

Table of Contents: HIV/AIDS Statistics of Persons Diagnosed in Michigan

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General HIV

AIDS (Acquired Immune Deficiency Syndrome)

Diagnosis with any one of 26 different opportunistic illnesses which are indicative of a severe immune deficiency, or a laboratory test demonstrating severe immune deficiency (i.e. CD4 count <200 or CD4 percent <14%)

Case Definitions for HIV and AIDS

Standard definitions used by all states. Specific information is required in order to count a case of HIV infection or AIDS, including a method to uniquely identify an individual. Each person is counted as either HIV infected without AIDS or HIV infected with AIDS. Once a person meets the AIDS case definition, this person is always counted as an AIDS case, even if his/her health improves.

HAART

Highly Active Antiretroviral Therapy

HIV (Human Immunodeficiency Virus)

Diagnosis with HIV by positive HIV screening and confirmatory test or positive result or detectable quantity on virologic test

Pediatric Cases

Children < 13 years at the time of diagnosis

Epidemiology Terms

Epidemiology

The study of the distribution, determinates, and frequency of disease in humans.

GIS (Geographic Information System)

The display and analysis of geographic data in map format.

Incidence

Number of persons who become infected with a disease in a certain period of time, usually a year.

New Diagnoses

Number of cases newly diagnosed over a given period of time, usually a year. In HIV surveillance, new diagnoses do not necessarily represent new infections, as newly diagnosed cases may have been infected for many years. Thus, only some newly diagnosed cases are also incident cases.

Prevalence

Total number of persons currently living with a disease at one point in time. See page iii for a description of estimated prevalence in Michigan.

Public Health Surveillance

The ongoing collection, analysis, interpretation, dissemination, and evaluation of population-based information about persons with a condition or risk factor of public health concern.

Rate

Count of infected cases divided by the number of persons in the population (infected and uninfected). This calculation is multiplied by a multiple of 10, usually 1,000 or 100,000. Allows one to weigh the relationship between prevalence or number of new diagnoses and population.

Administrative Info

CDC

U.S. Centers for Disease Control and Prevention

eHARS (HIV/AIDS Reporting System)

A standardized database developed by CDC for national reporting of HIV/AIDS

HAPIS

HIV/AIDS Prevention and Intervention Section

MDCH

Michigan Department of Community Health

Michigan HIV Surveillance Activities

Core HIV Surveillance

Population-based surveillance system of diagnosed adult, adolescent, and pediatric HIV/AIDS cases.

MMP (Medical Monitoring Project)

Project providing information on needs, risk behaviors, barriers to utilization of services, and quality of care, as well as other data, among HIV-positive persons in care in Michigan.

Michigan MMP Coordinator, Meosia Lee-Turner. Call (313) 876-0117

NHBS (National HIV Behavioral Surveillance)

Surveillance system to monitor selected behaviors and access to prevention services among groups of uninfected persons at highest risk for HIV infection: MSM, IDU, and Heterosexuals Living in High Risk Areas.

Michigan NHBS Coordinator, Emily Higgins (313) 876-0176

STARHS (Serologic Testing Algorithm for Recent HIV Seroconversion)

HIV Incidence Surveillance that will enable estimation of new HIV infections in Michigan.

Michigan STARHS Coordinator, Marianne O'Connor (313) 876-0854

VARHS (Variant, Atypical, and Resistant HIV Surveillance)

Surveillance of drug-resistant and sub-type HIV strains using viral genotyping of remnant sera.

Michigan VARHS Coordinator, Mary-Grace Brandt (313) 876-4115

Risk & Exposure Categories

Blood Recipient

All hemophiliacs, blood transfusion recipients, and organ recipients who received blood products prior to 1985 and all persons documented to have ever received an infected organ or unit of blood

Heterosexual

HRH (High Risk Heterosexuals)

Males and females whose sexual partners are known to be HIV-infected or at high risk for HIV. The partners meet one of the following criteria: a history of sexual contact with bisexual males (for females), IDU, hemophiliacs, HIV+ transfusion recipients, or other HIV+ persons of unknown risk

PH (Presumed Heterosexual)-Female

Females whose only documented risk is heterosexual contact, and their male partners' risk and HIV status is unknown

IDU (Injection Drug User)

Persons who have a history of injecting drugs

Perinatal

HIV transmission from mother to child during birth or through breastfeeding.

MSM (Men who have sex with men)

Males who have a history of sexual contact with other men or with both men and women

MSM & Sex with Female (not HRH)

Males who have a history of sexual contact with other men and women, however, they do not know the risk of their female partner.

MSM/IDU

MSM who also have a history of injecting drugs

Behaviorally Bisexual Men

MSM who also have a history of sexual contact with a woman.

Undetermined

PH (Presumed Heterosexual)-Male

Males whose only documented risk is heterosexual contact, and their female partners' risk and HIV status is unknown

Unknown

Males and females with no identified risk

Risk Transmission and Exposure Categories

Risk Transmission Categories

Risk transmission categories are the hierarchical risk categories that have been used for displaying HIV transmission risk in the Michigan and national HIV/AIDS statistics since the 1980's. When the transmission categories were created, the order from top to bottom was meant to represent the most likely route through which HIV was transmitted, and thus implies that some modes of transmission are more efficient than others. The hierarchy was established based on what was known at the beginning of the epidemic about how HIV was transmitted, when almost all cases were among men and there was little documented heterosexual transmission. Since then, the hierarchy has not changed appreciably even though our understanding of the most efficient HIV transmission routes has changed.

Background on Hierarchy

The hierarchy algorithm is calculated using data provided on the case report form on the individual risk factor questions. In this hierarchy, all cases are assigned a single mode of transmission, with the exception of men who have reported sex with other men as well as injection of drugs. These men are categorized as Men who Have Sex with Men/Injection Drug Users (MSM/IDU). Over time, concerns have been raised that use of hierarchical categories masks the identification of cases with multiple risks. For example, consider a woman whose risk is documented as both injecting drugs and sex with a male partner who has injected drugs. This case would be assigned a risk of injecting drug use (IDU), rather than both IDU + HRH category, because the IDU category is ranked higher in the risk hierarchy than the high-risk heterosexual (HRH) category. Therefore, this woman's risk of HRH would not be represented.

There is a national effort toward representing mode of HIV transmission more comprehensively. However, the use of "multiple risk" or "combination risk" categories has not yet been implemented nationally, partly because many organizations that use HIV surveillance data still rely on the traditional transmission categories. Beginning in January 2009, Michigan will present data on mode of transmission in two ways. The traditional risk categories will continue to be used in the same tables in which they previously appeared. In addition, a new table (Table 2 on page 2) will display Exposure Categories, which will present mode of transmission in a manner that allows more complete presentation of the reported risk factor information.

