indian/AN	10	<5	**	<5	**	5	1%	---	1,239	<1%
Multi/Other/Unk	30	9	4%	11	5%	20	4%	N/A	9,148	3%
SEX & RACE										
Male	470	184	74%	175	84%	359	78%	262.8	136,594	49%
White Male	280	112	45%	101	48%	213	46%	216.2	98,532	35%
Black Male	130	49	20%	49	23%	98	21%	629.5	15,568	6%
Hispanic Male	30	8	3%	15	7%	23	5%	224.2	10,258	4%
Other Male	30	15	6%	10	5%	25	5%	204.3	12,236	4%
Female	130	66	26%	34	16%	100	22%	69.3	144,301	51%
White Female	30	15	6%	8	4%	23	5%	21.9	104,927	37%
Black Female	80	44	18%	17	8%	61	13%	372.8	16,363	6%
Hispanic Female	10	<5	**	<5	**	5	1%	---	10,268	4%
Other Female	10	<5	**	7	3%	11	2%	86.3	12,743	5%
RISK*										
Male-Male Sex (MSM)	330	137	55%	113	54%	250	54%	--	--	--
Injection Drug Use (IDU)	40	16	6%	13	6%	29	6%	--	--	--
MSM/IDU	30	10	4%	11	5%	21	5%	--	--	--
Blood Products	10	<5	**	5	2%	6	1%	--	--	--
Heterosexual Contact (HC)	120	57	23%	32	15%	89	19%	--	--	--
HCFR (Males)	20	7	3%	6	3%	13	3%	--	--	--
HCM (Females)	100	50	20%	26	12%	76	17%	--	--	--
Perinatal	10	<5	**	<5	**	5	1%	--	--	--
Undetermined	80	27	11%	32	15%	59	13%	--	--	--
AGE AT HIV DIAGNOSIS										
0 - 12 years	10	<5	**	<5	**	6	1%	--	--	--
13 - 19 years	30	14	6%	10	5%	24	5%	--	--	--
20 - 24 years	80	41	16%	21	10%	62	14%	--	--	--
25 - 29 years	120	50	20%	40	19%	90	20%	--	--	--
30 - 39 years	210	77	31%	80	38%	157	34%	--	--	--
40 - 49 years	110	48	19%	37	18%	85	19%	--	--	--
50 - 59 years	40	14	6%	15	7%	29	6%	--	--	--
60 years and over	10	<5	**	<5	**	6	1%	--	--	--
Unspecified	0	0	0%	0	0%	0	0%	--	--	--
TOTAL	600	250	100%	209	100%	459	100%	163	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 / 236 = 862. Thus, 1 out of every 862 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

	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
MALE										
Male-Male sex	174	82%	48	49%	15	65%	13	52%	250	70%
Injection Drug Use	5	2%	5	5%	<5	**	<5	**	17	5%
MSM/IDU	16	8%	3	**	<5	**	<5	**	21	6%
Blood Products	<5	**	2	**	0	0%	0	0%	6	2%
Heterosexual Contact (HCFR)	<5	**	9	9%	0	0%	<5	**	13	4%
Perinatal	<5	**	<5	**	0	0%	0	0%	<5	**
Undetermined	11	5%	29	30%	<5	**	6	24%	49	14%
Male Subtotal	213	59%	98	27%	23	6%	25	7%	359	100%
FEMALE										
Injection Drug Use	<5	**	5	8%	<5	**	<5	**	12	12%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual Contact (HCM)	18	78%	46	75%	<5	**	9	82%	76	76%
Perinatal	<5	**	<5	**	0	0%	0	0%	<5	**
Undetermined	0	0%	9	15%	0	0%	<5	**	10	10%
Female Subtotal	23	23%	61	61%	5	5%	11	11%	100	100%
ALL										
Male-Male sex	174	74%	48	30%	15	54%	13	36%	250	54%
Injection Drug Use	9	4%	10	6%	6	21%	<5	**	29	6%
MSM/IDU	16	7%	<5	**	<5	**	<5	**	21	5%
Blood Products	<5	**	<5	**	0	0%	0	0%	6	1%
Heterosexual Contact (HC)	20	8%	55	35%	<5	**	11	31%	89	19%
HCFR (Males)	<5	**	9	6%	0	0%	<5	**	13	3%
HCM (Females)	18	8%	46	29%	<5	**	9	25%	76	17%
Perinatal	<5	**	<5	**	0	0%	0	0%	5	1%
Undetermined	11	5%	38	24%	<5	**	7	19%	59	13%
RACE ALL	236	51%	159	35%	28	6%	36	8%	459	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	8	94	14	8	15
1989	40	7	127	16	7	24
1990	49	20	156	24	17	31
1991	28	17	167	19	16	34
1992	32	13	186	27	12	49
1993	39	20	205	36	18	67
1994	28	19	214	25	17	75
1995	17	23	208	18	22	71
1996	27	22	213	30	19	82
1997	18	16	215	17	14	85
1998	27	8	234	20	8	97
1999	11	9	236	13	7	103
2000	26	6	256	19	6	116
2001	17	12	261	18	9	125
2002	13	9	265	5	6	124
2003	24	6	283	8	6	126
2004	37	4	316	14	4	136
2005	29	4	341	12	2	146
2006	21	10	352	15	4	157
2007	20	9	363	18	8	167
2008	24	5	382	12	5	174
2009	17	2	397	11	2	183
2010	32	4	425	15	3	195
2011	26	5	446	11	4	202
2012	13	0	459	7	0	209
TOTAL	718	272		440	238	

