

Table of Contents: HIV Surveillance Statistics of Persons Diagnosed in Michigan

	Page
Front Matter	
Acronyms and Definitions	i
Risk Transmission and Exposure Categories	ii
Surveillance in Michigan	iii
Section 1: Data on Prevalent Cases	
Table 1. Demographic Information on Prevalent HIV Infection Cases	1
Table 2. Risk Transmission and Exposure Categories for HIV on Prevalent Cases, by Sex	2
Table 3. Sex, Race, and Risk Among Prevalent HIV Infection Cases	3
Figure 1. Mode of HIV Transmission Among Prevalent Cases, by Race	3
Table 4. Sex, Race, and Age at HIV Diagnosis Among Prevalent Cases	4
Figure 2. Age at HIV Diagnosis Among Prevalent Cases, by Race	4
Section 2: New Diagnoses, Deaths, and Prevalence	
Table 5. New Diagnoses, Deaths, and Prevalence of HIV Infection, by Year	5
Figure 3. New Diagnoses, Deaths, and Prevalence of HIV Infection, by Year	6
Figure 4. HIV Infection Deaths, by Race/Sex	6
Section 3: Data on Newly and Ever Diagnosed Cases	
Table 6. Demographic Information on Persons Newly and Ever Diagnosed with HIV	7
Section 4: Geographic Distribution of HIV Infection	
Table 7. Prevalent HIV Infection Cases, by County of Residence at Diagnosis	8
Figure 5. Reported HIV Prevalence and Prevalence Rates, by Residence at Diagnosis	9
Section 5: Data on Perinatally HIV Exposed Infants	
Table 8. Number of Deliveries and Births with Perinatal HIV Exposure, 2008 - 2011	10
Figure 6. Perinatal HIV Exposures, by Residence at Birth	10
Figure 7. Perinatal HIV Exposures, by Infant Race	10
Figure 8. Perinatal HIV Exposures, by Maternal Risk	10
Figure 9. Infection Status of Perinatal HIV Exposures	10

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****WEBSITE****

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.

HAART

Highly Active Antiretroviral Therapy.

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 measure the impact of a disease on populations of varying size.

Administrative Info

CDC

U.S. Centers for Disease Control and Prevention

eHARS (enhanced HIV/AIDS Reporting System)

A standardized database developed by CDC for national reporting of HIV infection.

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 cases.

Nilsa Mack, (517) 335-8165 or Eve Mokotoff, (313) 876-4769

MMP (Medical Monitoring Project)

Project providing information on health-related and risk behaviors, access to and use of prevention and support services, and other data on HIV-infected persons in care in Michigan.

Meosia Lee-Turner, MI MMP Coordinator, (313) 876-0072

NHBS (National HIV Behavioral Surveillance)

Surveillance system to identify behaviors that place individuals at risk for contracting HIV as well as access to prevention services among groups of uninfected persons at highest risk for HIV infection: MSM, IDU, and Heterosexuals at risk for contracting HIV.

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

STARHS (Serologic Testing Algorithm for Recent HIV Seroconversion)

HIV Incidence Surveillance that enables estimation of new HIV infections in Michigan.

Marianne O'Connor, MI STARHS Coordinator, (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.

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

Risk Transmission and Exposure Categories - Overview

Risk Transmission Categories

Risk transmission categories are the hierarchical risk categories that have been used to display HIV transmission risk in the Michigan and national HIV infection statistics since the 1980s. 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, even though our understanding of the most efficient HIV transmission routes has changed.

Background on Hierarchy

The hierarchy algorithm is calculated using data from individual patient history questions collected on the case report form (Section VIII). In this hierarchy, all cases are assigned a single mode of transmission with the exception of men who report both sex with other men and injection drug use (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 multiple risks that a case may have. For example, a woman who has documented risk of both injection drug use and sex with a male partner who has injected drugs would be assigned a risk of injection drug use (IDU), rather than both IDU and heterosexual sex, because the IDU category is ranked higher in the transmission risk hierarchy. Therefore, this woman's risk of heterosexual sex would not be represented.

There is a national effort toward representing mode of HIV transmission more comprehensively. Beginning in January 2009, Michigan began presenting data on mode of transmission in two ways. First, the traditional risk categories continue to be used in the same tables in which they previously appeared. Second, Table 2 on page 2 displays exposure categories, which present mode of HIV exposure 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 known modes of HIV exposure. Like the traditional risk transmission categories, the exposure categories are mutually exclusive, meaning that each case is only included in one category. Exposure categories, however, allow readers to see all the reported ways in which a case may have been exposed to HIV without stating definitively how the case was infected. Categories are displayed in order of decreasing HIV prevalence. In order to display the most accurate information possible, we request that persons who complete the Michigan Adult HIV/AIDS Confidential Case Report Form indicate a 'Yes', 'No', or 'Unknown' answer to each patient history questions in Section VIII. Patient History of the form.

Risk Transmission & Exposure 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 (**applies to risk transmission categories**).

Heterosexual Contact w/ Female (HCF): Males who have had sex with a female regardless of what is known about the female's HIV status or behaviors (**applies to exposure categories**).

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 (**applies to both risk transmission and exposure categories**).

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.

Behaviorally Bisexual Men

MSM who also have a history of sexual contact with women. Also referred to as "MSM & Sex with Female".

Perinatal

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

Undetermined

Males and females with no identified risk.

Males whose only documented risk is sex with a female, and their female partner's risk and HIV status is unknown (**note: these males meet the definition of heterosexual contact w/ female (HCF) in the exposure categories, but they remain "undetermined" risk in the transmission categories**).

HIV Surveillance in Michigan

Background

Reports of HIV infection are submitted to state and local health departments under Michigan law by providers making initial 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 timeliness and completeness of case reporting. Anonymous HIV reports (without name or other identifier) are excluded from this report because we cannot de-duplicate reports, update status, or obtain missing data. A total of 2,025 complete anonymous reports have been reported in Michigan.