Exposure Categories

The 'Exposure Categories' shown on page 2 convey all risks that a person is documented to have engaged in that could have exposed him or her to HIV. Like the traditional risk hierarchy categories, the Exposure Categories are mutually exclusive, meaning that each person is only included in one category. However, the categories, as presented, allow readers to see all the ways in which a person may have been infected with HIV and, with the exception of undetermined risk, are displayed in decreasing order of frequency. In order to display the most accurate information possible, we request that persons who fill out case report forms complete a 'Yes', 'No' or 'Unknown' answer to all the risk factor questions in Section VII Patient History.

HIV Surveillance in Michigan

Background

Reports of HIV infection and AIDS are submitted to state and local health departments under Michigan law by providers making the diagnoses or treating previously diagnosed persons. In addition, MDCH implemented PA 514 in April 2005, requiring laboratories to report HIV test results. The addition of laboratory reporting to the HIV surveillance system increased the case reports received and improved reporting completeness. Anonymous HIV reports (without name or other identifier) are excluded from this report because we cannot estimate duplication, update status, or obtain missing data. A total of 1,979 complete anonymous reports have been reported in Michigan.

HIV Prevalence Estimates for Michigan

HIV prevalence estimates in this report are based on adding the following three components and rounding: 1) the number of reported cases living with HIV/AIDS, 2) the number of known HIV+ cases not yet reported, estimated at 10 percent of the reported living HIV/AIDS cases, and 3) the number of HIV+ cases that have not yet been tested, estimated at 21 percent of the total cases living with HIV/AIDS (identical to the CDC estimate).

Categorical estimates of HIV infection are calculated from the distribution of reported cases among each group of confidentially-reported persons living with HIV or AIDS. The proportion of total cases is multiplied by 18,800. For example, 77 percent of combined HIV and AIDS reports are among men. Therefore, the number of HIV-infected men in Michigan is estimated to be 14,500 (77.13% X 18,800). Since the estimates are rounded to the nearest 10, totals may not equal 18,800. The minimum estimate is 10.

Prison estimates of HIV infection are calculated differently than the above mentioned categorical estimates. Because all prisoners are tested for HIV upon entry to prison, there is no need to apply estimates to account for unreported and untested cases to the reported prison cases. Therefore, the prison prevalence estimate is calculated by rounding the reported number of persons living with HIV/AIDS who were diagnosed in prison to the nearest 10.

County estimates of HIV infection are calculated similarly to the categorical estimates; however, for county calculations the proportion of cases in a particular county is multiplied by the statewide estimate minus the prison estimate (18,800 - 790 = 18,010). For example, 12 percent of HIV/AIDS cases (not including prison and cases with unknown residence) were living in Oakland county at diagnosis. Therefore, the number of HIV-infected persons who were living in Oakland county at the time of diagnosis is estimated to be 2,130 (11.81% x 18,010). Since the estimates are rounded to the nearest 10, the county totals may not equal 18,010. The method of calculating prevalence estimates for county of residence was revised as of April 2008, and thus county estimates presented prior to this date may differ from current and future estimates.

