Michigan Department of Community Health

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QUARTERLY HIV/AIDS REPORT, MICHIGAN

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****NEW WEBSITE**** **http://www.michigan.gov/hivstd** ****NEW WEBSITE****

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 ii 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 bi-sexual 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 1,960 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 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 18,200. 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 14,030 (76.95% X 18,200). Since the estimates are rounded to the nearest 10, totals may not equal 18,200. 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 (18,200 - 780 = 17,420). For example, 12 percent of HIV/AIDS cases 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 2,010 (11.53% x 17,420). Since the estimates are rounded to the nearest 10, the county totals may not equal 17,420. 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

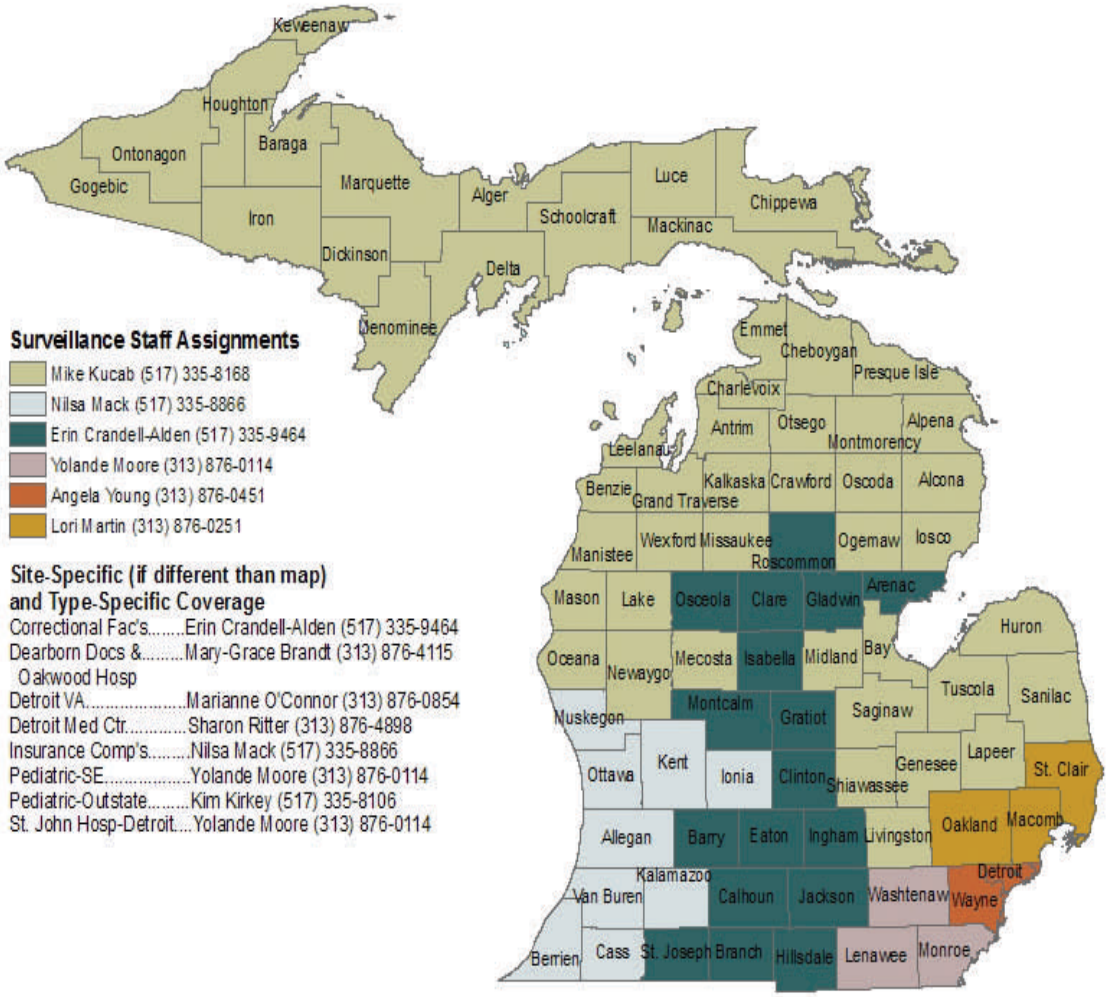


TABLE 1. Demographic Information on Prevalent HIV/AIDS Cases

	EST PREV*	REPORTED PREVALENCE							CENSUS 2007 ESTIMATES	
		HIV, not AIDS		AIDS		Total				
	Number	Number	Percent	Number	Percent	Number	Percent	Rate per 100,000†	Number	Percent
RACE/ ETHNICITY§										
White	6,370	2,262	35%	2,646	35%	4,908	35%	63	7,812,806	78%
Black	10,730	3,876	59%	4,399	59%	8,275	59%	582	1,422,205	14%
Hispanic	740	250	4%	317	4%	567	4%	141	402,797	4%
Asian/PI	90	33	1%	34	0%	67	0%	28	237,430	2%
Am Indian/AN	60	23	0%	20	0%	43	0%	79	54,473	1%
Multi/Unk/Other	220	80	1%	91	1%	171	1%	N/A	142,111	1%
SEX & RACE										
Males	14,030	4,875	75%	5,942	79%	10,817	77%	218	4,959,730	49%
White Males	*5,540*	*1,906*	*29%*	*2,367*	*32%*	*4,273*	*30%*	*111*	*3,857,958*	*38%*
Black Males	*7,650*	*2,684*	*41%*	*3,213*	*43%*	*5,897*	*42%*	*876*	*673,251*	*7%*
Hispanic Males	*570*	*188*	*3%*	*252*	*3%*	*440*	*3%*	*207*	*212,734*	*2%*
Other Males	*270*	*97*	*1%*	*110*	*1%*	*207*	*1%*	*96*	*215,787*	*2%*
Females	4,170	1,649	25%	1,565	21%	3,214	23%	63	5,112,092	51%
White Females	*820*	*356*	*5%*	*279*	*4%*	*635*	*5%*	*16*	*3,954,848*	*39%*
Black Females	*3,080*	*1,192*	*18%*	*1,186*	*16%*	*2,378*	*17%*	*318*	*748,954*	*7%*
Hispanic Fmls	*160*	*62*	*1%*	*65*	*1%*	*127*	*1%*	*67*	*190,063*	*2%*
Other Females	*100*	*39*	*1%*	*35*	*0%*	*74*	*1%*	*34*	*218,227*	*2%*
RISK*										
Male-Male Sex	8,630	2,948	45%	3,706	49%	6,654	47%	N/A	N/A	N/A
Injection Drug Use	2,130	677	10%	966	13%	1,643	12%	N/A	N/A	N/A
MSM/IDU	820	266	4%	365	5%	631	4%	N/A	N/A	N/A
Blood Products	120	34	1%	62	1%	96	1%	N/A	N/A	N/A
Heterosexual	3,250	1,237	19%	1,269	17%	2,506	18%	N/A	N/A	N/A
HRH	*2,330*	*831*	*13%*	*962*	*13%*	*1,793*	*13%*	*N/A*	*N/A*	*N/A*
PH-Female	*920*	*406*	*6%*	*307*	*4%*	*713*	*5%*	*N/A*	*N/A*	*N/A*
Perinatal	200	105	2%	50	1%	155	1%	N/A	N/A	N/A
Undetermined	3,040	1,257	19%	1,089	15%	2,346	17%	N/A	N/A	N/A
PH-Male	*1,630*	*579*	*9%*	*678*	*9%*	*1,257*	*9%*	*N/A*	*N/A*	*N/A*