HIV Surveillance in Michigan (Continued)

HIV Prevalence Estimates for Michigan

HIV prevalence estimates are updated annually in the January edition of this quarterly analysis. These estimates are based on reported cases diagnosed with HIV infection while residents of Michigan, regardless of current residence, which is the national standard established by the CDC. Estimates are calculated by adding the following three components and rounding up to the nearest 100: 1) the number of reported cases living with HIV infection, 2) the number of diagnosed HIV infected cases not yet reported, estimated at 10 percent of the reported cases living with HIV infection, and 3) the number of HIV infected cases that have not yet been tested, estimated at 21 percent of the total cases living with HIV infection (identical to the CDC estimate). The current prevalence estimate is 19,300 cases.

HIV prevalence estimates for each subgroup are calculated by multiplying the proportion of total cases in that group by 19,300 (the current total prevalence estimate). For example, 78 percent of HIV infection reports are among men. Therefore, the number of HIV-infected men in Michigan is estimated to be 14,980 ($77.61\% \times 19,300$ rounded up to the nearest 10). Since the estimates are rounded, totals may not equal 19,300. The minimum estimate is 10.

Prison estimates of HIV infection are calculated differently than the aforementioned categorical estimates. All prisoners are tested for HIV upon entry to prison; therefore, there is no need to apply estimates to account for unreported and untested cases. The prison prevalence estimate is calculated by rounding the reported number of persons living with HIV infection and diagnosed in prison up 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 ($19,300 - 740 = 18,560$). For example, 12 percent of HIV infection cases (not including cases in 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 2,250 ($12.11\% \times 18,560$). Since the estimates are rounded to the nearest 10, the county totals may not equal 18,560. 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.

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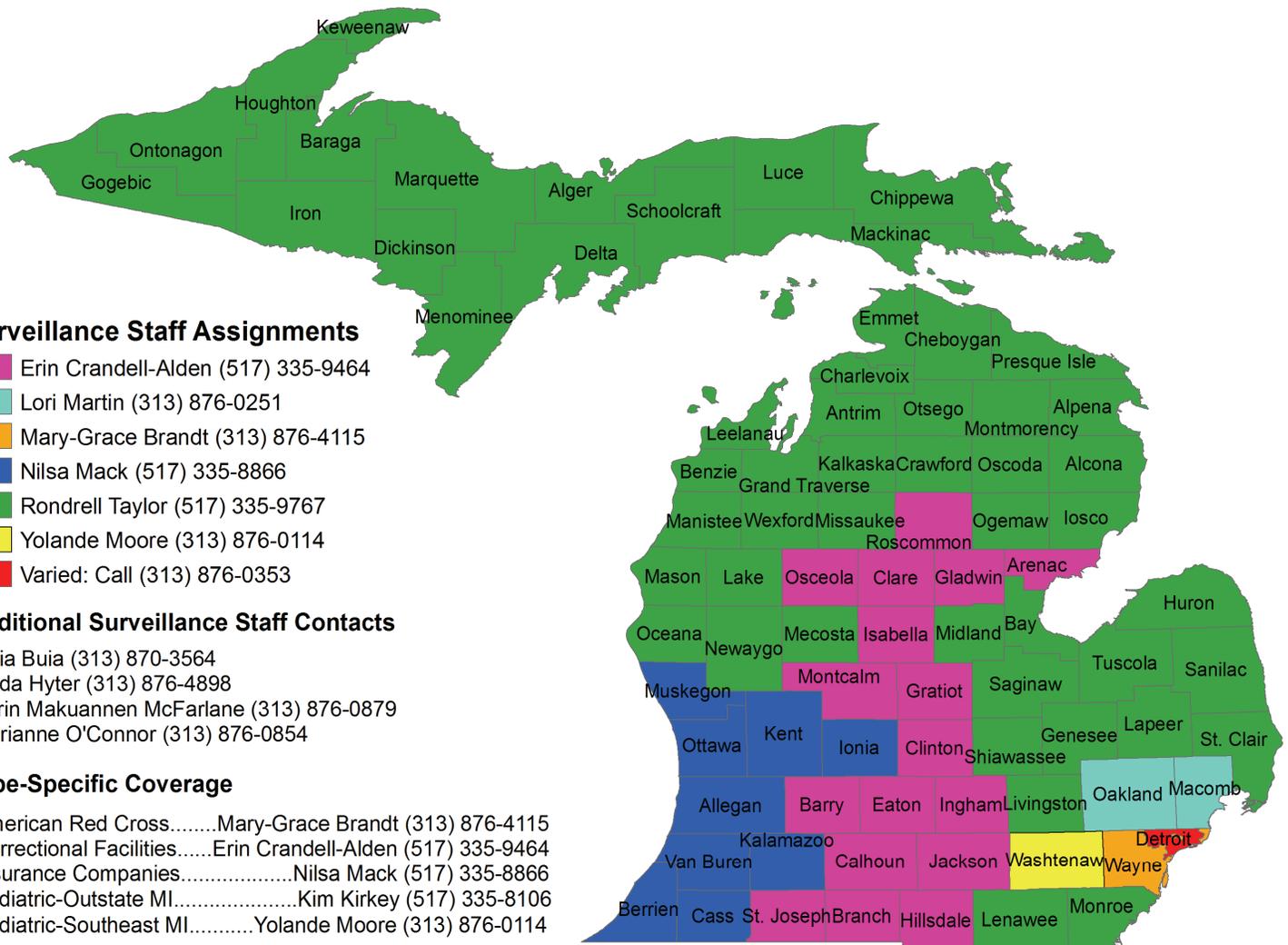