HIV Surveillance Staff Contacts

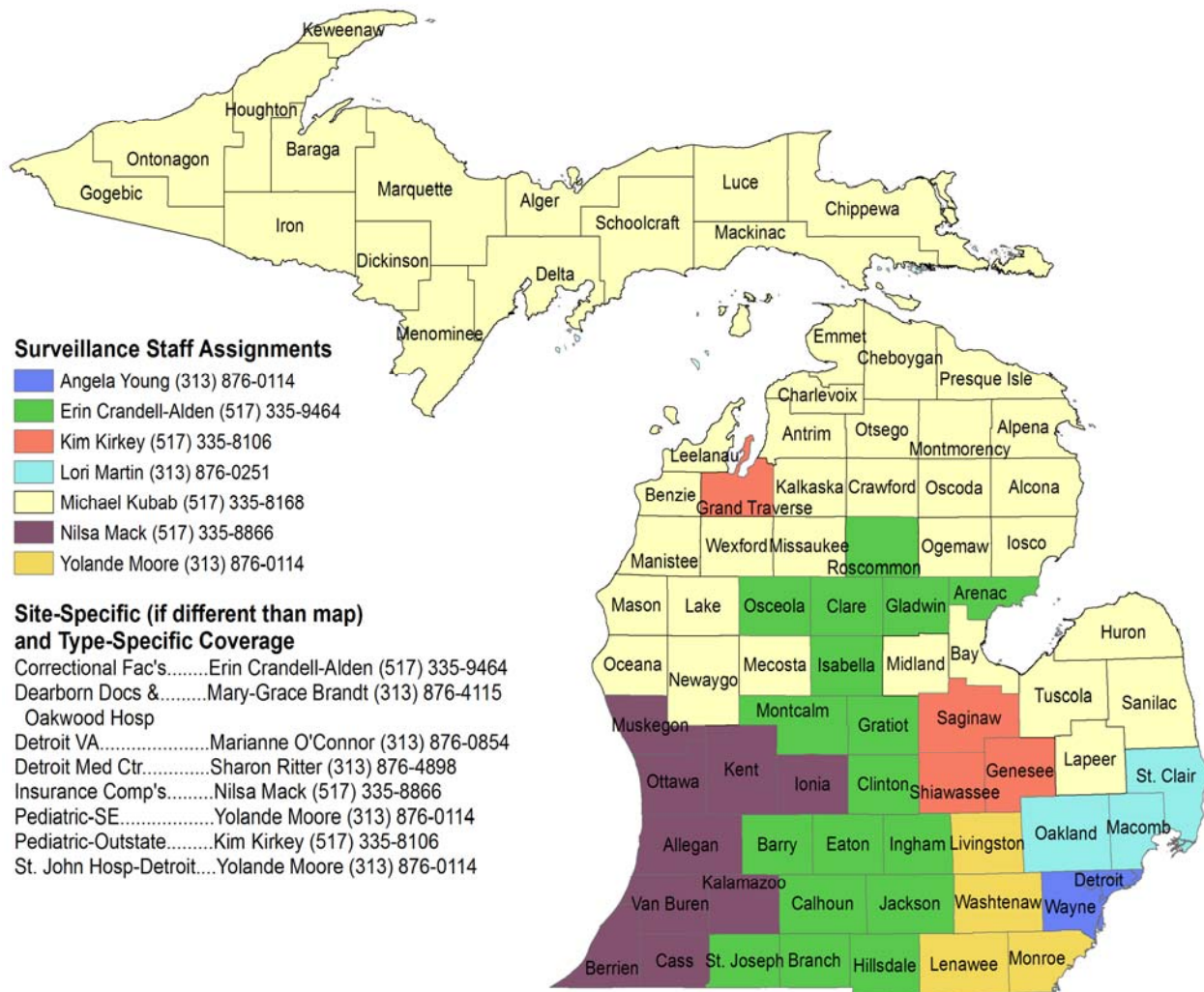


TABLE 1. Demographic Information on Prevalent HIV/AIDS Cases

	<i>EST PREV*</i>	<i>REPORTED PREVALENCE</i>						<i>CENSUS 2008 ESTIMATES</i>	
		HIV, not AIDS		AIDS		Total		Rate per 100,000 [†]	Number Percent
	Number	Number	Percent	Number	Percent	Number	Percent		
<i>RACE/ ETHNICITY[§]</i>									
White	6,500	2,292	34%	2,674	35%	4,966	35%	64	7,750,818 77%
Black	11,140	4,003	60%	4,513	59%	8,516	59%	607	1,403,051 14%
Hispanic	760	258	4%	326	4%	584	4%	141	413,827 4%
Asian/PI	90	34	1%	36	0%	70	0%	128	54,714 1%
Am Indian/AN	50	20	0%	20	0%	40	0%	17	236,236 2%
Multi/Unk/Other	260	88	1%	107	1%	195	1%	N/A	144,776 1%
<i>SEX & RACE</i>									
Males	14,500	5,011	75%	6,073	79%	11,084	77%	225	4,923,929 49%
<i>White Males</i>	5,670	1,937	29%	2,394	31%	4,331	30%	113	3,825,990 38%
<i>Black Males</i>	7,950	2,782	42%	3,297	43%	6,079	42%	917	662,992 7%
<i>Hispanic Males</i>	590	195	3%	257	3%	452	3%	207	217,942 2%
<i>Other Males</i>	290	97	1%	125	2%	222	2%	102	217,005 2%
Females	4,300	1,684	25%	1,603	21%	3,287	23%	65	5,079,493 51%
<i>White Females</i>	830	355	5%	280	4%	635	4%	16	3,924,828 39%
<i>Black Females</i>	3,190	1,221	18%	1,216	16%	2,437	17%	329	740,059 7%
<i>Hispanic FmIs</i>	170	63	1%	69	1%	132	1%	67	195,885 2%
<i>Other Females</i>	110	45	1%	38	0%	83	1%	38	218,721 2%
<i>RISK*</i>									
Male-Male Sex	8,970	3,054	46%	3,804	50%	6,858	48%	N/A	N/A N/A
Injection Drug Use	2,100	643	10%	963	13%	1,606	11%	N/A	N/A N/A
MSM/IDU	830	266	4%	370	5%	636	4%	N/A	N/A N/A
Blood Products	120	33	0%	62	1%	95	1%	N/A	N/A N/A
Heterosexual	3,370	1,272	19%	1,302	17%	2,574	18%	N/A	N/A N/A
<i>HRH</i>	2,380	840	13%	981	13%	1,821	13%	N/A	N/A N/A
<i>PH-Female</i>	990	432	6%	321	4%	753	5%	N/A	N/A N/A
Perinatal	210	105	2%	52	1%	157	1%	N/A	N/A N/A
Undetermined	3,200	1,322	20%	1,123	15%	2,445	17%	N/A	N/A N/A
<i>PH-Male</i>	1,690	593	9%	698	9%	1,291	9%	N/A	N/A N/A
<i>Unknown</i>	1,510	729	11%	425	6%	1,154	8%	N/A	N/A N/A
<i>AGE AT HIV DIAGNOSIS</i>									
0 - 12 years	240	119	2%	63	1%	182	1%	N/A	N/A N/A
13 - 19 years	850	403	6%	244	3%	647	5%	N/A	N/A N/A
20 - 24 years	2,400	1,046	16%	788	10%	1,834	13%	N/A	N/A N/A
25 - 29 years	3,100	1,162	17%	1,208	16%	2,370	16%	N/A	N/A N/A
30 - 39 years	6,640	2,172	32%	2,905	38%	5,077	35%	N/A	N/A N/A
40 - 49 years	4,000	1,291	19%	1,763	23%	3,054	21%	N/A	N/A N/A
50 - 59 years	1,290	409	6%	574	7%	983	7%	N/A	N/A N/A
60 years and over	290	90	1%	131	2%	221	2%	N/A	N/A N/A
Unspecified	10	3	0%	0	0%	3	0%	N/A	N/A N/A
<i>AREA OF RESIDENCE AT DIAGNOSIS*</i>									
Detroit Metro	12,400	4,273	64%	5,079	66%	9,352	65%	213	4,395,484 44%
Out-State	5,610	2,022	30%	2,210	29%	4,232	29%	75	5,607,938 56%
Prison/Unknown	800	400	6%	387	5%	787	5%	N/A	N/A N/A
TOTAL	18,800	6,695	100%	7,676	100%	14,371	100%	144	10,003,422 100%

*See pages i and ii for descriptions of prevalence estimate calculations and risk category groupings. Risk categories used in Michigan are newly defined as of the July 2007 quarter.

[†] To calculate "1 out of x" statements for rate, divide the census number by the total reported prevalence. For example, for non-Hispanic whites: 7,750,818 / 4,966 = 1,561. Thus, 1 out of every 1,561 non-Hispanic white persons in Michigan are living with HIV

[§] 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.

* Detroit Metro Area consists of Oakland, Monroe, Lapeer, Macomb, St. Clair, and Wayne Counties. The remaining counties comprise the Out-State area.