Unknown	*1,410*	*678*	*10%*	*411*	*5%*	*1,089*	*8%*	*N/A*	*N/A*	*N/A*
AGE AT HIV DIAGNOSIS										
0 - 12 years	230	118	2%	60	1%	178	1%	N/A	N/A	N/A
13 - 19 years	770	373	6%	221	3%	594	4%	N/A	N/A	N/A
20 - 24 years	2,250	986	15%	747	10%	1,733	12%	N/A	N/A	N/A
25 - 29 years	2,990	1,117	17%	1,188	16%	2,305	16%	N/A	N/A	N/A
30 - 39 years	6,510	2,159	33%	2,860	38%	5,019	36%	N/A	N/A	N/A
40 - 49 years	3,890	1,277	20%	1,724	23%	3,001	21%	N/A	N/A	N/A
50 - 59 years	1,270	401	6%	575	8%	976	7%	N/A	N/A	N/A
60 years and over	290	90	1%	132	2%	222	2%	N/A	N/A	N/A
Unspecified	10	3	0%	0	0%	3	0%	N/A	N/A	N/A
AREA OF RESIDENCE AT DIAGNOSIS¥										
Detroit Metro	11,990	4,154	64%	4,967	66%	9,121	65%	206	4,438,006	44%
Out-State	5,430	1,957	30%	2,174	29%	4,131	29%	73	5,633,816	56%
Prison/Unknown	790	413	6%	366	5%	779	6%	N/A	N/A	N/A
TOTAL	**18,200**	**6,524**	**100%**	**7,507**	**100%**	**14,031**	**100%**	**139**	**10,071,822**	**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 x" statements for rate, divide the census number by the total reported prevalence. For example, for non-Hispanic whites: 7,812,806 / 4,908 = 1,592. Thus, 1 out of every 1,592 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: a case is represented in ONLY one category)						
Male-Male Sex	6,654	62%	N/A	--	6,654	47%
Injection Drug Use	994	9%	649	20%	1,643	12%
MSM/IDU	631	6%	N/A	--	631	4%
Blood Products	83	1%	13	0%	96	1%
Heterosexual	518	5%	1,988	62%	2,506	18%
HRH	*518*	*5%*	*1,275*	*40%*	*1,793*	*13%*
PH-Female	*N/A*	*--*	*713*	*22%*	*713*	*5%*
Perinatal	87	1%	68	2%	155	1%
Undetermined	1,850	17%	496	15%	2,346	17%
PH-Male	*1,257*	*12%*	*N/A*	*--*	*1,257*	*9%*
Unknown	*593*	*5%*	*496*	*15%*	*1,089*	*8%*
EXPOSURE CATEGORIES[†]						
(Mutually Exclusive: a case is represented in ONLY one category)						
Male-Male Sex	6,151	57%	N/A	--	6,151	44%
MSM - ONLY	*4,206*	*39%*	*N/A*	*--*	*4,206*	*30%*
MSM & Sex with Female (not HRH)	*1,945*	*18%*	*N/A*	*--*	*1,945*	*14%*
MSM & HRH	499	5%	N/A	--	499	4%
MSM & IDU	438	4%	N/A	--	438	3%
MSM & IDU & HRH	193	2%	N/A	--	193	1%
MSM & Blood Products	4	0%	N/A	--	4	0%
Heterosexual - ONLY	518	5%	1,988	62%	2,506	18%
HRH	*518*	*5%*	*1,275*	*40%*	*1,793*	*13%*
PH-Female	*N/A*	*--*	*713*	*22%*	*713*	*5%*
HRH & IDU	395	4%	351	11%	746	5%
Injection Drug Use - ONLY	594	5%	294	9%	888	6%
IDU & Blood Products	5	0%	4	0%	9	0%
Perinatal Exposure	87	1%	69	2%	156	1%
Exposure to Blood Products - ONLY	83	1%	13	0%	96	1%
Undetermined	1,850	17%	495	15%	2,345	17%
PH-Male Only	*1,257*	*12%*	*N/A*	*--*	*1,257*	*9%*
Unknown	*593*	*5%*	*495*	*15%*	*1,088*	*8%*
TOTAL	**10,817**	**100%**	**3,214**	**100%**	**14,031**	**100%**
SUMMARIZED EXPOSURE CATEGORIES[¥]						
(NOT Mutually Exclusive: a case can be represented in multiple categories)						
Any MSM	7,285	67%	N/A	--	7,285	52%
Behaviorally Bisexual Men	2,637	24%	N/A	--	2,637	19%
Any Heterosexual	3,550	33%	2,339	73%	5,889	42%
Any HRH	1,605	15%	1,626	51%	3,231	23%
Any IDU	1,625	15%	649	20%	2,274	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