TABLE 1. Demographic Information on Prevalent HIV Infection Cases

REPORTED HIV INFECTION PREVALENCE

	EST PREV*		HIV Infection Non-Stage 3		HIV Infection Stage 3 (AIDS)		Total		CENSUS 2010		
	Num		Num	Percent	Num	Percent	Num	Percent	Num	Percent	
RACE/ETHNICITY[§]											
White	6,660		2,361	34%	2,716	35%	5,077	35%	67	7,569,939	77%
Black	11,280		4,038	59%	4,565	58%	8,603	58%	622	1,383,756	14%
Hispanic	830		281	4%	355	5%	636	4%	146	436,358	4%
Asian/PI	110		39	1%	45	1%	84	1%	35	238,660	2%
Am Indian/AN	50		24	<1%	14	<1%	38	<1%	70	54,665	1%
Multi/Other/Unk	360		117	2%	160	2%	277	2%	N/A	200,262	2%
SEX & RACE											
Male	14,980		5,214	76%	6,206	79%	11,420	78%	236	4,848,114	49%
White Male	5,810		2,006	29%	2,427	31%	4,433	30%	119	3,728,507	38%
Black Male	8,110		2,860	42%	3,326	42%	6,186	42%	941	657,181	7%
Hispanic Male	650		218	3%	281	4%	499	3%	225	221,913	2%
Other Male	400		130	2%	172	2%	302	2%	126	240,513	2%
Female	4,320		1,646	24%	1,649	21%	3,295	22%	65	5,035,526	51%
White Female	840		355	5%	289	4%	644	4%	17	3,841,432	39%
Black Female	3,170		1,178	17%	1,239	16%	2,417	16%	333	726,575	7%
Hispanic Female	180		63	1%	74	1%	137	1%	64	214,445	2%
Other Female	130		50	1%	47	1%	97	1%	38	253,074	3%
RISK*											
Male-Male Sex (MSM)	9,460		3,310	48%	3,902	50%	7,212	49%	--	--	--
Injection Drug Use (IDU)	1,830		551	8%	842	11%	1,393	9%	--	--	--
MSM/IDU	790		258	4%	343	4%	601	4%	--	--	--
Blood Products	110		30	<1%	56	1%	86	1%	--	--	--
Heterosexual Contact (HC)	3,450		1,265	18%	1,367	17%	2,632	18%	--	--	--
HCFR (Males)	670		224	3%	289	4%	513	3%	--	--	--
HCM (Females)	2,780		1,041	15%	1,078	14%	2,119	14%	--	--	--
Perinatal	220		100	1%	65	1%	165	1%	--	--	--
Undetermined	3,440		1,346	20%	1,280	16%	2,626	18%	--	--	--
AGE AT HIV DIAGNOSIS											
0 - 12 years	250		116	2%	74	1%	190	1%	--	--	--
13 - 19 years	980		452	7%	296	4%	748	5%	--	--	--
20 - 24 years	2,680		1,174	17%	873	11%	2,047	14%	--	--	--
25 - 29 years	3,230		1,227	18%	1,233	16%	2,460	17%	--	--	--
30 - 39 years	6,610		2,136	31%	2,905	37%	5,041	34%	--	--	--
40 - 49 years	3,920		1,235	18%	1,757	22%	2,992	20%	--	--	--
50 - 59 years	1,310		427	6%	574	7%	1,001	7%	--	--	--
60 years and over	310		90	1%	143	2%	233	2%	--	--	--
Unspecified	10		3	<1%	0	0%	3	<1%	--	--	--
AREA OF RESIDENCE AT DIAGNOSIS*											
Detroit Metro	12,610		4,362	64%	5,139	65%	9,501	65%	223	4,267,304	43%
Out-State	5,940		2,139	31%	2,339	30%	4,478	30%	80	5,616,336	57%
Prison/Unknown	750		359	5%	377	5%	736	5%	N/A	N/A	N/A
TOTAL	19,300		6,860	100%	7,855	100%	14,715	100%	149	9,883,640	100%

*See pages ii and iii 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).

† To calculate "1 out of x" statements for rate, divide the census number by the total reported prevalence. For example, for non-Hispanic whites: 7,569,939 / 5,077 = 1,491. Thus, 1 out of every 1,491 non-Hispanic white persons in Michigan are living with HIV.

‡ 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 may be of any race.

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

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

	Male		Female		Overall	
	Num	Percent	Num	Percent	Num	Percent
REPORTED HIV INFECTION PREVALENCE						
RISK TRANSMISSION CATEGORIES (CDC Hierarchy) *[§]						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-Male Sex (MSM)	7,212	63%	N/A	--	7,212	49%
Injection Drug Use (IDU)	830	7%	563	17%	1,393	9%
MSM/IDU	601	5%	N/A	--	601	4%
Blood Products	73	1%	13	<1%	86	1%
Heterosexual Contact (HC)	513	4%	2,119	64%	2,632	18%
HCFR (Males)	513	4%	N/A	--	513	3%
HCM (Females)	N/A	--	2,119	64%	2,119	14%
Perinatal	94	1%	71	2%	165	1%
Undetermined	2,097	18%	529	16%	2,626	18%
EXPOSURE CATEGORIES *[†]						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-Male Sex Only	4,652	41%	N/A	--	4,652	32%
MSM & HC	2,514	22%	N/A	--	2,514	17%
MSM & IDU	257	2%	N/A	--	257	2%
MSM & Blood Products	23	<1%	N/A	--	23	<1%
MSM & HC & IDU	328	3%	N/A	--	328	2%
MSM & HC & Blood Products	23	<1%	N/A	--	23	<1%
MSM & IDU & Blood Products	3	<1%	N/A	--	3	<1%
MSM & HC & IDU & Blood Products	13	<1%	N/A	--	13	<1%
Heterosexual Contact Only	1,873	16%	2,406	73%	4,279	29%
HC & IDU	626	5%	495	15%	1,121	8%
HC & Blood Products	48	<1%	34	1%	82	1%
HC & IDU & Blood Products	19	<1%	12	<1%	31	<1%
Injection Drug Use Only	183	2%	56	2%	239	2%
IDU & Blood Products	2	<1%	0	0%	2	<1%
Perinatal Exposure	94	1%	71	2%	165	1%
Exposure to Blood Products Only	38	<1%	4	<1%	42	<1%
Undetermined	724	6%	217	7%	941	6%
TOTAL	11,420	100%	3,295	100%	14,715	100%
SUMMARIZED EXPOSURE CATEGORIES*						
(NOT Mutually Exclusive: one case may be represented in multiple categories)						
Any MSM	7,813	68%	N/A	--	7,813	53%
Behaviorally Bisexual Men	2,878	25%	N/A	--	2,878	20%
Any Heterosexual Contact	5,444	48%	2,947	89%	8,391	57%
Any IDU	1,431	13%	563	17%	1,994	14%

*See page ii for descriptions of risk transmission and exposure categories.

[§] Risk transmission categories are grouped based on hierarchical categories determined by the CDC. Any one person with multiple risks is only represented in the highest category, with the exception of MSM/IDU (based on the hierarchical algorithm).