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 459. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 209.

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

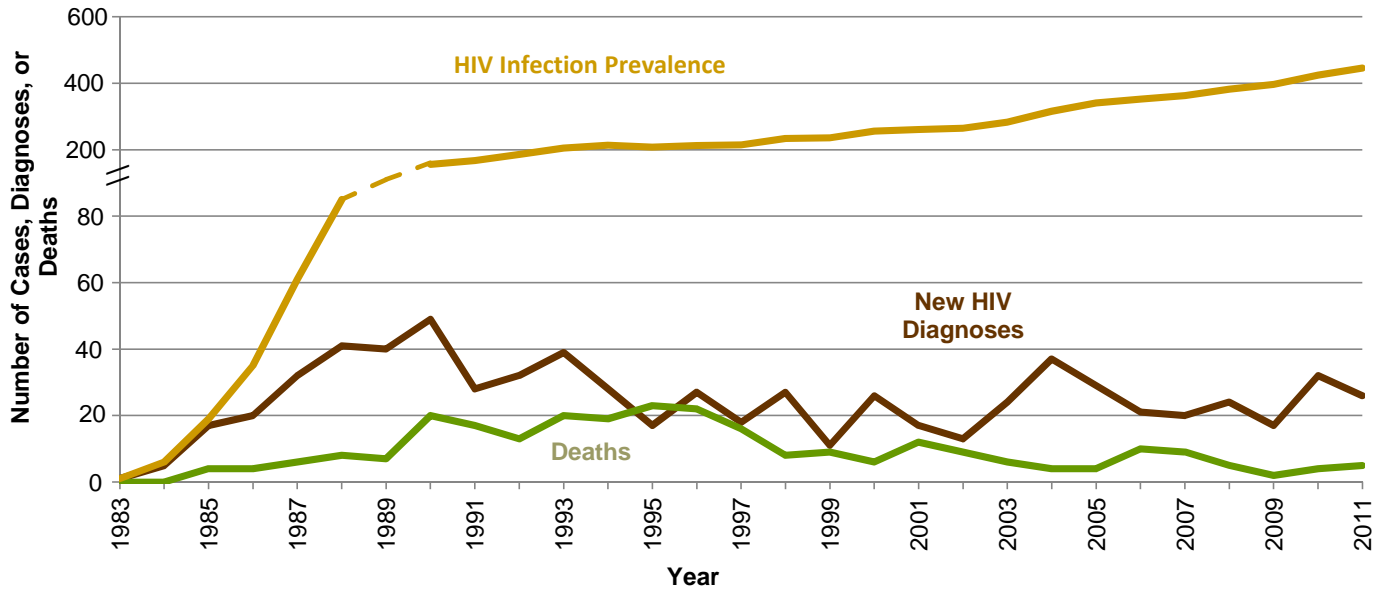


TABLE 4. Comparison of HIV Infection Prevalence in INGHAM CO. to State

<i>Residence at Diagnosis</i>	<i>Estimated Prevalence</i>	<i>Reported Prevalence</i>				<i>Cumulative Stage 3</i>
		<i>HIV Infection Non-Stage 3</i>	<i>HIV Infection Stage 3 (AIDS)</i>	<i>Total</i>	<i>Rate</i>	
Ingham Co.	600	250	209	459	163	440
Michigan Total	19,300	7,057	7,966	15,023	152	17,891



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