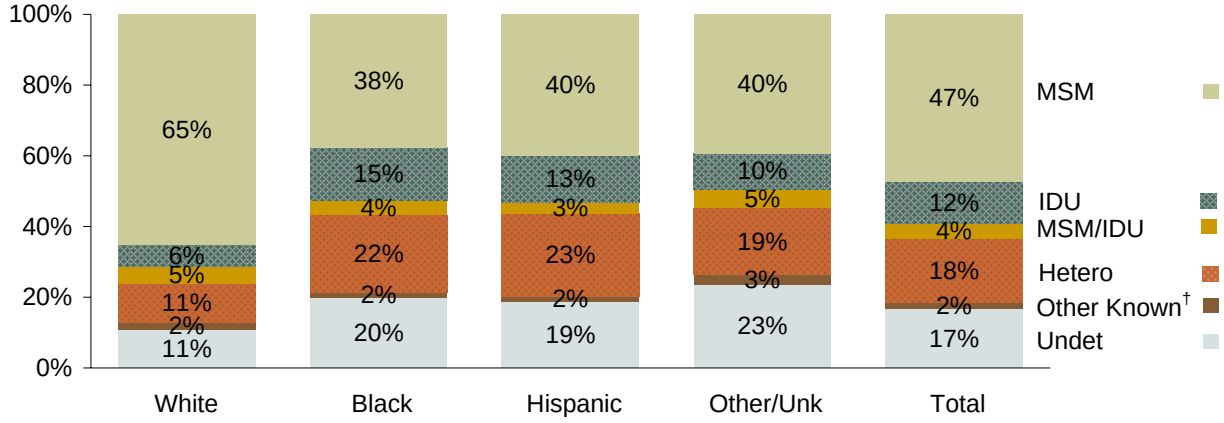
MALES	White		Black		Hispanic		Other or Unknown		Male Subtotal	
Male-Male sex	3,201	75%	3,115	53%	227	52%	111	54%	6,654	62%
Injecting Drug Use	185	4%	741	13%	55	13%	13	6%	994	9%
Male-Male Sex/IDU	249	6%	350	6%	17	4%	15	7%	631	6%
Blood Products	65	2%	15	0%	1	0%	2	1%	83	1%
Heterosexual*	99	2%	377	6%	38	9%	4	2%	518	5%
Perinatal	15	0%	65	1%	2	0%	5	2%	87	1%
Undetermined	459	11%	1,234	21%	100	23%	57	28%	1,850	17%
PH-Male	*284*	*7%*	*863*	*15%*	*75*	*17%*	*35*	*17%*	*1,257*	*12%*
Unknown	*175*	*4%*	*371*	*6%*	*25*	*6%*	*22*	*11%*	*593*	*5%*
Male Subtotal	**4,273**	**40%**	**5,897**	**55%**	**440**	**4%**	**207**	**2%**	**10,817**	**100%**

FEMALES	White		Black		Hispanic		Other or Unknown		Female Subtotal	
Injecting Drug Use	115	18%	499	21%	20	16%	15	20%	649	20%
Blood Products	9	1%	4	0%	0	0%	0	0%	13	0%
Heterosexual	424	67%	1,420	60%	95	75%	49	66%	1,988	62%
HRH	*315*	*50%*	*864*	*36%*	*69*	*54%*	*27*	*36%*	*1,275*	*40%*
PH-Female	*109*	*17%*	*556*	*23%*	*26*	*20%*	*22*	*30%*	*713*	*22%*
Perinatal	13	2%	48	2%	6	5%	1	1%	68	2%
Undetermined*	74	12%	407	17%	6	5%	9	12%	496	15%
Female Subtotal	**635**	**20%**	**2,378**	**74%**	**127**	**4%**	**74**	**2%**	**3,214**	**100%**