[†] Exposure categories are mutually exclusive and grouped to allow all possible combinations of exposures that any one person may have. NOTE: Heterosexual contact (HC) in exposure categories includes males and females who had heterosexual contact, regardless of what is known about their partners' risk or HIV status.

^{*} Summarized exposure categories are NOT mutually exclusive, i.e. a case may be represented in multiple categories. These summarized categories are meant to give a broader picture of exposure and will NOT add up to the total number of persons living with HIV infection.

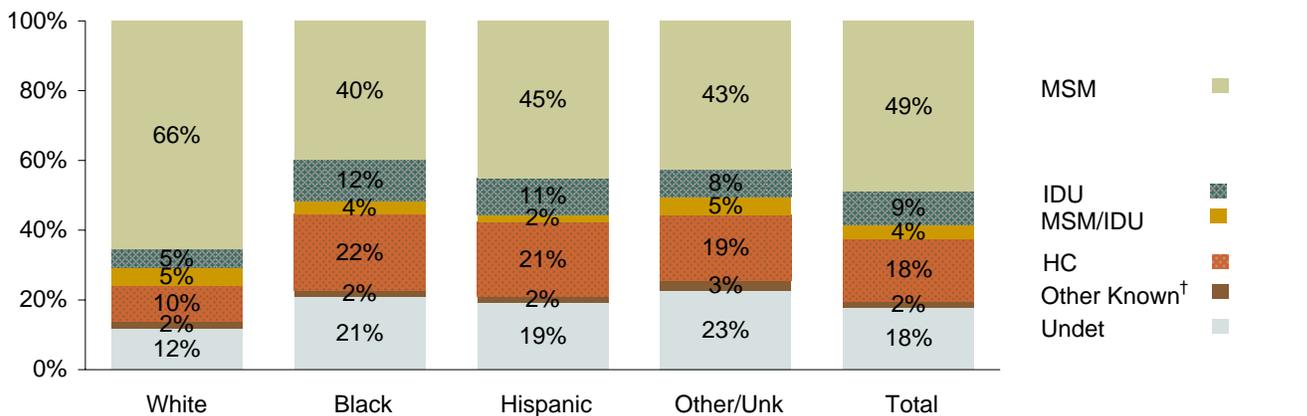
TABLE 3. Sex, Race, and Risk Among Prevalent HIV Infection Cases

MALE	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	3,326	75%	3,429	55%	287	58%	170	56%	7,212	63%
Injection Drug Use	163	4%	602	10%	47	9%	18	6%	830	7%
MSM/IDU	249	6%	318	5%	13	3%	21	7%	601	5%
Blood Products	56	1%	14	<1%	1	<1%	2	1%	73	1%
Heterosexual Contact (HCFR)	99	2%	370	6%	34	7%	10	3%	513	4%
Perinatal	15	<1%	71	1%	2	<1%	6	2%	94	1%
Undetermined	525	12%	1,382	22%	115	23%	75	25%	2,097	18%
Male Subtotal	4,433	39%	6,186	54%	499	4%	302	3%	11,420	100%

FEMALE	White		Black		Hispanic		Other or Unknown		All Female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection Drug Use	109	17%	421	17%	20	15%	13	13%	563	17%
Blood Products	8	1%	4	<1%	1	1%	0	0%	13	<1%
Heterosexual Contact (HCM)	433	67%	1,519	63%	102	74%	65	67%	2,119	64%
Perinatal	12	2%	49	2%	6	4%	4	4%	71	2%
Undetermined	82	13%	424	18%	8	6%	15	15%	529	16%
Female Subtotal	644	20%	2,417	73%	137	4%	97	3%	3,295	100%

ALL	White		Black		Hispanic		Other or Unknown		Risk All	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex	3,326	66%	3,429	40%	287	45%	170	43%	7,212	49%
Injection Drug Use	272	5%	1,023	12%	67	11%	31	8%	1,393	9%
MSM/IDU	249	5%	318	4%	13	2%	21	5%	601	4%
Blood Products	64	1%	18	<1%	2	<1%	2	1%	86	1%
Heterosexual Contact (HC)	532	10%	1,889	22%	136	21%	75	19%	2,632	18%
<i>HCFR (Males)</i>	99	2%	370	4%	34	5%	10	3%	513	3%
<i>HCM (Females)</i>	433	9%	1,519	18%	102	16%	65	16%	2,119	14%
Perinatal	27	1%	120	1%	8	1%	10	3%	165	1%
Undetermined	607	12%	1,806	21%	123	19%	90	23%	2,626	18%
RACE ALL	5,077	35%	8,603	58%	636	4%	399	3%	14,715	100%

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



†The 'Other Known' mode of transmission 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 Cases

MALE	White		Black		Hispanic		Other or Unknown		All Male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	24	1%	79	1%	2	<1%	7	2%	112	1%
13 - 19 years	77	2%	456	7%	17	3%	15	5%	565	5%
20 - 24 years	415	9%	1,065	17%	60	12%	42	14%	1,582	14%
25 - 29 years	732	17%	1,001	16%	101	20%	62	21%	1,896	17%
30 - 39 years	1,727	39%	1,923	31%	196	39%	109	36%	3,955	35%
40 - 49 years	1,041	23%	1,191	19%	82	16%	49	16%	2,363	21%
50 - 59 years	329	7%	393	6%	28	6%	15	5%	765	7%
60 years and over	88	2%	76	1%	13	3%	3	1%	180	2%
Male Subtotal*	4,433	39%	6,184	54%	499	4%	302	3%	11,418	100%

FEMALE	White		Black		Hispanic		Other or Unknown		All Female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	13	2%	55	2%	6	4%	4	4%	78	2%
13 - 19 years	40	6%	130	5%	11	8%	2	2%	183	6%
20 - 24 years	114	18%	316	13%	21	15%	14	14%	465	14%
25 - 29 years	127	20%	401	17%	19	14%	17	18%	564	17%
30 - 39 years	200	31%	796	33%	50	36%	40	41%	1,086	33%
40 - 49 years	97	15%	501	21%	18	13%	13	13%	629	19%
50 - 59 years	43	7%	177	7%	9	7%	7	7%	236	7%
60 years and over	9	1%	41	2%	3	2%	0	0%	53	2%
Female Subtotal*	643	20%	2,417	73%	137	4%	97	3%	3,294	100%