TABLE 2. Risk Transmission* and Exposure Categories* for HIV on Prevalent HIV/AIDS Cases, by Sex

	REPORTED HIV/AIDS PREVALENCE					
	Males		Females		Total	
	Number	Percent	Number	Percent	Number	Percent
RISK TRANSMISSION CATEGORIES (CDC Hierarchy)[§]						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-Male Sex	6,858	62%	N/A	--	6,858	48%
Injection Drug Use	957	9%	649	20%	1,606	11%
MSM/IDU	636	6%	N/A	--	636	4%
Blood Products	82	1%	13	0%	95	1%
Heterosexual	528	5%	2,046	62%	2,574	18%
HRH	528	5%	1,293	39%	1,821	13%
PH-Female	N/A	--	753	23%	753	5%
Perinatal	88	1%	69	2%	157	1%
Undetermined	1,935	17%	510	16%	2,445	17%
PH-Male	1,291	12%	N/A	--	1,291	9%
Unknown	644	6%	510	16%	1,154	8%
EXPOSURE CATEGORIES[†]						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-Male Sex	6,355	57%	N/A	--	6,355	44%
MSM - ONLY	4,334	39%	N/A	--	4,334	30%
MSM & Sex with Female (not HRH)	2,021	18%	N/A	--	2,021	14%
MSM & HRH	499	5%	N/A	--	499	3%
MSM & IDU	441	4%	N/A	--	441	3%
MSM & IDU & HRH	195	2%	N/A	--	195	1%
MSM & Blood Products	4	0%	N/A	--	4	0%
Heterosexual - ONLY	528	5%	2,046	62%	2,574	18%
HRH	528	5%	1,293	39%	1,821	13%
PH-Female	N/A	--	753	23%	753	5%
HRH & IDU	379	3%	356	11%	735	5%
Injection Drug Use - ONLY	573	5%	289	9%	862	6%
IDU & Blood Products	5	0%	4	0%	9	0%
Perinatal Exposure	88	1%	70	2%	158	1%
Exposure to Blood Products - ONLY	82	1%	13	0%	95	1%
Undetermined	1,935	17%	509	15%	2,444	17%
PH-Male Only	1,291	12%	N/A	--	1,291	9%
Unknown	644	6%	509	15%	1,153	8%
TOTAL	11,084	100%	3,287	100%	14,371	100%
SUMMARIZED EXPOSURE CATEGORIES[‡]						
(NOT Mutually Exclusive: one case can be represented in multiple categories)						
Any MSM	7,494	68%	N/A	--	7,494	52%
Behaviorally Bisexual Men	2,715	24%	N/A	--	2,715	19%
Any Heterosexual	3,622	33%	2,402	73%	6,024	42%
Any HRH	1,601	14%	1,649	50%	3,250	23%
Any IDU	1,593	14%	649	20%	2,242	16%

*See page ii for descriptions of risk category groupings.

[§] Risk categories are grouped based on hierarchical categories as set by the CDC. Any one person with multiple risks may only be represented in the highest category (based on the hierarchical algorithm).

[†] Exposure Categories are mutually exclusive and grouped by allowing all possible combinations of risks that any one person may have. Any one person may have any combination of risks and is not assigned to a single risk category, as in the hierarchical groupings.

[‡] These groups presented are NOT mutually exclusive, meaning a case can be represented in multiple groupings. These summarized categories are meant to give a broader picture of the exposure categories and will NOT add up to the overall total number of persons living with HIV/AIDS.

TABLE 3. Sex, Race, and Risk Among Prevalent HIV/AIDS Cases

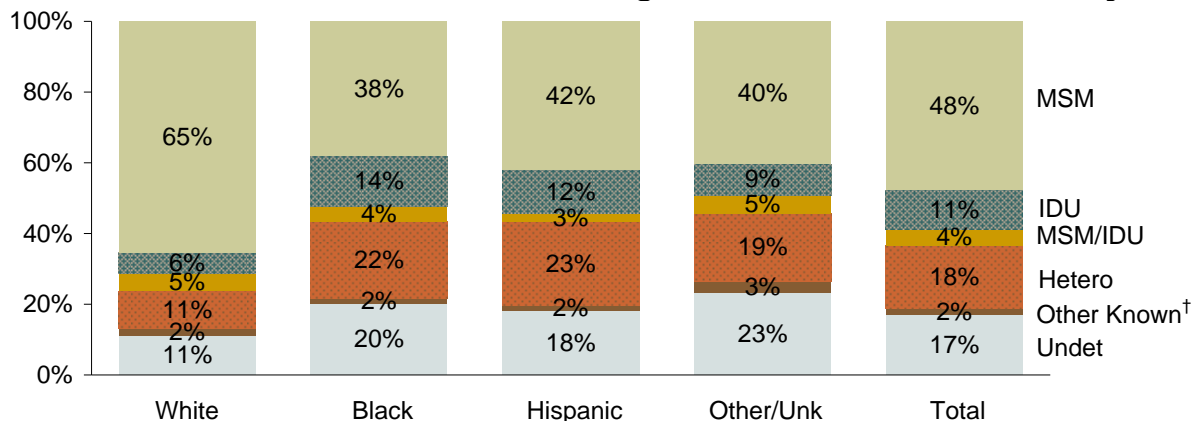
MALES	White		Black		Hispanic		Other or Unknown		Male Subtotal	
Male-Male sex	3,246	75%	3,244	53%	245	54%	123	55%	6,858	62%
Injecting Drug Use	181	4%	713	12%	51	11%	12	5%	957	9%
Male-Male Sex/IDU	248	6%	357	6%	15	3%	16	7%	636	6%
Blood Products	64	1%	15	0%	1	0%	2	1%	82	1%
Heterosexual*	101	2%	385	6%	37	8%	5	2%	528	5%
Perinatal	15	0%	66	1%	2	0%	5	2%	88	1%
Undetermined	476	11%	1,299	21%	101	22%	59	27%	1,935	17%
<i>PH-Male</i>	287	7%	893	15%	75	17%	36	16%	1,291	12%
<i>Unknown</i>	189	4%	406	7%	26	6%	23	10%	644	6%
Male Subtotal	4,331	39%	6,079	55%	452	4%	222	2%	11,084	100%

FEMALES	White		Black		Hispanic		Other or Unknown		Female Subtotal	
Injecting Drug Use	114	18%	499	20%	21	16%	15	18%	649	20%
Blood Products	9	1%	4	0%	0	0%	0	0%	13	0%
Heterosexual	424	67%	1,469	60%	100	76%	53	64%	2,046	62%
<i>HRH</i>	315	50%	875	36%	74	56%	29	35%	1,293	39%
<i>PH-Female</i>	109	17%	594	24%	26	20%	24	29%	753	23%
Perinatal	12	2%	48	2%	6	5%	3	4%	69	2%
Undetermined*	76	12%	417	17%	5	4%	12	14%	510	16%
Female Subtotal	635	19%	2,437	74%	132	4%	83	3%	3,287	100%

TOTAL	White		Black		Hispanic		Other or Unknown		Risk Total	
Male-Male sex	3,246	65%	3,244	38%	245	42%	123	40%	6,858	48%
Injecting Drug Use	295	6%	1,212	14%	72	12%	27	9%	1,606	11%
Male-Male Sex/IDU	248	5%	357	4%	15	3%	16	5%	636	4%
Blood Products	73	1%	19	0%	1	0%	2	1%	95	1%
Heterosexual	525	11%	1,854	22%	137	23%	58	19%	2,574	18%
<i>HRH</i>	416	8%	1,260	15%	111	19%	34	11%	1,821	13%
<i>PH-Female</i>	109	2%	594	7%	26	4%	24	8%	753	5%
Perinatal	27	1%	114	1%	8	1%	8	3%	157	1%
Undetermined	552	11%	1,716	20%	106	18%	71	23%	2,445	17%
<i>PH-Male</i>	287	6%	893	10%	75	13%	36	12%	1,291	9%
<i>Unknown</i>	265	5%	823	10%	31	5%	35	11%	1,154	8%
RACE TOTAL	4,966	35%	8,516	59%	584	4%	305	2%	14,371	100%

*In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males and, likewise, in the female subset, all cases in the undetermined category are of unknown risk because the PH-Male category is not applicable to females.