TOTAL	White		Black		Hispanic		Other or Unknown		Risk Total	
Male-Male sex	3,201	65%	3,115	38%	227	40%	111	40%	6,654	47%
Injecting Drug Use	300	6%	1,240	15%	75	13%	28	10%	1,643	12%
Male-Male Sex/IDU	249	5%	350	4%	17	3%	15	5%	631	4%
Blood Products	74	2%	19	0%	1	0%	2	1%	96	1%
Heterosexual	523	11%	1,797	22%	133	23%	53	19%	2,506	18%
HRH	*414*	*8%*	*1,241*	*15%*	*107*	*19%*	*31*	*11%*	*1,793*	*13%*
PH-Female	*109*	*2%*	*556*	*7%*	*26*	*5%*	*22*	*8%*	*713*	*5%*
Perinatal	28	1%	113	1%	8	1%	6	2%	155	1%
Undetermined	533	11%	1,641	20%	106	19%	66	23%	2,346	17%
PH-Male	*284*	*6%*	*863*	*10%*	*75*	*13%*	*35*	*12%*	*1,257*	*9%*
Unknown	*249*	*5%*	*778*	*9%*	*31*	*5%*	*31*	*11%*	*1,089*	*8%*
RACE TOTAL	**4,908**	**35%**	**8,275**	**59%**	**567**	**4%**	**281**	**2%**	**14,031**	**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%	71	1%	2	0%	6	3%	104	1%
13 - 19 years	59	1%	340	6%	14	3%	7	3%	420	4%
20 - 24 years	398	9%	835	14%	48	11%	25	12%	1,306	12%
25 - 29 years	706	17%	944	16%	84	19%	36	17%	1,770	16%
30 - 39 years	1,700	40%	1,970	33%	176	40%	89	43%	3,935	36%
40 - 49 years	1,004	23%	1,241	21%	80	18%	32	15%	2,357	22%
50 - 59 years	295	7%	414	7%	26	6%	10	5%	745	7%
60 years and over	86	2%	80	1%	10	2%	2	1%	178	2%
Total*	**4,273**	**40%**	**5,895**	**55%**	**440**	**4%**	**207**	**2%**	**10,815**	**100%**

FEMALES	White		Black		Hispanic		Other or Unknown		Female Subtotal	
0 - 12 years	14	2%	53	2%	6	5%	1	1%	74	2%
13 - 19 years	41	6%	120	5%	11	9%	2	3%	174	5%
20 - 24 years	116	18%	286	12%	17	13%	8	11%	427	13%
25 - 29 years	126	20%	378	16%	18	14%	13	18%	535	17%
30 - 39 years	197	31%	807	34%	48	38%	32	43%	1,084	34%
40 - 49 years	95	15%	521	22%	17	13%	11	15%	644	20%
50 - 59 years	38	6%	181	8%	7	6%	5	7%	231	7%
60 years and over	7	1%	32	1%	3	2%	2	3%	44	1%
Total*	**634**	**20%**	**2,378**	**74%**	**127**	**4%**	**74**	**2%**	**3,213**	**100%**

TOTAL	White		Black		Hispanic		Other or Unknown		Age Total	
0 - 12 years	39	1%	124	1%	8	1%	7	2%	178	1%
13 - 19 years	100	2%	460	6%	25	4%	9	3%	594	4%
20 - 24 years	514	10%	1,121	14%	65	11%	33	12%	1,733	12%
25 - 29 years	832	17%	1,322	16%	102	18%	49	17%	2,305	16%
30 - 39 years	1,897	39%	2,777	34%	224	40%	121	43%	5,019	36%
40 - 49 years	1,099	22%	1,762	21%	97	17%	43	15%	3,001	21%
50 - 59 years	333	7%	595	7%	33	6%	15	5%	976	7%
60 years and over	93	2%	112	1%	13	2%	4	1%	222	2%
RACE TOTAL*	***4,907***	***35%***	***8,273***	***59%***	***567***	***4%***	***281***	***2%***	***14,028***	***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