ALL	White		Black		Hispanic		Other or Unknown		Overall	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	37	1%	134	2%	8	1%	11	3%	190	1%
13 - 19 years	117	2%	586	7%	28	4%	17	4%	748	5%
20 - 24 years	529	10%	1,381	16%	81	13%	56	14%	2,047	14%
25 - 29 years	859	17%	1,402	16%	120	19%	79	20%	2,460	17%
30 - 39 years	1,927	38%	2,719	32%	246	39%	149	37%	5,041	34%
40 - 49 years	1,138	22%	1,692	20%	100	16%	62	16%	2,992	20%
50 - 59 years	372	7%	570	7%	37	6%	22	6%	1,001	7%
60 years and over	97	2%	117	1%	16	3%	3	1%	233	2%

RACE OVERALL* 5,076 35% 8,601 58% 636 4% 399 3% 14,712 100%

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

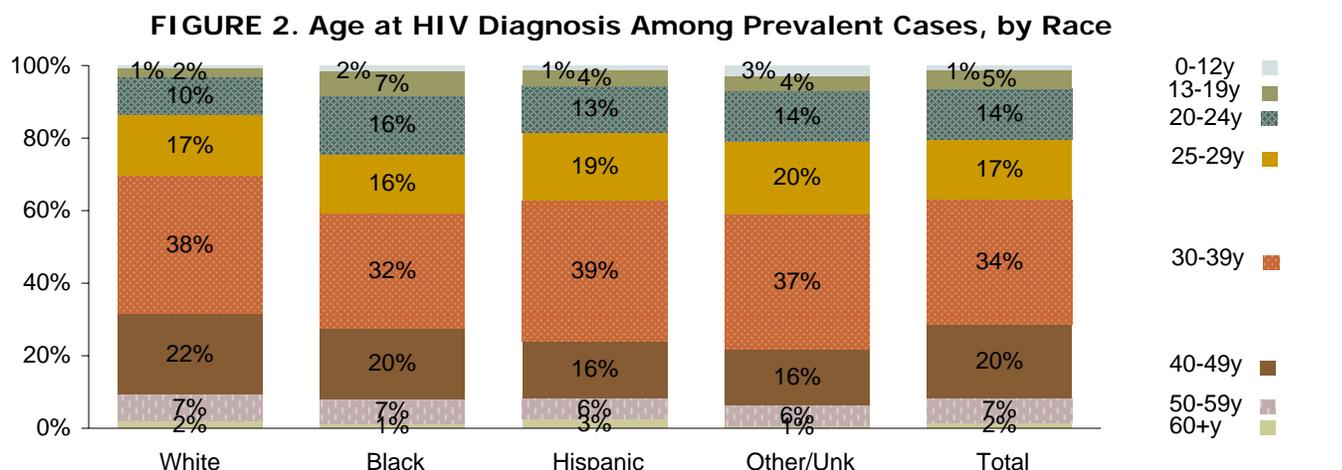


TABLE 5. New Diagnoses, Deaths, and Prevalence of HIV Infection, by Year

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	4	2	2	3	2	1
1982	3	0	5	2	0	3
1983	29	5	29	22	5	20
1984	70	17	82	50	17	53
1985	382	63	401	98	63	88
1986	490	103	788	168	100	156
1987	720	182	1,326	318	174	300
1988	905	264	1,967	493	255	538
1989	1,301	383	2,885	689	373	854
1990	1,441	454	3,872	795	434	1,215
1991	1,442	537	4,777	962	516	1,661
1992	1,491	664	5,604	1,232	632	2,261
1993	1,299	827	6,076	1,126	781	2,606
1994	1,212	901	6,387	1,014	844	2,776
1995	1,193	919	6,661	1,064	850	2,990
1996	1,118	633	7,146	858	583	3,265
1997	1,042	470	7,718	737	419	3,583
1998	900	407	8,211	649	356	3,876
1999	745	372	8,584	574	323	4,127
2000	924	386	9,122	651	334	4,444
2001	879	393	9,608	575	325	4,694
2002	771	371	10,008	579	317	4,956
2003	868	359	10,517	600	292	5,264
2004	889	344	11,062	563	277	5,550
2005	895	354	11,603	740	291	5,999
2006	809	338	12,074	613	272	6,340
2007	797	325	12,546	590	276	6,654
2008	791	338	12,999	546	278	6,922
2009	815	225	13,589	478	194	7,206
2010	760	163	14,186	508	147	7,567
2011	622	93	14,715	372	84	7,855
TOTAL	25,607	10,892		17,669	9,814	

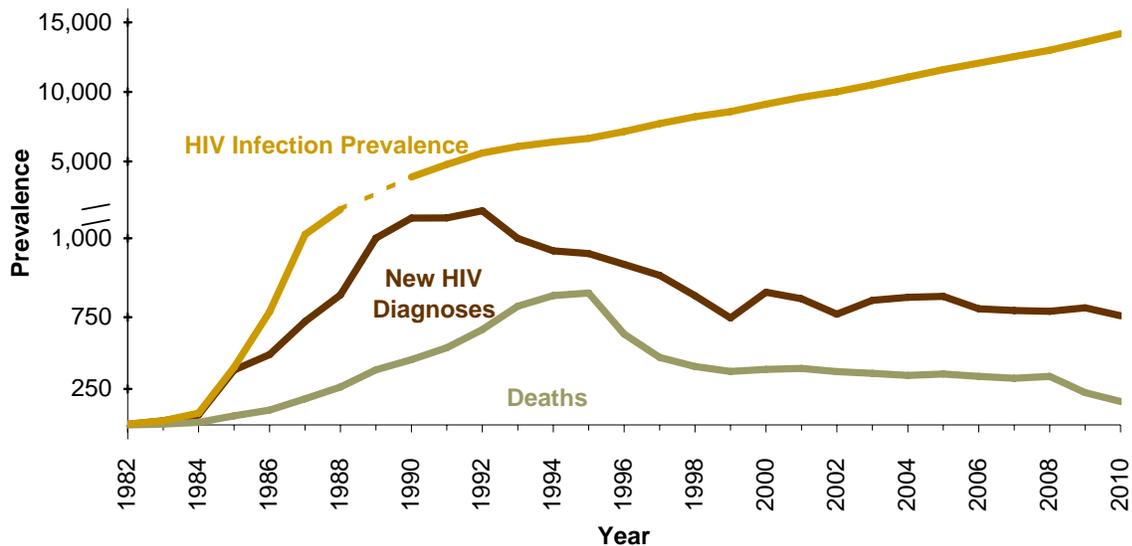
The prevalence of HIV in Michigan has steadily increased, since persons with HIV are living longer. This is largely due to improved anti-retroviral therapy.