FIGURE 1. Mode of HIV Transmission Among Prevalent HIV/AIDS Cases by Race



†The 'Other Known' category in Figure 1 is a combination of 'Blood Products' and 'Perinatal' from Table 3

TABLE 4. Sex, Race, and Age at HIV Diagnosis Among Prevalent HIV/AIDS Cases

MALES	White		Black		Hispanic		Other or Unknown		Male Subtotal	
0 - 12 years	25	1%	73	1%	2	0%	6	3%	106	1%
13 - 19 years	64	1%	380	6%	16	4%	8	4%	468	4%
20 - 24 years	407	9%	908	15%	47	10%	29	13%	1,391	13%
25 - 29 years	712	16%	978	16%	90	20%	42	19%	1,822	16%
30 - 39 years	1,705	39%	1,997	33%	180	40%	89	40%	3,971	36%
40 - 49 years	1,023	24%	1,258	21%	81	18%	35	16%	2,397	22%
50 - 59 years	310	7%	405	7%	26	6%	11	5%	752	7%
60 years and over	85	2%	78	1%	10	2%	2	1%	175	2%
Total*	4,331	39%	6,077	55%	452	4%	222	2%	11,082	100%

FEMALES	White		Black		Hispanic		Other or Unknown		Female Subtotal	
0 - 12 years	13	2%	54	2%	6	5%	3	4%	76	2%
13 - 19 years	41	6%	125	5%	11	8%	2	2%	179	5%
20 - 24 years	117	18%	298	12%	18	14%	10	12%	443	13%
25 - 29 years	126	20%	388	16%	18	14%	16	19%	548	17%
30 - 39 years	199	31%	825	34%	49	37%	33	40%	1,106	34%
40 - 49 years	93	15%	534	22%	19	14%	11	13%	657	20%
50 - 59 years	37	6%	181	7%	7	5%	6	7%	231	7%
60 years and over	8	1%	32	1%	4	3%	2	2%	46	1%
Total*	634	19%	2,437	74%	132	4%	83	3%	3,286	100%

TOTAL	White		Black		Hispanic		Other or Unknown		Age Total	
0 - 12 years	38	1%	127	1%	8	1%	9	3%	182	1%
13 - 19 years	105	2%	505	6%	27	5%	10	3%	647	5%
20 - 24 years	524	11%	1,206	14%	65	11%	39	13%	1,834	13%
25 - 29 years	838	17%	1,366	16%	108	18%	58	19%	2,370	16%
30 - 39 years	1,904	38%	2,822	33%	229	39%	122	40%	5,077	35%
40 - 49 years	1,116	22%	1,792	21%	100	17%	46	15%	3,054	21%
50 - 59 years	347	7%	586	7%	33	6%	17	6%	983	7%
60 years and over	93	2%	110	1%	14	2%	4	1%	221	2%
RACE TOTAL *	4,965	35%	8,514	59%	584	4%	305	2%	14,368	100%

*Not included in this table are one white female and two black male cases of unknown age at diagnosis

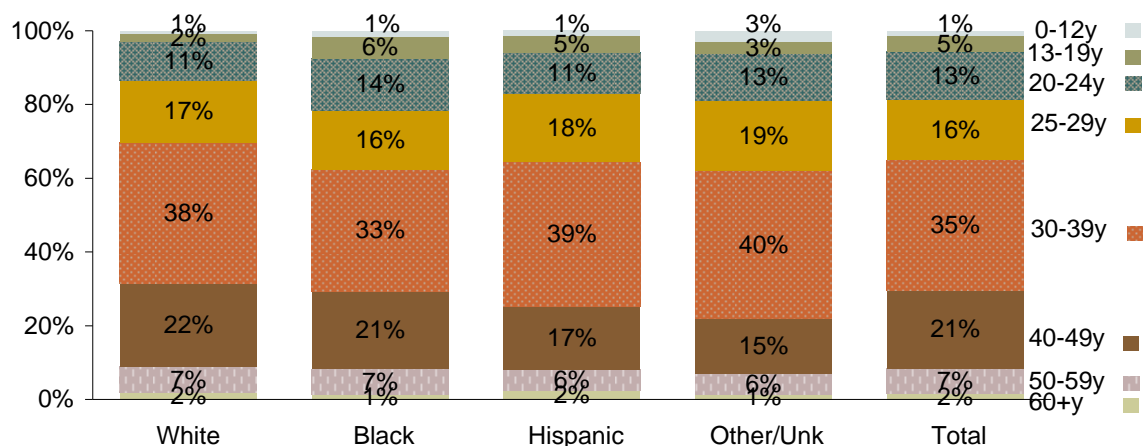
FIGURE 2. Age at HIV Diagnosis Among Prevalent HIV/AIDS Cases by Race

TABLE 5. New Diagnoses, Deaths, and Prevalence of HIV/AIDS by Year

Year	<i>HIV/AIDS</i>			<i>AIDS</i>		
	New HIV Diagnoses	Deaths	Prevalence	New AIDS Diagnoses	Deaths	Prevalence
1981	4	2	2	3	2	1
1982	3	0	5	2	0	3
1983	28	5	28	22	5	20
1984	70	17	81	50	17	53
1985	382	63	400	98	63	88
1986	488	102	786	168	99	157
1987	716	182	1,320	318	174	301
1988	902	263	1,959	493	254	540
1989	1,301	380	2,880	689	370	859
1990	1,441	453	3,868	795	433	1,221
1991	1,449	536	4,781	962	515	1,668
1992	1,490	662	5,609	1,231	630	2,269
1993	1,305	822	6,092	1,126	776	2,619
1994	1,214	899	6,407	1,013	842	2,790
1995	1,190	911	6,686	1,063	843	3,010
1996	1,122	632	7,176	857	583	3,284
1997	1,049	469	7,756	736	419	3,601
1998	904	398	8,262	649	350	3,900
1999	756	363	8,655	575	317	4,158
2000	928	379	9,204	650	328	4,480
2001	883	382	9,705	572	315	4,737
2002	765	300	10,170	578	271	5,044
2003	879	278	10,771	599	240	5,403
2004	894	271	11,394	558	224	5,737
2005	902	284	12,012	680	242	6,175
2006	824	251	12,585	630	209	6,596
2007	802	234	13,153	597	202	6,991
2008	796	202	13,747	558	180	7,369
2009	733	109	14,371	406	99	7,676
TOTAL	24,220	9,849		16,678	9,002	

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 3 on page 6, 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/AIDS in Michigan is 14,371. The prevalence of AIDS, which is a subset of HIV/AIDS prevalence, is 7,676.