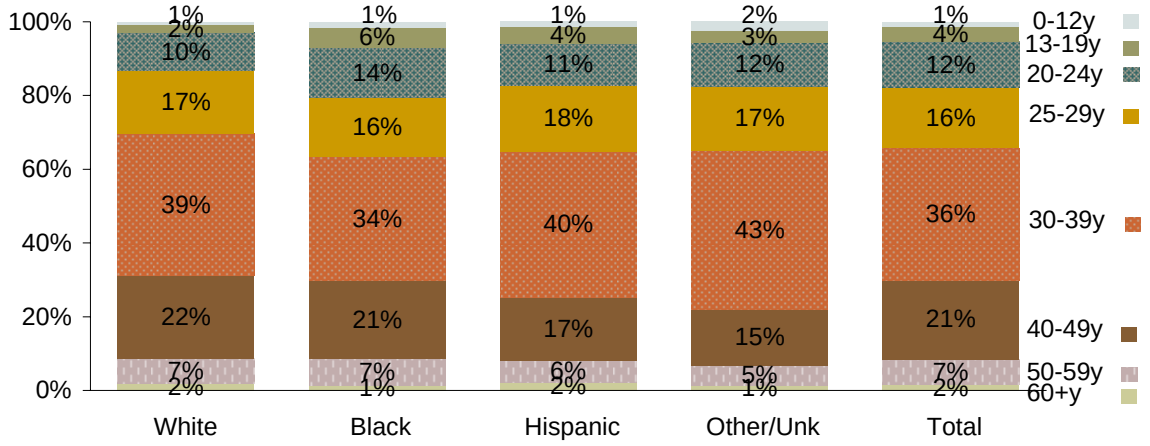


TABLE 5. New Diagnoses, Deaths, and Prevalence of HIV/AIDS by Year

	HIV/AIDS			AIDS		
Year	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	71	17	82	50	17	53
1985	382	63	401	99	63	89
1986	488	102	787	168	99	158
1987	716	182	1,321	318	174	302
1988	906	263	1,964	493	254	541
1989	1,301	380	2,885	689	370	860
1990	1,439	453	3,871	795	433	1,222
1991	1,450	536	4,785	962	515	1,669
1992	1,492	662	5,615	1,231	630	2,270
1993	1,306	822	6,099	1,126	776	2,620
1994	1,216	900	6,415	1,013	843	2,790
1995	1,195	911	6,699	1,063	843	3,010
1996	1,127	632	7,194	858	583	3,285
1997	1,051	469	7,776	736	419	3,602
1998	907	398	8,285	649	350	3,901
1999	754	363	8,676	575	317	4,159
2000	927	379	9,224	648	328	4,479
2001	890	381	9,733	573	314	4,738
2002	773	296	10,210	576	268	5,046
2003	878	265	10,823	601	230	5,417
2004	892	250	11,465	555	209	5,763
2005	899	264	12,100	678	232	6,209
2006	837	209	12,728	631	184	6,656
2007	829	218	13,339	601	191	7,066
2008	792	197	13,934	555	178	7,443
2009†	117	20	***14,031***	83	19	***7,507***
TOTAL	***23,670***	***9,639***		***16,353***	***8,846***	

† Reporting for 2009 is incomplete at this time.

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 14,031. The prevalence of AIDS, which is a subset of HIV/AIDS prevalence, is 7,507.

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

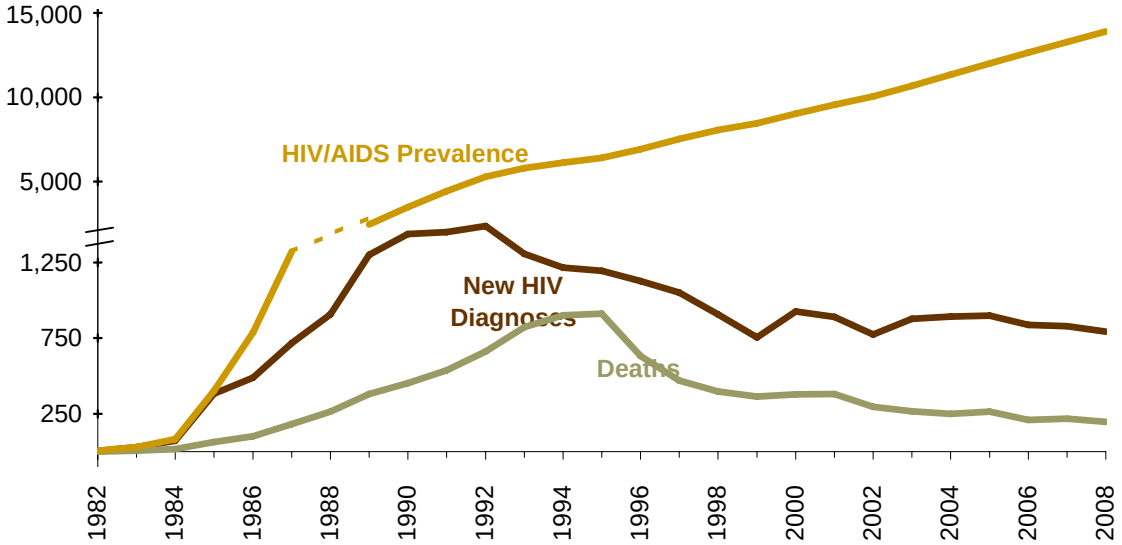
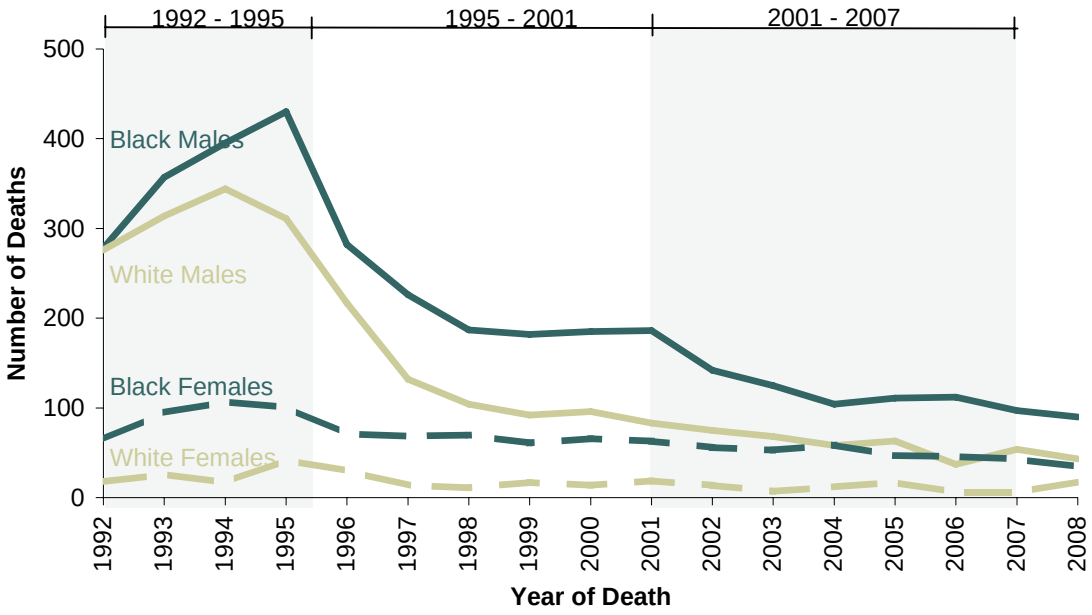


Figure 4 (below) shows the number of HIV-infected Michigan residents who have been reported as deceased by a local health department, the department of vital records via a data match or death certificate, or an alternate source. The number of deaths increased in all race/sex groups from the beginning 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 2007 (48%), even in comparison to white males (35%), black females (32%). And although the percent decrease in deaths among white females (68%) is larger, the number of deaths among black males still exceeds that of any other race/sex group.