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 infection in Michigan is 14,715. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 7,855.

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.

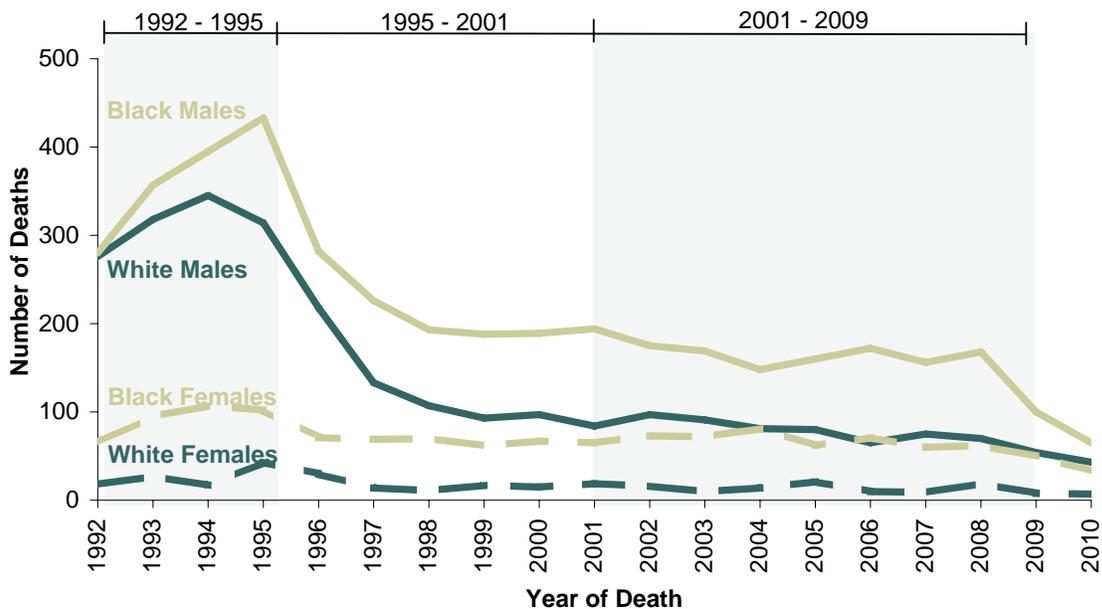
FIGURE 3. New Diagnoses[†], Deaths, and Prevalence of HIV Infection, by Year



[†] Reporting for 2010 is incomplete at this time.

Figure 4 (below) shows the number of HIV-infected Michigan residents who are reported as deceased by a local health department, the Department of Vital Records via a data match or death certificate, a match with the National Death Index, 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 (55%), and the percent decrease among white females (56%) was larger than the percent decrease among black females (36%). Encouragingly, the number of deaths in black males has fallen substantially from 2001 to 2009 (48%), as have the number of deaths in white males (36%), black females (23%) and white females (58%).

FIGURE 4. HIV Infection Deaths[†], by Race/Sex



[†] Reporting for 2010 is incomplete at this time.

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

	2011 [†]						CUMULATIVE (through 2011)					
	Male		Female		All		Male		Female		All	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
RACE/ETHNICITY												
White	162	32%	27	22%	189	30%	8,037	40%	1,009	19%	9,046	35%
Black	294	59%	87	71%	381	61%	11,078	55%	3,953	75%	15,031	59%
Hispanic	29	6%	5	4%	34	5%	767	4%	192	4%	959	4%
Asian/HI/PI	7	1%	4	3%	11	2%	72	<1%	26	<1%	98	<1%
Am In/AK Nat	2	<1%	0	0%	2	<1%	46	<1%	15	<1%	61	<1%
Multi/Other/Unk	5	1%	0	0%	5	1%	311	2%	101	2%	412	2%
RISK[§]												
Male-Male Sex	311	62%	N/A	--	311	50%	12,023	59%	N/A	--	12,023	47%
Injection Drug Use	11	2%	5	4%	16	3%	2,708	13%	1,586	30%	4,294	17%
MSM/IDU	13	3%	N/A	--	13	2%	1,366	7%	N/A	--	1,366	5%
Blood Products	0	0%	0	0%	0	0%	306	2%	38	1%	344	1%
Heterosexual Contact (HC)	12	2%	75	61%	87	14%	803	4%	2,870	54%	3,673	14%
HCFR (Males)	12	2%	N/A	--	12	2%	803	4%	N/A	--	803	3%
HCM (Females)	N/A	--	75	61%	75	12%	N/A	--	2,870	54%	2,870	11%
Perinatal	3	1%	0	0%	3	<1%	136	1%	103	2%	239	1%
Undetermined	149	30%	43	35%	192	31%	2,969	15%	699	13%	3,668	14%
AGE AT HIV DIAGNOSIS												
0 - 12 years	3	1%	0	0%	3	<1%	181	1%	109	2%	290	1%
13 - 19 years	47	9%	4	3%	51	8%	655	3%	224	4%	879	3%
20 - 24 years	124	25%	17	14%	141	23%	2,070	10%	582	11%	2,652	10%
25 - 29 years	73	15%	17	14%	90	14%	3,231	16%	812	15%	4,043	16%
30 - 39 years	94	19%	39	32%	133	21%	7,414	37%	1,835	35%	9,249	36%
40 - 49 years	96	19%	22	18%	118	19%	4,676	23%	1,180	22%	5,856	23%
50 - 59 years	45	9%	16	13%	61	10%	1,610	8%	424	8%	2,034	8%
60 years and over	17	3%	8	7%	25	4%	472	2%	129	2%	601	2%
Unspecified	0	0%	0	0%	0	0%	2	<1%	1	<1%	3	<1%
Infection STATUS[‡]												
HIV Infection Non-Stage 3	375	75%	82	67%	457	73%	6,001	30%	1,937	37%	7,938	31%
HIV Infection Stage 3 (AIDS)	124	25%	41	33%	165	27%	14,310	70%	3,359	63%	17,669	69%
AIDS - Same time	95	19%	29	24%	124	20%	7,650	38%	1,496	28%	9,146	36%
AIDS - Short Lag	29	6%	12	10%	41	7%	1,571	8%	441	8%	2,012	8%
AIDS - Long lag	0	0%	0	0%	0	0%	5,089	25%	1,422	27%	6,511	25%
AREA OF RESIDENCE AT DIAGNOSIS[£]												
Detroit Metro	318	64%	81	66%	399	64%	13,368	66%	3,829	72%	17,197	67%
Out-State	175	35%	41	33%	216	35%	5,838	29%	1,360	26%	7,198	28%
Prison/Unknown	6	1%	1	1%	7	1%	1,105	5%	107	2%	1,212	5%
TOTAL	499	80%	123	20%	622	100%	20,311	79%	5,296	21%	25,607	100%