As implied, the HIV/AIDS section displays data on all persons with HIV, including those with AIDS, as well as those who have not been diagnosed with AIDS. Thus, persons represented in the AIDS section are also represented in the HIV/AIDS section. The number of reported deaths includes deaths directly attributable to presence of HIV/AIDS 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 3. New Diagnoses, Deaths, and Prevalence of HIV/AIDS by Year

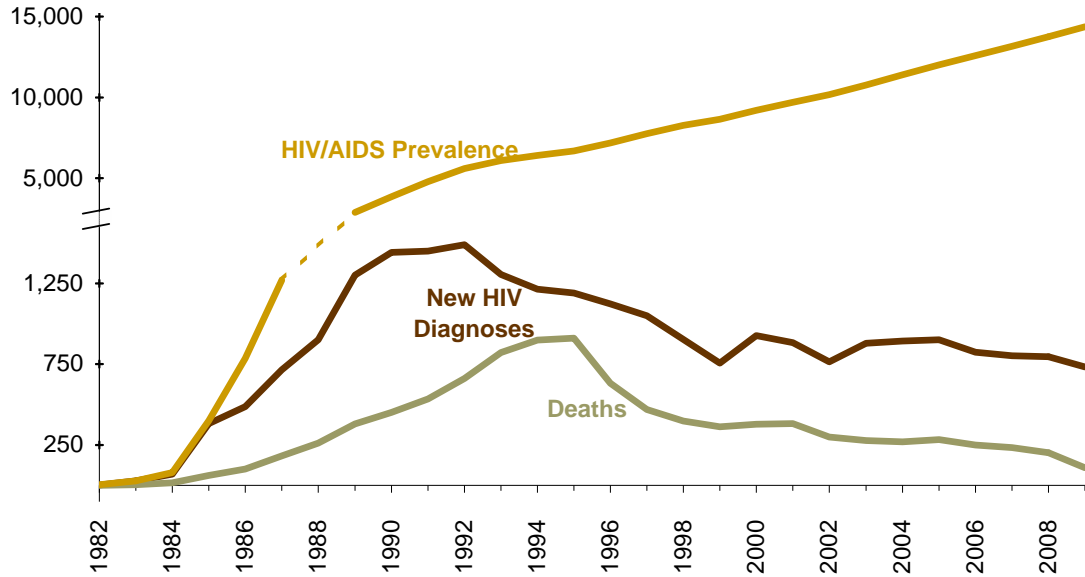


Figure 4 (below) shows the number of HIV-infected Michigan residents who have been reported as deceased by a local health department, the department of vital records via a data match or death certificate, or an alternate source. The number of deaths increased in all race/sex groups from the beginning of the epidemic through approximately 1994-1995. The number of deaths decreased markedly between 1995 and 1998 and then were relatively stable until 2001. It should be noted that the percent decrease in deaths among white males (73%) between 1995 and 2001 was more pronounced than the percent decrease among black males (57%), and the percent decrease among white females (55%) was larger than the percent decrease among black females (38%). Encouragingly, the number of deaths in black males has fallen substantially from 2001 to 2008 (49%), as have the number of deaths in white males (52%) and black females (44%). Compared to the other groups, the number of deaths in white females fell by a smaller amount between 2001 and 2008 (5%).