FIGURE 4. HIV/AIDS Deaths by Race/Sex



*Deaths occuring in 2008 are not complete at this time.

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

	2009†						CUMULATIVE (through 2009)					
	Male		Female		Total		Male		Female		Total	
RACE/ETHNICITY												
White	32	(35%)	3	(12%)	35	(30%)	7,575	(40%)	959	(20%)	8,534	(36%)
Black	57	(62%)	21	(84%)	78	(67%)	10,197	(54%)	3,674	(75%)	13,871	(59%)
Hispanic	2	(2%)	1	(4%)	3	(3%)	675	(4%)	176	(4%)	851	(4%)
Asian	0	(0%)	0	(0%)	0	(0%)	65	(0%)	17	(0%)	82	(0%)
Am Indian	0	(0%)	0	(0%)	0	(0%)	48	(0%)	15	(0%)	63	(0%)
Multi/Unk	1	(1%)	0	(0%)	1	(1%)	200	(1%)	69	(1%)	269	(1%)
RISK§												
Male-Male Sex	50	(54%)	N/A	--	50	(43%)	11,022	(59%)	N/A	--	11,022	(47%)
Injection Drug Use	0	(0%)	3	(12%)	3	(3%)	2,666	(14%)	1,539	(31%)	4,205	(18%)
MSM/IDU	2	(2%)	N/A	--	2	(2%)	1,312	(7%)	N/A	--	1,312	(6%)
Blood Products	0	(0%)	0	(0%)	0	(0%)	305	(2%)	37	(1%)	342	(1%)
Heterosexual	2	(2%)	15	(60%)	17	(15%)	763	(4%)	2,600	(53%)	3,363	(14%)
HRH	*2*	*(2%)*	*2*	*(8%)*	*4*	*(3%)*	*763*	*(4%)*	*1,759*	*(36%)*	*2,522*	*(11%)*
PH-Female	*N/A*	*--*	*13*	*(52%)*	*13*	*(11%)*	*N/A*	*--*	*841*	*(17%)*	*841*	*(4%)*
Perinatal	0	(0%)	0	(0%)	0	(0%)	128	(1%)	100	(2%)	228	(1%)
Undetermined	38	(41%)	7	(28%)	45	(38%)	2,564	(14%)	634	(13%)	3,198	(14%)
PH-Male	*21*	*(23%)*	*N/A*	*--*	*21*	*(18%)*	*1,683*	*(9%)*	*N/A*	*--*	*1,683*	*(7%)*
Unknown	*17*	*(18%)*	*7*	*(28%)*	*24*	*(21%)*	*881*	*(5%)*	*634*	*(13%)*	*1,515*	*(6%)*
AGE AT HIV DIAGNOSIS												
0 - 12 years	0	(0%)	0	(0%)	0	(0%)	172	(1%)	105	(2%)	277	(1%)
13 - 19 years	11	(12%)	2	(8%)	13	(11%)	503	(3%)	205	(4%)	708	(3%)
20 - 24 years	19	(21%)	1	(4%)	20	(17%)	1,727	(9%)	530	(11%)	2,257	(10%)
25 - 29 years	13	(14%)	3	(12%)	16	(14%)	2,996	(16%)	754	(15%)	3,750	(16%)
30 - 39 years	17	(18%)	9	(36%)	26	(22%)	7,106	(38%)	1,737	(35%)	8,843	(37%)
40 - 49 years	24	(26%)	8	(32%)	32	(27%)	4,392	(23%)	1,101	(22%)	5,493	(23%)
50 - 59 years	7	(8%)	2	(8%)	9	(8%)	1,441	(8%)	371	(8%)	1,812	(8%)
60 years and over	1	(1%)	0	(0%)	1	(1%)	421	(2%)	106	(2%)	527	(2%)
Unspecified	0	(0%)	0	(0%)	0	(0%)	2	(0%)	1	(0%)	3	(0%)
DISEASE STATUS¥												
HIV, not AIDS	66	(72%)	20	(80%)	86	(74%)	5,455	(29%)	1,862	(38%)	7,317	(31%)
AIDS - Same time	25	(27%)	5	(20%)	30	(26%)	7,327	(39%)	1,424	(29%)	8,751	(37%)
AIDS - Short lag	1	(1%)	0	(0%)	1	(1%)	1,384	(7%)	386	(8%)	1,770	(7%)
AIDS - Long lag	0	(0%)	0	(0%)	0	(0%)	4,594	(24%)	1,238	(25%)	5,832	(25%)
AREA OF RESIDENCE AT DIAGNOSIS£												
Detroit Metro	59	(64%)	17	(68%)	76	(65%)	12,341	(66%)	3,565	(73%)	15,906	(67%)
Out-State	32	(35%)	8	(32%)	40	(34%)	5,333	(28%)	1,244	(25%)	6,577	(28%)
Prison/Unknown	1	(1%)	0	(0%)	1	(1%)	1,086	(6%)	101	(2%)	1,187	(5%)
TOTAL	**92**	**(79%)**	**25**	**(21%)**	**117**	**(100%)**	**18,760**	**(79%)**	**4,910**	**(21%)**	**23,670**	**(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