*Includes deceased cases.

†Data for cases diagnosed in 2011 may be incomplete at this time.

§ See page ii for description of risk category groupings. Risk categories used in Michigan are redefined as of January 2012.

‡ The definitions of infection status are as follows (see page i for complete description of HIV infection stages):

HIV Infection Non-Stage 3: Has not progressed to Stage 3 Infection (AIDS) or no information is available on CD4 levels or AIDS-defining conditions

HIV Infection Stage 3 (AIDS):

AIDS - Same time = Diagnosed as Stage 3 Infection within 30 days of initial HIV diagnosis

AIDS - Short lag = Progressed to Stage 3 between 1 and 12 months after initial HIV diagnosis

AIDS - Long lag = Progressed to Stage 3 more than 12 months after initial HIV diagnosis

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

TABLE 7. Prevalent HIV Infection Cases, by County of Residence at Diagnosis

COUNTY	EST PREV	REPORTED PREVALENCE				CENSUS 2010	COUNTY	EST PREV	REPORTED PREVALENCE				CENSUS 2010
		HIV		Total	Rate*				HIV		Total	Rate*	
		Infection Non-Stage 3	Infection Stage 3						Infection Non-Stage 3	Infection Stage 3			
Alcona	10	0	0	0	0	10,942	Livingston	70	21	32	53	29	180,967
Alger	10	0	1	1	10	9,601	Luce	10	0	0	0	0	6,631
Allegan	90	24	47	71	64	111,408	Mackinac	10	2	1	3	27	11,113
Alpena	10	1	2	3	10	29,598	Macomb	880	325	338	663	79	840,978
Antrim	10	3	6	9	38	23,580	Manistee	10	5	6	11	44	24,733
Arenac	10	1	1	2	13	15,899	Marquette	20	7	10	17	25	67,077
Baraga	10	1	3	4	45	8,860	Mason	10	4	5	9	31	28,705
Barry	30	9	15	24	41	59,173	Mecosta	20	10	5	15	35	42,798
Bay	80	34	27	61	57	107,771	Menominee	10	3	1	4	17	24,029
Benzie	10	2	3	5	29	17,525	Midland	30	12	13	25	30	83,629
Berrien	300	93	136	229	146	156,813	Missaukee	10	3	5	8	54	14,849
Branch	20	11	3	14	31	45,248	Monroe	90	30	37	67	44	152,021
Calhoun	170	61	65	126	93	136,146	Montcalm	30	8	13	21	33	63,342
Cass	40	14	14	28	54	52,293	Montmorency	10	0	3	3	31	9,765
Charlevoix	10	3	7	10	39	25,949	Muskegon	160	64	58	122	71	172,188
Cheboygan	10	3	6	9	34	26,152	Newaygo	20	7	9	16	33	48,460
Chippewa	10	6	3	9	23	38,520	Oakland	2,250	835	858	1,693	141	1,202,362
Clare	20	3	10	13	42	30,926	Oceana	10	6	4	10	38	26,570
Clinton	40	19	10	29	38	75,382	Ogemaw	10	1	3	4	18	21,699
Crawford	10	1	3	4	28	14,074	Ontonagon	10	1	2	3	44	6,780
Delta	20	5	8	13	35	37,069	Osceola	10	1	2	3	13	23,528
Dickinson	10	0	1	1	4	26,168	Oscoda	10	1	0	1	12	8,640
Eaton	70	23	29	52	48	107,759	Otsego	10	4	7	11	46	24,164
Emmet	10	3	6	9	28	32,694	Ottawa	150	47	65	112	42	263,801
Genesee	680	253	256	509	120	425,790	Presque Isle	10	0	2	2	15	13,376
Gladwin	10	3	4	7	27	25,692	Roscommon	20	3	10	13	53	24,449
Gogebic	10	1	1	2	12	16,427	Saginaw	280	109	102	211	105	200,169
Grand Traverse	90	34	32	66	76	86,986	Sanilac	20	7	7	14	32	43,114
Gratiot	10	5	3	8	19	42,476	Schoolcraft	10	0	0	0	0	8,485
Hillsdale	10	3	5	8	17	46,688	Shiawassee	30	8	13	21	30	70,648
Houghton	10	3	3	6	16	36,628	St. Clair	120	49	44	93	57	163,040
Huron	10	2	2	4	12	33,118	St. Joseph	40	13	19	32	52	61,295
Ingham	600	245	206	451	161	280,895	Tuscola	10	4	5	9	16	55,729
Ionia	30	10	11	21	33	63,905	Van Buren	60	20	23	43	56	76,258
Iosco	10	4	1	5	19	25,887	Washtenaw	650	248	239	487	141	344,791
Iron	10	0	1	1	8	11,817	Wayne Total	9,230	3,110	3,844	6,954	382	1,820,584
Isabella	50	17	20	37	53	70,311	Wayne, excl. Detroit	1,890	607	816	1,423	129	1,106,807
Jackson	190	73	71	144	90	160,248	Detroit	7,340	2,503	3,028	5,531	775	713,777
Kalamazoo	400	152	148	300	120	250,331	Wexford	10	3	5	8	24	32,735
Kalkaska	10	4	0	4	23	17,153							
Kent	1,090	361	460	821	136	602,622							
Keweenaw	10				0	2,156	Detroit Metro [†]	12,610	4,362	5,139	9,501	223	4,267,304
Lake	10	4	7	11	95	11,539	Out-State [†]	5,940	2,139	2,339	4,478	80	5,616,336
Lapeer	40	13	18	31	35	88,319							
Leelanau	10	0	6	6	28	21,708	Prisons [‡]	740	358	376	734	N/A	N/A
Lenawee	70	23	27	50	50	99,892	Unknown	10	1	1	2	N/A	N/A
							TOTAL	19,300	6,860	7,855	14,715	149	9,883,640