FIGURE 4. HIV/AIDS Deaths by Race/Sex

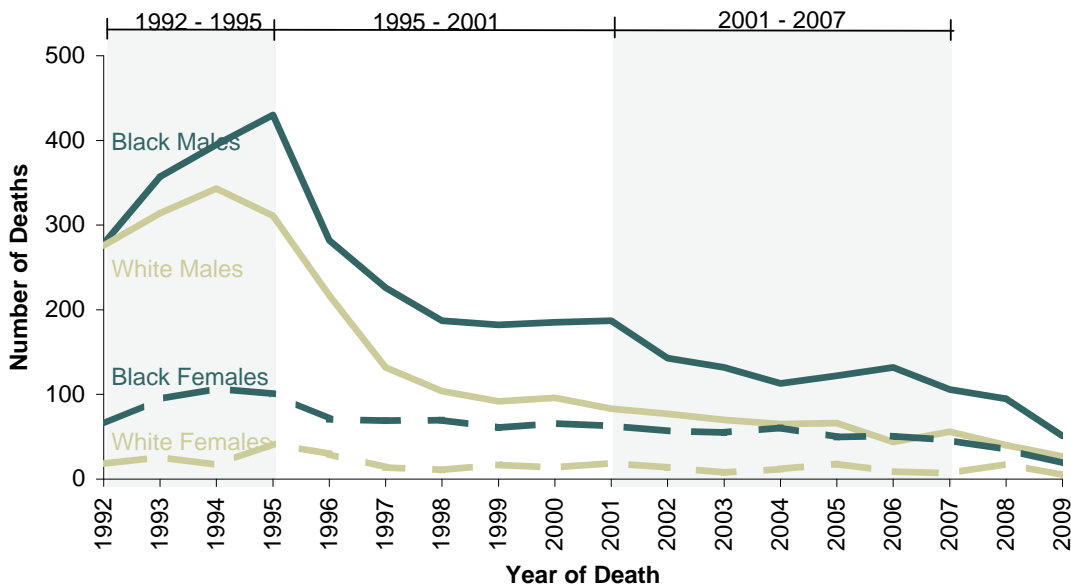


TABLE 6. Demographic Information on Persons Ever Diagnosed* with HIV

	2009 [†]						CUMULATIVE (through 2009)					
	Male		Female		Total		Male		Female		Total	
RACE/ETHNICITY												
White	179	(31%)	20	(13%)	199	(27%)	7,674	(40%)	970	(19%)	8,644	(36%)
Black	368	(63%)	121	(80%)	489	(67%)	10,483	(55%)	3,763	(75%)	14,246	(59%)
Hispanic	24	(4%)	3	(2%)	27	(4%)	694	(4%)	182	(4%)	876	(4%)
Asian/Hi/PI	1	(0%)	3	(2%)	4	(1%)	63	(0%)	22	(0%)	85	(0%)
Am In/AK Nat	0	(0%)	0	(0%)	0	(0%)	46	(0%)	14	(0%)	60	(0%)
Multi/Unk	10	(2%)	4	(3%)	14	(2%)	231	(1%)	78	(2%)	309	(1%)
RISK[§]												
Male-Male Sex	337	(58%)	N/A	--	337	(46%)	11,289	(59%)	N/A	--	11,289	(47%)
Injection Drug Use	6	(1%)	12	(8%)	18	(2%)	2,669	(14%)	1,552	(31%)	4,221	(17%)
MSM/IDU	12	(2%)	N/A	--	12	(2%)	1,327	(7%)	N/A	--	1,327	(5%)
Blood Products	0	(0%)	0	(0%)	0	(0%)	305	(2%)	37	(1%)	342	(1%)
Heterosexual	16	(3%)	94	(62%)	110	(15%)	781	(4%)	2,683	(53%)	3,464	(14%)
HRH	16	(3%)	32	(21%)	48	(7%)	781	(4%)	1,790	(36%)	2,571	(11%)
PH-Female	N/A	--	62	(41%)	62	(8%)	N/A	--	893	(18%)	893	(4%)
Perinatal	1	(0%)	1	(1%)	2	(0%)	129	(1%)	101	(2%)	230	(1%)
Undetermined	210	(36%)	44	(29%)	254	(35%)	2,691	(14%)	656	(13%)	3,347	(14%)
PH-Male	98	(17%)	N/A	--	98	(13%)	1,746	(9%)	N/A	--	1,746	(7%)
Unknown	112	(19%)	44	(29%)	156	(21%)	945	(5%)	656	(13%)	1,601	(7%)
AGE AT HIV DIAGNOSIS												
0 - 12 years	2	(0%)	2	(1%)	4	(1%)	174	(1%)	107	(2%)	281	(1%)
13 - 19 years	64	(11%)	9	(6%)	73	(10%)	554	(3%)	211	(4%)	765	(3%)
20 - 24 years	118	(20%)	18	(12%)	136	(19%)	1,819	(9%)	547	(11%)	2,366	(10%)
25 - 29 years	88	(15%)	20	(13%)	108	(15%)	3,064	(16%)	770	(15%)	3,834	(16%)
30 - 39 years	110	(19%)	43	(28%)	153	(21%)	7,178	(37%)	1,769	(35%)	8,947	(37%)
40 - 49 years	120	(21%)	32	(21%)	152	(21%)	4,481	(23%)	1,127	(22%)	5,608	(23%)
50 - 59 years	69	(12%)	20	(13%)	89	(12%)	1,488	(8%)	384	(8%)	1,872	(8%)
60 years and over	11	(2%)	7	(5%)	18	(2%)	431	(2%)	113	(2%)	544	(2%)
Unspecified	0	(0%)	0	(0%)	0	(0%)	2	(0%)	1	(0%)	3	(0%)
DISEASE STATUS[‡]												
HIV, not AIDS	439	(75%)	120	(79%)	559	(76%)	5,632	(29%)	1,910	(38%)	7,542	(31%)
AIDS - Same time	109	(19%)	23	(15%)	132	(18%)	7,399	(39%)	1,439	(29%)	8,838	(36%)
AIDS - Short lag	34	(6%)	8	(5%)	42	(6%)	1,434	(7%)	394	(8%)	1,828	(8%)
AIDS - Long lag	0	(0%)	0	(0%)	0	(0%)	4,726	(25%)	1,286	(26%)	6,012	(25%)
AREA OF RESIDENCE AT DIAGNOSIS[£]												
Detroit Metro	400	(69%)	104	(69%)	504	(69%)	12,650	(66%)	3,646	(72%)	16,296	(67%)
Out-State	171	(29%)	45	(30%)	216	(29%)	5,446	(28%)	1,278	(25%)	6,724	(28%)
Prison/Unknown	11	(2%)	2	(1%)	13	(2%)	1,095	(6%)	105	(2%)	1,200	(5%)
TOTAL	582	(79%)	151	(21%)	733	(100%)	19,191	(79%)	5,029	(21%)	24,220	(100%)

*Includes deceased cases

†Data for cases diagnosed in 2009 may be incomplete at this time

§ See page ii for description of risk category groupings. Risk categories used in Michigan are newly defined as of the July 2007 quarter.

‡ The definitions of disease status are as follows:

HIV, not AIDS = Has not been diagnosed with AIDS

AIDS - Same time = Concurrent HIV and AIDS diagnoses (diagnoses within the same month)

AIDS - Short lag = AIDS diagnosed 1 month to 12 months after HIV diagnosis

AIDS - Long lag = AIDS diagnosed more than 12 months after HIV diagnosis

£ Detroit Metro Area consists of Oakland, Monroe, Lapeer, Macomb, St. Clair, and Wayne Counties. The remaining counties comprise the Out-State area.