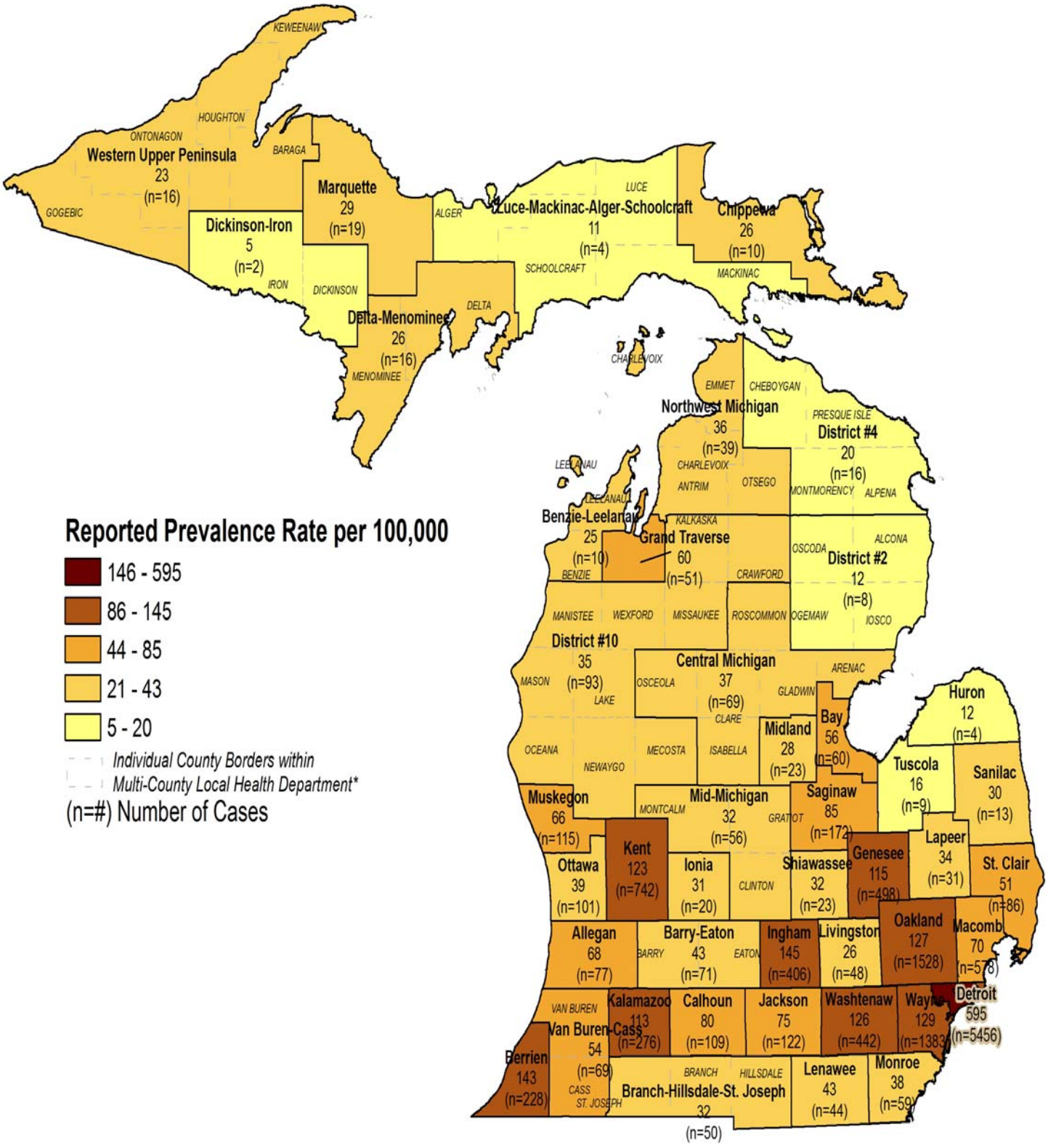
COUNTY	EST PREV	REPORTED PREVALENCE				CENSUS 2007 EST	COUNTY	EST PREV	REPORTED PREVALENCE				CENSUS 2007 EST
	Number	HIV, Not AIDS	AIDS	Total	Rate*			Number	HIV, Not AIDS	AIDS	Total	Rate*	
Alcona	10	0	1	1	9	11,538	Livingston	60	21	27	48	26	183,194
Alger	10	0	1	1	10	9,612	Luce	10	0	0	0	0	6,728
Allegan	100	32	45	77	68	112,761	Mackinac	10	1	1	2	18	10,877
Alpena	10	2	2	4	13	29,707	Macomb	760	266	312	578	70	831,077
Antrim	10	4	5	9	37	24,299	Manistee	20	5	7	12	48	24,803
Arenac	10	1	1	2	12	16,608	Marquette	20	11	8	19	29	65,216
Baraga	10	2	4	6	70	8,544	Mason	10	3	6	9	31	28,750
Barry	30	9	14	23	39	59,188	Mecosta	20	10	3	13	31	42,090
Bay	80	33	27	60	56	107,517	Menominee	10	3	1	4	16	24,249
Benzie	10	2	2	4	23	17,510	Midland	30	9	14	23	28	82,818
Berrien	300	98	130	228	143	159,589	Missaukee	10	4	2	6	40	14,976
Branch	10	9	2	11	24	46,194	Monroe	80	23	36	59	38	153,608
Calhoun	140	53	56	109	80	136,615	Montcalm	20	6	13	19	30	62,950
Cass	40	14	14	28	55	50,551	Montmorency	10	0	3	3	29	10,327
Charlevoix	20	5	8	13	50	26,181	Muskegon	150	58	57	115	66	174,386
Cheboygan	10	2	4	6	22	26,768	Newaygo	20	6	11	17	35	49,171
Chippewa	10	7	3	10	26	38,922	Oakland	2,010	730	798	1,528	127	1,206,089
Clare	20	5	9	14	46	30,697	Oceana	10	6	4	10	36	27,800
Clinton	40	17	13	30	43	69,755	Ogemaw	10	1	2	3	14	21,338
Crawford	10	0	3	3	21	14,550	Ontonagon	10	1	1	2	29	6,977
Delta	20	4	8	12	32	37,367	Osceola	10	2	2	4	17	23,148
Dickinson	10	0	1	1	4	26,937	Oscoda	10	1	0	1	11	8,938
Eaton	60	23	25	48	45	107,390	Otsego	10	4	5	9	37	24,223
Emmet	10	3	5	8	24	33,393	Ottawa	130	42	59	101	39	259,206
Genesee	650	250	248	498	115	434,715	Presque Isle	10	1	2	3	22	13,852
Gladwin	10	2	5	7	27	26,287	Roscommon	20	4	8	12	47	25,517
Gogebic	10	1	1	2	12	16,287	Saginaw	230	84	88	172	85	202,268
Grand Traverse	70	25	26	51	60	85,479	Sanilac	20	6	7	13	30	43,640
Gratiot	10	3	4	7	17	42,141	Schoolcraft	10	1	0	1	12	8,518
Hillsdale	10	4	3	7	15	46,781	Shiawassee	30	9	14	23	32	71,753
Houghton	10	2	4	6	17	35,201	St. Clair	110	47	39	86	51	170,119
Huron	10	2	2	4	12	33,290	St. Joseph	40	12	20	32	51	62,449
Ingham	530	220	186	406	145	279,295	Tuscola	10	4	5	9	16	56,805
Ionia	30	9	11	20	31	64,053	Van Buren	50	17	24	41	53	77,931
Iosco	10	2	1	3	11	26,255	Washtenaw	580	211	231	442	126	350,003
Iron	10	0	1	1	8	12,151	Wayne Total	8,990	3,074	3,765	6,839	345	1,985,101
Isabella	40	15	15	30	45	66,693	*Wayne, excl. Detroit*	*1,820*	*600*	*783*	*1,383*	*129*	*1,068,149*
Jackson	160	55	67	122	75	163,006	*Detroit*	*7,170*	*2,474*	*2,982*	*5,456*	*595*	*916,952*
Kalamazoo	360	141	135	276	113	245,333	Wexford	10	3	6	9	28	31,792
Kalkaska	10	3	1	4	23	17,188							
Kent	980	329	413	742	123	604,330	**Detroit Metro†**	11,990	4,154	4,967	9,121	206	4,438,006
Keweenaw	10	0	0	0	0	2,151	**Out-State†**	5,430	1,957	2,174	4,131	73	5,633,816
Lake	10	3	7	10	90	11,153							
Lapeer	40	14	17	31	34	92,012	**Prisons£**	780	412	365	777	N/A	N/A
Leelanau	10	0	6	6	27	21,898	**Unknown**	10	1	1	2	N/A	N/A
Lenawee	60	20	24	44	43	101,243	***TOTAL***	***18,200***	***6,524***	***7,507***	***14,031***	***139***	***10,071,822***