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

[†] Detroit Metro Area consists of Lapeer, Macomb, Monroe, Oakland, St. Clair, and Wayne Counties. The remaining counties constitute 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 further explanation.

Table 8: Number of Deliveries and Births with Perinatal HIV Exposure, 2008 - 2011†

	Mothers	Infants
2008	38	39
2009	35	40
2010	40	40
2011	30	30

FIGURE 6. Perinatal HIV Exposures, by Residence at Birth

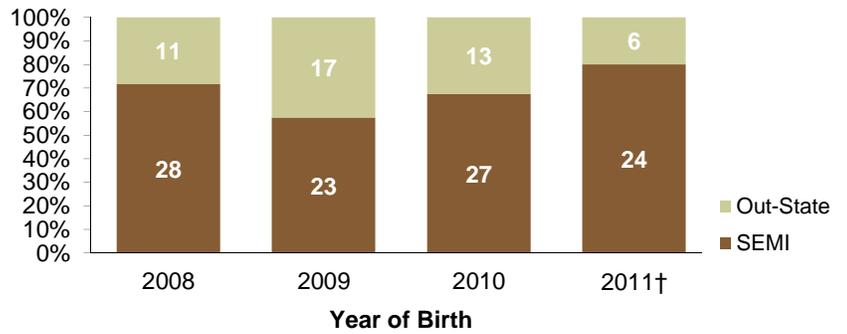


FIGURE 7. Perinatal HIV Exposures, by Infant Race

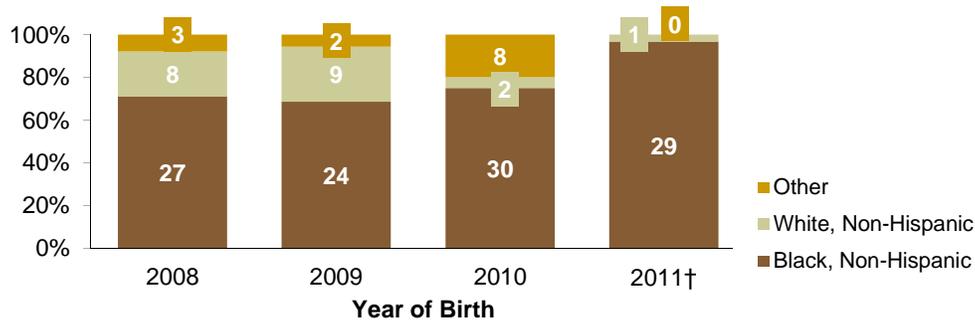


FIGURE 8. Perinatal HIV Exposures, by Maternal Risk

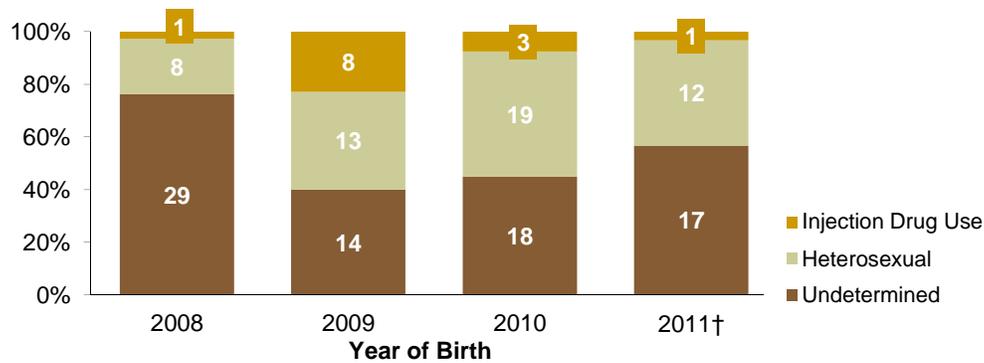


FIGURE 9. Infection Status of Perinatal HIV Exposures

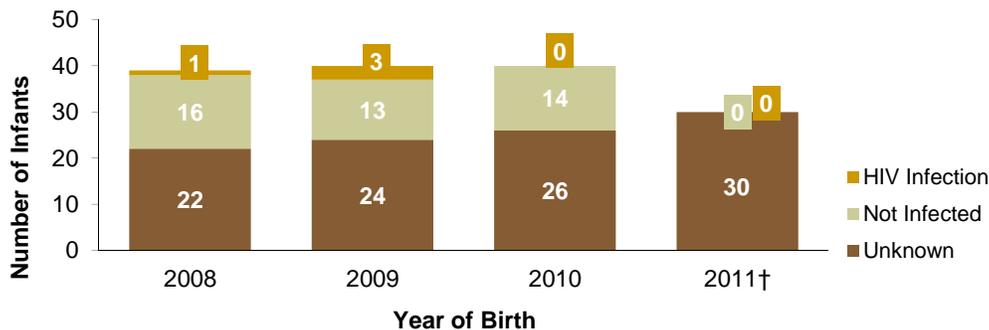


Figure 9 indicates the current infection status of infants born to HIV positive women: the top portion of the bars shows number of infants confirmed to be infected with HIV disease; the middle portion shows those not infected with HIV, based on laboratory testing or physician exam; and the bottom portion shows the number of infants whose HIV infection status is unknown due to loss to follow-up or infection status reporting delay.

† Reporting for 2011 is incomplete at this time.