NOTE: <5 and ** = 1, 2, 3, or 4 cases

TABLE 7. Prevalent HIV/AIDS Cases According to County of Residence at Diagnosis

COUNTY	EST PREV Number	REPORTED PREVALENCE				CENSUS 2008 EST	COUNTY	EST PREV Number	REPORTED PREVALENCE				CENSUS 2008 EST
		HIV, Not AIDS	AIDS	Total	Rate*				HIV, Not AIDS	AIDS	Total	Rate*	
Alcona	10	0	0	0	0	11,556	Livingston	60	20	27	47	26	182,575
Alger	10	0	1	1	11	9,438	Luce	10	0	0	0	0	6,614
Allegan	100	31	46	77	68	112,975	Mackinac	10	1	1	2	19	10,624
Alpena	10	1	3	4	14	29,520	Macomb	790	287	312	599	72	830,663
Antrim	10	3	6	9	37	24,109	Manistee	10	5	6	11	45	24,640
Arenac	10	1	1	2	12	16,361	Marquette	20	10	8	18	27	65,492
Baraga	10	2	4	6	70	8,528	Mason	10	3	6	9	31	28,782
Barry	30	8	14	22	37	58,890	Mecosta	20	10	4	14	34	41,562
Bay	80	35	27	62	58	107,495	Menominee	10	3	1	4	17	24,202
Benzie	10	2	2	4	23	17,396	Midland	30	11	14	25	30	82,605
Berrien	300	97	133	230	144	159,481	Missaukee	10	4	2	6	40	15,001
Branch	20	12	2	14	31	45,726	Monroe	80	23	38	61	40	152,949
Calhoun	150	53	58	111	82	135,861	Montcalm	30	6	13	19	30	62,971
Cass	40	14	14	28	56	50,185	Montmorency	10	0	3	3	29	10,335
Charlevoix	20	5	8	13	50	25,936	Muskegon	160	62	57	119	68	174,344
Cheboygan	10	2	4	6	23	26,354	Newaygo	20	5	9	14	29	48,897
Chippewa	10	7	3	10	26	38,971	Oakland	2,130	782	823	1,605	134	1,202,174
Clare	20	6	7	13	43	30,312	Oceana	10	6	4	10	36	27,598
Clinton	40	18	13	31	44	69,726	Ogemaw	10	1	3	4	19	21,016
Crawford	10	0	3	3	21	14,463	Ontonagon	10	1	1	2	29	6,819
Delta	20	5	8	13	35	37,179	Osceola	10	1	3	4	17	22,930
Dickinson	10	0	1	1	4	26,812	Oscoda	10	1	0	1	11	8,836
Eaton	70	24	27	51	48	106,781	Otsego	10	5	6	11	46	23,808
Emmet	10	3	5	8	24	33,535	Ottawa	140	43	61	104	40	260,364
Genesee	670	254	252	506	118	428,790	Presque Isle	10	0	2	2	15	13,650
Gladwin	10	3	5	8	31	25,920	Roscommon	10	4	7	11	44	25,042
Goebic	10	1	1	2	12	16,043	Saginaw	240	93	87	180	90	200,745
Grand Traverse	70	29	25	54	63	86,071	Sanilac	20	6	7	13	30	43,024
Gratiot	10	3	4	7	17	42,245	Schoolcraft	10	1	0	1	12	8,220
Hillsdale	10	4	3	7	15	46,212	Shiawassee	30	9	13	22	31	70,880
Houghton	10	2	4	6	17	35,174	St. Clair	120	47	42	89	53	168,894
Huron	10	2	2	4	12	32,805	St. Joseph	40	11	19	30	48	62,232
Ingham	550	220	192	412	148	277,528	Tuscola	10	4	4	8	14	56,187
Ionia	30	8	11	19	30	63,833	Van Buren	60	20	25	45	58	77,801
Iosco	10	2	1	3	12	25,932	Washtenaw	610	225	233	458	132	347,376
Iron	10	0	1	1	8	12,001	Wayne Total	9,230	3,119	3,847	6,966	357	1,949,929
Isabella	40	17	15	32	48	66,778	Wayne, excl. Detroit	1,880	609	806	1,415	136	1,037,867
Jackson	170	58	67	125	78	160,180	Detroit	7,360	2,510	3,041	5,551	609	912,062
Kalamazoo	380	148	138	286	116	245,912	Wexford	10	3	5	8	25	31,673
Kalkaska	10	4	1	5	29	17,066	Detroit Metro[†]	12,400	4,273	5,079	9,352	213	4,395,484
Kent	1,020	341	430	771	127	605,213	Out-State[†]	5,610	2,022	2,210	4,232	75	5,607,938
Keweenaw	10	0	0	0	0	2,202	Prisons[‡]	790	399	386	785	N/A	N/A
Lake	10	3	7	10	91	11,014	Unknown	10	1	1	2	N/A	N/A
Lapeer	40	15	17	32	35	90,875	TOTAL	18,800	6,695	7,676	14,371	144	10,003,422
Leelanau	10	0	6	6	28	21,783							
Lenawee	60	20	24	44	44	100,801							

*Rate is reported prevalence per 100,000 and is not an estimate

[†] Detroit Metro Area consists of Oakland, Monroe, Lapeer, Macomb, St. Clair, and Wayne Counties. The remaining counties comprise the Out-State area[‡] The Prevalence Estimate for prisons is calculated differently from the remainder of the state. Please see the Front Matter (p. iii) for a further explanation

TABLE 8. Perinatal HIV Exposures by Year of Birth, 2003 - 2009

	2003	2004	2005	2006	2007	2008	2009 [†]
NUMBER DELIVERIES/BIRTHS							
Infants	66	55	71	49	52	35	30
Mothers	65	51	65	47	45	34	25
RESIDENCE AT BIRTH							
Southeast Michigan	45 68%	37 67%	42 59%	30 61%	35 67%	24 69%	21 70%
Out-State Michigan	21 32%	18 33%	29 41%	19 39%	17 33%	11 31%	9 30%
INFANTS' RACE							
White, Non-Hispanic	10 15%	7 13%	9 13%	6 12%	6 12%	7 20%	6 20%
Black, Non-Hispanic	51 77%	45 82%	57 80%	34 69%	41 79%	25 71%	21 70%
Other	5 8%	3 5%	5 7%	9 18%	5 10%	3 9%	3 10%
MOTHERS' MODE OF TRANSMISSION*							
Injecting Drug Use	6 9%	3 6%	7 11%	2 4%	1 2%	1 3%	3 12%
High Risk Heterosexual	30 46%	13 25%	32 49%	18 38%	15 33%	6 18%	9 36%
Undetermined	28 43%	35 69%	26 40%	27 57%	29 64%	27 79%	13 52%

*Not reported in this table is one mother's mode of transmission of 'Blood Products' for an infant born in 2003

† Reporting for 2009 is incomplete at this time.

Table 8 displays the characteristics of all infants born to HIV positive women as well as characteristics of their mothers. Figure 6 indicates the current infection status of these infants -- the bottom portion of the bars showing number confirmed to be infected with HIV and/or diagnosed with AIDS; the middle portion showing those not to be infected with HIV or AIDS through laboratory testing or physician exam; and the top portion showing the number whose HIV infection status is unknown due to loss to follow up or infection status reporting delay.

Since 1994, the CDC and other organizations involved in perinatal HIV transmission have recommended that HIV-positive pregnant women receive doses of zidovudine (ZDV or AZT) prenatally and at labor and delivery and that children born to these women receive ZDV neonatally. Despite these recommendations, only 57% of births to HIV-positive women are documented by MDCH to have received all three arms of therapy. For more information, please see the annual Missed Opportunity report, which can be found at: http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_2982_46000_46003-166892--,00.html

FIGURE 6. Infection Status of Perinatal HIV Exposures, 2003 - 2009