**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.

FIGURE 5. Reported HIV Prevalence and Prevalence Rates by Residence at Diagnosis



**To mitigate the effect of small numbers of cases, reported HIV prevalence rates and case numbers for multi-county health departments are listed for the health department as a whole and not the individual counties.*

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

	2003	2004	2005	2006	2007	2008	2009†
NUMBER DELIVERIES/BIRTHS							
Infants	66	56	71	49	52	34	9
Mothers	65	51	65	47	45	33	9
RESIDENCE AT BIRTH							
Southeast Michigan	45 68%	38 68%	42 59%	30 61%	35 67%	23 68%	8 89%
Out-State Michigan	21 32%	18 32%	29 41%	19 39%	17 33%	11 32%	1 11%
INFANTS' RACE							
White, Non-Hispanic	10 15%	7 13%	9 13%	6 12%	6 12%	7 21%	1 11%
Black, Non-Hispanic	51 77%	46 82%	57 80%	34 69%	41 79%	24 71%	8 89%
Other	5 8%	3 5%	5 7%	9 18%	5 10%	3 9%	0 0%
MOTHERS' MODE OF TRANSMISSION*							
Injecting Drug Use	6 9%	3 6%	7 11%	2 4%	1 2%	1 3%	2 22%
High Risk Heterosexual	30 46%	13 25%	31 48%	18 38%	15 33%	6 18%	4 44%
Undetermined	28 43%	35 69%	27 42%	27 57%	29 64%	26 79%	3 33%

**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